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Small Business and Defense Acquisitions

A Review of Policies and Current Practices

Clifford A. Grammich, Thomas Edison, Nancy Y. Moore, Edward G. Keating

Prepared for the Office of the Secretary of Defense

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The information contained in this monograph provides a historical perspective on DoD small business policy as of 2004. This volume does not take into account legal or statutory changes that have occurred since that time.

Preface

This report summarizes elements of research that the RAND Corporation conducted on small business acquisition policy. In this report, we provide background information on the general evolution of federal small business policy and how this has affected the Department of Defense (DoD), on the challenges that evolving procurement needs pose to efforts by DoD to fulfill small business policy goals, and on what current practices of large private firms toward small business indicate about the feasibility of DoD small business policies.

RAND conducted and documented nearly all the research in this report in 2004 and 2005. In some minor cases not always noted in this research, terminology and thresholds have since changed.

This research should be of interest to personnel concerned with procurement, acquisition policy, and small business policy. Related research has been documented in

- *The Department of Defense and Its Use of Small Businesses: An Economic and Industry Analysis*, Elaine Reardon and Nancy Moore, DB-478-OSD, 2005
- *Evaluation and Recommendations for Improvement of the Department of Defense Small Business Innovation Research (SBIR) Program*, Bruce Held, Thomas Edison, Shari Lawrence Pfleeger, Philip S. Antón, and John Clancy, DB-490-OSD, 2006
- *The Utilization of Women-Owned Small Businesses in Federal Contracting*, Elaine Reardon, Nancy Nicosia, and Nancy Y. Moore, TR-442-SBA, 2007
- *Estimating the Cost of Administering the Department of Defense Small Business Innovation Research (SBIR) Program*, Somi Seong, Kenneth Horn, and Bruce Held, OP-208-OSD, 2008
- *Enhancing Small-Business Opportunities in the DoD*, Nancy Y. Moore, Clifford A. Grammich, Julie DaVanzo, Bruce Held, John Coombs, and Judith D. Mele, TR-601-OSD, 2008
- *Exploring Reasons for Decreasing Numbers of Small-Business Contract Actions in the DoD*, Nancy Y. Moore, Clifford A. Grammich, and Judith D. Mele, MG-904-OSD, forthcoming.

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Summary

For much of the past century, the federal government has consistently sought to boost small businesses. These efforts have included, in recent years, a federal government-wide statutory goal for 23 percent of prime contract dollars on goods and services to be spent with small businesses. Recent federal policies have also set spending goals with more narrow categories of women-owned businesses and small “disadvantaged” businesses¹ as certified by the Small Business Administration (SBA). Because the Department of Defense (DoD) accounts for most federal purchases, its spending practices draw considerable attention from small business advocates. This report reviews the origin of these small business policies, evidence of their effects, and what lessons best commercial practices may offer for their improvement.

Efforts to support small business are long enduring and have been promoted by Congresses and presidential administrations of both parties. DoD has had mixed results in meeting some of its mandated small business goals, exceeding them in some industries while falling short in others. In Fiscal Year 2007, 20.4 percent of its prime contract dollars went to small businesses, although the nature of data available for analysis may mean that this figure is an underestimate of actual total purchases with small businesses.

Part of DoD’s challenge in meeting its small business goals may be in the nature of different industries and their conduciveness to small business. DoD exceeds the overall 23 percent goal for small business utilization in some categories of its expenditures. Some of the industries for which it does not meet this goal are those in which industry consolidation has concentrated business among larger firms. Because of customer needs for economies of scale as well as scope, flexibility, innovation, and agility, certain industries are better suited to businesses of particular sizes, and many of the goods and services that DoD procures are in industries dominated by large businesses. The challenges this broad economic pattern poses may be exacerbated by evolving DoD needs. Procurement needed to follow the long-range planning guidance of Joint Vision 2020 and its operational concepts, for example, will likely be in industries dominated by large businesses, making it very difficult for DoD to meet its small business goals in future years.

In some measure, the difficulties of meeting small business goals may also be attributable to the bewildering array of criteria for what constitutes a “small” business. The SBA sets separate criteria for nearly 1,200 industries. Criteria may be based either on number of employees,

¹ “Disadvantaged” businesses include, for example, those owned by African-Americans, Hispanic Americans, Native Americans, Asian Pacific Americans, and subcontinent Asian Americans with a net worth of less than \$250,000 for initial applicants and \$750,000 for continuing program participants, excluding home and business equity.

as is typical for manufacturing, or on total revenues, as is typical for services. Small business thresholds set by number of employees vary by industry from 100 to 1,500, and those set by annual revenues vary by industry from \$750,000 to \$35.5 million.

It may also be the case that many small businesses are simply not interested in government procurement. The few data that exist on the policy interests of small businesses indicate that government procurement is a low priority for many of them.

Unfortunately, there is little evidence of the effectiveness of small business policies. Small business utilization is generally judged on input, and policy effects have generally not been judged against alternative policies. Also, as noted, available data do not permit complete analysis of all purchases with small businesses.

DoD, which has been among the historic leaders in procuring from SBA-certified small “disadvantaged” businesses, often exceeds its goals for purchases from such businesses, but here, too, evaluation efforts are wanting. There is some evidence, for example, that minority employment increases among contractors subject to federal oversight, but this is true for both large and small contractors. Similarly, expanding employment opportunities for minorities outside small business entrepreneurship may mitigate the effects of small business preferences on minority employment, particularly given the greater opportunities that professionals of “disadvantaged” groups are increasingly finding in large firms and outside small business ownership.

Many leading private-sector firms typically have goals for procurement from minority firms (usually as certified by the National Minority Supplier Development Council, Inc.), but fewer have goals focusing on procurement from small firms. Those that do often do not have goals for small business utilization as high as those of the federal government and DoD. In large part, this may be because best commercial practices favor some contract and supply base consolidation that may preclude procurement from some small firms, while procurement goals with minority suppliers can serve other purposes (e.g., marketing). In seeking to find the greatest value in their supply chains, for example, leading commercial enterprises seek to develop more complex and ultimately rewarding relationships with a smaller number of firms. Small businesses can develop niche opportunities with leading commercial enterprises or find opportunities as “tier one” or lower suppliers to prime contractors of leading commercial enterprises. Yet the opportunities available to small businesses in best commercial practices are fundamentally changing in a way not always reflected by fixed prime contract quotas in federal policy.

Still, given the strong support small business policies have enjoyed by different Congresses and presidential administrations of both parties, supporting such policies is likely to remain a concern of DoD for many years to come. To continue to meet prime contracting goals, DoD policymakers may need to develop small businesses as prime contractors. Alternatively, Congress may wish to consider counting subcontracting dollars for small businesses toward small business utilization goals, as some private-sector firms do in their own small business utilization programs. DoD small business utilization, although sometimes falling short of non-statutory goals negotiated with the SBA, exceeds that for many leading large firms in the private sector, and many of its practices for increasing procurement for small and minority businesses match those of leading private firms. The F/A-18E/F Fleet Integrated Readiness Support Team of the Navy, the Flexible Acquisition and Sustainment Tool contract of the Air Force for

engineering and support services, and the Rapid Response to Critical Systems Requirements program of the Army have all emphasized involving small businesses in innovative acquisition policies. Small businesses may be able to play new roles in defense by supplying innovative ideas, responsive supply solutions, and services support as they do in the private sector, and receive federal contracts helping them grow as needs and best commercial practices evolve. Rather than considering how DoD can continue to meet very high small business utilization goals, policymakers may wish to consider what changing warfighter needs and business practices mean for DoD and the opportunities that small business itself may actually want.

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Any errors in this report are solely the authors' responsibility.

Abbreviations

DoD	Department of Defense
FAST	Flexible Acquisition and Sustainment Tool
FIRST	F/A-18E/F Fleet Integrated Readiness Support Team
FPDC	Federal Procurement Data Center
FPDS	Federal Procurement Data System
FSC	Federal Supply Class
FY	fiscal year
GAO	General Accounting Office [now the Government Accountability Office]
GPO	gross product originating
HUBZone	Historically Underutilized Business Zone
JDAM	Joint Direct Attack Munition
NAICS	North American Industry Classification System
NFIB	National Federation of Independent Businesses
NMSDC	National Minority Supplier Development Council, Inc.
NSBA	National Small Business Association
O&M	operations and maintenance
OFPP	Office of Federal Procurement Policy
OMB	Office of Management and Budget

PSC	Product and Service Code
R&D	research and development
R2CSR	Rapid Response to Critical Systems Requirements
RDT&E	research, development, test, and evaluation
RFC	Reconstruction Finance Corporation
RFID	radio frequency identification
SADBU	DoD Office of Small and Disadvantaged Business Utilization [now the Office of Small Business Programs]
SBA	Small Business Administration
SBIR	Small Business Innovation and Research
SBTT	Small Business Technology Transfer
SDB	small disadvantaged business
SWPC	Smaller War Plants Corporation
USCC	U.S. Chamber of Commerce

Military Procurement and Small Businesses

For much of the past century, the federal government has sought to “aid, counsel, assist and protect, insofar as possible, the interests of small business concerns” (SBA, 2003). Such policies have deep historical roots in a long-standing American political ethos holding small business to be the “backbone of democracy” and free enterprise (Bean, 1996). As economic and political circumstances in the nation have changed, the means to promote this interest have evolved, from loans to businesses hurt by the Great Depression to initiatives seeking to boost contracting with small business and to increase federal purchases from small “disadvantaged” businesses (SDBs) (as certified by the Small Business Administration [SBA]). In recent years, Congress has set a federal government-wide goal for 23 percent of federal prime contracts to be awarded to small businesses (see Table 1.1), with additional prime contracting and subcontracting goals for SDBs and small businesses owned by women or service-disabled veterans (SBA Office of Government Contracting, 2003).

Because the Department of Defense (DoD) accounts for about two-thirds of federal purchases, its purchasing practices greatly affect the success of federal policy to utilize small businesses, and consequently draw considerable attention from small business advocates (OMB, 2004; House Small Business Committee Democratic Staff, 2003).¹ Beyond fulfilling federal small business policy goals, DoD officials also seek to incorporate more innovative ideas emanating from smaller companies (Vehmeier et al., 2003).

DoD and its Office of Small Business Programs (formerly the Office of Small and Disadvantaged Business Utilization, or SADBU),² which is charged with advising the Secretary of Defense on all matters related to small business, face several unique issues in fulfilling goals to support small business innovation and broader federal goals for small business growth. DoD and its Office of Small Business Programs must, above all else, support warfighter needs.

¹ Corrected numbers for fiscal year (FY) 2003 indicated that DoD spent 69 percent of all federal prime contract dollars and spent 65 percent of all federal prime contract dollars with small businesses (Gruber, 2004b; SBA, 2004). The DoD share of all federal procurement dollars in contract actions worth more than \$25,000 has decreased in recent years after reaching 80 percent in 1985 (SBA Office of Advocacy, 2004).

² We use SADBU in some places in this report in reference to the name of the sponsoring office at the time our research was conducted.

Table 1.1
Statutory Federal Procurement Goals

Program	Prime Contracting (%)	Subcontracting (%)
Small business	23	N/A
Small disadvantaged business	5	5
Women-owned small business	5	5
Historically Underutilized Business Zone (HUBZone) small business	3	N/A
Service-disabled veteran-owned small business	3	3

SOURCE: SBA Office of Government Contracting (2003), p. 1.

NOTE: Goals may overlap. For example, procurement from an SDB may count toward agency goals for both small business and small disadvantaged business.

Many of the needs identified in Joint Vision 2020 for continuing transformation of the armed forces, particularly those for “full spectrum dominance” and “focused logistics,” may require changes in the DoD base of suppliers, which could make more difficult the fulfillment of its small business utilization goals. These needs led DoD to ask the RAND Corporation to review small business policy preferences, their continuing implications for DoD purchases of goods and services, and some possible new approaches DoD and the federal government may wish to consider in pursuing the goals embodied in these policies.

Many of the continuing challenges DoD faces in fulfilling small business goals stem from the kinds of goods and services it purchases. If, to cite an extreme example, a promising small business were to win a prime contract as a weapon system producer, it would very likely not remain small. More generally, the oligopolistic nature of military-related industries may pose difficulties for DoD policymakers seeking to boost small business (Bean, 2001; Higgs, 1990).

Some of these challenges might be overcome by adapting private-sector initiatives for small business—for example, emphasizing subcontracting as a means to grow small businesses. Some have, in fact, been addressed in recent efforts to solve supply problems (e.g., improving supply chain processes for Joint Direct Attack Munitions [JDAMs]). Others may be made more difficult should future defense needs require increased purchases of goods and services where few small businesses compete as prime contractors (e.g., for procurement of weapon systems).

There are also limits to the lessons that private enterprise can offer on small business utilization. Many private-sector practices, including some that DoD is adopting to improve its purchasing practices (e.g., “strategic sourcing,” supply chain management, and “lean” manufacturing practices), are leading to significant supply base rationalization, with purchasers selecting fewer, better suppliers for longer-term relationships likely to help both purchasers and suppliers improve their performance. If applied to all government procurement, these practices could reduce the number of small businesses receiving prime contract awards. While there are several noteworthy private-sector initiatives to boost disadvantaged business, their adaptation may not suffice for meeting federal small business goals. Many private-sector goals for utilization of disadvantaged businesses of all sizes are lower than those DoD meets just for SDBs. Private

initiatives are often for both subcontracting and prime contracting combined, not prime contracting alone, which is the focus of federal policy for boosting procurement from small business.³ Finally, unlike the federal government, private-sector companies typically do not have goals for utilization of small (rather than “disadvantaged”) businesses. That is, size is not an issue for many private firms pursuing social goals, and some, for strategic reasons, prefer working with large businesses, “disadvantaged” or not. Many champions of “disadvantaged” businesses, as we will discuss, also advocate that such businesses increase in size to increase both their profitability and the economic standing of their broader communities (see Lowry and Holland, 2005).

In this report, we review federal policy regarding small businesses and its implications for present and future DoD purchasing policies and practices. In the next chapter, we review the origins of federal small business policy, the evolution of procurement goals, policies to foster small business innovation in federal operations and growth of small businesses with socioeconomic characteristics of concern to federal policymakers, and evidence of the effectiveness of these policies, and present support and constituencies for them. This chapter is meant to be a primer for those seeking a basic historical background on these policies, their evolution, and the continuing support for them. In Chapter Three, we review DoD transformation goals and how they are likely to affect long-standing small business policy goals. The chapter identifies broad trends in the goods and services DoD purchases, as well as those in DoD contracting practices that are likely to affect its attainment of small business policy goals. In Chapter Four, we review some trends and initiatives within the private sector, including those among firms that sell to DoD that affect small business utilization. We present conclusions and some policy implications in Chapter Five.

³The federal government requires some large contracts to have small business subcontracting plans and goals. As we will discuss, DoD also has some goals negotiated with the SBA for “tier one” subcontracting with small businesses. Subcontracting dollars do not, however, count toward meeting the overall federal goal that 23 percent of all prime contract dollars go to small businesses, nor do they count toward the goals for utilization of more narrow categories of small businesses such as those for small women-owned businesses and small “disadvantaged” businesses.

Past and Present Small Business Policies

Small business policy concerns, as we consider them, encompass three topics. First, there are policies to foster small businesses generally, reflecting federal concerns dating back nearly a century. The pursuit of policies to foster small business has been complicated by evolving goals and a wide array of standards varying by industry for defining what is a “small” business. Second, there are policies to foster the more narrow category of small “disadvantaged” businesses (as certified by the Small Business Administration) owned by socially and economically disadvantaged individuals (including African-Americans, Hispanic Americans, Asian Pacific Americans, subcontinent Asian Americans, and Native Americans) with less than \$250,000 for initial applicants and \$750,000 for continuing participants in net wealth (excluding home and business equity). This is a more recent federal policy concern, but one with elements now several decades old. Third, for the past three decades there have been efforts to foster small business innovation and research.

In this chapter, we discuss the evolution and current status of these three policy targets. In considering the evolution of small business policies generally, we also review the limited evidence on policy preferences of small business owners. The chapter is written to give readers a basic background in the development and reasons for continuation of these policies.

Small Business Policies

Background¹

Efforts to boost small business are one of the more enduring themes of federal policy. Their origins, preservation, and expansion lie in both Republican and Democratic administrations and Congresses. They are rooted in a long-standing American ethos that views economic and political democracy as intertwined and concentration of wealth in the hands of a few as a threat to democracy. (Appendix A lists dates for some notable small business policy initiatives.)

Initial Policies. Among the first policy efforts to boost small business was that for antitrust legislation more than a century ago, which proponents contended could allow small businesses to compete equally with big businesses. More-direct efforts to boost small business date to

¹ This subsection draws heavily on Bean (1996, 2001).

those of the Hoover administration, which were continued by the Roosevelt administration, to provide loans through the Reconstruction Finance Corporation (RFC) to all businesses, large or small, hurt by the Great Depression (SBA, 2003).

These policies continued, and had their first major effects on defense policy, during World War II through efforts to help small businesses participate in war production. One such effort was Congress's 1942 creation of the Smaller War Plants Corporation (SWPC) to provide direct loans to private entrepreneurs, to encourage financial institutions to provide credit to small businesses, and to advocate small business interests to federal procurement agencies and big businesses. During the Korean War, the Small Defense Plants Administration provided many of the same services that the SWPC provided during World War II.

Efforts to boost small business contracts for defense procurement were complicated by the concentration of large corporations in heavy industry and by the ability of small businesses to realize greater rewards from their flexibility in the civilian sector. Interest in promoting small business also waned because of perceptions that large corporations were more innovative and beneficial to the economy—much like small business has been viewed in recent years.

Development of the Small Business Administration. Still, presidential administrations continued to champion small business. When the Eisenhower administration moved to abolish the RFC, it sought to preserve its small business functions in a new Small Business Administration created by the Small Business Act of 1953. The function of the SBA was to “aid, counsel, assist and protect, insofar as is possible, the interests of small business concerns” (SBA, 2003). Its charter also reiterated a 1947 congressional call for small businesses to receive an unspecified “fair proportion” of government contracts and sales of surplus property. Part of this lack of specificity may have stemmed from the diffuse interests of small businesses.

At the time the SBA was created, small businesses typically shared interests with other businesses in their industry more than with other small businesses in other industries. Ambiguity and diffusion of small business interests is a recurring theme in the history of small business policy, leading one historian (Bean, 1996) to speculate that much small business policy reflects the interests of political and policy “entrepreneurs” inside government rather than expressed needs of small business constituents.²

² Regarding the success of congressional advocates in fostering small business policies despite mixed evidence of their effects, Bean writes, “As political entrepreneurs, congressional small business advocates enjoyed several advantages. The symbolic appeal of small business garnered them the support of other legislators. Politicians found it easy to vote for small business legislation if it did not seriously threaten other organized interest groups. The symbolism of small business also made it difficult for a politician to ‘vote against small business.’ Consequently, Congress usually voted nearly unanimously to pass small business legislation” (p. 168).

Nevertheless, while such legislation has enjoyed the support of some trade associations, Bean also notes, “Present-day advocates of small business face the same problem that plagued congressional champions of small business in the past: most small business owners lack any interest in politics and government. Administrators of small business development programs have been frustrated by the indifference of small business people. Many small business owners are simply too busy to concern themselves with government, even if it promises them benefits. The political scientist Benjamin Mokry concludes that the small business owner is ‘by nature independent and antibureaucratic, and may spend little time watching government actions.’ Furthermore, many small business owners are hostile to government in general because they feel burdened by taxes and regulations” (p. 177).

Setting Procurement Targets. Shortly after taking office, the Kennedy administration set more specific goals for procurement from small businesses, directing DoD to increase the small business share of defense contracts by 10 percent in the coming fiscal year. Accordingly, the Secretary of Defense developed “goals” and “quotas” throughout the military, including for each branch and for individual installations and activities. Congress considered similar mandates at the time, with even some of the most conservative members agreeing that specific goals might be required. The administration also ordered DoD to favor the smallest company among businesses making identical bids, and backed legislation granting preference to prime contractors that outsourced work to small businesses.

These initiatives had their desired results, with the small business share of defense dollars increasing for the first time in years. Nevertheless, this proportion soon fell, with a lack of small business knowledge about the defense sector and the legal requirements of government contracts, as well as an inability to handle the high volume of work often required by the military, contributing to this decrease. It was also unclear whether small businesses were underrepresented in defense procurement. While small businesses may be underrepresented in overall military procurement, they are overrepresented in half of all industries in which the military procures goods and services.³ That is, the proportion of small firms in these industries that sell goods and services to the military is larger than the proportion of small firms throughout these industries.

Recent Procurement Goals. Beyond DoD procurement, Congress periodically sought to mandate a permanent goal for small business share of federal procurement contracts, but it could not agree on such a goal for decades. In 1978, it instituted a requirement for reporting the proportion of federal contracts that went to small business, but set no firm goal. In 1988, Congress finally established a goal for 20 percent of federal prime contracts to be awarded to small businesses. In 1997, it increased this goal to 23 percent.⁴ There have been some recent calls for boosting the goal to 30 percent (Gottlieb, 2002). In addition to these prime contracting goals, DoD seeks to direct 37.2 percent of all subcontracting dollars to small businesses (DoD Office of Small Business Programs, 2009).⁵

In response to criticisms by small business lobbyists that procurement practices were resulting in “bundling” of contracts into larger, longer-term agreements that were effectively excluding small business from competition for federal contracts, Congress has included “unbundling” requirements in the Small Business Act (Baldwin, Camm, and Moore, 2001;

³ For a broader discussion of DoD usage of small business by industry, see Reardon and Moore (2005) and Moore et al. (2008).

⁴ Exempt from this requirement are nonappropriated funds, internal transactions, mandatory sources, transactions with foreign governments and international organizations, work performed outside the United States, and procurements not subject to federal acquisition regulations (e.g., those involving the Federal Aviation Administration or the Transportation Security Administration). For a more complete discussion of contracting goals regarding small businesses, see SBA Office of Government Contracting (2003).

⁵ Prime contracts are any direct contracts between the government and a contractor. Subcontracts are any agreement entered into by a government contractor calling for supplies or services required for contract performance. The base for determining subcontracting goals includes all contracts over \$1 million in construction and \$500,000 for all other goods and services (SBA Office of Government Contracting, 2003).

OFPP, 2002). In particular, the Small Business Reauthorization Act of 1997 states that federal agencies should “avoid unnecessary and unjustified bundling of contract requirements that precludes small business participation in procurements as prime contractors.” Small business lobbyists contended that they were excluded from winning large, bundled, prime contracts because they were not big enough to handle the entire scope of the new requirements.⁶ Congress requires federal agencies to conduct market research to determine whether consolidation is “necessary and justified.” The resulting projected benefits must also be “measurably substantial” relative to an unbundled baseline. Regulatory changes have lowered to \$5 million the annual value threshold for contracts requiring senior DoD procurement executives to make justifications for a “substantially bundled” contract, including an analysis indicating that the consolidation is necessary and justified, an assessment of impediments to small business participation as prime contractors, and actions to maximize small business participation as prime contractors and subcontractors (GAO, 2004; Baldwin, Camm, and Moore, 2001).⁷

Trends in DoD Procurement from Small Business. DoD has experienced mixed results in meeting small business contracting goals. Some agencies, because of the nature of the goods or services they demand, have supply bases better suited to businesses of certain sizes. For example, one analysis (Joel Popkin and Company, 2001) found that while small businesses accounted for 52 percent of the private, nonfarm gross domestic product in 1999, the share of small businesses in gross product originating (GPO) by sector varied widely. We infer that

⁶ *Bundling* is defined as the consolidation of two or more requirements for goods or services that were previously purchased through separate smaller contracts into a single solicitation that is unsuitable for small business. Recent revisions to federal code offer some opportunity for small businesses to work together to win bundled contracts without losing their small business status (SBA, 2002).

⁷ Regulatory changes embodied in Federal Acquisition Regulation (7.104[d][2]), instituted October 20, 2003, lowered from \$10 million to \$7 million the “substantial bundling” threshold for DoD (GAO, 2004). The National Defense Reauthorization Act for FY 2004 imposed additional restrictions on senior procurement activities to ensure that small businesses are given appropriate opportunities to participate in consolidated acquisitions exceeding \$5 million.

The actual effects of bundling on small business are unclear. Between 1991 and 2000, according to the Office of Management and Budget’s (OMB’s) Office of Federal Procurement Policy (OFPP), the total number of federal contracts awarded to small businesses decreased by more than half, from 26,505 to 11,651 (Dooley, 2003). At the same time, the number of dollars going to small businesses did not change significantly, suggesting that small businesses are getting larger, longer contracts.

In FY 2002, according to the Federal Procurement Data System (FPDS), 23 federal agencies, including DoD, had 928 bundled contracts (associated with 2,404 bundled contract actions) in FY 2002, while the agencies themselves reported only 24 such contracts to the OFPP. Through its review of FPDS data, the General Accounting Office (GAO, renamed the Government Accountability Office in July 2004) found that 33 percent of contracts coded as “bundled” were awarded to small businesses, even though, by definition, a small business is essentially precluded from being awarded a bundled contract. The GAO also found that there were many FPDS coding errors resulting from confusion about the statutory definition of contract bundling, inadequate verification of data, and ineffective controls in the FPDS reporting process.

The OFPP in October 2002 instituted a strategy for increasing small business contracting opportunities, particularly by mitigating the effects of bundling. The accompanying regulatory changes to effect this policy were not made until October 2003, providing too little time to analyze the effect of the policy to date.

The effects of bundling, including benefits or price premiums of bundled contracts, on DoD is less clear still. Although there is considerable speculation on the effects of federal contract bundling on small businesses, there has been virtually no speculation on how bundling may affect federal government operations. For further discussion, see Moore et al. (2008), especially pp. 19–27.

sectors in which small business GPO exceeds that for the economy as a whole—including construction (90 percent), services (68 percent), and wholesale and retail trade (65 percent)—are those in which small businesses are most competitive on price and quality, regardless of set-asides.⁸

For the sectors in which small business may be most competitive, DoD purchases from small business exceed 23 percent. In FY 2007, for example, the proportion of DD350 prime contract purchases that were made through small businesses were particularly high in military construction, operations and maintenance, and family housing, but relatively low in purchases for research, development, test, and evaluation (RDT&E) and for weapon procurement.⁹

Overall, DoD prime contract purchases from small businesses have often fallen short of 23 percent in recent years (see Figure 2.1). In addition, DoD exceeded the prime contracting goal for several years in the mid-1990s before the goal was raised from 20 percent to 23 percent.

Small business contract dollars are roughly split between prime contracts (which count toward federal small business contracting goals) and subcontracts (which count only toward some limited, separate goals). The proportion of dollars for small business in subcontracts has fallen short of internal DoD goals—37.2 percent in FY 2009—in recent years (see Figure 2.2). Subcontracting has decreased in part because prime contractors have sought to consolidate their supply base in attempts to “leverage their purchases, cut costs and improve performance” (Gruber, 2004a). Some defense contractors have also claimed that they do not receive sufficient quality bids from small business subcontractors.

Defining Small Business

One of the persisting difficulties in designing and administering policies to promote “small business” has been defining what constitutes such a business. Federal statutes consider

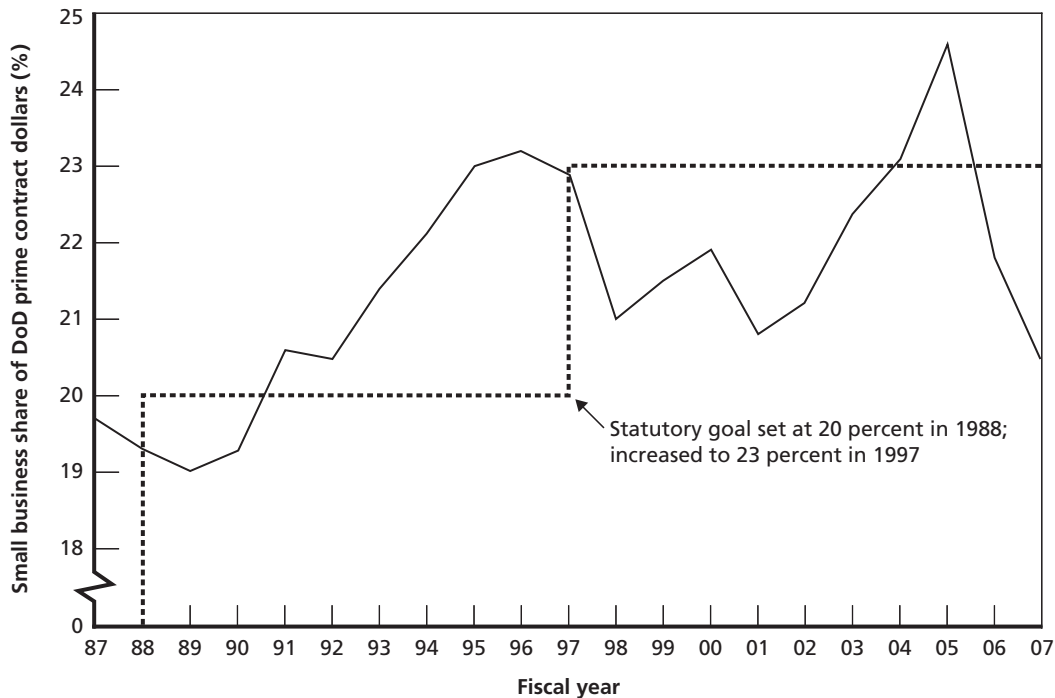
[a] small business [to be] one that:

1. is organized for profit;
2. has a place of business in the United States;

⁸ Other reported small business GPO shares included 45 percent in fire, insurance, and real estate; 27 percent in mining and manufacturing; and 26 percent in transportation, communication, and public utilities. Unfortunately, there is no direct evidence relating to the cost effects of DoD’s small business preferences, although some recent research by Marion (2004; 2005; email correspondence with lead author, September 12, 2005) offers some suggestive indicators. Regarding small business preferences, Marion found that, on California road construction projects, procurement costs are 3.5 percent higher on auctions using preferences for small businesses, with firm profits lower on such auctions as well. Regarding preferences for women or minority suppliers, Marion found winning bids for California state contracts also decreased after the passage of Proposition 209, which prohibited the consideration of race or sex in state-funded contracts. Marion did not find that preferences affected the quality of work done under the contract, nor that cost overruns, when controlling for the size of the project, varied by the size of the firm doing the work.

⁹ We later discuss in more depth what trends in DD350 data and their implications mean for DoD efforts to meet small business procurement goals. See also Reardon and Moore (2005) on small business utilization by industry in DoD and across the federal government.

Figure 2.1
DoD Use of Small Businesses for Prime Contracts



SOURCES: DoD Office of Small Business Programs (2009); Moore et al. (2008).

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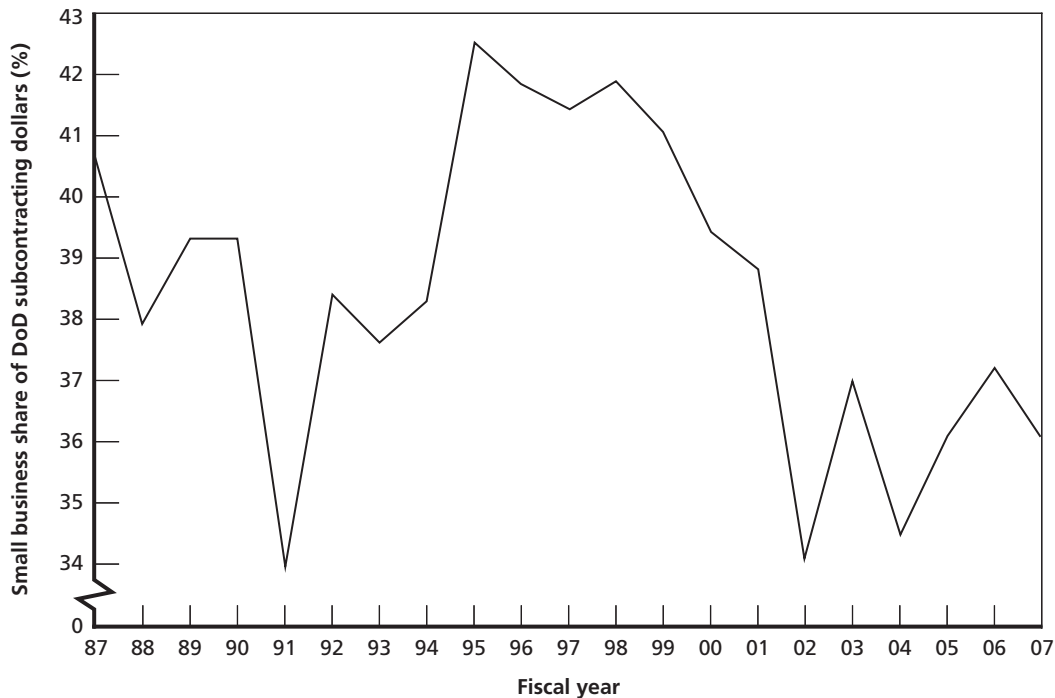
3. makes a significant contribution to the U.S. economy by paying taxes or using American products, materials or labor; and,
4. does not exceed the numerical size standard for its industry. (DoD Central Contractor Registration, 2004).

Of these criteria, the “numerical size standard” by industry is perhaps most confusing. Businesses may be classified as “small” according to either their number of employees, as is typical for manufacturing, or their financial size (typically measured as average annual receipts), as is typical for services. Official small business classifications do not readily correspond to available published data on businesses (e.g., Internal Revenue Service Corporation Source Book of Statistics of Income, U.S. Census Bureau Economic Census or County Business Patterns data).

There are more than 600 industries as classified by North American Industry Classification System (NAICS) codes for which number of employees determines whether an enterprise is a “small” business.¹⁰ For most of these industries, 500 employees is the threshold for

¹⁰ A list of industries and their specific size standards for “small” businesses is available in SBA (2008).

Figure 2.2
DoD Use of Small Businesses for Subcontracts



SOURCES: DoD Office of Small Business Programs (2009); Moore et al. (2008).

NOTE: The source is likely an underestimate. The subcontracting data were gathered only for contracts worth at least \$500,000 (or \$1 million for construction projects). Also, the reader may notice that this figure, unlike Figures 2.1 and 2.3–2.6, does not include a dotted line indicating the goal for subcontracting. This is because, as noted, there is no statutory goal for subcontracting, only an internal DoD goal that varies somewhat over time.

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determining whether a business is “small.” Thresholds vary by industry, from 100, used for businesses in many wholesale industries, to 1,500, used for aircraft manufacturers, among others. If applied across all industries, even the most restrictive threshold of 100 employees would appear to account for a large portion of U.S. economic activity. Of the 5.7 million U.S. firms in 2002, 5.6 million had fewer than 100 employees; in all, these firms employed 36 percent of U.S. workers (U.S. Census Bureau, 2005).

There are more than 500 other industries as classified by NAICS codes for which average annual receipts determine whether a business is “small.” For most of these industries, \$7 million is the threshold for determining whether a business is “small.” These thresholds also vary, from \$750,000, used for many agricultural industries, to \$35.5 million, used for single businesses providing multiple facilities support services.¹¹ Recent proposals to streamline the crite-

¹¹ Anecdotally, we have learned that some large businesses will hold back giving a small business additional work because it will push the business over its threshold goal and thus no longer count toward meeting federal small business (or their own) subcontracting goals.

ria for defining small business, in part by relying solely on the number of employees for classification, and to lower the threshold for small business classification (effectively reducing the number of businesses that are eligible for it) were withdrawn after many businesses complained about the changes (Federal Register, 2004; Emery, 2004; “SBA Withdraws Changes,” 2004).¹²

To qualify for federal contract preference, businesses must *self-certify* that they are smaller than the size standard for their NAICS code. Businesses similarly *self-ensure* compliance with size standards. Competitors losing a contract to a small business may challenge its self-classification. Contracting officers are also strongly encouraged to “diligently review an offeror’s small business self-certification before awarding a contract” (Armendariz, 2003). The SBA periodically reviews the small business contractor database; recently, it removed 600 registered businesses found not to be “small” and an additional 90,000 that had not updated their profile in 18 months (Armendariz, 2003).¹³

Gauging the Interests of Small Businesses

Beyond the criteria for classifying firms as small businesses, much is unknown about the small business constituency, particularly regarding its needs and policy preferences. One historian (Bean, 2001, p. 130) notes that “knowledge of small business attitudes toward government is limited” and that exploring this topic, and what small business owners might expect from government, warrants more attention. Nevertheless, several sources provide some insight on current interests of small businesses, including the priority that small businesses give to securing federal contracts. These appear to indicate that, overall, procurement policy is of interest to few small businesses.

To gauge the policy interests of all small businesses, we review four different sources. First, we review the policy priorities of the National Federation of Independent Businesses (NFIB). The NFIB claims 600,000 members and to be the largest advocacy organization representing small and independent businesses to government at both the national and state levels. Second,

¹² Representatives of some large businesses buying in capital-intensive industries have told us that thresholds for these industries should be raised, not lowered, because the current thresholds make it very difficult for a business to qualify as a small business. In particular, these representatives told us, the threshold for engineering services, \$4.5 million for NAICS code 541330, may be too low. There are higher thresholds for engineering services related to military and aerospace equipment and military weapons (\$27.0 million), contracts and subcontracts for engineering services awarded under the National Energy Policy Act of 1982 (\$27.0 million), and marine engineering and naval architecture (\$18.5 million).

Standards have shifted over time, occasionally in notorious ways. In one of the most infamous examples, a market share standard was used to classify the American Motors Company, which in the mid-1960s had only 3 percent of the automobile market but more than 30,000 employees and about \$1 billion in sales, as a “small” business (Bean, 2001).

¹³ Enforcement of these standards may be limited. In 2004, there were reportedly 180,000 firms on the small business contractor list but only two SBA employees helping to maintain it (Bounds, 2004).

In some circumstances, federal contracts meant for small business have been awarded to small firms subsequently acquired by larger ones. The SBA Office of Inspector General (2005) found that “[t]he SBA awarded four [contracts], reported as small business procurements, to large companies at the time of the procurements. This occurred because SBA utilized multiple award contracts, which do not require that agencies obtain current size certifications, and did not ask contractors for an updated size certification Because contracts can be active for many years, companies may become large, and an agency can still obtain credit for small business procurement” (p. 3). The SBA has since pursued efforts to change certification regulations.

we review the policy priorities of the National Small Business Association (NSBA), which claims more than 150,000 members and to be the oldest nationwide small business organization. Third, we review the policy priorities of the U.S. Chamber of Commerce (USCC), which claims to represent more than 3 million businesses, 96 percent of which have fewer than 100 employees. Fourth, we examine the results of a survey of small and mid-sized businesses by the City Business Journals Network.

NFIB Policy Priorities. To gauge the policy interests of its members, the NFIB periodically conducts a random mail survey of a sample of its members to assess their “problems and priorities” (Phillips and Wade, 2008). “Winning contracts from federal/state/local governments” has consistently ranked among the least important problems for small business owners in this survey. In the 2008 survey, it ranked 71st out of 75 problems. In 2004, it ranked 69th out of 74 in importance; in 2000, it was 70th out of 74. By contrast, problems with insurance, tax, and energy costs ranked highest. Respondents to the NFIB survey ranked “cost of health insurance” as their top concern. The NFIB top ten list of problems and priorities of small business owners in 2008 comprised the following:

1. Cost of health insurance
2. Cost of natural gas, propane, gasoline, diesel, fuel oil
3. Federal taxes on business income
4. Property taxes
5. Tax complexity
6. Unreasonable government regulations
7. State taxes on business income
8. Cost of supplies/inventories
9. Electricity costs
10. Workers’ compensation costs.

Since 1982, selling goods and services to the government has never ranked higher than 60th among the problems that small business owners have identified in the survey. There is little substantial difference by number of employees, industry, location, length of ownership, and citizenship or immigrant status of owners in the low priority that business owners in the 2008 survey give to winning government contracts.

An analysis of survey results notes:

Both the federal and state/local governments continue to try and raise the share of procurement dollars going to small firms. This survey indicates that despite their efforts, government procurement is not a high-ranking concern for most small businesses. . . . Most owners either do not want to do business with the government or do not think they can . . . 72 percent of owners made no sales to a government agency during the past three years and 84 percent did not expect to bid on a contract during the next three years. Owners, especially retailers and service firms, generally think that they do not produce a product or service that the government wants to buy (Phillips and Wade, 2008, pp. 10–11).

NSBA Priorities. The NSBA has given somewhat higher priority to government contracts. It calls the percentage of federal contracting dollars awarded to small business “unacceptable,” and “urges Congress and the administration to pursue policies that encourage wide participation on government contracting, eliminate fraud, ensure accurate and reliable data, end contract bundling, improve authority and oversight over contracting dollars, and provide appropriate treatment of subcontractors” (NSBA, no date).

Nevertheless, contracting and procurement did not rank among its top ten priority issues for the 110th Congress. Rather, “broad health care reform” and “fair labor practices in the workplace” were its top two issues, although “reauthorization, expansion, and strengthening” of the federal government’s Small Business Innovation and Research (SBIR) program, which we will later discuss, did rank third (NSBA, 2007). A 2008 NSBA survey of small business owners further found that “reducing the tax burden” and “addressing health care costs” were, by far, the issues of “most importance” to these voters when they considered their vote in the presidential election that year (NSBA, 2008).

USCC Priorities. The USCC lists “government contracting” and “small business” among its “issue priorities” (USCC, 2009). Its focus on these issues, however, is only loosely tied to government contracting opportunities for small business. Indeed, both government contracting and small business are but two of 20 issue priorities for the USCC; others include “corporate governance,” “education and workforce development,” “energy and the environment,” “health care,” “labor policy,” “pensions,” and “taxes.”

For example, its government contracting focus is more broadly on creating government contracting opportunities for *all* businesses rather than small businesses specifically. It “[s]upport[s] acquisition and procurement reform initiatives to streamline the contracting process and maximize opportunities for the private sector in the federal market,” “[o]ppose[s] legislative efforts to restrict contracting federal functions to the private sector,” and pledges to “[c]ontinue working to defeat harmful provisions that would strengthen protectionist Buy American measures” (USCC, 2009).

Similarly, its small business priorities, while “[s]upport[ing] legislation to provide budgetary independence for the Office of Advocacy within the Small Business Administration” as well as improved SBA lending programs to small businesses, do not mention improving government contracting opportunities for such businesses (USCC, 2009).

City Business Journals Network Survey. The City Business Journals Network periodically surveys, by telephone and via the Internet, business owners, chief executive officers, and presidents of small (i.e., with fewer than 100 employees) and “mid-market” (i.e., with 100 to 499 employees) companies.¹⁴ A March 2004 survey of small and midsize businesses indicated priority issues that have remained consistent over time, with the cost of health insurance being the top concern for small and mid-market companies, just as it is for respondents to the NFIB survey (see Table 2.1). Unfortunately, government procurement is not one of the topics asked

¹⁴ As noted earlier, “small” firms with fewer than 100 employees constitute 98.3 percent of U.S. firms and employ 36.0 percent of U.S. workers. “Midsize” firms of 100 to 499 workers comprise 1.4 percent of U.S. firms and employ 14.1 percent of U.S. workers. See U.S. Census Bureau (2005).

Table 2.1
City Business Journal Network Survey Respondents' Top Concerns
by Business Size, 2004

Rank	Small Business	Mid-Market Business
1	Cost of health insurance	Cost of health insurance
2	Having enough money to retire	Finding, keeping good employees
3	U.S. economy	U.S. economy
4	Demands on time	Business safety, security
5	Finding, keeping good employees	Having enough money to retire

in the close-ended question on the City Business Journals Network survey. Nevertheless, we find it telling that the top priority of this survey—health insurance—matches that of other similar surveys.

Have Small Business Policies Been Effective?

One possible reason for the limited interest small businesses have shown in government procurement is the relatively limited benefits such procurement may offer them. Based on estimates that small business comprises 52 percent of the private, nonfarm gross domestic product (Joel Popkin and Company, 2001), we surmise that the small business share of the current gross domestic product is nearly \$4.7 trillion.¹⁵ By contrast, total federal spending on small businesses in FY 2003 was \$66 billion, constituting 23.6 percent of federal procurement (FPDC, 2004). Put another way, even when federal procurement reportedly meets the 23 percent governmentwide goal, federal spending with small businesses represents just over 1 percent of the gross domestic product associated with small businesses, or a very small proportion of the opportunities that small businesses find elsewhere.

While small businesses may not exhibit high interest in federal procurement, policies to boost small business contracts remain strong, with specific award goals that have endured across changes of Congress and presidential administrations. The number and scope of small business utilization programs have increased over time, with prime contracting goals set to ensure small businesses receive a “fair proportion” of federal contracts.

Nevertheless, results of these efforts are difficult to evaluate. Small business utilization is generally judged on input. That is, the entire goal-setting process, as well as data collection on its effects and reporting of its results, is geared to measuring the dollars and contracts awarded to small business, and pays little attention to the *effect* that access to government contracts has on small business starts, growth, and wealth generation. Results of the program are also hard to isolate, difficult to measure, and generally not judged against the next best or other alternative policies. None of the academic and government reports we reviewed were able to establish a clear causal relationship between federal preferences for small business contract awards and

¹⁵ The total gross domestic product in 2004 was \$11.734 trillion, of which \$8.929 trillion was private, nonfarm output (Bureau of Economic Analysis, 2005).

increases in employment, business starts, and economic opportunity. Even the SBA Office of Advocacy (2003) concedes, “While small firms contribute substantially to the growth of the economy, the number of small firms does not change dramatically over time.”

Categories of Small Business

Background

A second, more recent theme of federal policy regarding small businesses is supporting the more narrow category of “disadvantaged” businesses among all small businesses. This is embodied in language of the Small Business Act that seeks to “promote the business development of small business concerns owned and controlled by socially and economically disadvantaged individuals” through a variety of business development services, as well as other programs more narrowly focused on preferences for SDBs in the granting of procurement contracts (Public Law 85-536).

Like concern for small business in general, federal concerns for small businesses owned by “socially and economically disadvantaged individuals” has its roots in broader policy concerns. Such policy has also been supported by Republican and Democratic administrations and Congresses and has been intertwined with defense policy over the years.

The Roosevelt administration established one of the first federal precedents for such efforts when, during World War II, it barred discrimination against African-Americans by defense contractors (Stephanopoulos and Edley, 1995). Later, the Kennedy administration issued its own measures to achieve nondiscrimination, measures it described as “affirmative action” (Executive Order 10925). These measures are also commonly recognized as those establishing affirmative action policy because they were linked with an emphasis on “numerical yardsticks” for the hiring of minorities and women (Holzer and Neumark, 2000). The Johnson administration subsequently required federal contractors to take affirmative action to ensure equality of employment opportunity.

The Johnson administration brought affirmative action to small business policy in 1967 when a DoD official suggested using Section 8(a), which had lain dormant, to boost minority business (Bean, 2001). The initial results were modest—there were only eight Section 8(a) contracts awarded in 1968—but the program evolved rapidly. The program became part of Nixon administration efforts to boost “black capitalism.” The Ford administration relied on Section 8(a) as a means to increase business for “disadvantaged” firms. Even the Reagan administration, despite its stated opposition to some small business and affirmative action policies, boosted Section 8(a) contract dollars by 30 percent in one year.

Defining Other Categories of Small Businesses and Programs for Them

Like that for “small” business, the definition of “disadvantaged” business has at times been confusing. While Section 8(a), for example, was originally interpreted to boost African-American businesses, over time it has been applied to more and more groups, sometimes in inconsistent ways (Bean, 2001).

Women were among the first groups to be added to those qualifying for special procurement opportunities. In 1979, the Carter administration directed federal agencies to take affirmative action to support small businesses owned by women, a change one historian notes resulted from its “political appeal.”¹⁶ The Women’s Business Ownership Act in 1988 also directed federal agencies to promote federal prime contracting and subcontracting opportunities for women.

A procurement goal of 5 percent of prime contracts and 5 percent of subcontract awards for SDBs was also added to the Section 8(a) program as small business policy in 1988.¹⁷ The definition of businesses eligible for such procurement goals was expanded again in 1997 to include those in Historically Underutilized Business Zones (HUBZones), defined by income, unemployment rate, or location on an Indian reservation. The expansion to include HUBZone businesses came in the wake of a 1995 Supreme Court ruling (*Adarand v. Peña*) subjecting racially preferential policies to “strict scrutiny” tests. In 1999, Congress, in passing the Veterans Entrepreneurship and Small Business Development Act, again expanded small business preferences to include those owned by service-disabled veterans. Altogether, initiatives to boost “disadvantaged” businesses now include those small businesses owned by individuals with less than \$750,000 in net wealth (excluding home or business equity) who are African-Americans, Hispanics, Native Americans, subcontinent Asians, Pacific Islanders, women, or service-disabled veterans, as well as small businesses in HUBZones.¹⁸

As programs for SDBs have expanded, their methods have expanded. While Section 8(a) programs primarily use sole-source or set-aside contracts, other SDB programs have used set-asides, “rule of two” awards, and 10 percent bid “preferences.” The “rule of two” allows contracting officers to limit bidding on a particular contract to Section 8(a) businesses if two or more such businesses are potential bidders on a contract and if the contracting officer determines the prevailing bid will likely be within 10 percent of the prevailing market price. A 10 percent preference rule allows contracting officers, when full and open competition exists on a contract, to add 10 percent to the price of a non-SDB bid, although such preferences are suspended in years following those in which DoD meets its SDB procurement goals.¹⁹ SDBs in HUBZones can qualify for both an SDB and a HUBZone preference.

Both the SBA and DoD have also sought to increase SDB subcontracting. In 1988, the SBA began collecting and reporting data on subcontracts awarded to SDBs. All contracts for more than \$500,000 (or \$1 million for construction) are required to have a subcontracting

¹⁶ Bean (2001) contends that, “In truth, female business owners had a lot in common with their male counterparts. An SBA survey reported ‘their identification as small business owners beset with problems common to all small business and not inclined to think of themselves as especially affected by gender.’ Nor was there evidence of widespread discrimination in the credit markets. . . . Yet the charge of ‘sexism’ had political appeal, because it allowed activist policymakers to ‘do something’ for women” (pp. 99–100).

¹⁷ Procurement goals for small and disadvantaged businesses and other categories of small business (e.g., women-owned business) are inclusive of, rather than an addition to, overall small business goals.

¹⁸ One business representative we interviewed suggested that the wealth threshold for SDBs, like the value threshold for defining small businesses, be increased.

¹⁹ The Supreme Court has overturned a similar preference system for minority firms in federal highway projects (Gottlieb, 2002).

plan detailing how the contractor will award work to SDBs and other small businesses, including percentage goals, or explain why they are unable to meet these goals (current DoD prime contracting and subcontracting goals, as negotiated with the SBA, are shown in Table 2.2). Small business prime contractors are exempt from this requirement. Since 1990, DoD has conducted the Comprehensive Subcontracting Plan Test Program, authorizing the negotiation, administration, and reporting of subcontracting plans on a plant, division, or companywide basis, to determine whether comprehensive subcontracting plans will result in increased subcontracting opportunities for SDBs (DoD SABDU, 2006a).

DoD SDB Program Results

DoD utilization of SDBs has been increasing, and often exceeds its goals, although DoD sometimes falls short in its goals for procurement in other special categories of small businesses, such as those owned by women or in HUBZones. Statutory goals call for SDBs to receive 5.0 percent of prime contract dollars (including Section 8[a]). DoD has exceeded this level each year since FY 1993. In most recent years, it has given at least 6 percent of prime contract dollars to SDBs (see Figure 2.3).

Both the departmental and statutory goal for subcontracting dollars to SDBs is 5.0 percent. DoD appears to have fallen just short of 5.0 percent of subcontracting dollars in recent years, although available subcontracting data may not reflect all subcontracting activity (see Figure 2.4). While all contracting dollars for small businesses are roughly split between prime contracting and subcontracting, about three-quarters of those for SDBs are for prime contracts. Put another way, DoD has been able to direct more prime contracting than subcontracting dollars to SDBs.

Table 2.2
DoD-Wide Prime Contracting and Subcontracting Goals

	Prime Contracting (%)	Subcontracting (%)
Small business	22.375 ^a	37.2 ^b
Small disadvantaged business	5.0 ^c	5.0
Small women-owned business	5.0	5.0
HUBZone small business	3.0	3.0 ^d
Service-disabled veteran small business	3.0	3.0

SOURCE: DoD SABDU (2006b).

NOTE: For more background on prime contracting and subcontracting goals and how they are established, see SBA (2005).

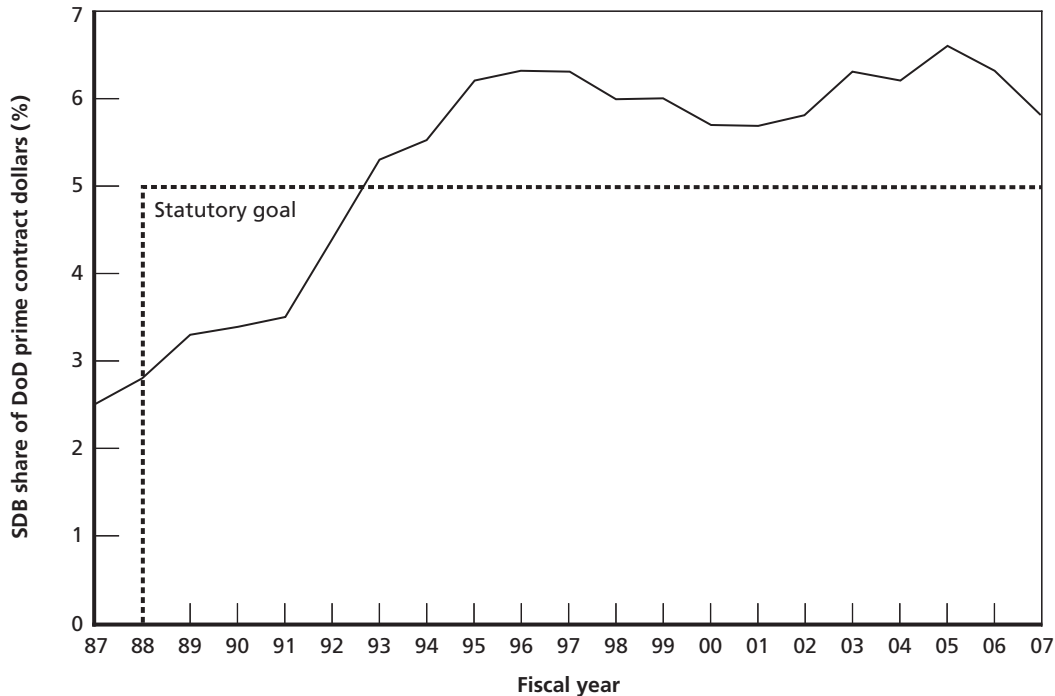
^a Prior to 2007, the prime contracting goal for DoD was 23.0 percent, the same level as in the rest of the federal government.

^b There is no statutory goal for overall small business subcontracting.

^c Prior to FY 2007, the DoD goal exceeded the statutory goal.

^d The HUBZone subcontracting program does not require a DoD-wide goal but negotiation of HUBZone goals in all DoD contracts and subcontracts requiring a small-business subcontracting plan. Nevertheless, the SBA assigned a 3 percent HUBZone subcontracting goal to DoD in FY 2008.

Figure 2.3
DoD Use of SDBs for Prime Contracts



SOURCE: DoD Office of Small Business Programs (2009).

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Per DoD policy, small businesses owned by women are to receive 5.0 percent of prime contracting and 5.0 percent of subcontracting dollars (DoD SADBUs, 2006b). The proportion of prime contract dollars going to small businesses owned by women has increased in recent years but remains well short of the goal (see Figure 2.5).²⁰

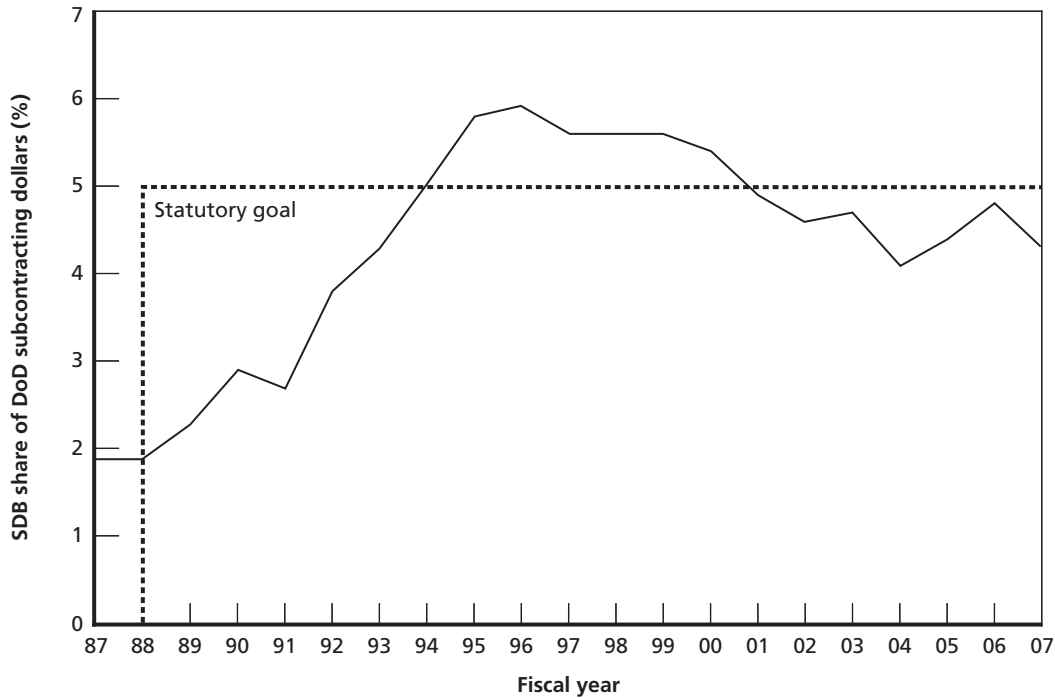
The proportion of subcontracting dollars going to small businesses owned by women has increased and in recent years has exceeded the statutory goal (see Figure 2.6). Small businesses in HUBZones are to receive 3.0 percent of prime contract dollars; while the reported proportion has increased from virtually nil in FY 1999 to 2.2 percent in FY 2007, it is still short of the goal.

The broad effects of the increasing proportion of dollars going to special categories of small businesses are unclear. Reasons for the lack of evidence may include the lack of tracking of these programs as well as program goals to “graduate” businesses to a larger size.²¹

²⁰ Anecdotal evidence suggests that some women-owned businesses find better opportunities outside government markets. See, for example, Fisher (2004).

²¹ One analysis (Gottlieb, 2002) notes, “Many former 8(a) firms have disappeared in the mainstream, however. Of about 1,500 businesses that completed their 8(a) program recently, only 41 confirmed that they were still operating independently, 10% went out of business and most of the rest failed to respond.”

Figure 2.4
DoD Use of SDBs for Subcontracts



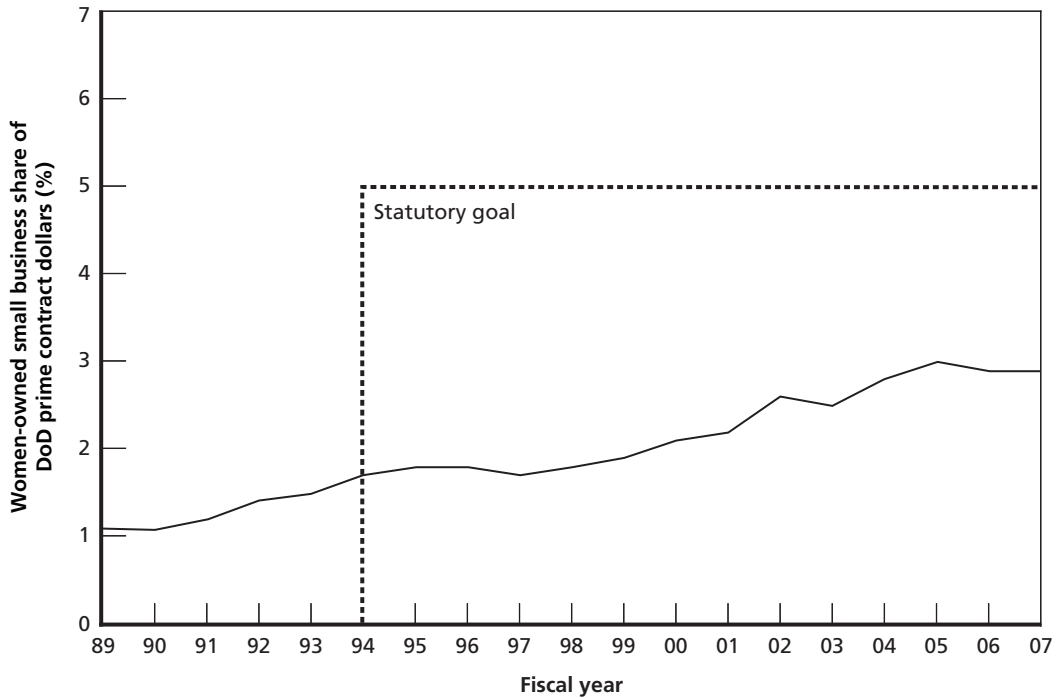
SOURCE: DoD Office of Small Business Programs (2009).

NOTE: The source is likely an underestimate. The subcontracting data were gathered only for contracts worth at least \$500,000 (or \$1 million for construction projects).

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There is some evidence that SDB utilization goals are linked to increased employment and ownership opportunity that have led to greater overall economic opportunity for disadvantaged groups, but the evidence is weaker regarding possible boosts to women-owned businesses (Holzer and Neumark, 2000). Furthermore, isolating the particular effects of programs to boost federal contracts with SDBs is a difficult task, since there have been many concurrent programs aimed at increasing inclusion and opportunity for disadvantaged populations. Holzer and Neumark (2000) and Stephanopoulos and Edley (1995) conclude that minority employment increases among contractors subject to federal oversight, but this is true for both large and small contractors—that is, there is no special effect attributable to policies directing contracts to small businesses. Bates (1988, 1997) similarly notes that increased use of minority contractors who in turn are more likely to hire minority workers also boosts minority employment. At the same time, expanding employment opportunities for minorities outside small business entrepreneurship may mitigate the effects of small business preferences on minority employment, particularly given the greater opportunities professionals of “disadvantaged”

Figure 2.5
DoD Use of Women-Owned Small Businesses for Prime Contracts



SOURCE: DoD Office of Small Business Programs (2009).

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groups are increasingly finding outside small business ownership. In fact, some minority business advocates suggest “that only large minority-owned businesses can create the . . . growth that is needed to invigorate minority communities” (Lowry and Holland, 2005, p. 2).²²

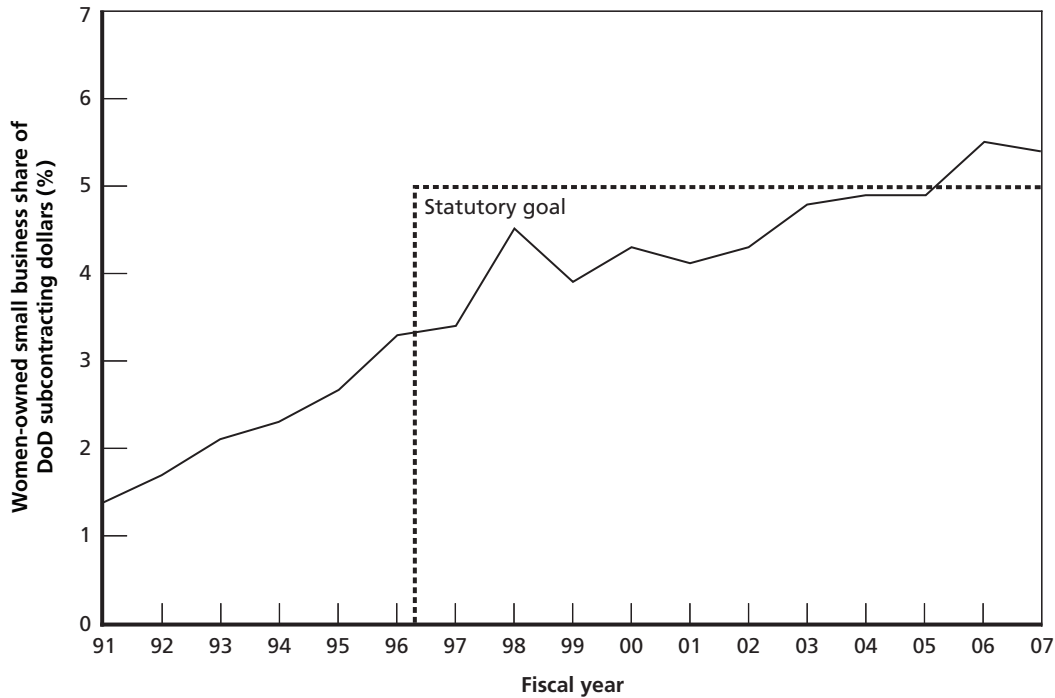
Fostering Small Business Innovation and Research

Background

A third concern of federal small business policy has been supporting innovation within small businesses. Federal efforts to boost innovation and research among its contractors date to two 1980 laws. The Stevenson-Wydler Act of 1980 made technology transfer a mission of all federal laboratories and required all major federal laboratories to establish an Office of Research and Technology Applications to undertake technology transfer activities (Jaffe and Lerner, 2001). The Bayh-Dole Act of 1980 gave universities and federally funded research and development

²² Lowry and Holland (p. 24) also note that minority-owned businesses are more concentrated in “traditionally low-growth segments” of the economy, such as personal services, eating and drinking establishments, food stores, and passenger transportation.

Figure 2.6
DoD Use of Women-Owned Small Businesses for Subcontracts



SOURCE: DoD Office of Small Business Programs (2009).

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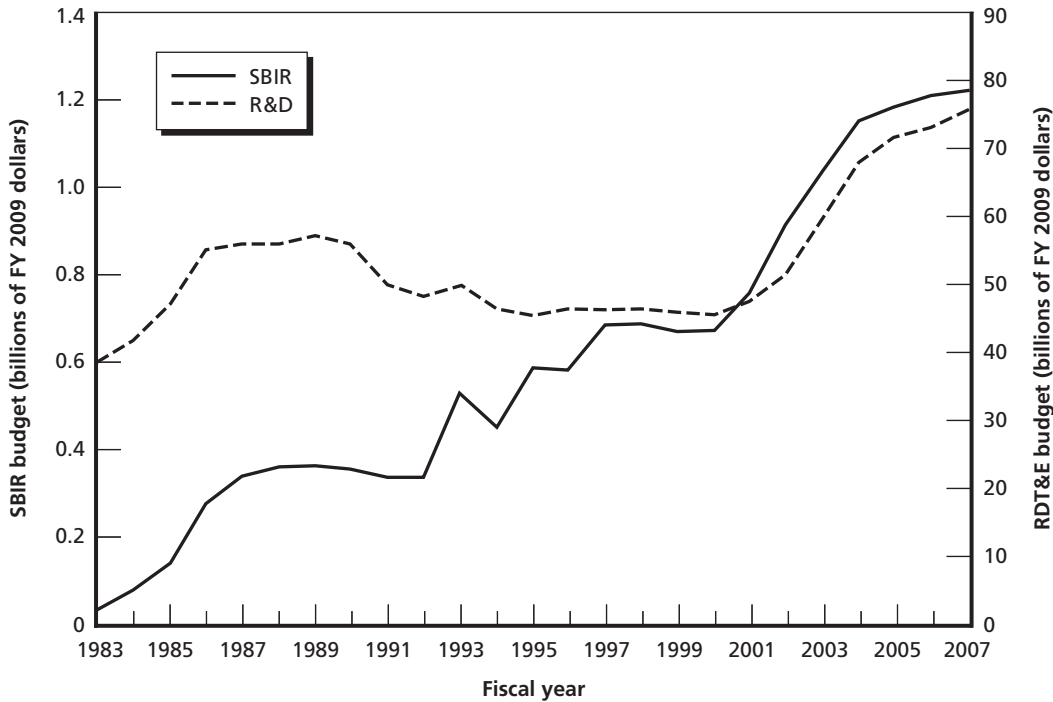
centers intellectual property rights to federally funded research and development. Its effects are such that it has been lauded as “possibly the most inspired piece of legislation to be enacted in American over the past half-century” (“Innovation’s Golden Goose,” 2002). Before this legislation, fewer than 5 percent of the 28,000 patents owned by the federal government had been used to develop commercial products. Since then, university patent rates have increased tenfold, and 2,200 firms have been spun off to exploit these innovations, creating more than a quarter-million jobs and \$30 billion in revenue (Council on Governmental Relations, 1999).

One key enabler of these acts has been the Small Business Innovation and Research Act of 1982, which established policies for giving contracts to small businesses to bring federal innovations to commercial markets. Much of the work of the SBIR Act has been accomplished through the Small Business Technology Transfer (STTR) program and the SBIR Fast Track. Congress established STTR in 1992 to enable government laboratories to collaborate directly with commercial small businesses to commercialize the most promising innovations of laboratories. DoD instituted the SBIR Fast Track to give higher priority to contractors that attract third-party funding for developing their innovations.

Each agency with more than \$100 million for external (i.e., contracted) research and development (R&D) is required to set aside a small proportion of this budget for SBIR contracts. The SBIR program seeks to stimulate technological innovation, to use small business to meet federal R&D needs, to foster and encourage participation by minorities and “disadvantaged” persons in technological innovation, and, ultimately, to increase private-sector commercialization of innovations derived from federal R&D funding (GAO, 1987). Each federal agency with more than \$100 million for external (i.e., contracted) R&D is required to set aside a small proportion of this budget for SBIR contracts. This set-aside requirement was initially 1.25 percent; it increased to 1.5 percent in FY 1993, to 2.0 percent in FY 1996, and to 2.5 percent in 1997 (SBA Office of Advocacy, 2004).

SBIR initiatives appear to have made some contribution to an increase in DoD procurement from small businesses for RDT&E services. Our analysis of DD350 data shows that between FY 1983 and FY 2007, SBIR set-asides increased from less than \$30 million to nearly \$1.2 billion, as measured in constant FY 2009 dollars (see Figure 2.7). At the same time, the contribution of SBIR to the increase in small business participation in RDT&E is unclear. In the last decade, for example, the rate of growth for the SBIR program, 78 percent, has been greater than the 48 percent growth in all small business RDT&E, but the absolute

Figure 2.7
SBIR and Other Small Business Dollars for DoD RDT&E, FYs 1983–2007



growth in SBIR in real terms, \$537 million, has lagged that of other small business RDT&E, \$1.19 billion. Overall in the past decade, DoD RDT&E expenditures with small businesses increased from \$3.49 billion to \$5.21 billion (see also Moore et al., 2008).

Results

Analyses of SBIR programs have generally been positive, although not conclusive. Analyses have also been general, rather than focusing on DoD specifically.

A GAO survey of the SBIR program found that it increased employment, improved non-SBIR research, and its funds helped programs that otherwise would not have been funded (GAO, 1987). A more recent analysis of two national laboratories found SBIR programs have had a “substantial impact” on patenting (Jaffe and Lerner, 2001). An evaluation of SBIR programs found that there was a shift away from basic research toward research programs with more commercial potential and success (Archibald and Finifter, 2003). A study of the long-term impact of SBIR programs found that recipients grew significantly faster than comparable firms did and were more likely to receive additional venture capital (Lerner, 1999).²³ SBIR programs have been found more effective than tax credits for early stages of financing technology innovation, although evaluators have also found that the program is not well understood generally and that academic and government evaluations of it are lacking (Wessner, 2003).

Earlier RAND research indicated that many DoD program managers view the SBIR as a tax on their program rather than as an opportunity (Held et al., 2006). It also found that most R&D conducted in the program focused on basic and applied research, leading to immature technologies not always ready for application. SBIR fund recipients were often not well equipped to manage subsequent, longer-term technology development because of the cash flow requirements.

Further research is needed regarding whether SBIR contracts offer the best return on investment as well as on the magnitude of ancillary consequences. One study on whether public R&D funding complements or displaces private R&D funding yielded ambivalent results (David, Hall, and Toole, 2000).

²³ Lerner’s evidence also supports the hypothesis that winning a Phase II SBIR award, given to firms whose Phase I awards yield the most promising new applications, serves as a certifying mechanism for potentially more capable firms to demonstrate their ability to attract customers and venture capitalists. This allows winning firms to grow faster and attract more funding than nonwinning firms would. For a more recent discussion on possible graduation among the DoD’s small business contractors, see Moore et al. (2008).

Defense Planning Needs and Small Business Utilization

Given what is known about its likely needs in coming years, what are the prospects for the Department of Defense in meeting small business contracting goals? To analyze this, we examine operational needs that are likely to affect the types of goods and services that DoD purchases, the small business share of each, how changing compositions of goods and services DoD needs for its changing operational needs will affect the opportunities it has to meet small business policy goals, and how evolving contracting practices may also affect small business procurement.

Future Operational Needs

Future operational needs of DoD can be discerned from its long-range planning guidance as expressed in Joint Vision 2020 (Joint Chiefs of Staff, 2000). This guidance poses challenges to transformation of the defense industrial base and the position of small business within it.

The goal that Joint Vision 2020 sets for DoD is “full spectrum dominance.” This “requires the steady infusion of new technology and modernization and replacement of equipment” (Joint Chiefs of Staff, 2000, p. 3). It demands innovation in the weapon systems used to fight wars. Such innovation will come from many sources, including new technologies in the defense industrial base.

“Focused logistics” is one of four elements the military seeks in achieving full spectrum dominance. It requires “the ability to provide the joint force the right personnel, equipment, and supplies in the right place, at the right time, and in the right quantity across the full range of military operations” (Joint Chiefs of Staff, 2000, p. 30). Focused logistics includes adapting best commercial practices to meet these requirements, in turn requiring defense acquisition planners and contractors to adopt many commercial supply chain management practices.

To achieve the goals of Joint Vision 2020, DoD has issued Transformation Planning Guidance for acquisition personnel and contractors in developing an industrial base capable of delivering required technologies and support infrastructure (DoD, 2003). The guidance calls for weapon systems architecture to be framed around a “system of systems,” as well as a contractor base restructured around this system of systems rather than around discrete weapon platforms. Such restructuring envisions a few contractors with an integrating role, coordinating government requirements across a network of large and small contractors supplying major

system components and niche technologies (Vehmeier et al., 2003). Such a transformation, while possibly offering the same *level* of total small business opportunity as in the past, may restrict future small business prime contracting opportunities.

Changing Mixes of Goods and Services and Their Implication for Small Business Procurement

Shifting DoD needs will likely require a shift in the distribution of DoD toward procurement. Specifically, when demand for weapon system procurement, for which there are relatively few small business providers, increases as a proportion of the DoD budget, then the proportion of all DoD contract dollars going to small businesses is likely to decrease.

To gauge the effects of a shift toward weapon system procurement on DoD purchases from small businesses, we examined data on total and small business purchases by category. More specifically, we examined purchases by Federal Supply Classes (FSCs) and Product and Service Codes (PSCs) and grouped these by budget category. FSCs and PSCs are finely grained indicators of the goods and services purchased through contract actions. We classified FSCs and PSCs into five categories, matching those of the DoD “Green Book” (Office of the Under Secretary of Defense [Comptroller], 2008). These are

- Research, Development, Test and Evaluation (RDT&E)
- Military Construction
- Family Housing
- Weapon Procurement
- Operations and Maintenance (O&M).¹

(Because the reporting threshold for contract data has shifted over time, including from \$25,000 in FY 2004 to \$2,500 in FY 2005 to \$3,000 in FY 2006, we limit our analysis of changes in purchases by category to contract actions of at least \$25,000. Our analysis excludes

¹ Specifically, our analysis of contract action data classified categories as follows:

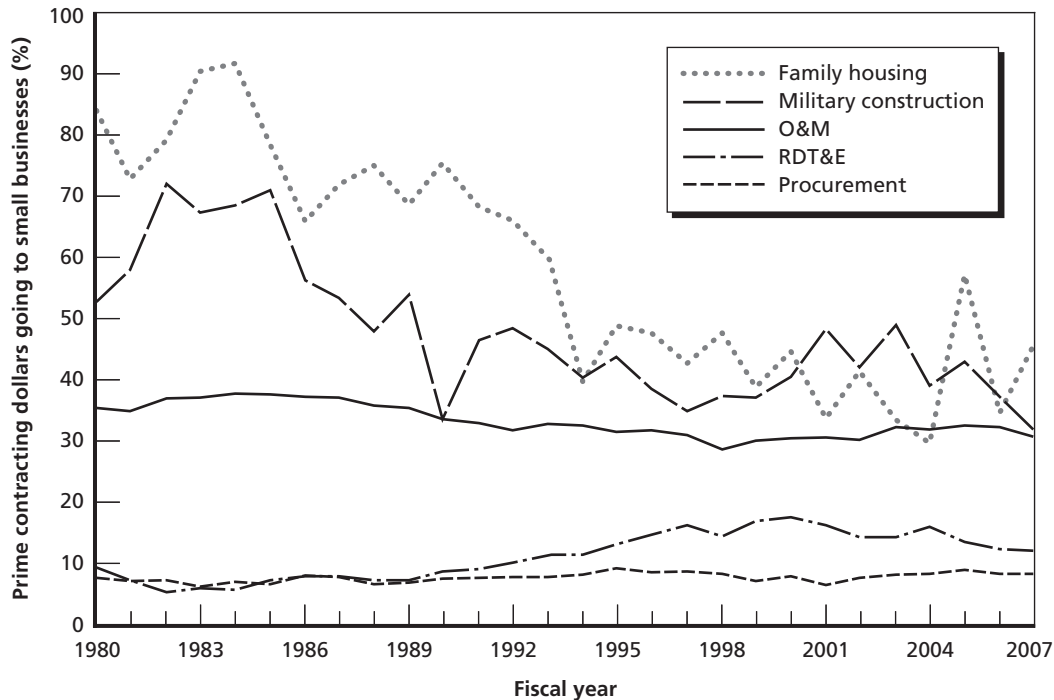
- RDT&E: PSCs starting with the letter A.
- Military Construction: PSCs starting with
 - C1, Architecture and Engineering Services for Construction but excepting C116, Architecture and Engineering Services for Residential Construction
 - Y11, Construction of Administrative Buildings
 - Y12, Construction of Airfields, Communication, and Missile Facilities
 - Y15, Construction of Industrial Buildings
 - Y17, Construction of Warehouse Buildings
 - Y22, Construction of Highways, Roads, Streets, Bridges, and Railways

contract obligations related to Foreign Military Sales that are not counted toward DoD small business prime contracting goals, as well as those for nonprofits and businesses outside the United States.)

Family housing has traditionally had the highest utilization of small businesses, but the small business share of DoD expenditures for family housing has dropped substantially in the past quarter century (see Figure 3.1). Similarly, Military Construction has had a very high rate of utilization for small businesses, but this, too, has decreased in the past quarter-century. The rate of small business utilization for O&M has been lower, but still substantially above the 23 percent governmentwide goal for all purchases, and has held relatively steady in recent years. The rate of utilization of small businesses for RDT&E has been substantially below 23 percent but higher in the past decade than previously. Procurement, or weapon acquisition, however, has had relatively limited utilization of small businesses for prime contractors, perhaps not surprising given the relatively low share that small business has in industries such as aircraft manufacturing (Reardon and Moore, 2005; Moore et al., 2008).

-
- Family Housing: PSCs starting with
 - C116, Architecture and Engineering Services for Residential Construction
 - E161, Purchase of Family Housing
 - X161, Lease or Rental of Family Housing
 - Y161, Construction of Family Housing
 - Z160, Maintenance, Repair, and Alteration of Family Housing
 - Weapon System Procurement: FSCs and PSCs starting with
 - 1, Aircraft and Systems
 - 2, Components
 - 4470, Nuclear Reactors
 - 58, Communication Equipment
 - 660, Navigational Instruments
 - 661, Flight Instruments
 - 662, Engine Instruments
 - H, Quality Control, Testing, and Inspection
 - K, Modifications
 - N, Installation of Equipment
 - W, Lease and Rental of Equipment
 - O&M: all other PSCs and FSCs.

Figure 3.1
Utilization of Small Businesses as Prime Contractors for O&M, RDT&E, and Procurement,
1980–2007



RAND MG443-3.1

What do these data mean for future small business utilization? To examine this question, we reviewed Green Book expenditure projections for each of the categories we analyzed above. We further assumed that small business utilization for each of these categories would not change in coming years; this appears to be a relatively reasonable assumption for O&M and procurement, the two largest categories in recent and projected budgets.

Table 3.1 demonstrates this process for FY 2009. The table shows that, overall, we may expect prime contract expenditures with small businesses in these categories to be \$67 billion, or 19.8 percent of the \$338 billion total for these categories, assuming that small business shares of each do not change from their FY 2007 levels.

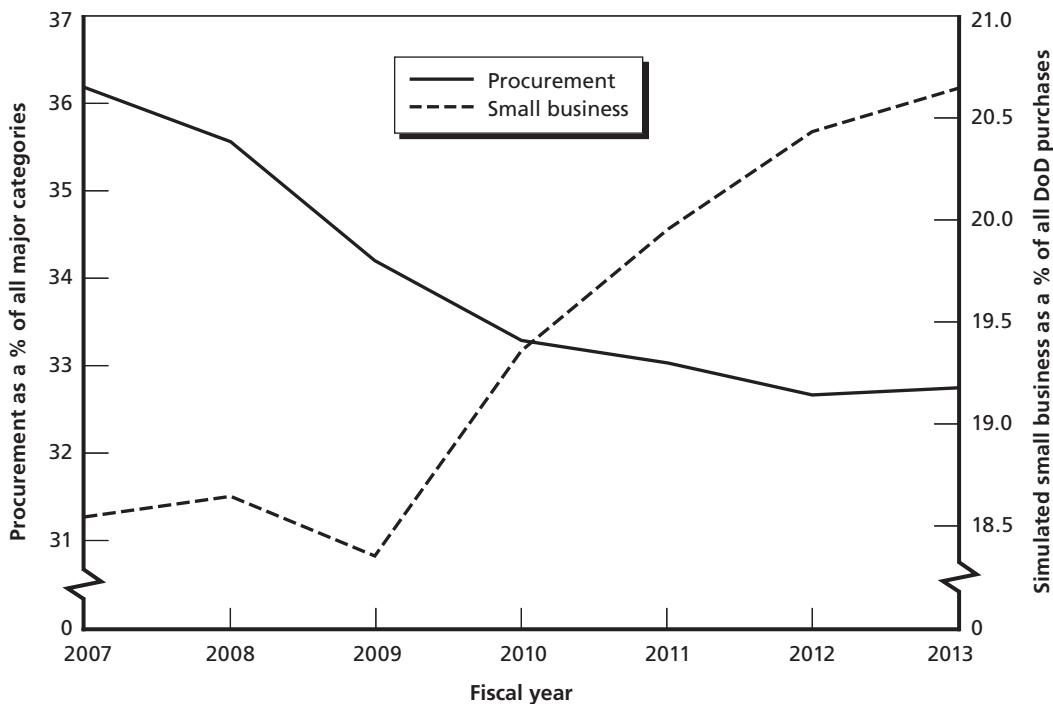
The Green Book for FY 2009 shows that procurement is projected to increase from 31.3 percent of DoD expenditures in FY 2007 to 36.2 percent in FY 2013. Figure 3.2 shows this trend, as well as the consequence of growth in this category featuring low rates of small business utilization for overall DoD levels of small business utilization. Specifically, should procurement increase as projected, and should small business share of budget categories remain unchanged, then we project overall small business utilization within DoD will decrease

Table 3.1
Projected Total and Simulated Amount of Prime Contract Expenditures Going to Small Business, by DoD Budget Category, FY 2009 (billions of dollars)

Category	Proposed Amount, by Category, per Green Book (A)	Amount Going to Small Business, per FY 2007 Contract Action Data (B), %	Estimated Amount Going to Small Business (A × B)
O&M (excluding pay)	129.957	30.66	39.841
Procurement	104.216	8.58	8.938
RDT&E	79.616	12.44	9.901
Military construction	21.197	32.10	6.804
Family housing	3.284	45.46	1.493
Total	338.270	19.80 ^a	66.977

^a Calculated by dividing the sum of simulated dollars (\$66,977 million) by the sum of Green Book projections for these categories (\$338,270 million).

Figure 3.2
Procurement and Small Business Dollars as a Percentage of Total DoD Expenditures



to 19.2 percent, its lowest level since the late 1980s. The primary reason for this will be the concentration of more DoD spending in sectors of the economy in which small business has traditionally been less concentrated.²

New Contracting Practices

While transforming how the military fights is likely to affect the contracts available to small businesses, transforming how it does business may affect how small businesses win such contracts. Several new contracting practices appear to have somewhat mixed effects in how small businesses win prime contracts while offering continuing subcontracting opportunities.

DoD is adopting several current commercial innovations, including those in strategic sourcing as mandated by OMB (Johnson, 2005), “lean” manufacturing, and supply chain management that requires “rationalizing” the supply base. This often leads to supply base consolidation, focusing on fewer, better suppliers and longer relationships that in turn lead to improved performance, including total cost savings, improved quality, responsiveness, and reliability for both purchaser and supplier (Avery, 2003; Holmes, 2001; Moore et al., 2002). This means that small businesses, in seeking future DoD contracts, may need to develop new and, perhaps for them, untraditional ways of working with customers and of demonstrating the value of their goods and services. The need for small businesses to do so may be amplified by the projected increases in weapon procurement, an area in which most small businesses are simply not positioned to compete.

As DoD transforms how it does business, it may also transform how it supports socioeconomic goals.³ DoD may set aside certain purchases specifically for small businesses, including those categories we discussed earlier. It also, as noted earlier, requires small business subcontracting plans for large prime contracts.

In transforming how the military does business with others, acquisition personnel may need to develop policies and technologies that facilitate public-private partnerships. Examples of policies and technologies for facilitating public-private technologies include the F/A-18E/F Fleet Integrated Readiness Support Team (FIRST) of the Navy, which we discuss later, and the Flexible Acquisition and Sustainment Tool (FAST) contract of the Air Force for engineering and sustainment support (Camm, Blickstein, and Venzor, 2004). Both share information previously held only by the government across organizational barriers. Such systems must not, per federal acquisition regulations, rely on auction base pricing systems or bypass contracting mechanisms (Doe, 2002). These can sometimes be adapted to meeting small business goals.

² Many enterprises face similar problems in seeking to increase purchases from minority suppliers. There are few minority enterprises in the steel industry, for example, making it difficult for manufacturers that have a great demand for steel products to meet diverse spending goals (Duffy, 2004).

³ Current DoD contractor screening comprises a three-step process that includes a detailed proposal showing the ability of bidders to develop a comprehensive management plan in a short period, demonstration by the contractor of sound financial accounting and management practices as well as of the necessary technical expertise to fulfill contract requirements, and, where applicable, review of past performance.

The FAST contract replaces what were many individual contracts of smaller scope that users previously awarded as needed with several larger contracts that can be used in issuing expedited requests for proposals. By consolidating the smaller requirements, the Air Force is able to reduce the time needed to issue and award a contract for goods and services needed by the warfighter. When the FAST contract was first written, small businesses protested that they would be excluded because of the size and scope of the contract. In response, the Air Force changed what were four large contracts to three large and three small contracts, for appropriately sized businesses, and included 136 small contractors as subcontractors on all six contracts (Camm, Blickstein, and Venzor, 2004).

Acquisition personnel also need to develop acquisition strategies to work with systems integrating contractors. These contractors will coordinate technology road maps across many subsystem contractors, transforming warfighter needs into industrial capabilities. Acquisition personnel, in developing and refining the roles of systems integrating contractors, may wish to do so in such a way as to support long-standing socioeconomic goals wherever possible.

The Rapid Response to Critical Systems Requirements (R2CSR) program of the Army shows one means by which DoD can emphasize small and disadvantaged prime contract awards for businesses while improving acquisition processes (Camm, Blickstein, and Venzor, 2004). R2CSR prequalifies a limited number of potential contractors, including the requisite number of small and “disadvantaged” businesses, and creates a market mechanism for qualified contractors to bid on work as it is submitted. Once the contract is bid and awarded, the winning firm becomes a direct prime contractor with the federal government rather than a subcontractor to the larger R2CSR integrator.

Private-sector transformation of business practices is also affecting the broader opportunities available to small and “disadvantaged” businesses (Morgan, 2002). In the wake of supply base consolidation, there has been no “across-the-board reduction” of private-sector programs to boost minority- and women-owned businesses, although there has been an expectation that such businesses will remain “competitive in every way to earn the business.” The focus of private-sector initiatives, however, has been on minority- and women-owned businesses, rather than small businesses per se. As one observer notes, small businesses with minority or women owners cannot expect “orders not supported by sales volume” (Morgan, 2002).

The transformation of military goals and concomitant acquisition policies clearly poses many challenges to long-standing socioeconomic goals for supporting small businesses and specific categories of small business of interest to federal policymakers. These challenges stem from many issues, such as supply base consolidation as noted above, also confronting small businesses in the private sector. We next review these issues in the private sector, including how they have affected private initiatives for supplier diversity and what lessons these initiatives may offer for DoD practices.

Challenges to Small Business Utilization Goals and Responses to Them

What additional challenges does the Department of Defense face in meeting future small business utilization goals? What private-sector trends and initiatives could affect the ability of DoD to use small businesses? To answer these questions, we review, in addition to supply base consolidation, other trends such as those in “lean” manufacturing and supply chain management. We also examine broader commercial practices regarding procurement with small, minority-, and women-owned businesses, and review several case studies highlighting these and other initiatives featuring best practices among suppliers and their customers.

Private-Sector Trends Affecting Supply Bases

A review of private-sector trends and best practices may benefit DoD small business policies in two ways. First, a review of private-sector trends and best practices may identify new challenges to current policies for supporting small businesses, particularly as prime contractors, and suggest policies that may be more effective. Second, small and disadvantaged business utilization programs of large private firms may offer some lessons for how DoD can improve its small business contracting policies.

“Lean” Manufacturing

“Lean” manufacturing originated in the automotive industry some 50 years ago. Toyota introduced initiatives that helped reduce cycle times by 60 percent, inventory by 50 percent, and increase worker productivity by 20 percent. Lean manufacturing requires elimination of causes of variability (e.g., stoppages, rework, backflows) in production times; blurring or elimination of traditional boundaries between jobs, functions, and firms; and synchronizing activities to the rate of customer demand. Under lean manufacturing, goods flow only when “pulled” by the next step. This requires quick production for responsive distribution to frequently and accurately placed orders (Womack, 1991; Womack and Jones, 1996).

Lean manufacturing transforms old means of batch and queue mass production into new means of lean continuous flow production. Under batch and queue mass production, a manufacturer would deal directly with all its suppliers, keeping all goods needed for production in its own inventory, and assemble major subassemblies from subcomponents. Under lean continuous flow production, the manufacturer remains the point of final assembly, but the sup-

pliers with which it primarily deals directly are its “tier-one” suppliers. These tier-one suppliers are also primarily responsible for major subassemblies and in turn may deal with tier-two subcontractors that are responsible for components. “Tier-two” subcontractors are subsequently responsible for dealings with tier-three (and higher) subcontractors that provide raw materials and piece parts. This transformation of manufacturing processes in the private sector is similar to the transformation DoD is pursuing through its defense systems integrators. While smaller contractors may have the same opportunities under transformed manufacturing processes, they arise at different points in the supply chain, and not always directly with the final manufacturer (or assembler).

Supply Chain Management

In recent decades, supply chain management has evolved from a fragmented to a “lean” integrated process (Cavinato and Kauffman, 1999).¹ Supply chains have four key components:

- physical, encompassing all movements within and between firms, transportation, service mobilization, delivery, movement, storage, and inventories
- financial, encompassing flows of cash between firms, expenses, investments, and costs of all processes to create and deliver goods and services
- informational, encompassing information processes and electronic systems, gathering and using data, and market intelligence
- relational, encompassing the linkages between suppliers, the enterprise, and the customers of the enterprise.

Initial integration of functional activities in the 1980s typically grouped them into materials management or physical distribution activities. In the 1990s, information technology, marketing and sales, and finance activities were added to the groupings, leading to integrated procurement and integrated logistics processes. The continuing integration of these two major groupings of procurement and logistics activities in turn encompasses current supply chain management, with further activity integration expected to lead to lean supply chain management.

Supply chain management best practices focus on improving the long-term performance of each enterprise within the supply chain as well as the supply chain as a whole. As such, it requires an enterprise and its suppliers to develop very close collaborative and complex relationships to respond to the predictable and unpredictable ways in which customer demands can vary. Without close communication between an enterprise and its suppliers, a “bullwhip” effect may develop that is amplified as it moves up the supply chain, with each chain “link,” for example, producing or holding much more inventory (and tying up cash in it) than may be needed at any given time (Lee, Padmanabhan, and Whang, 1997). Given that enterprises may not effectively manage relationships with many suppliers, they often choose to develop closer relationships with a reduced number of suppliers.

¹ On the expansion of supply chain management from core enterprise activities to encompass a process from product development to customer service, see Metz (1998).

More General Policies Regarding Small, Minority-, and Women-Owned Businesses

Beyond the specific implications of each of these practices, they also have general implications for small businesses and the opportunities available to them.² Practices seeking to eliminate waste and add value through joint efforts are easier to accomplish with fewer suppliers but impossible to manage with thousands of suppliers (Trent, 2001). Initiating such practices requires rigorous evaluation and selection of suppliers, and rewarding the highest performers with more business and long-term, collaborative relationships.

Supply base rationalization has often led not just to reduction in the number of suppliers but also concentration of spending with top suppliers (Trent, 2001). Small businesses can still find opportunities in supply base rationalization, but they must work with customers to enable continuous improvement. More generally, the greatest opportunities will be for suppliers that are able to offer reliable and responsive service through fewer, larger, longer-term contracts; work closely with customers to reduce costs and improve performance throughout the supply chain; and work with customers that can help them learn and grow in their business. For small businesses, this may mean focusing on tier-two opportunities with larger suppliers rather than tier-one opportunities with primary customers.³ This is an issue policymakers may wish to consider in their efforts to maintain policies supporting small business, as broader economic forces increasingly favor larger suppliers. One analysis of business opportunities in the military notes:

As DoD streamlines customers' roles and lengthens project horizons, prime contractors increasingly should lead major programs, with fewer but much larger contracts. Small businesses will retain ample opportunities and could be even more effective as subcontractors to the primes. (Apgar and Keane, 2004, p. 52)

Industry Consolidation

Over time, most industries consolidate around a few large suppliers. Typically, this takes an average of 25 years (Deans, Kroeger, and Zeisel, 2002). More recently, industry consolidation has been accelerating as a result of global competition and efforts by buyers to shift to fewer, larger suppliers that can meet worldwide requirements. In the 1990s, DoD encouraged consolidation in the defense industry, and the number of prime contractors in several market sectors decreased sharply (see Table 4.1).

² For a discussion linking the importance of supplier performance to lean manufacturing, see Drickhamer (2004).

³ A recent analysis found that the Delphi Corporation, a tier-one automotive supplier, had reduced its suppliers from 7,000 to 1,000, with the remaining suppliers split between strategic suppliers, near-core suppliers, niche suppliers, and suppliers of commodities with low value and less complexity (Nelson and Johnson, 2004). Such consolidation of secondary suppliers suggests that small business may, in some industries, eventually need to move still further down the supply chain.

Table 4.1
Number of Prime Contractors in Selected Defense
Market Sectors

Sector	Year	
	1990	1998
Tactical missiles	13	4
Fixed-wing aircraft	8	3
Expendable launch vehicles	6	2
Satellites	8	5
Surface ships	8	5
Tactical wheeled vehicles	6	4
Tracked combat vehicles	3	2
Strategic missiles	3	2
Torpedoes	3	2
Rotary-wing aircraft	4	3

SOURCE: GAO (1998).

Other industries in which DoD spends considerable resources that are experiencing consolidation include transportation and logistics (Leenders et al., 2002; Hannon, 2005), information technology and software, metals (Stundza, 2006), electronics (“Acquisitions Continued in 1999,” 2000), and industrial distribution (Morgan, 2005).⁴ More generally, a global analysis of industry consolidation (Deans, Kroeger, and Zeisel, 2002) found that all industries go through roughly the same consolidation process—suggesting that the challenges posed by consolidation to meeting small business goals must eventually be faced in each industry from which DoD purchases goods and services.

The need for suppliers to develop greater capital to grow and successfully compete through each stage of industry consolidation has led to some modifications in private-sector initiatives to boost minority-owned businesses. The National Minority Supplier Development Council, Inc. (NMSDC), for example, on which many manufacturers rely for certification of minority business ownership, will now certify a business as minority “controlled” if minority owners have as little as 30 percent of the economic equity of the firm, while retaining a majority of

⁴ In addition, emerging industries of interest to DoD are experiencing rapid consolidation. One such industry is radio frequency identification (RFID) technology, a technology DoD has required its suppliers to adopt (“Military Edict,” 2003). In a move with implications for DoD’s ability to meet small business goals, Symbol Technologies, Inc., a large business supplier to DoD and a leading manufacturer of bar code systems used in retail, health care, and transportation industries, acquired Matrics, Inc., a small business supplier to DoD and maker of RFID tags and readers, for \$230 million (Brewin, 2004; Collins, 2004). (Business size classifications are per the Dun & Bradstreet Data Universal Numbering System file provided by DoD in February 2004.)

Another example of a rapidly consolidating industry is enterprise resource planning software, a major component of DoD’s information technology modernization program. In particular, two large suppliers, Oracle and SAP, are consolidating their shares of the market (Reinhardt, 2005).

voting equity and control of day-to-day operations (NMSDC, 2000).⁵ The definition was modified in recognition of the need that minority businesses have for capital to compete with larger suppliers (Milligan, 2000). The NMSDC explicitly disregards size in its definition of minority businesses, which is perhaps an indication that size per se is not a significant issue for private-sector supplier diversity programs.

Leading private-sector initiatives for increasing business with minority- and women-owned suppliers focus both on identifying qualified suppliers and on some best supply practices (Morgan, 2002). Among their characteristics are

- a written policy directing adherence to affirmative procurement measures
- origination at a senior management level
- posting and dissemination throughout the organization
- written procedures specifying or clarifying actions staff must take to ensure inclusion of minority- or women-owned suppliers
- responsibility for initiatives not limited to purchasing staff
- establishment of agencywide, division-level, or departmentwide goals
- an assessment to determine products or services to be excluded from the procurement base for purposes of goal setting
- classification of the entire supply base
- certification of minority- or women-owned suppliers
- a viable database management system regarding minority- and women-owned businesses
- internal staff officers for minority- or women-owned businesses
- a mechanism for generating feedback from minority suppliers
- a formal process for encouraging prime contractors to undertake second-tier subcontracting (thereby crediting firms for subcontracting efforts)
- ongoing monitoring and reporting to senior management
- a process for recognizing exemplary performance
- a benchmark study to determine the comparative effectiveness of a minority purchasing program within an industry.

One study of purchasing expenditures with “diversity suppliers” found that 11.21 percent of expenditures by aerospace and defense firms, and 7.88 percent of a multi-industry sample, were with “diversity suppliers” (Center for Advanced Purchasing Studies, 2004). These figures are not far above what DoD spends with *small* disadvantaged businesses alone. This same research indicates that, in past years, purchasing expenditures of this multi-industry sample with minority-owned firms was 2.98 percent; with women-owned businesses, 2.25 percent; and with other small businesses, 12.80 percent—figures that are all well below DoD requirements.

⁵ This definition is less stringent than the federal government definition of a “small disadvantaged” business.

Case Studies

We examine several case studies highlighting these trends in the private sector and their impact on small businesses and their customer relationships, as well as how private-sector acquisition personnel screen and select contractors and how they seek to boost business with “disadvantaged” contractors. Unfortunately, such information is limited, and the case studies we present below were selected primarily because they were available. Nevertheless, as we note, there are some themes common to them that have implications for DoD small business policies.

“Big Three” Automakers

Among the largest spenders with minority suppliers are the “Big Three” automakers. In one recent year, Ford Motor Company spent \$3.5 billion with minority suppliers, DaimlerChrysler spent \$2.7 billion, and General Motors spent \$2.3 billion, placing each company in the top ten of all firms in purchases from minority suppliers (Hannon, 2001).

While initiatives by each company with minority suppliers began as a response to urban unrest of the late 1960s, the programs have offered the automakers a continuing means by which to develop new customers. Still, supplier selection criteria begin with product quality, with emphasis as well on selecting suppliers that can adapt to changing demands and grow with the industry. As one purchasing executive noted, the automakers seek “to concentrate on a nucleus of suppliers that we can put more effort into and help them grow to a level where they can compete effectively with larger Tier One suppliers.” This has led the automakers to focus on developing a smaller number of minority suppliers while retaining or increasing overall goals for procurement from minority firms.

The automakers also require their tier-one suppliers to match their diversity goals. General Motors is gradually increasing its procurement from minority firms to 10 percent, a goal being matched by Delphi Automotive, which General Motors spun off in 1999. Delphi’s efforts to develop tier-two minority suppliers have led to such initiatives as its annual “matchmaker” conference, which brings together minority suppliers with Delphi representatives and even some nonminority suppliers (Hannon, 2001).

Johnson Controls

Johnson Controls has similarly used summits and other initiatives in efforts to boost its purchases from minority suppliers to \$1 billion (“Johnson Controls Sets \$1B Supplier Diversity Goal,” 2001b). These efforts include

- ensuring that all results from diversity supplier efforts are reported to the company chief executive officer
- including diverse suppliers in divestitures, lead supplier arrangements, joint ventures, and strategic alliances
- implementing standardized processes for recruiting, training, and using diverse suppliers
- expanding a mentor-protégé program for customers and key suppliers

- strengthening mandates for existing suppliers to boost supplier diversity as a condition of doing business with the company
- adopting Web-based systems to provide business opportunities to diverse suppliers.

Bristol-Myers Squibb

Since organizing in 1996, the Bristol-Myers Squibb Global Strategic Sourcing Group has sought to preserve supplier diversity while consolidating its supply base (Porter, 2003). One way it has done this is through an online supplier registration process for small and diverse businesses to register and classify themselves as minority-owned, women-owned, veteran-owned, or small disadvantaged businesses. The resulting database gives sourcing managers a tool for soliciting proposals on strategic supply contracts. The database also allows sourcing managers to gauge the extent to which they are including small and diverse businesses in their contracting efforts.

Coca-Cola

Coca-Cola has a supplier diversity program that matches its strategic needs (Porter, 2003). This program, linked explicitly to its marketing strategy, targets women and minority suppliers. Coca-Cola requires every employee involved in procurement decisions to take a course on the business case for supplier diversity, which specifically notes that minorities comprise larger proportions of Coca-Cola purchasers than they do of the U.S. population and that women are the predominant decisionmakers for retail purchases. Coca-Cola also pushes this business case with its suppliers to promote diversity throughout its supply chain. Supplier size is not an explicit criterion for Coca-Cola in this initiative.

FedEx Express

Like Coca-Cola, FedEx Express (the largest of the FedEx businesses) sees its diversity program as a means of marketing (Avery, 2005). Employees regularly receive training on diversity, and the company promotes diversity through its intranet and an in-house magazine. Regarding procurement, the company's diversity goal is to purchase at least 5 percent of "sourceable" goods and services from small or "diverse" suppliers, which are certified by a third party. Sourceable goods and services are those that are not core to the company's work. While, for example, janitorial services are considered a sourceable commodity, jet fuel and aircraft are not.

Hewlett-Packard

Hewlett-Packard launched a "Multicultural Procurement and Sales Support Program" in 1968, formally instituting it throughout all its U.S. businesses in 1972 (Hewlett-Packard, 2005). While the primary purpose of its initiative is to boost its own socioeconomic goals, Hewlett-Packard also links its program to an overall strategy of innovation (Porter, 2003). Hewlett-Packard has also, with the SBA and the USCC, sponsored "matchmaking" events for small suppliers, in part to expand the geographic diversity of its suppliers.

In 2004, Hewlett-Packard had a small business procurement goal of \$1.6 billion, which it exceeded through \$3.0 billion in actual purchases from small businesses (Hewlett-Packard,

2005). Of its \$1.10 billion in purchases from minority-owned firms, \$909 million was from small minority-owned firms, for which the company had set a goal of \$400 million. Of its \$397 million in purchases from women-owned firms, \$362 million was from small firms, for which the company had set a goal of \$140 million. Total purchases from minority- and women-owned businesses comprised 22 percent of the firm's "total qualified procurement spending" in the United States during 2004.

Gillette

The recent effort of the Gillette Company to implement strategic sourcing also included efforts to boost procurement from minority- and women-owned business enterprises (Dolan and Fedele, 2004). In 2001, Gillette launched a strategic sourcing initiative using a formal, seven-step strategic sourcing methodology. Each step included attention to minority- and women-owned business enterprises. In developing a profile of a category for goods for strategic sourcing and generating supplier portfolios, Gillette sought to understand current levels of spend with diverse suppliers and to set future goals with such suppliers. Gillette identified some minority- and women-owned business enterprises that were physically closer to its facilities and had less overhead than other suppliers did, as well as some that had developed global capabilities.

Specialized Packaging Group

Minority firms have also responded on their own to changing opportunities for suppliers. Specialized Packaging Group, for example, faced many of the same challenges as other minority-owned suppliers did, including gaining access to decisionmakers in large corporations and to capital for financing its growth (Milligan, 1999). Its greatest challenge, however, was in responding to the changing opportunities caused by supply base consolidation.

To meet this challenge, the company acquired the North American general folding carton business from the Alusuisse Lonza Group. The combination made Specialized Packaging Group the largest minority-owned manufacturer of folding cartons in the United States.

The acquisition, in the view of company executives, was necessary to serve a growing number of companies expecting more from their suppliers. As its customers consolidated their supply base, they sought suppliers that could provide products and services on a national or global level. With the consolidation, Specialized Packaging has been able to serve a clientele including Procter & Gamble, Johnson & Johnson, and Colgate-Palmolive.

Mays Chemical

Mays Chemical is another minority firm that, although relatively large with 16 stocking locations and ranking among the largest chemical distributors in the United States, has seen the need to grow still further through alliances to seize opportunities in supply consolidation. As one of its executives notes:

Larger companies want to deal with larger companies. They want to see more volume across bigger geographies . . . we had an opportunity to support 48 PepsiCo locations. For us to do

that, we had to set up an alliance with a smaller, competing distributor that could service other geographies. We said, “Neither of us can win this national contract alone, so we’ll handle the East and you handle the West.” It’s been successful. (Porter, 2003)

Boeing

Boeing has initiated several programs both in its own initiatives for supplier diversity and in its initiatives with DoD to improve small business opportunities and performance.

For its own supplier diversity initiatives, the Boeing Commercial Airplanes Group provides all its procurement directors with a scorecard containing 26 items under five categories: business direction; quality; cost; delivery; and people, safety, and morale (“Boeing Takes the Initiative,” 2001). “Business direction” questions include those on subcontracting with small businesses, small minority-owned businesses, and women-owned small businesses, including both dollars spent with such firms and identification of additional firms. Each line item is graded with a color, with green showing that the goals of the diversity plan are being met, yellow indicating that the plan is not being fulfilled, and red indicating that the plan is failing or is not in place. Through this plan, Boeing hopes to meet goals of spending 2 percent of its procurement dollars with SDBs, 2 percent with women-owned small businesses, and 20 percent with all small businesses. The scorecard questions regarding identification of small businesses in the field have led to contracts with new firms.

To help its suppliers grow, Boeing also has a Supplier Management Process Council. The role of the council is to ensure that minority-owned firms, particularly high-performance firms, are considered when new suppliers are needed.

With DoD, Boeing has worked both on the F/A-18E/F FIRST program of the Navy and with small businesses to improve supply processes for the JDAM program. The FIRST program has provided Boeing access to information not typically shared with contractors. The program uses logistics metrics normally used to judge the performance of organic support of aircraft components to measure the quality of Boeing support for the F/A-18E/F. This contract implies that Boeing will be a sole provider of logistical support for this aircraft, which means that, to meet small business requirements, Boeing and the Navy will need to target small businesses through tier-one and tier-two subcontracting plans (Camm, Blickstein, and Venzor, 2004). Such contracts have come under increased scrutiny as possible bundled contracts. DoD decisionmakers will need to examine this issue to determine the proper balance between adopting best practices to meet needs for focused logistics and to fulfill socioeconomic goals. One possible compromise might be to count utilization of subcontractors toward meeting broader socioeconomic goals.

The experience of Boeing with the JDAM program provides a recent example of how major suppliers can work with smaller subcontractors both to boost the opportunities available to small businesses and to improve DoD operations. In 1999 operations against Serbia, increased JDAM demand and reconfiguration of the supply chain to meet this demand led to erratic production. JDAM production tripled between April and July, decreased by September

to levels below those of April, and then had another brief surge in November before a December reduction. DoD needs were met by draining supply channels, and it took more than a year for production rates to stabilize.

To improve price stability and production rates, the Air Force instituted a firm-fixed-price contract with incentives for the contractor to stay within the negotiated unit price. Among its provisions was a requirement that, should this fixed unit price be exceeded, the contractor would have to qualify a second source at its own expense within 12 months (Lorell and Graser, 2001). As a result, Boeing had incentives to develop and retain its suppliers. One step the Boeing JDAM team took to develop and retain suppliers was a small and medium enterprise initiative including “lean manufacturing” training. Although there was some initial skepticism toward the adoption of lean manufacturing techniques, participants soon realized that they could not remain on the JDAM team and make money without reducing their costs. Perhaps more important to them, they also recognized that the techniques could work in practice and could ultimately help them to be more profitable and competitive on both military and commercial contracts. Perhaps most important for DoD, the participation of suppliers in lean manufacturing of JDAM led to smooth, sustainable production increases from September 2001 through October 2002 in support of Operation Enduring Freedom (Michel, 2003).

Lessons from Commercial Practices

The commercial evidence on how best to develop small business programs through procurement is quite limited because small business preferences are not a concern of most large businesses. Of the firms we examined, only four—Bristol-Myers Squibb, FedEx Express, Hewlett-Packard, and Boeing—have any programs aimed explicitly at small businesses. Some of these programs (e.g., the Boeing JDAM program designed to help subcontractors be more profitable and competitive) could, theoretically, result in these businesses no longer being “small.” At the same time, the need Boeing has to retain suppliers and the incentives DoD has given it to do so could also, we speculate, mean that it would not be in the interest of Boeing or DoD to develop additional small business suppliers should the original “small” businesses on the JDAM contract become large ones. In the case of FedEx Express, “core” commodities are excluded from small and disadvantaged business procurement goals, an option DoD does not have.

The Bristol-Myers Squibb and Hewlett-Packard programs may offer more lessons for increasing DoD small business procurement. The database that Bristol-Myers Squibb developed could perhaps help acquisition officers reach their small business goals, particularly if updated so as to be free of the problems of certification that have led to some large government suppliers receiving contracts designated for small businesses.⁶ The Hewlett-Packard program, particularly its “matchmaking” events for small suppliers, could perhaps help DoD identify new businesses in areas where small business are most competitive (e.g., construction or O&M) or where they are increasingly competitive (e.g., RDT&E). Nevertheless, it is difficult

⁶ See, for example, SBA Office of Inspector General (2005) on small businesses acquired by larger businesses continuing to be certified as small businesses for contracting purposes.

to see how small businesses can become more competitive in weapon system procurement—where DoD is spending more money—or that “matchmaking” can help identify prospective small businesses for such goods and services.

Private firms offer more examples of programs to boost purchasing from minority- or women-owned businesses, but the application of these to DoD is limited. First, the goals for many of these programs are at levels below what DoD already exceeds. Second, they often focus as much on subcontracting as prime contracting goals. Federal statutes focus on prime contracting goals, although some departments, such as DoD, have subcontracting goals as well. Third, the implicit goal of many such programs—to expand the size of minority- or women-owned business enterprises—would create an implicit tension with DoD and federal goals that focus on SDBs. The leading automotive suppliers concentrate on a small number of “disadvantaged” suppliers to help them grow and compete effectively with larger tier-one suppliers. Coca-Cola seeks to boost minority procurement as part of its marketing strategy but does not explicitly consider supplier size in its efforts to boost supplier diversity. The Specialized Packaging Group, while seeking to increase supplier diversity, also views supply consolidation as necessary to serve its clients. Mays Chemical, a large minority-owned firm, seeks to become larger still, having found that large companies prefer dealing with other large companies. In sum, many leading commercial programs for supplier diversity, in contrast to federal government programs, focus neither on size nor primarily on prime contracting efforts.

Conclusions

What overall conclusions do the general history of small business policies and recent initiatives with small business offer DoD policymakers? First, policies and prime contracting goals favoring small businesses generally and specific categories of small businesses as well have been strongly supported by Congresses and presidential administrations of both political parties. They have endured over time and are likely to continue to do so. Recent policies aimed at reducing contract “bundling” and changing small business size standards, as well as reaction to these, indicate that, at least among federal policymakers if not all small business owners, small business policy initiatives are likely to be of continuing concern or even controversy.

Second, commercial-sector practices are evolving in ways that may make fulfillment of small business policy goals more difficult. Many large commercial firms are not as concerned about boosting *small* businesses as much as they are about boosting *diverse* businesses. Some firms, in increasing their use of minority businesses, explicitly concern themselves with those that, regardless of size, can best help their enterprise, just as leading minority firms recognize the need for capital and growth to compete for consolidated business. At least one of the firms we reviewed that focuses on small business procurement exempts certain key commodities; perhaps DoD and the federal government should examine such cases to determine how certain spending categories such as weapon system procurement should be subject to small and disadvantaged business goals. Best commercial practices are leading to consolidations in many industries in which minority firms are hoping to grow to serve (including defense and aerospace)—sometimes as subcontractors to much larger prime suppliers. Some minority business advocates even caution against relegating minority business development to small business status and contend that under currently stringent federal preferences for small businesses “most minority businesses are excluded from major opportunities offered by larger agencies such as the U.S. Department of Defense” (Lowry and Holland, 2005, p. 20).¹

Third, given interests in boosting small businesses and, in particular, DoD needs, DoD policymakers may need to focus more on developing niche prime contractors in the coming years. This may include finding more ways of using tier-one and tier-two suppliers to boost indirect small business participation as subcontractors more generally, and accurately counting

¹ Lowry and Holland (p. 34) suggest a “bifurcated approach” to assist both small and disadvantaged minority businesses and larger and more growth-oriented companies. The current focus on small disadvantaged businesses, they contend, “focus[es] on financing those firms least likely to succeed . . . typically headed by entrepreneurs who were less experienced or educated.”

these subcontracts toward meeting DoD's goals, as private-sector firms do. DoD small business utilization exceeds the 23 percent governmentwide goal in many, but not all, categories of its expenditures. As noted, the federal governmentwide goal for small business purchases is 23 percent of prime contract dollars. Small businesses account for more than 23 percent of DoD prime contract dollars in many industries but fall short in others. Many of the industries in which DoD utilization of small business falls short of 23 percent are those in which large firms dominate and are likely to continue to do so. Our analysis suggests that DoD spending with small businesses may fall short of federal goals should DoD purchases become more concentrated in weapon system procurement, in which small businesses have historically been less prevalent. Federal policymakers concerned with boosting purchases from small businesses may wish to modify the prime contracting goal for DoD or seek to boost small businesses through subcontracting goals.² Another possibility may be to have DoD develop more direct contractual relationships with smaller providers of goods and services that are managed by larger providers, as it has with the R2CSR program.³

Fourth, best practices in the private sector (e.g., the Gillette strategic sourcing initiative, which is coupled with goals for procurement from minority- and women-owned business enterprises) indicate that rigorous screening processes needed to improve supply chain performance can accommodate small and diverse business participation. As such, these initiatives may offer some lessons to DoD as it explores ways to benefit from small businesses, such as with innovation or in fulfilling niche needs. Indeed, DoD utilization of small businesses already exceeds that of many private-sector firms, and many of its practices for boosting small and minority business match those of leading private firms. Small businesses may also be able to play a role in defense transformation by supplying innovative ideas, responsive supply solutions, and services support, including contracts helping them grow as needs and best commercial practices evolve.⁴ Rather than considering how DoD can continue to meet very high small business goals, policymakers may wish to consider what changing warfighter needs and business practices mean for DoD and the opportunities small businesses may actually want.

² Indeed, subcontracting may prove more profitable, and attractive, to small businesses. Since the early 1980s, for example, DoD prime contractors have had an average profit margin of 6.5 percent, while subcontractors have had an average profit margin of 8.5 percent (Crock, 2005). Among the reasons identified for higher subcontractor profits are their ability to be paid a fixed price, keeping any gains from efficiencies that prime contractors might be expected to share with the government. As a result, some analysts speculate that firms subcontracting on DoD work may be better able to attract capital than DoD's prime contractors do.

³ See Amaral, Billington, and Tsay (2004) on how such relationships in the private sector also help mitigate supply risks. Such direct contractual relationships would, we assume, count toward prime contracting rather than subcontracting goals.

⁴ In some industries, the most innovative small businesses may be acquired by large businesses. Cisco Systems, for example, has long been known for its strategy of innovation through acquisition (Christensen, 1997; Foster and Kaplan, 2001).

Notable Dates Regarding Small Business Policy Initiatives

- 1890 Sherman Act passed with antitrust prohibitions; viewed by some as first federal legislation for protecting small businesses.
- 1932 Reconstruction Finance Corporation created to provide loans for businesses, large or small, hurt by the Great Depression.
- 1942 Smaller War Plants Corporation created to assist small businesses in war procurement.
- 1947 Congress calls for small businesses to receive a "fair proportion" of government contracts and sales of property.
- 1953 Congress passes the Small Business Act, creating the Small Business Administration.
- 1961 Department of Defense ordered to increase small business share of defense contracts; "goals" and "quotas" established.
- 1967 DoD uses Section 8(a) of the Small Business Act to boost minority-owned businesses.
- 1978 Congress requires reporting of the proportion of federal contracts that go to small business.
- 1979 Carter administration Executive Order 12138 directs federal agencies to take "affirmative action" for small businesses owned by women.
- 1982 Small Business Innovation and Research Act passed.
- 1988 Congress passes Business Opportunity Development Reform Act (Public Law 100-656), amending the Small Business Act, to establish goal for 20 percent of federal prime contracts to be awarded to small businesses and for 5 percent of federal prime contracts and 5 percent of subcontracts to be awarded to small disadvantaged businesses. Congress passes Women's Business Ownership Act (Public Law 100-533), directing federal agencies to promote federal contracting and subcontracting opportunities for women.
- 1994 Congress (Public Law 103-355 Section 7106[a]) establishes a goal for small businesses owned by women to receive at least 5 percent of prime contracts and 5 percent of subcontracting awards.
- 1995 Supreme Court, in *Adarand v. Peña*, declares racially preferential policies for small businesses must undergo "strict scrutiny."
- 1997 Small Business Act renewal (Public Law 105-135) places limits on contract bundling, increases prime contract goal to 23 percent, and creates HUBZone program, with an initial goal of 1 percent of prime contracts (increasing to 3 percent by FY 2003).
- 1999 Congress passes Veteran Entrepreneurship and Small Business Development Act (Public Law 106-50), establishing goals of 3 percent for prime contracts and 3 percent for subcontracts for procurement from small businesses owned by service-disabled veterans.
- 2002 Some congressional small business advocates call to boost small business prime contracting goal to 30 percent.

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