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HOW DO ACCELERATED PAYMENTS FOR DOD CONTRACTORS HELP SMALL BUSINESSES?

June 2020

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HELP SMALL BUSINESSES?**

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Submitted in partial fulfillment of the
requirements for the degree of

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HOW DO ACCELERATED PAYMENTS FOR DOD CONTRACTORS HELP SMALL BUSINESSES?

ABSTRACT

The purpose of this research is to analyze small-business responses to the accelerated payments policy for DOD contractors. This research explored small-business decision-making due to the DOD accelerated payments policy. The thesis methodology is to conduct surveys with populations taken from open-source access of the Federal Procurement Data System-Next Generation. Random population of registered businesses were solicited for input on the business' present or potential application of contracting activity as a result of accelerated payments. This project reviewed the trends reported to determine whether the accelerated payment incentive is useful to small business as the regulation stands, or if changes should be made to the process. The results provide an introductory analysis into the accelerated payment policy relationship with small-business concerns. The feedback from businesses indicates a need for in-depth exploration of accelerated payment policy and DOD processes, internal controls, personnel, stakeholder impact, and areas for improvement for adequate incentive application. The trend is that the accelerated payment timeline is not being met. The insights provided by the report have the potential to support further research for the benefit of providing realistic future acquisition reform or modification.

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LIST OF ACRONYMS AND ABBREVIATIONS

ACCS	Automated CAS Collection System
AMPS	Account Management and Provisioning System
AVEDS	Automated Voucher Examining and Disbursement System
CAPSW	Computerized Accounts Payable System-Windows
CEDMS	Corporate Electronic Document Management System
CEFMS	Corps of Engineers Financial Management System
CRA	Community Reinvestment Act
DAI	Defense Agencies Initiative
DFAS	Defense Finance and Accounting System
DOD	Department of Defense
DUNS	Data Universal Numbering System
EBS	Enterprise Business System
EDA	Electronic Data Access
EDI	Electronic Data Interchange
EFR	Electronic File Room
FABS	Financial Accounting and Budget System
FAR	Federal Acquisition Regulation
FAS	Fuels Automated System
FPDS-NG	Federal Procurement Data System-Next Generation
GAO	Government Accountability Office
GPC	Government Purchase Card
IAPS	Integrated Accounts Payable Systems
iRAPT	Invoicing, Receipt, Acceptance and Property Transfer
MOCAS	Mechanization of Contract Administration Services System
MPP	Mentor Protégé Program
MSST	Multi-System Search Tool
MTAP	Management and Technical Assistance Program
NAICS	North American Industry Classification System

NGO	Non-Governmental Organization
SAM	System for Award Management
SAVES	Standard Automated Voucher Examination System
SBA	Small Business Administration
SBIR	Small Business Innovative Research
SBRDE	Small Business Research and Development Enhancement Act
SF	Standard Form
STTR	Small Business Technology Transfer
TFMS	Transportation Financial Management System
TPPS	Third Party Pay System
WAWF	Wide Area Work Flow

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“With man it is impossible, but not with God, because all things are possible with God.” — Mark 10:27

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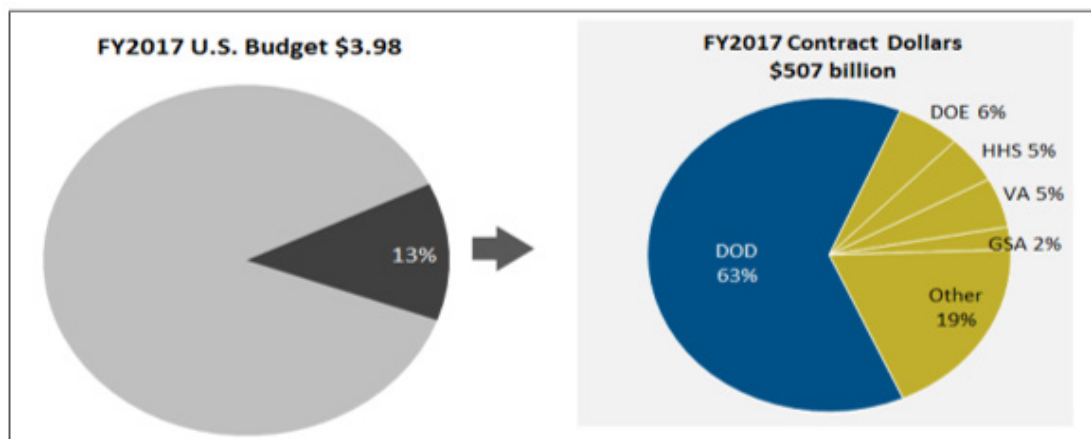
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I. INTRODUCTION

In this chapter, I reviewed the history of small businesses as a resource with a focus on, How do accelerated payments for DOD contracts help small businesses? I examined small-business application as a plan to stimulate the economy, maintained a growing competition base, and reliance on for innovation or demonstrated the capacity of industries (Office of Federal Procurement Policy [OFPP], 2019, p. 14). I was interested in the accelerated payment policy and solicited the input of the contractor representative to identify any trends pertaining to this policy, including the implications that primarily occurred in the post-award phase of the contract life cycle to closeout.

A. BACKGROUND

The Department of Defense (DOD) spends billions of dollars in contracts annually. Figure 1 was first presented by the Office of Management and Budget ([OMB], 2016) and further amplified by Congressional Research Service (CRS). Figure 1 depicted the national budget for fiscal year 2017 (CRS, 2018, p. 3). It showed the total U.S. government contracting activity percentage related to contracts, and a breakdown of the DOD's portion of contract activity compared to other agencies (CRS, 2018, p. 3).



U.S. Budget Dollars in Trillions, Contract Dollars in Billions.

Figure 1. The 2015 U.S. Budget and Contract Obligations.
Source: CRS (2018, p. 3).

Many of these contracts meet the warfighter's requirements, and are long-term programs, while others are discontinued, canceled, or absorbed by other programs. The programs, vendors, and contractors who hold these defense contracts vary widely across components. The DOD incentivizes contracts to small businesses because a thriving small-business sector can have indications of a thriving economy and demonstrate the development of competition (DOD, 2019a, p. 2). According to the Small Business Administration (SBA), small businesses are defined using size standards and gross income depending on industry (2019). Small businesses are for-profit businesses of legal structure, independently owned and operated, not nationally dominant in their field, and physically located and operated in the United States or its territories (SBA, 2019).

The DOD's aimed to ensure that 23% of its contracts are made with small businesses which continues to be the goal. Current small-business regulations were scrutinized, and policies in this environment were analyzed for any value to DOD accelerated payment incentives. Per the Accelerated Payments for Small businesses Act of 2018, the federal government is mandated to pay small businesses contractors and subcontractors within 15 days of receiving invoices for services or supplies delivered (§. 3903). My research is intended to determine the utility of the statute to small businesses and in what capacity. I conducted interviews with past and active small-business contractors and reviewed historical data to present the potential application of contracting activity as a result of accelerated payments. I explored the small businesses decision-making process due to accelerated payments.

All organizations operate under constrained resources, and it is important to have objective processes that help inform the use of those constrained resources. Identifying how small businesses utilize accelerated payments from DOD contracts to operate in a constrained environment could help identify patterns in small-business activity and assist DOD efforts to stimulate the development of small-business activity. At the writing of this thesis, the leadership commitment was the only criterion met (GAO; 2019b, p. 1). The Government Accountability Office (GAO; 2019b) stated in a report that "substantial efforts are needed to achieve greater progress on high risk areas." (p. 1). The GAO identified DOD contract management process as high risk in 1992 because of deficiencies in five areas:

leadership commitment, capacity, action plan, monitoring, and demonstrated progress (GAO, 2019a, p. 227). Left unchecked, the contract management process has the potential to induce strain both in an administrative capacity and in monitoring the accelerated payment policy. The main areas of concern continue to be contracting officer workload, inadequate training, unreliable systems, and outdated acquisitions regulations and policies (GAO, 2019b).

The SBA defined small-business concern from the guidelines outlined in Title 13, Section 121, *Small Business Size Regulations* of the eC.F.R. 121 “a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operations in which it is bidding on government contracts and qualified as a small business under the criteria and size standards.” The Small Business Administration has its roots in President Herbert Hoover’s Reconstruction Finance Corporation (RFC). which was an effort to preserve small businesses in 1932 when the impact of the Great Depression could be felt throughout the economy. President Dwight D. Eisenhower created the SBA on July 30, 1953, through the Small Business Act (SBA, 2018, p. 1), referenced under 15 United States Code (U.S.C.) ch. 14A (SBA, n.d.-b). Since then, changes were made under every presidential administration. After the 2009 recession, President Obama’s White House created the QuickPay initiative, which provided 18 tax breaks to small businesses with the intent of maintaining a strong middle class and supporting economic recovery (The White House, President Barack Obama, n.d.). Since 1953, the Small Business Act has been a source of support for the interests of small-business concerns (SBA, n.d.-c). The policy of accelerated payments subject to this research was first introduced in 2011 under the Prompt Payment Act (PPA), 31 U.S.C. Chapter 39 (PPA; 2011). This is a demonstration that small-business sustainment is consistently a priority on the policy agenda.

B. PURPOSE

How these policies are manifested should be explored by researchers. A 2017 GAO report of contract data analysis *Assessment of Government-Wide Trends*, found that during the period directly following the implementation of the accelerated payment policy,

While overall contract obligations decreased over the 5-year period, the decrease occurred primarily at the Department of Defense. Defense contract

obligations in fiscal year 2015 for products and services decreased by almost 31% from fiscal year 2011 levels. About 60% of government-wide contract obligations are for services, with civilian agencies obligating 80% of their contract dollars for services. Federal agencies consistently obligated about \$50 billion annually for contracted services that the Office of Federal Procurement Policy and our prior work have identified as needing increased management attention, such as professional and management support services. (p. 4)

Hence why the reduction or variation in small-business activity should be explored. The benefits of small businesses are so intertwined with our acquisition policy and national economy that the topic warrants research into the posture of small businesses due to policy.

C. RESEARCH QUESTION

I conducted the research to answer the thesis question, “How do small businesses utilize accelerated payments from DOD contracts?” The term utilize I defined in this research as a positive ability to incentivize small businesses to continue pursuing business activity. Business activity can be with the DOD, other federal, state or local entities, commercial, international, or other. The business activity is anticipated to be captured in funds availability or utilization. How are the accelerated payments facilitating that utilization? The effects of accelerated payments on risk tolerance or risk-averse behaviors on cost, schedule, and performance of small businesses can have wide-ranging first- and second-order impact to the vendor, warfighter, mission, national security, and national strategy. Are these relationships positive or negative?

D. PROJECT SCOPE

Small businesses in the predominant industries with which the DOD has a high frequency of contracts was the target population. The most ideal and objective tool to inform the process would have been looking at contract award history before and after the accelerated payment policy was implemented; however, the constrained the survey. I defined small businesses with SBA parameters. I determined the policy capability by observing continual healthy business activity, decisions, and availability to the DOD over time. I explored any potential variance was related to accelerated payments is necessary to

identify any help to small businesses. I included large businesses for a qualitative comparison analysis to small-business activity.

E. METHODOLOGY

My method included a purposeful random sample approach with a limited number of small businesses and was used to establish the areas clarified or attended more in-depth to adequately answer the thesis question. The data I used to select small businesses by industry was available open source. I collected information for the preliminary survey and decided to use the researcher-administered survey method. My preliminary survey comprised of 12 questions. I administered the preliminary survey in order to focus the scope of the project and administer follow-on refined survey with a new random sample. The measured variables such as processing time of invoices and percentage of DOD contracts I selected for their potential utility and relevance for analysis. I administered the preliminary survey questionnaire via telephone to the initial population and subsequently the final survey questionnaire by email to a representative of the small businesses who was responding on behalf of the company.

F. RESEARCH STRUCTURE

I provided a background of small-business activity in chapter 1. Chapter 1 also included relevance to the U.S. economy as a reference for why the growth and opportunity of small businesses was important. In chapter 1 I also captured the importance of small businesses in contracting. Chapter 2, the literature review covered the research related to “How do small businesses utilize accelerated payments from DOD contracts?” In chapter 3 I administered surveys to small and large business representatives, and qualitatively analyzed the results in chapter 4. In chapter 5 I summarized and concluded with the highlighted trends and patterns from the research. Finally, I recommended areas for follow-on study.

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II. LITERATURE REVIEW

In this literature review I examined the research available on DOD accelerated payments to small-business contracts. The small businesses that pursued contracts as a stand-alone entity can be captured with more accuracy. A significant portion of small businesses operating as subcontractors was harder to accurately capture. The review provided context for the thesis topic as it related to DOD small-business contracts, regulation and monitoring bodies that govern or impact small business, what was already explored in the field, and gaps discovered that made this topic feasible for exploration.

A. SMALL-BUSINESS CRITERIA

I used the following to determine small-business criteria: Each company has a Dun & Bradstreet (D & B) created Data Universal Numbering System (DUNS) number, and its product or services are matched with a North American Industry Classification System (NAICS) code (SBA, n.d.-a). Primarily, the company met the size standard for the NAICS code. This size standard was calculated by either millions of dollars or number of employees. The company was registered in the federal government's System for Award Management (SAM), retained eligibility once within these criteria, and maintained compliance according to the Federal Acquisition Regulation (FAR) (SBA, n.d.-a). The affiliations, annual receipts and employee calculations were all used to determine small businesses criteria (SBA, n.d.-a). Small businesses size regulations are derived primarily from Title 13, Part 121, of the eCFR (2020).

B. LAWS AND REGULATIONS

The 1953 Small Business Act was a source to support the interests of small-business concerns (SBA, 2019b). The policy of accelerated payments was first introduced in 2011 under the Prompt Payment Act (PPA), 31 U.S.C. Chapter 39. The Office of Management and Budget (OMB) advertised the implemented regulation from Title 5, Administrative Personnel, C.F.R. Part 1315, Prompt Payment, when memorandum 11-32 was published (Lew, 2011). The eCFR also contained overarching guidelines for government contracting programs (eCFR, 2011). The OMB published follow-on memorandums to highlight the

requirement prompt payment each year the regulation was in place, as well as encourage accelerated payments for prime contractors to support the small businesses subcontractors (OMB, 2011, 2014).

Congressional action through the John McCain National Defense Authorization Act (NDAA) for Fiscal Year 2019 reintroduced the accelerated payments requirement. Specifically, it included the following language in section 852 of Pub. L. 115–232: This applied directly or indirectly to those contractors who may utilize small businesses subcontracts:

For contractors that subcontract with small businesses, section 852 requires DOD, to the fullest extent permitted by law, to establish an accelerated payment date, with a goal of 15 days after receipt of a proper invoice, if: (1) A specific payment date is not established by contract, and (2) the contractor agrees to make accelerated payments to the subcontractor without any further consideration from, or fees charged to, the subcontractor. (NDAA, 2019)

The policy is included in FAR Parts 52.232-40 and 32.009-2, titled Providing Accelerated Payments to Small Businesses Subcontractors in all solicitations and contracts (FAR, 2019). The OMB continued to support and reiterate the provision. To note, Kampen (2019) highlighted that this policy does not guarantee payment within 15 days; rather it is a guide for business practice.

Several interrelated regulations cannot be easily disentangled. The following listed regulations may have cumulative effects on the outcome of small-business contracts: Emergency Loan Guarantee Act, 1971; Regulatory Flexibility Act FY 1980; Small Business Innovation Development Act, 1982; Small Business Research and Development Enhancement Act, 1992; Community Reinvestment Act; Small Business Act, as amended through December 8, 2004 and Consolidated Appropriations Act, 2018. In many of these cases, they provided a more convoluted picture of potential sources of interference; for example, only Lockheed Aircraft Corporation utilized the Emergency Loan Guarantee Act of 1971, but did not come to fruition because the government guarantee commitment was terminated (GAO, 1978). Lockheed sought open source credit, and each side dissolved liability and claims that would pertain to the contract (GAO, 1978).

C. ORGANIZATIONS

The DOD's Office of Federal Procurement Policy (OFPP) published a DOD Small Business Strategy in which objective were to "Focus On Strategic Objective #2: Aligning DOD's Small Businesses Activities With National Security Priorities" (OFPP, 2019, p. 6) and "to gather data to measure progress towards increasing small-business participation from industries" (p. 7), much of which is managed under the DOD Office of Small Business Programs (OSBP) (OFPP, 2019, p. 2). The DOD OFPP strategy is reliant on military organizations and the SBA, along with existing programs such as the Procurement Technical Assistance Programs (PTAP; OFPP, 2019). For instance, the DOD Small Business Innovation Research (SBIR) program is congressionally mandated to provide research and development contracts specifically to innovative small businesses (Ryburn, 2012). To successfully leverage the SBIR program, the DOD must proactively communicate its intent with small businesses participating in the program (Ryburn, 2012). How these incentives become known to new small businesses is unclear. Outlined in the SBA is the shortfall of the NAICS code to adequately capture the scope of some business capabilities, and the intent is to permit multiple business identification. This may not be revealing of the systems and must be accounted for in some way.

The Defense Contract Management Agency (DCMA) Small Business Program has a mission to analyze the prime contractor balance of using small-business subcontractors (DCMA, 2020). The SBP is the prime agency to investigate the impacts of such policies as accelerated payments to contractors. Within the SBA, the Office of Advocacy (OoA) as the primary regulatory body is instrumental in engaging this research (see Figure 2). Through the OoA, the Office of the Under Secretary of Defense (OUSD) issued a memorandum in 2014 that indicated a lack of capability may have impacted the ability to meet the accelerated payments goal of within 15 days (OSBP, 2014, p. 1). The DOD pilot Mentor Protégé Program (MPP) is yet another program implemented in Fiscal Year (FY) 1991 under the NDAA, and provided small businesses with an avenue to participate in DOD contracts (Hagans, 2018).

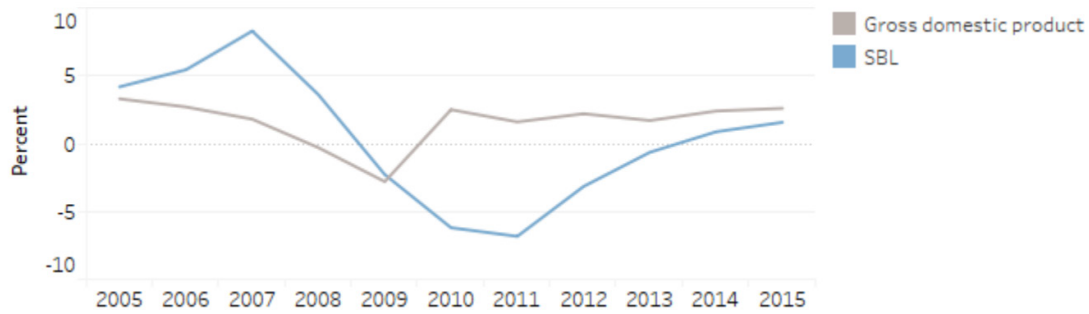


Figure 2. Information on Percent Change in small businesses Loan Balances and Gross Domestic Product. Source: SBA OoA (2017).

D. ELECTRONIC SYSTEMS

Those systems that became capable of providing accelerated payments to small businesses included OnePay and Integrated Accounts Payable System (Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics [OUSD(AT&L)], 2014). Of the 12 reported by the OUSD (AT&L; 2014), it was unclear whether this was an exhaustive list. It was also unclear which systems were previously capable on an earlier class deviation update and/or additional systems that may still be without the capability. In 2006, there were 20 vendor payment locations (GAO, 2006).

Many systems used throughout the DOD impacted the ability to pay contracts. The U.S. Marine Corps Regional Contracting Office requirements include Wide Area Work Flow (WAWF) and Defense Finance and Accounting System (DFAS), which at minimum entailed a two-step process to accepting and issuing payment. The WAWF permitted acceptance within seven days of a proper invoice, while DFAS payout was three to four business days. This did not include the potential validation and approval latency that may be experienced due to additional Simplified Acquisition Procedures that may exist per mandatory regulation and or internal unit standard operating procedures at every level.

The SAM may be a relevant source of contractor activity as eligible for small-business opportunities, and the Contract Performance Assessment Reporting System (CPARS) can support the cross-reference of changes to indicate why follow-on contracts

may not be pursued. The Defense Acquisition Visibility Environment (DAVE), Defense Acquisition Management Information Retrieval (DAMIR), DUNS or Commercial and Government Entity Code (CAGE) number (SBA, n.d.-a) repository are potential sources of small-business activity. The CAGE numbers are readily available through the Defense Logistics Agency (DLA) Federal Logistics Information System (FLIS) or Federal Logistics Agency (FEDLOG; DLA, n.d.).

The Federal Procurement Data System-Next Generation (FPDS-NG) currently provides consolidated reports available to the public. Its FY2010 Small Businesses Goaling Report showed 1,960,516 small business-eligible actions and 985,715 utilized actions, for a total utilization of 50% (FPDS-NG, 2010). When the new regulation took effect in 2011, 12,331,135 small businesses eligible actions were available, and the number of small businesses actions taken was only 1,897,503, which was 15.39% of the total potential (FPDS-NG, 2011). In 2018, that same report shows a decline to 5.4% utilization, considering 35,212,700 small businesses eligible actions were available and the number of small businesses actions was only 1,916,160 (FPDS, 2018). While the small-business actions increased the rate at which it did was not on par with the demand or availability. No in-depth analysis was noted in the publicly available reports.

E. RESEARCH

I found four major organizations conducted research surrounding contracts for small business: the GAO, RAND Corporation, SBA OoA, and independent and university-supported educational research.

The GAO published substantial data on small-business concerns where the focus is primarily on DOD initiatives and meeting criteria rather than on the small businesses experience with policy or the action taken by small businesses as a result of policy. The Small Business Research Program found that as it relates to small business, the issuance of contract awards varied by agency (GAO, 2019b, p. 230). Some of the variations included:

- Type of contract used, like cost reimbursement contract.
- Expertise and work load of the contracting officer.

- Lack of fluidity in communications and discussions in the contract award phase.

In a report to congressional committees titled *DOD Payments to Small Business: Implementation and Effective Utilization of the Electronic Invoicing Could Further Reduce Late Payments*, the GAO (2006):

- Found that invoices to small businesses were paid late almost 5% more than others,
- Conducted surveys with small businesses to determine action taken as a result of the disruption of cash flow, and
- Used WAWF data elements to flag small businesses invoices.

The RAND Corporation has conducted a few studies that were primarily funded by the DOD. These are conducted under its National Security Research Division and can vary from centers such as the Acquisition and Technology Policy Center, International Security and Defense Policy, and Navy and Marine Forces Center (RAND, n.d.). According to *Small Business and Defense Acquisitions: A Review of Policies and Current Practice* (Grammich et al., 2011), the DOD relationship with small businesses experienced:

- Challenges to support small business.
- Industry compatibility issues between the DOD and small business.
- Evolution and feasibility of DOD small-business policy.

The report titled *U.S. Department of Defense Faces Obstacles in Meeting Small Business Contract Goals* (RAND Office of Media Relations, 2008) indicated the following:

- The DOD's goal of 35% prime contracts work was performed under subcontracts.

- DOD requirements are primarily performed in industries with few small businesses.

Moore et al. (2008) conducted a study, *Enhancing Small Business Opportunities in the DOD*, in which they found:

- There was a minimal impact of the electronic payment systems on small business.
- The bundling of contracts has negative and positive impacts on small business.
- There is a need for evaluation to link program efforts to outcome, as with the MPP.
- Small-business development may be inversely incentivized to remain a small businesses to keep preferences.

In the research *Small-Business and Strategic Sourcing: Lessons from Past Research and Current Data* (Moore et al., 2014) found that there was

- Small businesses potential in strategic sourcing.
- Improvement necessary to small businesses size criteria metric.
- Potential to use competitive industry standards as a guide.

The SBA Office of Advocacy (OoA) and the Office of the National Ombudsman are the primary agencies tasked to support small-business concerns. The Enterprise Learning Agenda (ELA) functions under the SBA OoA and provides a platform to delve into small-businesses' major concerns; for the past few years, the ELA has focused on measurement metrics on questions that support the mission (SBA, 2019b). The FY2019 ELA questions were not connected to accelerated payment impact. The SBA provides loan programs and general small-business concerns with evaluations (SBA OoA, 2017; SBA, n.d.-b, 2020). The *Small Business Lending in the United States, 2014–2015* report does tell us some of the loan activity and sources (see Figure 3; SBA OoA, 2017).

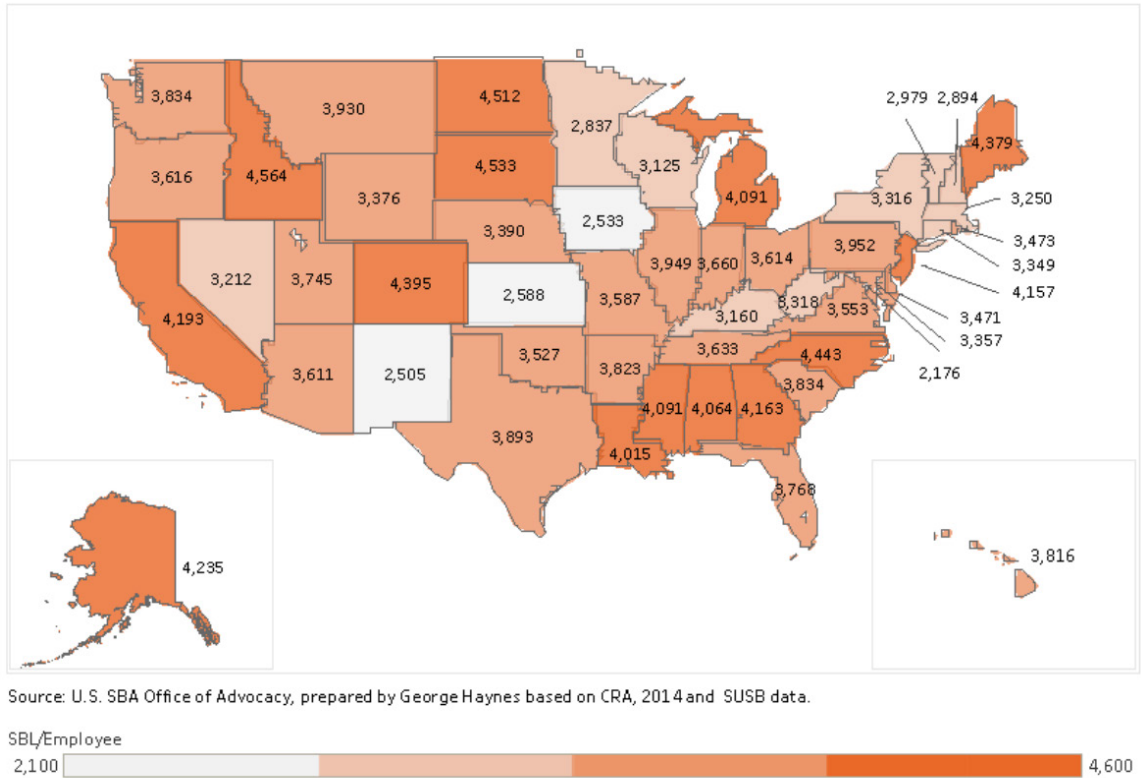


Figure 3. Small businesses Loan Amount per Employee by State. Source: SBA OoA (2017).

Very few other programs and independently funded research exist on small businesses and accelerated payments. A few that may support the necessity for exploring this process include the following studies.

Bilinski's (2013) thesis analyzed small-business concerns particularly towards the Department of the Navy's Naval Open Architecture (NOA), which primarily focused on sharing within information technology contracts and indicated the following:

- NOA participation increases small-business concerns.
- Market niches may exist by contract cost and category for various sizes of businesses.

Byrdsong et al. (2003) focused on a comprehensive analysis towards the *Transformation of Department of Defense Contract Closeout* in which they provided recommendations to improve contract closeout that could be implemented near term without any changes in regulations, intermediate with changes, and long-term transformational changes. The group identified that training within the DOD workforce and the interrelated communities such as acquisition and finance is key to closeout efficiency (Byrdsong et al., 2003). The contract closeout process directly correlates to the provision of accelerated payments.

Cheifetz's (2004) thesis analyzed the effects of acquisition reform available pre-2004 and did not capture the impact of the accelerated payment. Cheifetz (2004) noted some concerns for small businesses as they relate to bundling, reduced competition, market availability for and lack of awareness of programs and policies.

Hunter et al.'s (2015) research, *Measuring the Success of Acquisition Reform by Major DOD Components* under the Center for Strategic and International Studies showed:

- Growth in the use of fixed price contracts.
- Little change towards making the contracting environment more competitive.
- Little change in small-business participation.

Small and mid-sized suppliers' competition and growth when exposed to set aside policies were analyzed (Brown & Girth, 2017) under the support of the Acquisition Research Program. The conclusions included the following:

- Firms that outgrow the small-business program are less likely to be women-owned.
- Small businesses elect to stay small.
- There is a pattern of business activity that may be linked to incentives from small businesses criteria being more lucrative than competing with large business economies of scale.

F. SUMMARY

There are many competing initiatives that provide incentives that can impact the outcome of small-businesses' ability to enter and reenter contracts. Major economic, local, state, national, and world events may impact the level of risk a vendor is willing to undertake and their potential to enter into contracts. These events also temper the type and availability of contract opportunities. Prime contractor and subcontractor agreements and relationships where privity of contract lie may deteriorate as policies are implemented to dictate that relationship. This may further erode my research ability to determine the impact of accelerated payments. A learning curve should be accounted for when looking at any data of small businesses entry into new contracts.

Small-business activity in subsequent years is not necessarily indicative of failure, as businesses maintain the status quo, gain option years, graduate out of the small businesses criteria, seek commercial interests, and partner or merge with other companies. Data sources may have a statistical degree of confidence less than or closest to 1 and will be sufficiently reliable despite the expectation of missing data or some level of inaccuracy or inconsistency.

There is very limited research on the subject of the impact of accelerated payments in general and none specifically diving into the data of small businesses ability to take on more contracts due to the accelerated payments. Both the GOA (2006) report and Moore et al. (2008) indicate that there was and potentially still is sufficient scrutiny on the improvement of the electronic systems and that these systems would be reliable sources of information for future analysis. This does leave many gaps, one of which may be straightforward to address by conducting an analysis of whether or not the accelerated payments for DOD contractors help small businesses. It is overdue to hear more from the small-business voice. The gravity of the impact in subsequent contractual action could prove important.

III. SURVEY METHODOLOGY

A. INTRODUCTION

In the survey I intended to identify the most efficient way to collect accelerated payment empirical data and determine whether the data collected provided relevant information to conduct an initial analysis of potential relationships with accelerated payments and small-business activity. The population included in the survey was from the current approved system of record the FPDS. I developed the questions as a direct requirement to the thesis topic, and I based the format partly on some of the survey questions I found with Cheifetz's 2004 study on The Effect of Acquisition Reform on Small Businesses' Participation in the Federal Marketplace.

B. TYPE OF SURVEY

In the preliminary survey, I used a fillable document that could be shared directly with business representatives. I also used conducted interviews for collecting data. This researcher-administered questionnaire was intended to capture open-ended participant responses and provide a higher potential to refine the preliminary survey into the final survey administered. I surveyed the business representatives by telephone. Respondents acted on behalf of the company and participated in the survey in a phone conversation dialogue-style. This was an element of self-reporting in which my research depended on honest feedback from the respondent.

I refined the final survey due to the results of the preliminary survey. Then I created the online via SurveyMonkey, and solicited a new, randomly-selected population via email for self-administration.

C. SURVEY STEPS

The population samples I used were randomly selected from the FPDS-NG. I conducted the survey during business hours. I identified a small-business official responsible for reporting on the organization's business activity. I provided an opportunity in the beginning of the interview for the business representative or official, to opt out of

the research. Some small businesses choose not to participate in the survey which impacted the response rate. Participants completed the survey via email correspondence when necessary, for verification or convenience.

My process was a standard where each small-business representative was asked the same questions in the same order. The dialogue interview with open-ended questions provided clarification and reduced redundant questions that may have been answered during a previous response. I did permit variation in the order of questions to facilitate smooth transition between questions.

D. ADVANTAGES AND DISADVANTAGES

The advantage or disadvantage of the survey method depended on both the business participant and my expertise as the researcher, the resources, constraints, budget, time, purpose, method, data collected, organization categories, and response rate.

1. Advantages

The electronic survey via telephone promoted flexibility and efficiency, and allowed the respondents to request clarification on items that might not have been clear to them. The survey's provided real time data over a significant coverage area, in a short period of time, that can be substantial (Kelley et al., 2003, p. 262). Researcher-administered surveys allow the researcher to note contentions, correct them, and prepare to answer other respondents. Any difficulty in the process should be documented for analysis. It also allows respondents to expound on or add any pertinent information that may be more important to the thesis topic of accelerated payments' help to small businesses than the outsider researcher may have realized. It increases accuracy in responses as respondents can get any clarification necessary for each question (Kelley et al., 2003, p. 263).

2. Disadvantages

The researcher-administered telephone interview was more time consuming than self-administering, which was evident when the business contact provided had no knowledge on who was the best point of contact to conduct the research and resulted in a number of messages, follow-ups, and referrals. The telephone-administered interviews

have a higher level of refusals than face-to-face interviews (Kelley et al., 2003, p. 262). Switching from the preliminary survey via telephone to a self-administered one via a SurveyMonkey link provided in an email would further degrade the response rate.

As Watkins (2018) indicated, there is a potential for incomplete reports and the varied meaning of questions for each participant (p. 221–222). Some organizations selected in the random population have since undergone closure or takeover. Some contractors had proprietary concerns, sensitive contracts, and medical, weapons, or research regulations that did not permit participation in the research. Additionally, businesses operate depending on activity, resources, risk, and circumstances. The survey captures how things were at a specific moment in time (Kelley et al., 2003, p. 261). The FPDS-NG (2019) database advertised the disclaimer “that limitations to the use of the third-party information one of which is D & B and users of the open source information are permitted to limited non-exclusive rights to which written attribution of the source data should be cited” (p. 9).

E. PRELIMINARY SURVEY

The preliminary survey is a deliberate effort within research to identify gaps or shortfalls in the research method. Hassan et al. (2006) provided a succinct illustration of the benefits to the preliminary study. Appendix A shows the preliminary survey, the DOD Accelerated Payments to Small Businesses’ Interview Script. It provided me an opportunity to adjust the research survey according to any constructive realizations from the preliminary survey.

When I created the preliminary questionnaire, it was in keeping with Hassan et al. to help observe officials’ understanding, comments, and time taken to process information or complete the survey (2006). The preliminary survey responses indicated an understanding of the questions.

F. FINAL SURVEY

I refined the final survey according to the feedback from the preliminary survey. The gaps, shortfalls, and concerns voiced by the small businesses informed the formulation.

Appendix B is an example of the final survey conducted using SurveyMonkey. It provided my research productive insights from the businesses.

G. RELIABILITY AND VALIDITY

According to Kelley et al. (2003), “A research tool must also demonstrate the psychometric properties of reliability (consistency from one measurement to the next), and validity (accurate measurement of the concept)” (p. 263). The target population sample size, though adequate, had a low response rate and limits the reliability: Kelley et al. (2003) further stated, “The sample has to be representative of the larger population to obtain a composite profile of that population” (p. 264). The participants were professionals in their respective fields, which support the validity of my research.

IV. SURVEY RESULTS, ANALYSIS AND RECOMMENDATION

A. INTRODUCTION

In this chapter, I compile and analyze the survey results. I also used a qualitative data analysis to provided my recommendations and used Microsoft Excel tools and SurveyMonkey data analysis. I conducted the preliminary survey via phone interview and identified changes implemented in the online survey. The online survey I administered via SurveyMonkey and was the final survey for this research. I used all survey responses and they were beneficial to conduct the qualitative assessment. The questions that remained unchanged for both surveys I consolidated for analysis. My recommendations were based on patterns and trends most explicitly shown by the collective responses.

B. RESULTS

I conducted two surveys on two different randomly selected populations. The most direct communication was achieved when the FPDS-NG DUNS number provided open source data listing contact name, phone number, and email. Businesses met both small and large criteria and had anywhere from one to over 250 employees. Some businesses had no current contract with the DOD, but primarily all businesses had active DOD contracts, and one business operations were only with the DOD. The results were based on the responses from those who participated. I labeled the respondents from the preliminary survey alphabetically and the final online survey numerically. In Table 1, I provided the common element of both surveys.

Table 1. Consolidated Responses to Questions on Both Surveys.

Respondent	Small Business	% of Contracts w/ DoD	Sys of Invoicing	Inquiries after Invoicing	Gov't Pgm	Source of funding
A	Yes	51-75	WAWF	0	None	Capital Gains
B	Yes	1-25	WAWF	1	None	Current Contracts, Closed contracts
C	No	1-25	Other	0	Grants	Grants
D	Yes	1-25	WAWF, GPC	0	None	Cash
E	Yes	51-75	WAWF	0	SBA	Cash
F	Yes	26-50	Other	0	SBA	Business Capital
G	Yes	1-25	GPC	0	None	Large Bank
H	Yes	76-100	WAWF	3	None	Capital Gains
I	Yes	1-25	DFAS	0	None	Capital Gains, Line of Credit
J	Yes	26-50	WAWF	2	SBA	Business Credit Cards, Personal line of Credit
K	yes	1-25	Other	0	None	Business Credit Card
L	No	1-25	WAWF	1	None	Personal Credit Cards, Check
M	No	51-75	WAWF	0	None	Current Contracts, Closed contracts
N	No	1-25	WAWF	0	None	Closed contracts
O	No	1-25	WAWF, GPC, Go Army ED, SF 182	5	None	Closed contracts
P	Yes	26-50	WAWF	5	None	Combination
1	No	26-50	IAPS	32	None	None
2	Yes	1-25	WAWF	0	Other	Large Bank
3	Yes	76-100	Other	Blank	None	Large Bank
4	No	1-25	WAWF	3	Other	Current Contracts
5	Yes	26-50	WAWF	0	SBA	Small Bank
6	Yes	1-25	WAWF	0	None	Business Capital
7	Yes	1-25	MyInvoice	0	None	Cash
8	No	1-25	WAWF	0	None	Small Bank
9	No	76-100	WAWF	0	Other	Current Contracts
10	Yes	1-25	WAWF	Blank	SBA	Small Bank
11	Yes	76-100	WAWF	1	None	Business Capital
12	Yes	26-50	WAWF	Blank	None	Current Contracts

1. Preliminary Survey

The phone interview was the most time-consuming process, as it was conducted over several weeks and required significant follow-up. I estimated the interview would take five minutes, but on average was 15 minutes or more depending on the business representative's interest in the survey or dialogue. I contacted the respondents within zero to three referrals. All businesses served as a prime contractor and in some instances as a subcontractor. Eleven of the 16 companies indicated that they used WAWF. The Government Purchase Card (GPC), SF 182, and other systems of invoicing were used as well. Seven companies used two or more systems of invoicing and this could vary by contract and department.

Only one company had inquired on the contract invoicing before the invoice was provided, but six companies noted that they handled inquiries after the invoice was submitted. Eleven of the companies had existing DOD contracts, and 15 companies had the capacity to take on more DOD contracts. Four companies received government

program support, three from the SBA and one as a grant. The source of funding varied across nine categories, shown in Figure 4.

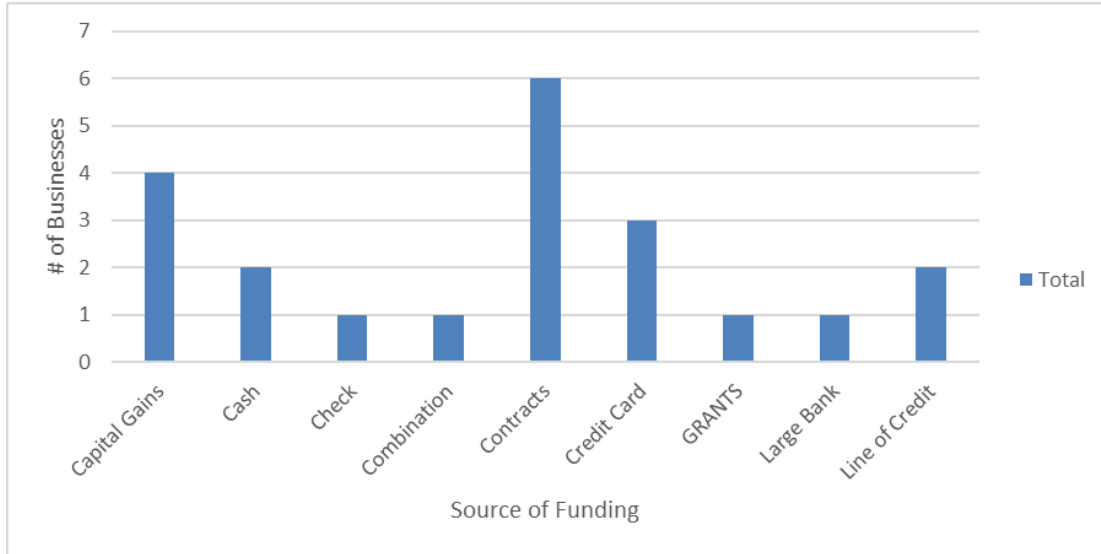


Figure 4. Preliminary Survey Distribution of Responses to Primary Source of Funding

The free, open-ended questions provided helpful feedback in the perspective of the businesses towards the accelerated payment policy and the DOD contracting process. Appendix C presents the results of the preliminary survey I conducted via phone interview. One company mentioned that it based the invoice on information that was provided in the contract award process, which could be different when modification is not communicated to the business. One business indicated it had limitations on the number of queries it could request from DFAS at a given time, which was an inconvenience to the business.

2. Final Survey

I modified the second survey according to the feedback from the preliminary survey. The questions I changed addressed the timeframe to payment that businesses experienced and how helpful payment improvements may be to the business activity more directly. I also reduced the survey to 10 questions. Six questions from the preliminary survey remained the same and four were made more direct. I estimated the survey to be

three minutes at minimum but expected it to be more depending on business interest or input. Appendix D provides the results of the final survey. The way I administered the final survey provided more automation and anonymity than the preliminary survey by using SurveyMonkey. Some business representatives provided substantial feedback; many were brief and exercised their option to skip, leave blank, or in some way not answer questions of their choosing.

The response rate was only 12% for the online survey administered via SurveyMonkey. Eight of the 12 responses were from small businesses. All businesses had current DOD contracts, and three of those companies did 88% or more of their business with the DOD. Predominantly, WAWF was again the main invoicing system indicated, with 75% of the businesses using it. IAPS, MyInvoice, and other systems were the other three responses. One company indicated it conducted 32 inquires before invoice payment. This could be an error or anomaly since the trend from other respondents who reported was five or less. However, the question range high limit was 10 and the response was manually inputted by the survey participant. The responses provided a range of time from invoice to payment between ten to 61 days. Figure 5 shows the distribution of days from invoicing to payment reported by 12 small businesses.

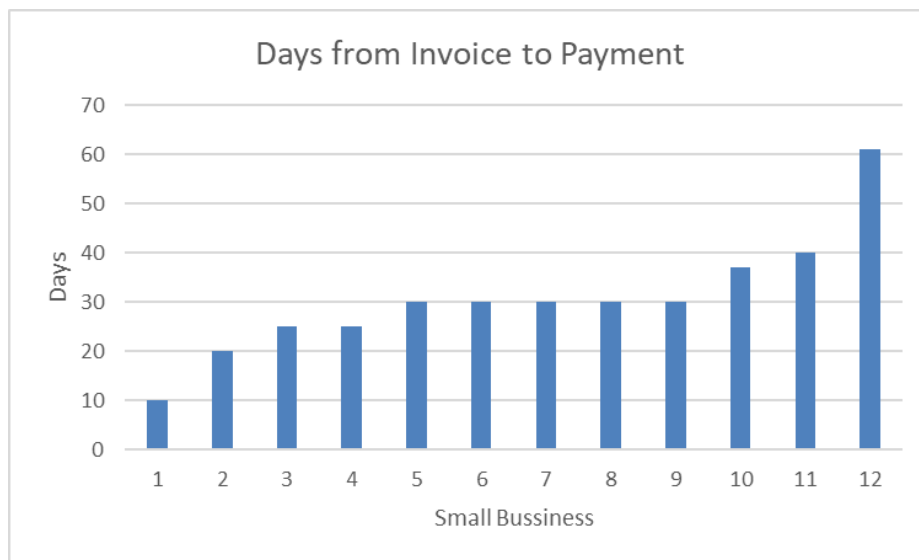


Figure 5. Distribution of Primary Source of Funding

Six businesses indicated that if the time to payment were halved, their business would benefit, two businesses chose not to respond, and four businesses did not expect any effect on their activity. Five businesses used some form of government program, two of which were through the SBA. Table 2, shows that the funding source for the businesses is primarily with banks and contract activity were used.

Table 2. Distribution of the Funding Source Used by Online Survey Respondents

Online Survey Respondent	Primary Funding
1	None
2	Large Bank
3	Large Bank
4	Current Contracts
5	Small Bank
6	Business Capital
7	Cash
8	Small Bank
9	Current Contracts
10	Small Bank
11	Business Capital
12	Current Contracts

Table 3 presents the results of the question “How do DOD contracts help or not help your business?” Eight of the 12 businesses provided a response that shows the range of potential for small businesses capability.

Table 3. Response to the Question “How do DOD Contracts Help or Not Help Your Business?”

How do DoD contracts help?
Maintain capacity to support US manufacturing for Domestic use.
Ensure cash flow with sustained business.
It adds an additional mix of products to our capabilities.
Determining trends within industry- "...we often cite the fact that if the Government is buying licenses for copyrighted material, the schools should be doing that also."
Generates revenue/cash flow,
Promotes research- "A research organization and is primarily funded through research contracts (e.g., from DARPA, AFRL, ONR)."
The DoD is a small percentage of our revenue, but every revenue source is valuable to our small business.
Source of work conducting equipment maintenance and repair. "We primarily support the Navy with old computer systems."

C. ANALYSIS

Only one data point from the online survey was an extreme outlier in the range of responses which I removed. I analyzed the responses that most directly informed the research questions. These included the size of the business in relation to key factors. The key factors are the questions listed in Table 4.

Table 4. Primary Questions Analyzed.

Questions Analyzed
Is your business currently registered under Small Business Administration as a small business?
What percentage of your business is affiliated with Department of Defense contracts?
What system of invoicing do you use?
How many inquiries are received before approval of invoice?
What government programs are you using?
What is your primary source of business funding?
How many days does it take on average to receive payment of invoice?
If the amount of time from invoice to payment were reduced by one half, how would this change your business?
Do DoD Contracts help your business?
How do DoD Contracts help or not help your business?

I used the question “Is your business currently registered under the Small Business Administration as a small business?” to cross reference the impact reported by that small businesses in the participant pool. For the questions “What percentage of your business is affiliated with Department of Defense Contracts?” and “How many days does it take on average to receive payment of invoice?” I presented in the corresponding columns in Appendices C and D. I identified higher-than-expected invoice to payment ranges.

1. Descriptive Analysis

The random sample included a range of business sizes. Primarily, businesses identified as small and large. All sizes were of value to the research because the value of a successful large business can inform what may also be of use to a small business. Table 5 shows the distribution of funding source revealed in the preliminary survey results. Only six of the respondents identified contracts as their primary source of funding, but it was the most frequent source, followed by capital gains, credit card, and line of credit.

Table 5. Response to the Question “What is Your Primary Source of Funding?”

Pilot Survey Respondent	Source of funding
A	Capital Gains
B	Current Contract(s), Closed contract(s)
C	Grant(s)
D	Cash
E	Cash
F	Business Capital
G	Large Bank
H	Capital Gains
I	Capital Gains, Line of Credit
J	Business Credit Card(s), Personal Line of Credit
K	Business Credit Card
L	Personal Credit Card(s), Check(s)
M	Current Contract(s), Closed contract(s)
N	Closed contract(s)
O	Closed contract(s)
P	Combination

Not surprisingly, businesses used a combination of or multiple sources of funding. I combined the 33 total responses to both the preliminary and final surveys’ funding source question as shown in Figure 6, current contracts was still the leading funding source, closed

contracts and cash were the next leading source and capital sources and banks were the next sources.

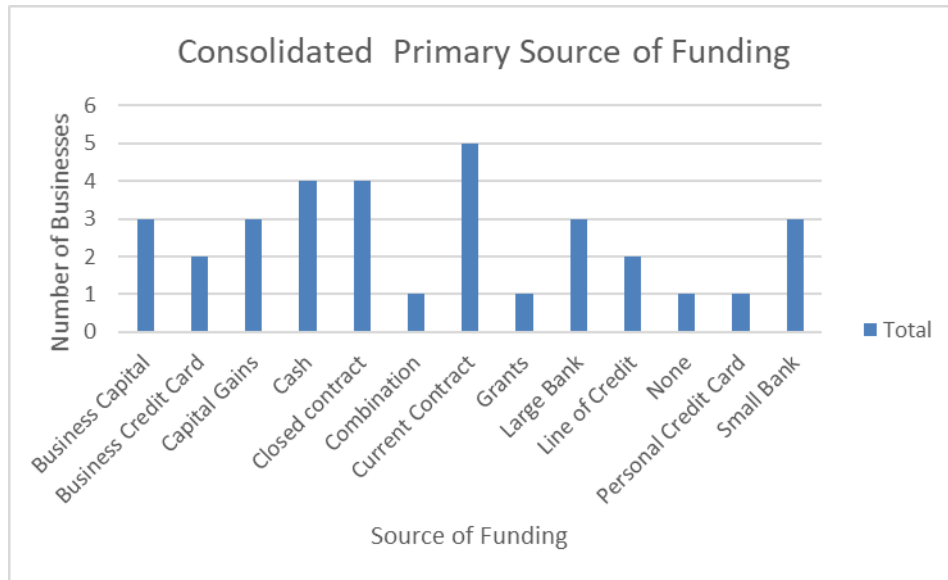


Figure 6. Consolidated Distribution of Primary Source of Funding

The pattern of activity in the funding source showed by the combined surveys indicates a possible significance in the reliability or consistency of the accelerated payments of contract and the value to small-business activity; this latent relationship requires further analysis. Furthermore, if the time to payment were halved, there is a potential benefit to businesses and small businesses in general. When asked “If the amount of time from invoice to payment were reduced by one half, how would this change your business?” six of 12 businesses indicated a positive impact, two indicated no change, two replied no and two did not respond to this question. More than half of the businesses currently experience a mean, median, and mode of 30 days to receive payment. When asked if the time to invoice was halved would change their business may have responded believing it meant a guarantee of payment within 15 days; however, in my research, I envisioned half in reference to the accelerated payment policy of 15 days for payment to small businesses and half should be regarded as seven to eight days for payment.

2. Patterns of Small businesses

I found three patterns of note related to small businesses and the accelerated payment policy. They include the reporting invoice system and the payment processing delays, choice of funding source, and a lag time in days to payment that is not reflected in the lauded efficiency of the invoicing systems.

I focused on the WAWF system of invoicing because the survey results indicated that WAWF was predominantly used in the DOD. While small businesses work the system when they had a DOD contract, it is not the primary system of invoicing used in small businesses operations. Only a fraction of a small businesses' DOD contract activity is through WAWF business operation and the organization internal capacity to navigate the WAWF or other invoicing system may not be prioritized. This is further exacerbated by the research results, which showed that there is little to no communication made from the DOD acquisition community. The businesses interacted through WAWF with members of the acquisition community across the DOD; however, businesses indicated that they did think the systems were efficient to use and process.

What was in question was the time for processing. The invoice processing systems, while automated, require human input, review, routing, approvals and submissions for payment. This is an area of concern for future exploration. What may be the source or sources of delay preventing the timely administration within policy specification? The preliminary survey open-ended response mentioned internal business inefficiency in operations, specifically the infrequent use of DOD invoice system such as WAWF. Internal business inefficiency can further delay invoices due to internal errors routing invoices in the typical manner for the business, or not according to the DOD contract direction. The responses also indicate that the contract modification and contract line item number discrepancies caused delays. Despite these delays all companies indicated that they had the capacity and willingness to take on additional DOD contracts.

The funding sources used by small businesses can hint towards whether the accelerated payment policy is useful. It is a good indication, as depicted in Figure 7 that some businesses do rely on funding from current or closed contracts, but primarily the large

businesses indicate they use contract sources more than the small businesses do. The small businesses response indicates a reliance on banks of various sizes more than on contracts.

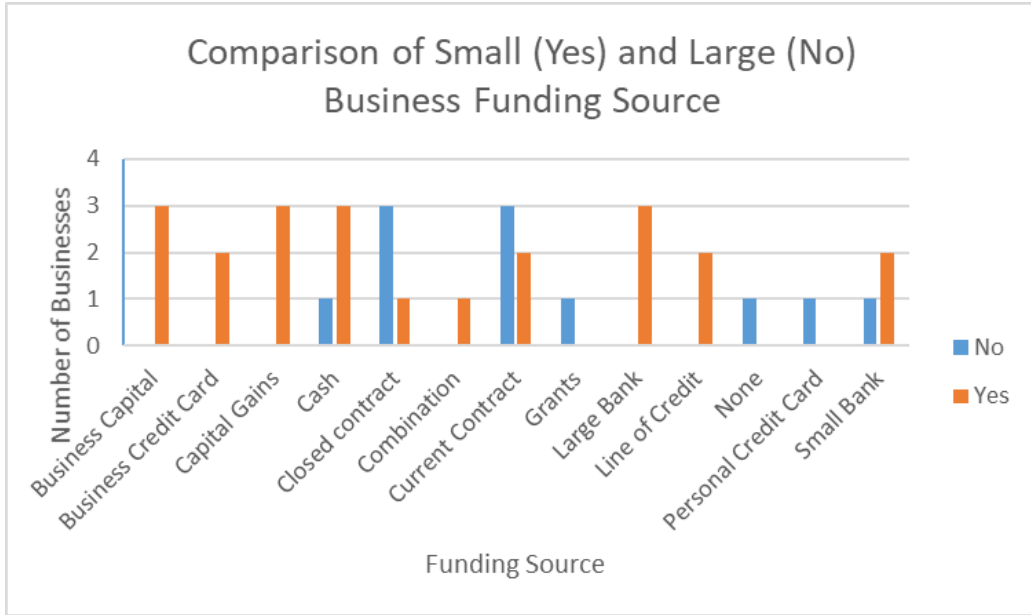


Figure 7. Source of Funding Distribution by Business Size

If the length of time to payment was improved the business experience may help small businesses currently operating without that reality. The notes section of the preliminary survey provided a wealth of information on the impact to individual businesses. The feedback was that the automated invoicing through WAWF is efficient, but the inquiries when seeking invoice payment and length of time it takes to receive payment are contradictory. One business reported the explanation provided from customer service is a high work-load.

Survey fielding indicated that businesses were hesitant to share even indirect or big picture financial data of their businesses. Some articulated International Traffic in Arms Regulation or like research, compliance, or proprietary restrictions as to why they could not participate.

3. DOD Contract by Industry

I thought it was necessary to compare the participants to the overall national contracting activity. I found that even using a random sample with a small response rate, the pattern was reflective. I also found that while the small businesses contracting goals are being met on the national level, there are areas to be improved with the invoicing process.

DOD contracting has a distinct pattern of authorization in the top industries of contracting activity. Figure 8 was retrieved from Contract Obligations by Agency Source: FPDS-NG, 2016 (CRS, 2016, p. 3). The CRS 2016 report separated the DOD contract activity by dollars authorized under three industry headings of services, goods and research and development.

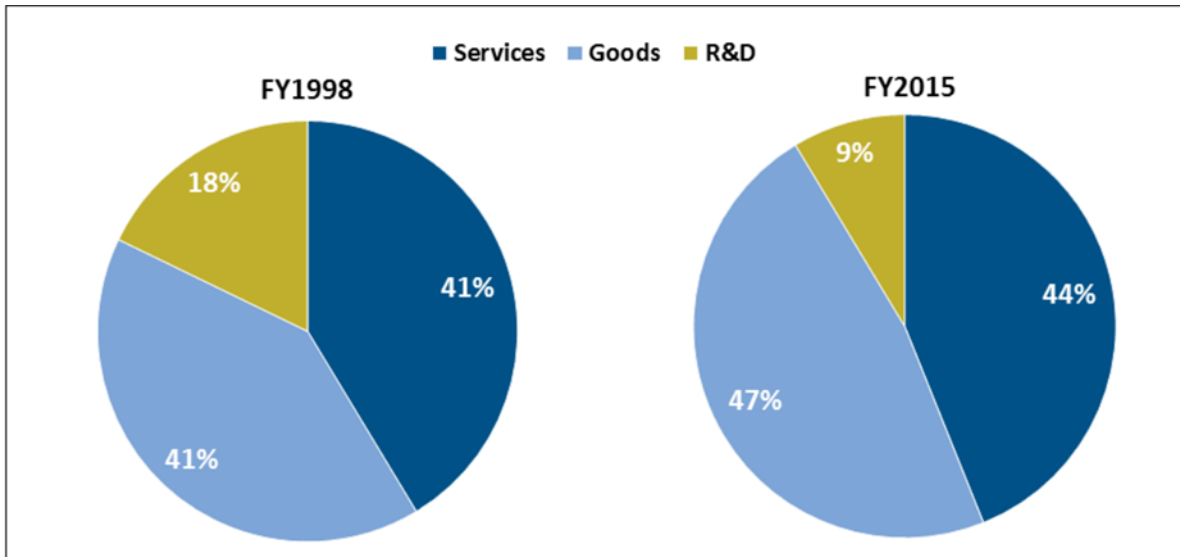


Figure 8. DOD Contract Obligations by Major Category in FY1998 and FY2015. Source: CRS (2016).

This pattern was the same for the follow-on report conducted by the CRS in 2018. As shown in Figure 9 the 2018 report also indicated a decline in the percentage of research and development activity with relation to DOD Contract obligation by major category.

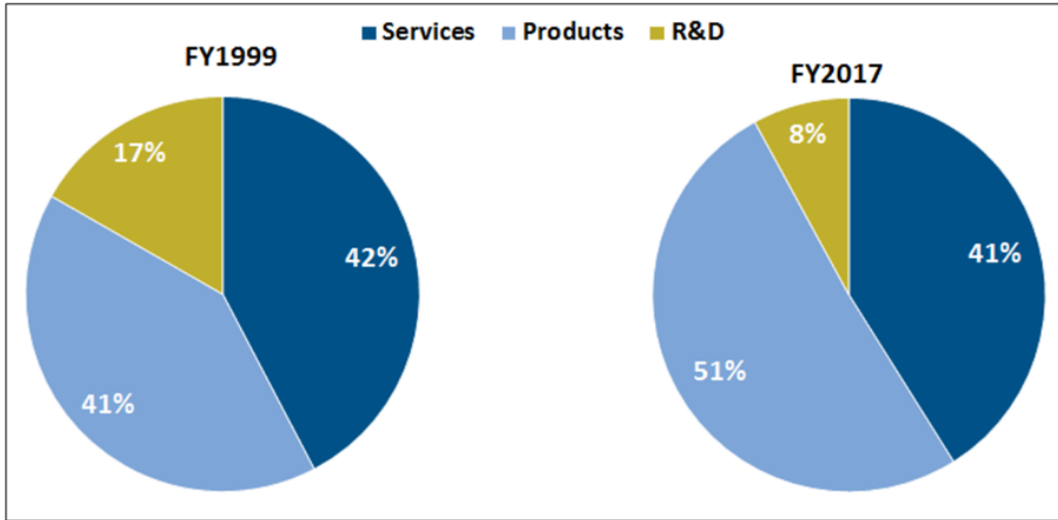


Figure 9. DOD Contract Obligations by Major Category in FY1999 and FY2017. Source: CRS (2018).

I compared the industry distribution to my survey responses, which revealed a similar pattern to that identified by the CRS as shown in Figure 10. The responses from each industry do not show a trend that there are industry-specific issues with the accelerated payment policy.

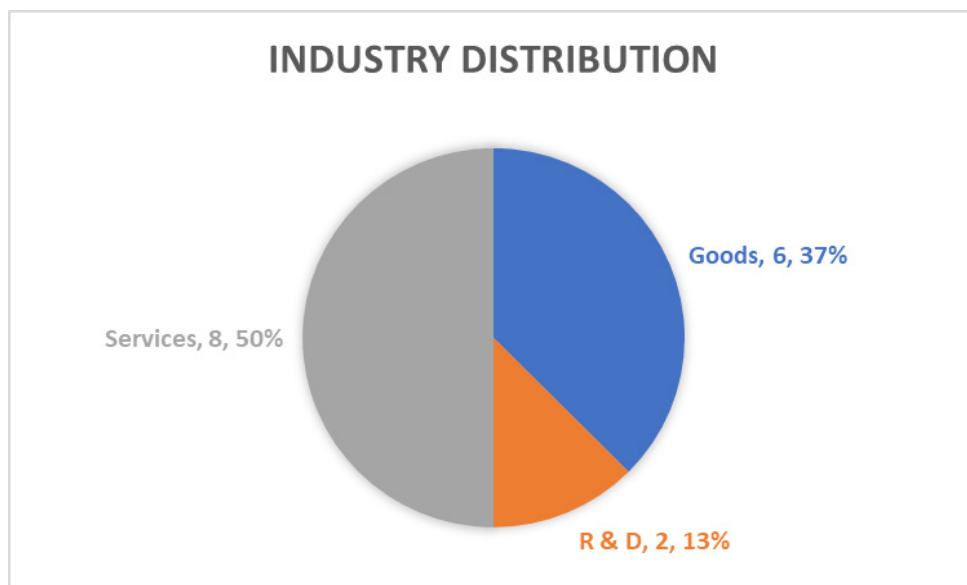


Figure 10. Industry Distribution of the Preliminary Survey Responses

The number of contracts awarded to small businesses has remained steady at or above the 23% goal (SBA, 2019a). The study's small businesses theme resounded small niches, uniqueness in product or service, and contracts of research and development. They represent the overall contracting activity base on a small scale. One business response to the question "What is your primary source of business funding?" was "I cannot rely on current contracts." The SBA's pride of achievement in meeting its small businesses contract goal for small businesses contracting activity for six consecutive years from 2012 to 2018 (SBA, 2019a) is not translated the same way to small businesses with the accelerated payment policy according to this scale of research.

D. ADVANTAGES AND DISADVANTAGES

Using the qualitative analysis on the open-ended survey responses has advantages and disadvantages despite the statistically significant differences. I analyzed both the preliminary survey and final survey results open-ended responses for trends, themes, and tones that could not be appreciated by any other method. I used the preliminary survey to standardize the final survey as well as provide clarification. The preliminary survey, I conducted as a phone interview, and as I anticipated it had a higher response rate than the final survey. The final survey administered online provided a greater level of anonymity and required only three minutes of the participants' time. I gained an improvement of two minutes from the preliminary survey to the final survey. The disadvantage of this method of survey analysis was that it relied on a subjective review of the small data responses to identify trends or patterns. Preliminary survey completion rarely took five minutes as most participants were inclined to have a dialogue and expound on their responses. Final survey results indicate brevity in responses and still supplied a wealth of open-ended information.

E. INFLUENCES

The external and internal influences of the research I identified to mitigate any negative effects. The survey captured how things were at a specific moment in time (Kelley et al., 2003, p. 261). My research area suffered from internal influences, as it was being developed specifically for the design and issue of the questionnaire. The preliminary survey served its purpose of refining the survey because I modified the final survey, in which the

questions not supportive of answering the research questions were removed. To the question “How many DOD contracts are you capable of managing?” All 17 respondents in the preliminary survey indicated a desire to take on additional DOD contracts.

While I anticipated external influence, it was unprecedented. During the administration of the surveys, the COVID-19’s pandemic impacted the nation’s, economy and businesses, which negatively influenced the potential for input from a larger sample. The majority of businesses I contacted were in crisis planning and execution and could not support the research. The small sample may not be representative of the larger contracting community. There are many other policies, regulations, processes, and incentives that cannot be clearly separated to examine the isolated influence of the accelerated payment policy. The SBA was used by five of the 28 businesses, and those businesses did not rely on current or closed contracts. Of the same five businesses, two were forthcoming that the potential to increase capacity existed.

F. SUMMARY

The assumptions in the survey design and fielding did not anticipate a very low response rate or business hesitancy to provide data. If this research were replicated on a larger scale to provide the measure of effectiveness for the accelerated payment policy, it may show that the policy is 8% effective in paying businesses, and possibly much less for small businesses. Survey results indicate that communication about the invoicing process is initiated by the contractor and those companies receive no communication from the acquisition community. The payment of invoice is on average within 30 days, which is double that of the accelerated payment policy intent of 15 days. The small businesses relied on banks instead of current or closed contract funding and agreed that it would help if payment times were reduced by half, it would be interesting to see which way these data points amplify with more respondents. For instance, WAWF was the predominant system of invoicing used by businesses regardless of size. It was not unusual for companies to use multiple systems of invoicing. As one company relayed, the DOD payment process is not the standard system used by their business, and inefficiencies in the invoicing also stem from the business internal operations.

For the overall research questions “How do accelerated payments from DOD contracts help small businesses?” I found that while businesses currently do not experience accelerated payments in the capacity that it was intended, their willingness to contract further with the DOD indicates that it is a positive incentive. The reliance on funds availability from closed or current contracts was not positive and businesses used a combination of multiple sources of funding.

To the research question “How are accelerated payments facilitating that utilization?” I found that the accelerated payments policy is not currently facilitating that utilization because I did not identify a consistent payment to small businesses at or below the 15-day policy guideline. With regard to identifying a positive or negative relationship of the effects of accelerated payments on risk tolerance or risk-averse behaviors on cost, schedule, and performance of small businesses, I could not definitively answer due to no distinct trend in the survey feedback.

In keeping with the research proposal, I was able to identify a snapshot of small businesses decisions such as to the capacity to contract further, funding source used, and ways in which the policy helped. Due to limitations in time, responses, and current events, I was not able to model the potential paths of healthy small-business activity as intended. The survey responses in Appendix D provided some ways in which the accelerated payments help small businesses, of which eight of the 12 were positive or neutral and four of the 12 were due to no answer.

G. RECOMMENDATIONS TO IMPROVE RESEARCH

The research can be improved in three areas: refinement of the survey itself, improving the sample size and time.

1. Refinement of Survey

Each successive survey provided refinements from the sample population. Questions that were not supportive to answer the research questions should be removed as realized. The discussions provided valid questions to help inform the scope of the research and follow-on research topics. While this is beneficial, a more succinct process could be

achieved if the response rate were higher in the initial survey. These specific areas of focus should address latency in the DOD acquisition community's involvement in the invoicing process leading up to payment of the invoice. The research responses provide the initial view to conduct in-depth case studies to further refine businesses' definitive activity and decision logics. To support case studies, it may be beneficial to have DOD higher headquarters support and build the relationship with businesses to gain access to tangible business metrics like bidding, award, contract values, progress payment and cash flow within the company.

2. Sample Size

A larger population size should be used. It should also provide more data to conduct quantitative analysis. This will increase the potential number of respondents and will improve validity and reliability of the research.

3. Time

The survey should be made available to complete for a longer period of time. During the fielding of this survey, businesses were rightly focused on crisis planning due to the COVID-19 virus pandemic. This severely degraded business participation, and many requested follow-up beyond the pandemic. Businesses also needed time to locate the right representative with the knowledge and experience that the survey required. The time for this was also outside the fielding range for the survey collection.

V. SUMMARY, RECOMMENDATIONS, AND CONCLUSIONS

The purpose of this section is to consolidate the research process and demonstrate the extent to which the research questions were addressed. The recommendations I presented are based on the trends, potential areas for future research are highlighted, and the project is concluded.

A. SUMMARY

My research hinted that the accelerated payment program timeline of 15 days for payment to small businesses is not realized. Only one business reported payment received within 15 days. The small-business activity is uniquely tied to the DOD industry. The contracting financing policies affect the defense industry and the effect should be assessed (GAO, 2019b, p. 2). The accelerated payment policy is one of many policies. There is potential for the loss of small businesses availability to DOD contracting. The lack of small businesses reliance on DOD contracts as a funding source may relate to the inconsistency of the DOD contracting process to meet the policy requirement. Survey results indicate that it is common for companies to receive no communication from the acquisition community. The timelines to payment are on average 30 days, which is double that of the accelerated payment policy intent of 15 days.

B. RECOMMENDATIONS FOR FURTHER STUDY

I recommended five areas for further study. These include: survey, risk, contract management process, accelerated payment timeframe and analysis for future policy.

1. Survey

The scope of follow-on surveys can benefit from this research survey. The response rate for the survey was low, at 17% for the phone interviews and 12% for the online survey. In both cases, the population size was 100. In-person interviews may be beneficial to improve the response rate, but they are time consuming. The population pool solicited should be sized to account for the poor response rate, which may provide the target number

of responses for quantitative assessment. The FPDS-NG is a public source with a large data repository to select the survey population.

2. Risk

Businesses identified that they wanted to increase the number of contracts they had with the DOD. The reasons that they take on contracts with the DOD or other sectors could be helpful to understand. This may be a pattern of risk aversion or inclination. The funding sources that businesses rely on and the type of operations that they conduct when they receive particular funding sources could also help. Any research to identify industry-specific trends may highlight the level of risk small businesses are willing to take to contract with or without the DOD and may help those same businesses.

3. Contract Management

In the contract management process, there are three areas that may provide resolution to the capabilities and limitations to achieve the accelerated payment policy payment timeline. The areas are: communications, contractor internal management issues, and government contract management issues. Since the accelerated payment policy is provided by the DOD, it may be necessary to incorporate the policy within an auditability process in all three aspects of personnel, processes, and internal controls but specifically the latter two (Rendon & Rendon, 2015, p. 716). small businesses consistently reported payment beyond the policy mandate, which indicates that there may be a deterioration of the auditability process where the policy is not enforced, monitored, or reported adequately.

4. Accelerated Payment Time Frame

It may be helpful to determine the number of days until payment is received after an invoice is submitted by invoice system or industry. Some examples are to conduct a thorough review to identify the reality of the timeframe from invoice to payment at different phases of the acquisition life cycle, different types of contracts, procurement systems, fiscal year periods, geographical areas, contracting commands, and service. An overview of the timeline from invoice submission to payment for each major invoice system step could help policy-makers reform the accelerated payment policy. The average,

mode, and deviations may inform the realistic assignment of policy timeframes. For instance, WAWF advertises five days to invoice review and submission to DFAS. DFAS advertises 10 days for invoice processing. The accelerated payment policy may be limited to 15 days minimum unless those specific systems' timelines are analyzed. Research should be conducted to identify and assess areas that should be addressed internal to the DOD to reiterate meeting criteria rather than relying on the small businesses' vested interest in receiving payment.

5. Analysis for Future Policy

The time between invoice submission and payment completion is significantly beyond the policy intent of payment within 15 days to small businesses and large businesses with small businesses contractors. The average timeline was 30 days to payment. The DOD's latest effort to support small businesses is the Small Business Runway Extension Act that went into effect in 2020 (H.R. 2345, 2019). This act can benefit from understanding the limitations and capabilities of the current contracting financing policies such as the accelerated payment policy. Understanding the effect from the small businesses perspective is the most relevant to achieving the objective of the policy. Other stakeholders who influence the acquisition and contract management process, such as contracting officers, program managers and contracting officer representatives should participate in the assessment.

C. CONCLUSIONS

The research helped inform, if not answer, some of the research questions. The main question, "How do accelerated payments for DOD contracts help small business?" is partially answered because small businesses are not experiencing the accelerated payment policy incentive of 15 days. This research provides important insight into small businesses' opinions on whether and how the accelerated payment policy helped. Small-business activity varied and indicates that they sometimes utilize current and closed contracts to conduct business activity. The invoice processing systems, while automated, require human input, review, routing, approvals, and submissions for payment. Future research into the impact of these variables could be conducted to analyze how the number of days

to payment can be reduced. What prevented the timely administration within policy specification should also be identified. Larger population pools should be used to administer the research surveys to help answer the research question using quantitative analysis. Any potential clarification on the policies can impact contractors in the defense industry. The basic provisions under the accelerated payment policy were not being met. Both survey results indicate that communication as it pertains to the invoicing and payment is primarily initiated by the DOD contractor small businesses staff. Policy-makers should thoroughly address all major areas of influence that may prevent policy from being realized before modification or reform.

APPENDIX A. PHONE INTERVIEW SURVEY QUESTIONS

The purpose of this appendix is to provide the reader with the preliminary interview questions that were used to conduct the survey.

DOD Accelerated Payments to Small businesses Interview Script

Introduction.

Hi, my name is Captain Pearl Winston a Marine Corps officer and student at the Naval Postgraduate School.

Who do I have the pleasure of talking to today? * (pause and wait for response)

I'm working on a research project that is studying how the speed of payments impact DOD contractors. Your business was chosen at random from amongst all federal contractors to answer a short survey. Your responses will be kept confidential, and participation is strictly voluntary. I am only interested in aggregate statistics and not individual companies. Would you mind letting me know who I could ask to take this survey? It shouldn't take more than five minutes to complete.

Number of referrals to responsible business representative ____.

Interview.

Refer to Preliminary Questionnaire.

1. Is your business currently registered under the Small Business Administration as a small business? *
 Yes No

2. Approximately how many employees does your company have? *
 1-10 11-25 26-50 51-100
 101-150 151-200 201-250 >250

3. What percentage of your business is affiliated with Department of Defense contracts? *
 1-25 26-50 51-75 76-100

4. What percentage of your business is affiliated with Department of Defense contracts is as a prime contractor? *
 1-25 26-50 51-75 76-100

5. What system of Invoicing do you use? (Select all that apply) *
 ACCS AMPS AVEDS CAPSW CASH
 CEFMS DAI EBS EDA FABS
 FAS GPC IAPS MOCAS MSST
 MyInvoice OnePay SAVES SF TPPS
 TFMS WAWF Other

6. How many different systems of Invoicing do you use for DOD contracts? *

1 2 3 4 5 6 7 8 9 >10

7. How many inquiries are received before submission of invoice? *

1 2 3 4 5 6 7 8 9 >10

8. How many inquiries are received before approval of invoice? *

1 2 3 4 5 6 7 8 9 >10

9. How many DOD contracts are you currently managing? *

1 2 3 4 5 6 7 8 9 >10

10. How many DOD contracts are you capable of managing? *

1 2 3 4 5 6 7 8 9 >10

11. What government programs are you using? (Select all that applies) *

CRA MPP MTAP NGO

Private SBIR SBRDE STTR

SBA GRANTS LOANS DISASTER ASSISTANCE

SURETY BOND INVESTMENT CAPITAL Business Advice

Other

12. What is your primary source of Business funding? *

Business credit cards Personal credit cards Current contracts

Closed contracts Small bank large bank

Close.

Do you have any other thoughts or comments that our discussion has triggered? *
Thank you for all your help. If other questions come up as I progress through the research, would you mind if I called you again for some follow-up?

Points of Contact. If you have any questions or comments that arise regarding this project, you can contact me, Capt. Pearl A. Winston, USMC, pearl.winston@nps.edu, or my advisor, Dr. Jesse Cunha, jcunha@nps.edu.

Notes:

APPENDIX B. ONLINE SURVEY QUESTIONS

DOD Accelerated Payments to small businesses SurveyMonkey

1. Is your business currently registered under the Small Business Administration as a small business?
 Yes No

2. What percentage of your business is affiliated with Department of Defense contracts?
 1–25 26–50 51–75 76–100

3. What system of Invoicing do you use? (Select all that apply)
 ACCS AMPS AVEDS CAPSW CASH
 CEFMS DAI EBS EDA FABS
 FAS GPC IAPS MOCAS MSST
 MyInvoice OnePay SAVES SF TPPS
 TFMS WAWF Other

4. How many inquiries are received before payment of invoice?
 0 1 2 3 4 5 6 7 8 9 >10

5. How many days does it take on average to receive payment of invoice?
 0 -15 16–30 31–45 46–60
 61+

6. If the amount of time from invoice to payment were reduced by one half, how would this change your business?

7. What government programs are you using? (Select all that applies)
 Business Advice CRA DISASTER ASSISTANCE
 GRANTS INVESTMENT CAPITAL LOANS MPP
 MTAP NGO Private SBIR SBRDE
 STTR SBA SURETY BOND None
 Other

8. What is your primary source of Business funding?
 Business credit cards Personal credit cards
 Current contracts

- Closed contracts
- Parent Corporation
- Small bank
- Grants
- Large bank
- Cash

Other

9. Does DOD contracts help your business?

- Yes
- No

10. How does DOD Contracts help or not help your business? (Include Company Name, DUNS, and your title within the organization)

APPENDIX C. PRELIMINARY SURVEY RESULTS

Respondent	Referrals	Small Business	Employees	% Contracts w/ DoD	% of DoD Contracts as Prime	Invoicing Sys	# of Sys	Inquiries Before	I. After	DoD Contracts	DoD Contract capacity	Gov't Pgm	Source of funding	NAICS	Industry
A	3	Yes	>250	51-75	76-100	WAWF	1	0	0	>10	>10	None	Capital Gains	541330	Engineering Services
B	1	Yes	20-Nov	25-Jan	76-100	WAWF	2	0	1	3	>10	None	Current Contracts, Closed contracts	336999	All Other Transportation Equipment Manufacturing
C	1	No	>250	25-Jan	76-100	Other	5	0	0	0	0	Grant	Grant	Nne	
D	1	Yes	26-50	25-Jan	76-100	WAWF, GPC	2	0	0	2	>10	None	Cash	423830	Industrial Machinery and Equipment Merchant Wholesalers
E	0	Yes	26-50	51-75	51-75	WAWF	1	0	0	>10	>10	SBA	Cash	561720	Janitorial Services
F	0	Yes	10-Jan	26-50	76-100	Other	2	0	0	1	6	SBA	Business Capital	541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)
G	0	Yes	51-100	25-Jan	51-75	GPC	1	0	0	>10	>10	None	Large Bank	333999	All Other Miscellaneous General Purpose Machinery Manufacturing
H	0	Yes	51-100	76-100	26-50	WAWF	1	0	3	4	>10	None	Capital Gains	541611	Administrative Management and General Management Consulting Services
I	0	Yes	10-Jan	25-Jan	76-100	DFAS	2	0	0	2	5	None	Capital Gains, Line of Credit	541620	Environmental Consulting Services
J	0	Yes	10-Jan	26-50	76-100	WAWF	1	0	2	0	>10	SBA	Business Credit Cards, Personal line of Credit	238330	Flooring Contractors
K	0	yes	51-100	25-Jan	25-Jan	Other	1	0	0	0	2	None	Business Credit Card	721110	Hotels (except Casino Hotels) and Motels
L	0	No	25-Nov	25-Jan	76-100	WAWF	1	0	1	0	>10	None	Personal Credit Cards, Check	None	
M	2	No	>250	51-75	76-100	WAWF	3	0	0	>10	>10	None	Current Contracts, Closed contracts	315220	Men's and Boys' Cut and Sew Apparel Manufacturing
N	0	No	25-Nov	25-Jan	76-100	WAWF	1	0	0	0	4	None	Closed contracts	334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
O	0	No	51-100	25-Jan	76-100	WAWF, GPC, Go Army ED, SF 182	4	4	5	6	>10	None	Closed contracts	None	
P	1	Yes	25-Nov	26-50	76-100	WAWF	1	0	5	>10	>10	None	Combination	441310	Automotive Parts and Accessories Stores

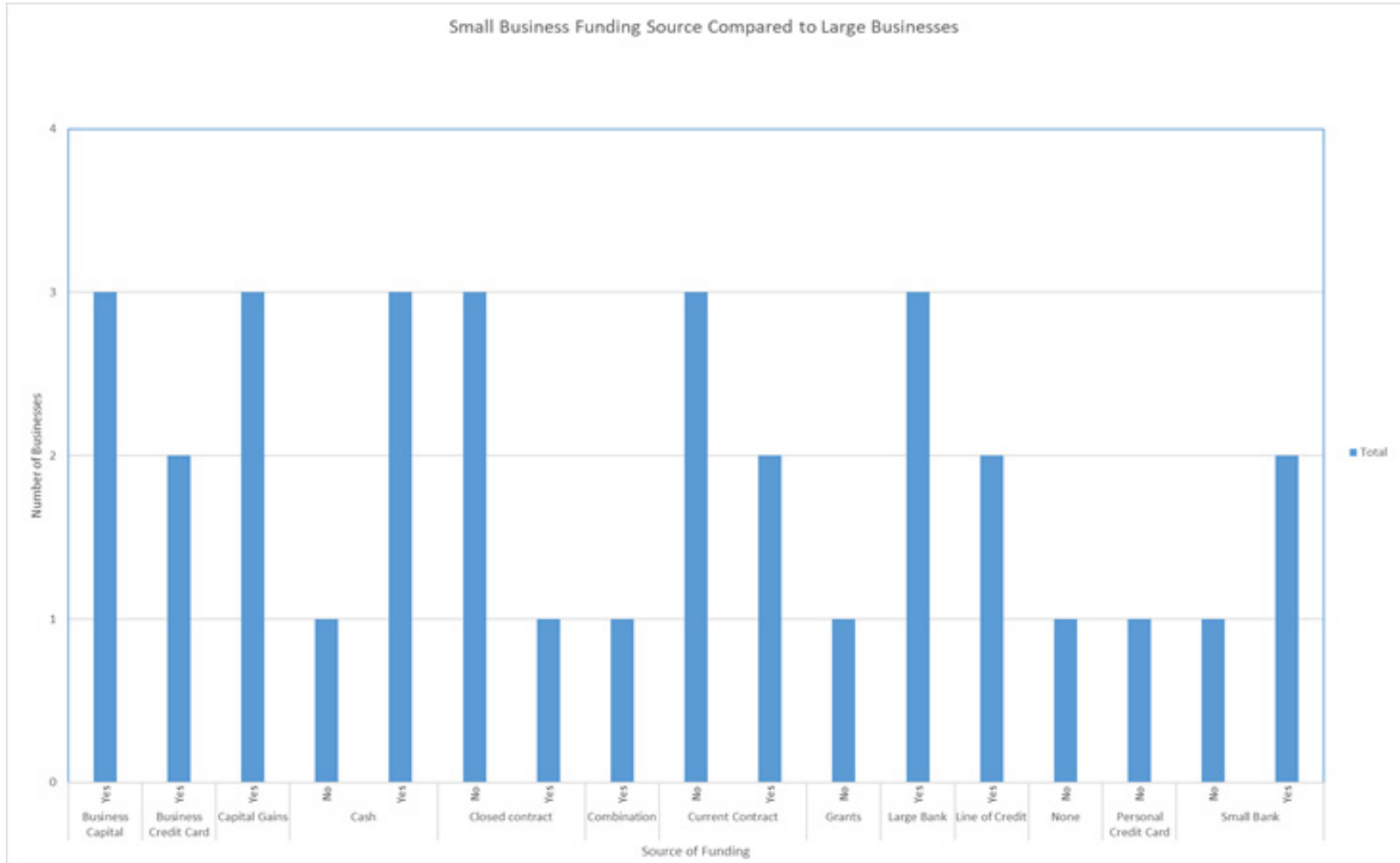
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APPENDIX D. FINAL SURVEY RESULTS

Respondent	Small Business	Exact % w/ DoD	% w/ DoD	Sys of Invoicing	Inquiries before	Days to Payment	Time to payment Halved	Gov't Pgms	Primary Funding	Does DoD Contract Help	How does DoD Contracts Help
1	No	41	26-50	IAPS	32	40	Blank	None	None	None	None
2	Yes	24	25-Jan	WAWF	0	37	Yes	Other	Large Bank	Yes	Support US manufacturing for domestic use.
3	Yes	100	76-100	Other	Blank	30	No Change	None	Large Bank	None	None
4	No	25	25-Jan	WAWF	3	30	Reduce workload on collections,manage and resolve our portfolio faster	Other	Current Contracts	Yes	Ensure cash flow with sustained business
5	Yes	40	26-50	WAWF	0	25	It would greatly improve our cash flow	SBA	Small Bank	Yes	It adds an additional mix of products to our capabilities
6	Yes	6	25-Jan	WAWF	0	30	No material effect	None	Business Capital	Yes	Well, we often cite the fact that if the Government is buying licenses for copyrighted material, the schools should be doing that also
7	Yes	8	25-Jan	MyInvoice	0	61	Blank	None	Cash	None	Blank
8	No	1	25-Jan	WAWF	0	30	No major affect, mostly small but would be helpful for cash flow if and when it is a large contract	None	Small Bank	Yes	Generates revenue/cash flow
9	No	98	76-100	WAWF	0	10	No significant impact	Other	Current Contracts	Yes	For a research organization and is primarily funded through research contracts (e.g., from DARPA, AFRL, ONR)
10	Yes	5	25-Jan	WAWF	Blank	20	No	SBA	Small Bank	Yes	The DoD is a small percentage of our revenue, but every revenue source is valuable to our small business
11	Yes	88	76-100	WAWF	1	30	Make cash flow much easier	None	Business Capital	Yes	We primarily support the Navy with old computer systems
12	Yes	35	26-50	WAWF	Blank	25	Would provide much better cash flow, which enables avoiding use of bank money and paying associated costs to use that money. Most small businesses understand there is cost of money but any reduction in those costs would help	None	Current Contracts	Yes	Blank

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APPENDIX E. FUNDING SOURCE BY BUSINESS SIZE



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LIST OF REFERENCES

- Accelerated Payments for Small Businesses Act of 2018. H.R. 5337, 115th Cong. (2018).
<https://www.congress.gov/bill/115th-congress/house-bill/5337/text?format=txt>
- Bilinski, C. S. (2013). *An analysis of small business concerns and naval open architecture: Options to facilitate small business participation in the Department of the Navy* [Master's thesis, Naval Postgraduate School]. <http://hdl.handle.net/10945/32794>
- Brown, T. L., & Girth, A. M. (2017). Examining the effects of set aside policies on competition and growth for small and mid-sized suppliers. In *Proceedings of the 14th Annual Acquisition Research Symposium* (Vol. 2, pp. 186–200).
https://calhoun.nps.edu/bitstream/handle/10945/58954/SYM-AM-17-077-016_Brown.pdf?sequence=1&isAllowed=y
- Byrdsong, R., Crespo, L. A., Holland, G. A., Parker, C. D., & Torunoglu, E. G. (2003). *Transformation of Department of Defense contract closeout* [Master's thesis, Naval Postgraduate School]. <http://hdl.handle.net/10945/34236>
- Cheifetz, A. (2004). *The effect of acquisition reform on small business participation in the federal marketplace* [Master's thesis, Naval Postgraduate School].
<http://hdl.handle.net/10945/1693>
- Clarifying the Small Business Runway Extension Act of 2018. H.R. 2345, 115th Cong. (2019). <https://www.congress.gov/bill/116th-congress/house-bill/2345>
- Congressional Research Service. (2016). *Defense acquisitions: How and where DOD spends and reports its contracting dollars* (CRS Report No. R44010).
https://www.ndia.org/-/media/sites/ndia/policy/documents/digest/3jan17/defense-acquisitions_how-and-where-dod-spends-and-reports-its-contracting-dollars.ashx
- Congressional Research Service. (2018). *Defense acquisitions: How and where DOD spends and reports its contracting dollars* (CRS Report No. R44010).
<https://fas.org/sgp/crs/natsec/R44010.pdf>
- Congressional Research Service. (2019). *An overview of small business contracting* (CRS Report No. R45576). <https://fas.org/sgp/crs/misc/R45576.pdf>
- Consolidated Appropriations Act, Pub. L. No. 106–554, § 712, 114 Stat. 2763 (2000).
<https://history.nih.gov/research/downloads/PL106-554.pdf>
- Contractor Performance Assessment Reporting System. (2020). *Past performance information*. <https://www.cpars.gov/>

- Defense Contract Management Agency. (2020). *Small business*. <https://www.dcms.mil/smallbusiness/>
- Defense Logistics Agency. (n.d.). Federal logistics data on mobile media (FED LOG) home. <https://www.dla.mil/HQ/InformationOperations/Offers/Products/LogisticsApplications/FEDLOG.aspx>
- Department of Defense. (2019). *Small business strategy*. <https://business.defense.gov/Portals/57/Documents/Small%20Business%20Strategy.pdf?ver=2019-11-19-115847-510>
- Dresbach, E. C. (1959). *Government assistance for small business* [Master's thesis, George Washington University]. <http://hdl.handle.net/10945/31067>
- Electronic Code of Federal Regulations. (2011). *Part 125—Government contracting programs*. <https://www.ecfr.gov/cgi-bin/text-idx?SID=eeb9bab9222e69bc5d35fac82b4e7ab7&mc=true&node=pt13.1.125&rgn=div5>
- Electronic Code of Federal Regulations. (2020). *Part 121—Small business size regulations*. <https://www.ecfr.gov/cgi-bin/text-idx?SID=4f80c72abdf0e98df9dd4e7328f08ee9&mc=true&node=pt13.1.121&rgn=div5>
- Federal Acquisition Regulation (FAR), 48 C.F.R. 15.204 (2019). <https://www.acquisition.gov/content/15204-contract-format>
- Federal Procurement Data System. (2010). *Small business goaling report Fiscal Year 2010*. https://www.fpds.gov/downloads/top_requests/FPDSNG_SB_Goaling_FY_2010.pdf
- Federal Procurement Data System. (2011). *Small business goaling report Fiscal Year 2011*. https://www.fpds.gov/downloads/top_requests/FPDSNG_SB_Goaling_FY_2011.pdf
- Federal Procurement Data System. (2018). *Small business goaling report Fiscal Year 2018*. https://www.fpds.gov/downloads/top_requests/FPDSNG_SB_Goaling_FY_2018.pdf
- Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001, Pub. L. No. 106–398, § 1006, 114 Stat. 1654 (2000). <https://www.govinfo.gov/content/pkg/PLAW-106publ398/pdf/PLAW-106publ398.pdf>
- Fricker, R. (2012). *Institutional review boards and human subjects protection* [PowerPoint slides]. <http://faculty.nps.edu/rdfricke/OA4109/Lecture%204-1%20--%20IRB%20and%20Human%20Subjects%20Protection.pdf>
- Government Accountability Office. (1978). *Implementation of the Emergency Loan Guarantee Act* (PSAD-78-66). <https://www.gao.gov/assets/130/121251.pdf>

- Government Accountability Office. (2006). *DOD payments to small businesses: Implementation and effective utilization of electronic invoicing could further reduce late payments* (GAO-06-358). <https://www.gao.gov/assets/260/250143.pdf>
- Government Accountability Office. (2017). *Assessment of government-wide trends* (GAO-17-244SP). <https://www.gao.gov/assets/690/683273.pdf>
- Government Accountability Office. (2019a). *Small business research programs: Many agencies took longer to issue small business awards than recommended* (GAO-19-620). <https://www.gao.gov/assets/710/701754.pdf>
- Government Accountability Office. (2019b). *Substantial efforts needed to achieve greater progress on high-risk areas* (GAO-19-157SP). <https://www.gao.gov/assets/700/697245.pdf>
- Government Accountability Office. (2019b). *Small business research programs: Many agencies took longer to issue small business awards than recommended* (GAO-19-620). <https://www.gao.gov/assets/710/701754.pdf>
- Government Contracting Programs, 13 C.F.R. 125 (2011). <https://www.law.cornell.edu/cfr/text/13/part-125>
- Grammich, A. C., Edison, T. R., Jr., Moore, N. Y., & Keating, E. G. (2011). *Small business and defense acquisitions: A review of policies and current practice* (MG-443-OSD). RAND. <https://www.rand.org/pubs/monographs/MG443.html>
- Hagans, C. (2018). *Gold coast 2018 DON OSBP mentor protégé program* (MPP) [PowerPointslides]. <https://www.navygoldcoast.org/wp-content/uploads/2018/2018Presentations/Tuesday/CarltonHagans.pdf>
- Hassan, Z. A., Schattner, P., & Mazza, D. (2006). *Doing a pilot study: Why is it essential?* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4453116/>
- Hunter, A., Sanders, G., McCormick, R., Ellman, J., & Riley, M. (2015). *Measuring the success of acquisition reform by major DOD components*. <https://apps.dtic.mil/dtic/tr/fulltext/u2/a623394.pdf>
- John McCain National Defense Authorization Act (NDAA) for Fiscal Year 2019, Pub. L. No 115–232, § 851, 132 Stat. 1636 (2018). <https://www.congress.gov/bill/115th-congress/house-bill/5515/text>
- Kampen, R. (2019). *DOD proposes updating DFARS with 15-day “prompt payment” rules*. <http://smallgovcon.com/statutes-and-regulations/dod-proposes-updating-dfars-with-15-day-prompt-payment-rules/>

- Kelley, K., Clark, B., Brown, V., & Sitzia, J. (2003). Methodology matters: Good practice in the conduct and reporting of survey research. *International Journal for Quality in Health Care*, 15(3), 261–266.
- Lew, J. J. (2011). Accelerating Payments to Small Businesses for Goods and Services. <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2011/m11-32.pdf>
- Moore, N. Y., Grammich, A. C., Davanzo, J., Held, B., Coombs, J., & Mele, J. D. (2008). *Enhancing small business opportunities in the DOD* (TR-601-1-OSD). RAND. https://www.rand.org/pubs/technical_reports/TR601-1.html
- Moore, N. Y., Grammich, C. A., & Mele, J. D. (2014). *Small business and strategic sourcing: Lessons from past research and current data* (RR-410-OSD). RAND. https://www.rand.org/pubs/research_reports/RR410.html
- National Defense Authorization Act for Fiscal Year 2006, Pub. L. No. 109–163, § 811–819, 119 Stat. 3136 (2006). <https://www.govinfo.gov/content/pkg/PLAW-109publ163/pdf/PLAW-109publ163.pdf>
- National Research Council. (2000). The small business innovation research program: An assessment of the Department of Defense fast track initiative. The National Academies Press.
- National Research Council. (2009). An assessment of the SBIR program at the Department of Defense. The National Academies Press. <https://www.ncbi.nlm.nih.gov/books/NBK32835/>
- Office of Federal Procurement Policy. (2019). *Small Business Strategy, October 2019*. <https://business.defense.gov/Portals/57/Documents/Small%20Business%20Strategy.pdf?ver=2019-11-19-115847-510>
- Office of Management and Budget (OMB). (2011). Accelerating payments to small businesses for Goods and Services. <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2011/m11-32.pdf>
- Office of Management and Budget (OMB). (2014). Extension of Policy to Provide Accelerated Payment to Small Business Subcontractors. <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/memoranda/2014/m-14-10.pdf>
- Office of Management and Budget (OMB). (2019). Office of Management and Budget, Budget of the U.S. Government Fiscal Year 2019. <https://www.whitehouse.gov/wp-content/uploads/2018/02/budget-fy2019.pdf>

- Office of Small Businesses Programs (OSBP). (2014). Class Deviation Update to Accelerated Payments to Small Businesses <https://www.acq.osd.mil/dpap/policy/policyvault/USA001245-14-DPAP.pdf>
- Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics. (2014). *Class deviation—Update to accelerated payments to small business*. <https://www.acq.osd.mil/dpap/policy/policyvault/USA001245-14-DPAP.pdf>
- Prompt Payment Act of 2011. 31 U.S.C. § 39 (2011). *Implementation through Federal Acquisition Regulation*. <https://uscode.house.gov/view.xhtml?path=/prelim@title31/subtitle3/chapter39&edition=prelim>
- RAND. (n.d.). *NSRD [National Security Research Division] centers*. <https://www.rand.org/nsrd/ndri.html>
- RAND Office of Media Relations. (2008). *U.S. Department of Defense faces obstacles in meeting small business contract goals*. <https://www.rand.org/news/press/2008/11/12.html>
- Rendon, R.G. & Rendon, J.M. (2015). Auditability in public procurement: An analysis of internal controls and fraud vulnerability. *International Journal of Procurement Management*, 8–6, 710–730.
- Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, Pub. L. No.108-375, § 801–855, 118 Stat. 1811 (2004). <https://www.congress.gov/108/plaws/publ375/PLAW-108publ375.pdf>
- Ryburn, S. H. (2012). *An analysis of information systems technology initiatives and small businesses in the DOD small business innovation research (SBIR) program* [Master's thesis, Naval Postgraduate School]. <http://hdl.handle.net/10945/17453>
- S. 1790, 116th Cong., (2019) (enacted). John S. McCain National Defense Authorization Act for Fiscal Year 2020. <https://www.congress.gov/bill/116th-congress/senate-bill/1790>
- Schwartz, M., Sargent, J. F., Jr., & Mann, C. T. (2018). *Defense acquisitions: How and where DOD spends its contracting dollars* (R44010). <https://fas.org/sgp/crs/natsec/R44010.pdf>
- Schweer, M. R. (2001). *An identification and possible method of collection/reporting of under-reported small business utilization data for the Space and Naval Warfare Systems Command* [Master's thesis, Naval Postgraduate School]. <http://hdl.handle.net/10945/969>
- Small Business Act, Pub. L. No. 85–536, § 4, 72 Stat. 304 (2018). https://www.sba.gov/sites/default/files/Small%20Business%20Act_0.pdf

- Small Business Administration. (n.d.-a). *Basic requirements*. <https://www.sba.gov/federal-contracting/contracting-guide/basic-requirements>
- Small Business Administration. (n.d.-b). *Organization*. <https://www.sba.gov/about-sba/organization>
- Small Business Administration. (n.d.-c). *Small Business Act*. <https://www.sba.gov/document/policy-guidance--small-business-act>
- Small Business Administration. (2019a). *Federal government achieves small business contracting goal for sixth consecutive year with record-breaking \$120 billion to small businesses*. <https://www.sba.gov/about-sba/sba-newsroom/press-releases-media-advisories/federal-government-achieves-small-business-contracting-goal-sixth-consecutive-year-record-breaking>
- Small Business Administration. (2019b). *FY 2019 enterprise learning agenda*. https://www.sba.gov/sites/default/files/2019-04/FY%202019%20Enterprise%20Learning%20Agenda_final%20508%2003%2029%202019.pdf
- Small Business Administration. (2019c). *U.S. Small Business Administration table of small business size standards matched to North American Industry Classification System codes*. https://www.sba.gov/sites/default/files/2019-08/SBA%20Table%20of%20Size%20Standards_Effective%20Aug%2019%2C%202019.pdf
- Small Business Administration Office of Advocacy. (2009). *Report on the Regulatory Flexibility Act, FY 2009*. https://cdn.advocacy.sba.gov/wp-content/uploads/2019/07/15145852/09_regflx.pdf
- Small Business Administration Office of Advocacy. (2017). *Small business lending in the United States, 2014–2015*. https://cdn.advocacy.sba.gov/wp-content/uploads/2019/05/09140816/Banking_study_Full_Report_508_FINAL.pdf
- Small Business Innovation Development Act, Pub. L. No. 97–219, § 2, 96 Stat. 217 (1982). <https://history.nih.gov/research/downloads/PL97-219.pdf>
- Small Business Research and Development Enhancement Act, Pub. L. No. 102–564, § 102, 106 Stat. 4249 (1992). <https://history.nih.gov/display/history/Legislative+Chronology>
- Stanton, T. P. (1977). *An assessment of Lockheed Aircraft Corporation and the Emergency Loan Guarantee Act* [Master's thesis, Naval Postgraduate School]. <http://hdl.handle.net/10945/18026>
- U.S. Senate Committee on Small Business and Entrepreneurship. (2008). *SBA in hot water for failing to monitor contract bundling's effect on small business*. <https://www.sbc.senate.gov/public/index.cfm/articles?ID=B53EFDB0-F016-48E5-80CF-A4F3782864A9>

Watkins, M. W. (2018). Exploratory factor analysis: A guide to best practice. *Journal of Black Psychology*, 44(3), 219–246. <https://doi.org/10.1177/0095798418771807>

The White House, President Barack Obama. (n.d.). *Supporting small businesses*. <https://obamawhitehouse.archives.gov/economy/jobs/supporting-small-businesses>

Wildt, S. F. (2006). *Efficient use of resources in the Marine Corps Operation and Maintenance Fund account* [Master's thesis, Naval Postgraduate School]. <http://hdl.handle.net/10945/10103>

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