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Examining Small Business Set Asides: Evidence and Implications for Small and Mid-Sized Suppliers in Federal Procurement

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Abstract

Our study of the federal small business set aside program assesses the impact of small business set asides on supplier competitiveness, program participation, and firm growth. Federal procurement policy distinguishes suppliers as either small or not small. Small businesses benefit from set asides and other programs offered by the U.S. Small Business Administration (SBA), whereas large companies have internal capacity, scale, and extensive past performance history to compete for procurements. Mid-sized suppliers are too big to qualify for set asides, yet do not have parity with large firms.

We focus our research on suppliers utilizing the small business set aside program and are particularly interested in firms that are “advanced small” or recently graduated suppliers (i.e., grew beyond the size standard prescribed by the SBA). We examine the federal small business set aside program and assess the impact of small business set asides on supplier competitiveness, program participation, and firm growth. We analyze 977 suppliers that participate or had participated in small business set aside procurements. We find the majority of suppliers stay small, and approximately 5% of small businesses grow to mid-sized.

Introduction

Federal procurement policy distinguishes suppliers as either small or not small. Small businesses benefit from set asides and other programs offered by the U.S. Small Business Administration (SBA), whereas large companies have internal capacity, scale, and extensive past performance history to compete for procurements. Mid-sized suppliers are too big to qualify for set asides, yet do not have parity with large firms. Anecdotal evidence of this disparity exists (perhaps best underscored by the work of trade associations such as the Association for Corporate Growth, Mid-Tier Advocacy, GTSC-Lion’s Den, and the development of the bi-partisan Congressional Caucus for Middle Market Growth). However, there is a dearth of empirical evidence on both the structural barriers that exist for middle market firms and the effects of their competitive disadvantage. Before we can understand



challenges for mid-sized suppliers, first we need to examine the marketplace where small businesses can thrive: small business set aside procurements. Our study begins to clarify industry narratives by analyzing the contours of the competitive federal procurement market for small and mid-sized suppliers.

Inequities in the public procurement market are not an insignificant concern. The scale and scope of federal procurement is vast, with over 5,000 different types of products procured (Brown, 2013) and over \$438 billion in contracts obligated in 2015 (accounting for approximately 2.5% of gross domestic product [GDP]). The National Center for the Middle Market reports “middle market” firms account for one-third of private sector GDP and one-third of U.S. jobs. However, it is unclear whether mid-sized firms are correspondingly represented in the federal procurement market. A study by the Center for Strategic & International Studies (CSIS) suggests the answer may be no (Ellman, Morrow, & Sanders, 2011). The CSIS found that mid-sized market share of federal professional services contracts is shrinking. Mid-sized contractors claimed 40% of the total value of federal professional services contracts in 1995, but only 30% in 2009. During the same time period, large contractors increased their market share from 41% to 48%, and small business market share increased from 19% to 22%. Understanding the barriers to competition, purported disparities, and structural policy effects that impede middle market firms’ ability to compete for federal contracts will in turn help us to understand their ability to capture market share, grow business, and deliver value to federal agencies.

This study examines the federal small business set aside program and assesses the impact of small business set asides on supplier competitiveness, program participation, and firm growth. Our study is based on a random sample of 977 firms with a small business set aside contract action in 2005. We include firms with contracts for products and services, which vary in complexity from simple product procurements to more complex services contracts (e.g., information technology systems). We follow these firms for a decade in order to better understand their contracts and the operating environment for small and mid-sized suppliers.

Our paper proceeds as follows. First, we provide context for the study by describing the federal policy environment for small and mid-sized suppliers. Next, we address our data and methodological approach. Then, we share our analysis and discuss policy implications and opportunities for future research. We suspect that firms that successfully transition out of the small business marketplace have unique ways of overcoming the “benefit cliff” they encounter as they grow out of a sheltered small business market, and this research lays the foundation for further study of these dynamics. We consider whether current policies governing procurement hamper mid-sized firm competitiveness in the federal procurement market and dampen U.S. economic growth.

Set Aside Policies in Federal Procurement

The first substantive guidance directed to federal agencies to contract with small businesses originated in the U.S. Senate in 1940 with the Special Committee to Study and Survey Problems of Small Business Enterprises, and in the U.S. House of Representatives in 1941 with the Select Committee on Small Business. The committees were created to protect the interests of small business owners, recognizing the need for a thriving small business community for innovation, economic growth, and national security. The Small Business Act of 1953 explicitly stated government prime contracts and subcontracts should be awarded to small businesses, and later the Small Business Act of 1958 created the SBA, an independent agency within the executive branch. Permanent committees were later established by both chambers: the Congressional Committee on Small Business and the



Senate Committee on Small Business and Entrepreneurship (U.S. Small Business Committee, n.d.; U.S. Senate Committee on Small Business & Entrepreneurship, n.d.; DoD Office of Small Business Programs, n.d.).

The policy goals for small businesses in federal procurement are multifaceted.¹ The initiating legislation created a competitive marketplace for small businesses to participate in federal procurement and win government awards; small business set aside procurements meet this policy objective. Government procurements are also required to allocate a percentage of all awards to small businesses. Firms bidding for these set asides must adhere to strict regulations to qualify as “small business concerns.” Although there are many exceptions and stipulations delineated in the Federal Acquisition Regulation (FAR) that determine how contract officers must classify the size of firms, the two primary criteria are the 12-month average number of employees and three-year average receipts. The Code of Federal Regulations (CFR) requires the SBA to calculate these size standards for each line of business specified in the North American Industry Classification System (NAICS). For example, according to the current size standards, an iron and steel forging company (NAICS 332111) may be considered small if it has an average of 750 employees or fewer. A management consulting firm (NAICS 541611) may be classified as small if it has a three-year average of no greater than \$15 million in revenue. In response to concerns that the SBA size standards failed to adapt to the changing economy, Congress passed the Jobs Act in 2010, requiring the SBA to review all size standards and make necessary adjustments to reflect market conditions at least once every five years (SBA, 2017).

The SBA also establishes procurement goals for federal agencies. Government-wide, 23% of the contract value of prime contracts is set aside for small businesses awards. There are goals within that subset, such as 5% of prime and subcontracts are to be awarded to woman-owned small businesses, and 5% of prime and subcontracts are to be awarded to small disadvantaged businesses, among others. Agencies also biennially negotiate their targets with the SBA in order to meet government-wide goals. In fiscal year (FY) 2017, goals ranged from 10% at the Department of Energy to 73% at the SBA. Additionally, federal agencies have annual goals for subcontracts. For example, the DoD’s prime contract goal is 22% in FY2017, but the subcontracting goal is 34%.

One of the other key policy objectives of the Small Business Act is to promote small business in order to foster economic growth. Yet as suppliers grow towards their NAICS thresholds, they encounter a “benefit cliff” that disincentivizes growth, counter to this goal.

¹ The SBA serves the interests of small business beyond those discussed here relating to federal procurement. For example, the SBA has developed several financing and loan tools and set aside procurement policies to support small business growth. One of the most popular programs is the 7(a) Loan Guarantee which allows small businesses that are otherwise incapable of obtaining private sector financing access to funding up to \$5 million. These funds may be used for a wide range of applications including the purchase or repair of capital, expansion or building of structures, and refinancing existing debt (Murray, 2013). A similar program, the 504 Certified Development Company loan, offers long-term fixed-rate financing specifically for the purchase of fixed assets for expansion or modernization (SBA, n.d.). Other innovative solutions such as the Small Business Investment Company (SBIC) and Surety Bond Guarantee programs offer growth-phase firms access to investment capital and bonding that they would otherwise be too small to acquire.



While the SBA might support economic growth among the smallest of small businesses (see Footnote 1), federal procurement policy is arguably less effective in supporting economic growth.

In the absence of robust research on firm behavior in sheltered markets, we turn to another policy domain for insight on benefit cliffs and unintended consequences. Comparisons can be drawn between the small business set aside growth disincentive and the benefit cliff observed in social welfare programs. Consider Temporary Assistance for Needy Families (TANF), the federal program implemented by states that provides financial welfare support. TANF includes work requirements and income thresholds to qualify and maintain benefits. Recipients benefit if they remain below the income threshold, as the loss in benefits is greater than the gain from increased wages (Bargain & Doorley, 2011; Randolph, 2014). In some cases, recipients maintain lower wages to keep ancillary benefits, such as child care, or forgo raises or promotions in order to stay under wage limits (Rutgers Center for Women and Work, 2016). Evidence shows that families also respond to benefit changes, altering employment decisions (Bargain & Doorley, 2011; Hoynes, 1996). It is clear that a similar dynamic exists for suppliers in the small business set aside program. Set aside procurements create incentives for suppliers not to grow beyond the NAICS size standard thresholds in their lines of business.

Public management research sheds light on a different dynamic at work in set aside procurements. One of the underlying tenets of contracting for goods and services is to harness the competitive force of the market. As with most government policies, unintended adverse effects can result in the pursuit of overcoming market failures (Vining & Weimer, 2005). In this case, set aside programs restrict competition, contribute to weakly competitive procurements, and thereby limit the range of cost, quality, and delivery options for goods and services procured under said programs (Brown, 2007; Girth et al., 2012). When markets are constrained, purchasers have fewer choices to balance different, and sometimes competing, purchasing goals (Brown, Potoski, & Van Slyke, 2013; Johnston & Girth, 2012). Taken together, these conflicting objectives between efficiency, equity, and effectiveness illustrate the intricacies of multifaceted policy interventions such as the small business set aside program.

Methods and Data

Our purpose is to understand the contours of the small business set aside marketplace, and we do this through descriptively analyzing federal contracts. We examine small business behavior by gathering data on 977² suppliers that had a small business set aside contract in 2005 (i.e., they have at least one contract action associated with a small business set aside contract). Data was drawn from the Federal Procurement Data System–Next Generation (FPDS). The FPDS is a repository of all non-classified prime contract activity with any action exceeding \$3,000 in value for federal agencies. The FAR requires contract officers to enter contract information into the FPDS-NG and update as required. Contract actions include the individual records created when a contract is initiated and subsequently modified. We stratify the sample such that 60% of contracts are DoD contracts

² We initially extracted a sample of 1,025 suppliers. In some cases, contract actions reported in FPDS-NG were missing key data elements, such as product or service code, principal NAICS code, or contracting agency; this reduced our sample to 977 suppliers.



to mirror federal spending. The sample includes firms with contracts for products and services varying in complexity, from simple product procurements to more complex services contracts. The unit of analysis is firm-year, and contracts data from the FPDS-NG is aggregated to account for contract activity for each fiscal year.

Data on firm attributes was procured from Dun & Bradstreet. This data is reported annually and appended to FPDS data to create our dataset. We also conducted content analysis and cross-referenced data with the System for Award Management (SAM), Dynamic Small Business Search (DSBS) database, and open source material.

Analysis

While following 977 suppliers over a decade, we observed patterns in their engagement with federal agencies. As shown in Table 1, about one-third of suppliers consistently maintained contracts with federal clients in every year studied. The remaining firms had irregular activity (e.g., contract actions 2005–2006, no contract actions 2007–2009, and contract actions 2010–2014). In some cases, suppliers were only inactive for one year. In other cases, we observed suppliers with two or more continuous years of inactivity, which indicates the firm either discontinued serving federal customers or did not survive.

Table 1. Contracting Patterns

<i>Description of supplier activity</i>	<i>Number of suppliers</i>
Contract activity for all years	303
One year with no contract activity	71
Two or more continuous years with no contract activity	312
Irregular contract activity	291
Total	977

Our data shows that suppliers that are eligible for set asides utilize that advantage. Yet it also suggests that small businesses are successfully obtaining contracts on the open market. Although we have 9,770 observations (977 firms and 10 years of contracts data), we only have 5,995 observations in the data set with contract activity.³ Table 2 contains descriptive statistics of variables in our dataset.

³ As Table 1 illustrates, we only have 303 suppliers with contract activity in all 10 years. This means 3,030 observations for those suppliers as the unit of analysis is firm-year. The remaining observations represent varying scenarios from Table 1 (one supplier might only have contracts data for 2005, another might have contracts data for every year except 2014). This is why our total observations of suppliers with contracts data reduces to 5,995.



Table 2. Descriptive Attributes

<i>Variable</i>	<i>Source</i>	<i>25th percentile</i>	<i>50th percentile</i>	<i>75th percentile</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>Range</i>
Percent set asides	FPDS	0.01	0.43	1	0.47	0.41	0-1
Agency diversity	FPDS	1	1	2	2.31	3.24	1-44
NAICS diversity	FPDS	1	1	2	1.70	1.15	1-10
Manufacturing	DB	0	0	0	0.21	0.40	0-1
Transportation	DB	0	0	0	0.05	0.22	0-1
Wholesale trade	DB	0	0	0	0.18	0.38	0-1
Retail trade	DB	0	0	0	0.05	0.22	0-1
Finance	DB	0	0	0	0.02	0.13	0-1
Construction	DB	0	0	0	0.10	0.30	0-1
Public administration	DB	0	0	0	0.00	0.02	0-1
Services	DB	0	0	1	0.39	0.49	0-1
Woman-owned	DB	0	0	0	0.23	0.43	0-1
Minority-owned	DB	0	0	0	0.16	0.37	0-1

- **Percent set asides:** We define contracts as small business set aside contracts to include set aside categories targeting small businesses, such as woman-owned small business, 8a, service disabled veteran owned small business, and the like. The variable measures the percent of contract actions specified as small business set asides compared to total contract actions in a given year. We see that an average of 43% of a supplier's portfolio are related to small business set aside awards. The distribution of this variable is like a hockey stick—at the 75th percentile, set asides are 100% of supplier portfolios.
- **Agency diversity:** We calculate the number of agencies (at the corporate level) with which a supplier has contract actions recorded for a given year. This shows that most small business suppliers serve one or two distinct federal agencies.
- **NAICS diversity:** We track the number of NAICS codes affiliated with contract actions for each year. This value represents the number of different NAICS associated with all contract actions for a supplier in a given year. NAICS are aggregated to the first two digits (e.g., naics53, naics54). Most firms operate in one or two NAICS categories.
- **Lines of business/Standard Industrial Classification (SIC):** Primary SIC is developed by the federal government and is reported to Dun & Bradstreet. The first two digits of a four-digit code rolls up to one of 11 categories. Seven of the 11 categories are in this sample: *services, manufacturing, transportation and public utilities, retail trade, wholesale trade, finance, insurance and real estate, and construction*. About 40% of the firms in this sample identify their primary SIC as services.
- **Ownership:** Approximately 23% of the observations are attributed to woman-owned suppliers. Approximately 16% of the observations are attributed to minority-owned suppliers.



In addition to capturing descriptive attributes of the contracts and suppliers in our dataset, we cross-checked suppliers in SAM, DSBS, and other open source materials. While FPDS data specifies whether a supplier obtained a set aside contract over this time period, supplier data on firm size is not as reliable. Dun & Bradstreet has a small business indicator among firm attributes, but this is also not a consistent indicator of the firm’s status, as it compares reported annual revenue or employee totals to primary NAICS. This process does not capture the other NAICS (beyond primary) that the firm can utilize to win set aside contracts, and revenue and employee data is often incomplete or in error for small businesses in Dun & Bradstreet’s data. As a result, we gathered information from additional resources to determine whether firms remained a small business or grew into the middle market and reported the results in Table 3.

Table 3. Supplier Growth

<i>Description of supplier activity</i>	<i>Number of suppliers</i>
Survived and remain a small business	574
Survived and are no longer a small business	46
Did not survive	183
Unable to substantiate	174
Total	977

Approximately 59% of suppliers with a small business contract action in 2005 remain small and eligible for set asides in 2017. Fewer than 5% of suppliers grew to mid-sized. Nineteen percent of suppliers that had a set aside contract action in 2005 no longer exist. We are unable to substantiate the status of approximately 18% of suppliers that had a contract action in 2005. These are suppliers that (a) no longer register in SAM, (b) have no recent contract activity in the FPDS, and (c) have no publicly available data to support approximating firm size.

Among those 46 firms that grew to mid-sized, we find that half grew through acquisition. We also see small businesses acquiring other small businesses and remaining small in some NAICS. Of the 43 supplier acquisitions we find through our content analysis, 20 are still small businesses.

Discussion

Our interest in this research lies in the design and implementation of the small business set aside program. Our analysis shows the tension between programmatic goals that established the SBA and set aside programs: economic growth versus equitable access. In this section, we explore the implications of these tensions in practice. We discuss implications of our descriptive analysis and present future research opportunities in light of our exploratory findings. We raise data limitations encountered with this study, which has bearing on future work, and explore approaches to research design in light of data constraints.

The vast majority of suppliers in our sample shelter in the small business set aside market. They fail to grow beyond the sales or employee thresholds in the product or service areas for which they have self-certified. In most cases, firms in our sample elect to stay small. These suppliers recognize the value of the constrained federal market established for small businesses. Their clients also value their small business status, allowing for more desirable procurements as they help to achieve the agency’s small business goals. In other



cases, we suspect small businesses are unable to harness the resources, whether financial or managerial, to grow. In yet other instances, prior study finds that firms respond to undesirable consequences resulting from growth. Despite evidence to the contrary, firms fear increased size can make firms more vulnerable to surviving crisis (Davidsson, Achtenhagen, & Naldi, 2006).

When suppliers make strategic decisions to stay small in order to retain small business status for federal procurements, they artificially constrain growth in order to stay under the revenue or employee thresholds for specified NAICS. If the intent of federal policies to support small business is to encourage economic growth and innovation, then firm behavior does not necessarily align with these goals. The behavior, albeit rational on the part of small business, is an unintended consequence of creating markets and subsidizing subsets of industry. Yet this phenomenon reinforces questions about the behaviors of suppliers that are not able to thrive as they grow into the middle market, and either intentionally constrain to meet small business thresholds in subsequent years or fail to win contracts when competing outside of the set aside market.

Several policy implications begin to form in light of this exploratory research, including policy priorities to support lasting transition to the middle market. Policy options might include modified size standards aimed to benefit mid-sized firms (particularly those at the lower threshold of the middle market). One concern with simply raising current size standards, or increasing the number of years in the rolling average to determine qualification, is that action fails to address underlying issues for emerging small businesses and is a temporary remedy for only those firms on the edge of mid-sized.

There are also other ways the federal government could support mid-sized suppliers that are neither large nor small. Agencies increasingly rely on federal schedules and multi-award vehicles. Creating a unique vehicle for mid-sized suppliers is one alternative advanced by trade associations supporting mid-tier suppliers. Another policy option is to create subcontracting benefits for prime contractors that utilize mid-sized suppliers. That is, rewarding proposals with mid-tier suppliers on the subcontracting team, or compelling large firms to diversify their teams by including mid-sized suppliers in addition to meeting existing small business requirements.

While there may be little drive among policymakers or administrators to create additional regulation, there appears to be a desire to address some of the structural challenges faced by mid-tier suppliers. The Chairman of the House Small Business Committee, Steve Chabot, recently noted,

After a small business has proven its success by growing out of its small size standard, it exists in a murky limbo—it is too large to benefit from small business set-asides, yet is too small to compete with billion dollar firms. (U.S. Small Business Committee, 2017, p. 1)

Even with political support, we conceive of a number of roadblocks to these alternatives. First, contract officers are already stretched thin, and policies to support the middle market would likely increase regulatory burden on acquisitions staff. Second, large firms benefit from status quo policies and would likely mobilize and challenge any regulatory changes that strengthen the middle market at the expense of the large suppliers. Third, it is unclear where the line should be drawn between emerging small business at the margins of the middle market and larger mid-tier suppliers. Who should make that determination, how, and where is the appropriate regulatory home for middle market suppliers?



More broadly, the underlying issue for policymakers to consider is simply the way in which procurement policy and regulation recognize federal suppliers as either “small business” or “not small business.” By ignoring the middle, the government may be losing an opportunity to secure value by not actively seeking contracts with mid-sized firms. It is well understood that small businesses are higher risk suppliers. Unlike large firms, their internal processes are immature, and resource shocks can have profound effects on a small enterprise and its clients. Large firms largely mitigate that risk, but can be costly. Mid-sized firms can be well suited to provide value at lower risk than small firms and lower cost than large. In any case, federal agencies are likely missing opportunities to secure value by treating all firms that are not small as large and not incentivizing contracting with mid-sized suppliers.

Future Research

The purpose of an exploratory study is to describe the current state and then propose further research to advance knowledge. With this in mind, we propose a number of possible avenues for future study. To begin, small and mid-tier businesses would benefit from understanding the success factors for the unusual firms in our study that started as small businesses and then successfully grew beyond their size standard and into the middle market. A qualitative study designed to solicit interviews from principals of the 46 firms we identified would shed light on success strategies.

Further, the initial intent of our research was to determine growth factors for suppliers successfully transitioning to the middle market, yet we have been unable to answer this research question due to inadequate data specification in the FPDS and from Dun & Bradstreet. Extensive primary data collection is needed to address this shortcoming. One approach to this is to leverage the qualitative findings from the aforementioned principal interviews to develop a survey instrument for wider distribution to small and mid-sized suppliers.

Next, we designed our study to gather contracts data across a wide range of contracts and did not constrain our sampling procedure to a specific NAICS in order to replicate the procurement environment. Replicating and then extending this study by analyzing a sampling of contracts within a single NAICS, to include the full range of suppliers (small and not small), would provide a different perspective on the supplier dynamics in the federal procurement market. Although this process would limit generalizability, this would help to shed light on the competitive landscape for all suppliers within a controlled category.

Finally, our analysis of contract patterns showed that one-third of businesses consistently contract with federal agencies. While some firms went out of business during the time period studied, others no longer participate in the federal marketplace. Future study on the reasons for the lack of continued participation could help us understand barriers to federal contracting, particularly among firms with a diverse client base.



Conclusion

In practice, acquisition officials are asked to deliver contracts that meet best value, low cost, or other performance objectives, and to meet broader political objectives that can affect (constrain) eligible suppliers. Public sector contracts are not simply a tool to increase efficiency; they can also serve to promote other public values. Procurement policies that target specialized groups, such as small businesses, minority-owned, or women-owned firms, are designed to promote equity and representativeness. In short, public procurement is a way in which governments can promote social policy goals, such as increased opportunity for underrepresented groups (McCrudden, 2004). It is this tension amongst competing values that motivates our interest in this study of small business set asides.

Our research represents a first step in capturing the structural dynamics involved in the design, implementation, and evaluation of competitive practices in federal agencies aimed at promoting small business participation and growth. For small and mid-sized suppliers, the analysis shows the market dynamics do not favor growth. Further analysis is needed to determine success factors for outlying suppliers that succeed in the middle market.

The results also have implications for policymakers. The Small Business Act has succeeded in carving out a competitive space for small businesses seeking federal procurements. The SBA's policies support growth among the smallest of firms, but appear to fall short in one of the Small Business Act's other goals, which is to encourage economic growth. There is yet another dynamic that should concern policymakers and administrations, which is if further analysis confirms that middle market firms are, on balance, unable to compete in the federal procurement market, then agencies are likely missing critical opportunities to secure value.

References

- Bargain, O., & Doorley, K. (2011, May 26). Caught in the trap? Welfare's disincentive and the labor supply of single men. *Journal of Public Economics*, 1096–1110.
- Beck, T., & Demircuc-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & Finance*, 30(11), 2931–2943.
- Brown, T. L. (2007, September 19). Testimony on the Small Business Administration's contracting programs, Small Business Committee, U.S. House of Representatives, Washington, DC.
- Brown, T. L. (2013). *A guide for agency leaders on federal acquisition: Major challenges facing government*. Washington, DC: IBM Center for the Business of Government.
- Brown, T. L., Potoski, M., & Van Slyke, D. M. (2013). *Complex contracting: Government purchasing in the wake of the U.S. Coast Guard's Deepwater Program*. New York, NY: Cambridge University Press.
- Davidsson, P., Achtenhagen, L., & Naldi, L. (2006). What do we know about small firm growth? In *The life cycle of entrepreneurial ventures* (pp. 361–398). Boston, MA: Springer.
- DoD Office of Small Business Programs. (n.d.). Legislation. Retrieved April 1, 2017, from <http://business.defense.gov/legislation/>
- Ellman, J., Morrow, D., & Sanders, D. (2011). *Structure and dynamics of the U.S. federal professional services industrial base*. Center for Strategic & International Studies.



- Girth, A. M., Hefetz, A., Johnston, J. M., & Warner, M. E. (2012). Outsourcing public service delivery: Management responses in noncompetitive markets. *Public Administration Review*, 72(6), 887–900.
- Hoynes, H. W. (1996, March). Welfare transfers in two-parent families: Labor supply and welfare participation under AFDC-UP. *Econometrica*, 295–332.
- Johnston, J. M., & Girth, A. M. (2012). Government contracts and “managing the market:” Exploring the costs of strategic management responses to weak vendor competition. *Administration & Society*, 44(1), 3–29.
- McCrudden, C. (2004). Using public procurement to achieve social outcomes. *Natural Resources Forum*, 28(4), 257–267.
- Murray, K. (2013, October 30). SBA's 7(a) loan program explained. Retrieved from <https://www.sba.gov/blogs/sbas-7a-loan-program-explained>
- Randolf, E. (2014). *Modeling potential income and welfare assistance benefits in Illinois: Single parent with two children households and two parents with two children household scenarios in Cook County, City of Chicago, Lake County and St. Clair County*. Chicago, IL: Illinois Policy Institute.
- Rutgers Center for Women and Work. (2016). *New Jersey's benefits “cliff effect” and economic self-sufficiency fact sheet*. New Brunswick NJ: Author.
- U.S. Senate Committee on Small Business & Entrepreneurship. (n.d.). History. Retrieved April 1, 2017, from <https://www.sbc.senate.gov/public/index.cfm?p=History>
- U.S. Small Business Administration (SBA). (n.d.). Office of financial assistance: Resources. Retrieved from <https://www.sba.gov/offices/headquarters/ofa/resources/4049>
- U.S. Small Business Administration (SBA). (2017). *A report on the first five-year comprehensive review of small business size standards under the Small Business Jobs Act of 2010*. Washington, DC: Author.
- U.S. Small Business Committee. (n.d.). Committee history. Retrieved April 1, 2017, from <http://smallbusiness.house.gov/about/>
- U.S. Small Business Committee. (2017, November 14). Mid-sized businesses: Too big to be small and too small to be big [Press release]. Retrieved March 20, 2018, from <https://smallbusiness.house.gov/news/documentsingle.aspx?DocumentID=400479>
- Vining, A., & Weimer, D. (2005). Economic perspectives on public organizations. In D. Ferrin, L. Lynn, & M. Pollitt (Eds.), *Oxford handbook of public management* (pp. 209–233). Oxford, England: Oxford University Press.

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