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The “Shrinking” Defense Industrial Base: A Survey of Former DoD Prime Contractors

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Abstract

The recent decline in the number of prime contractors participating in the defense industrial base (DIB) is a well-documented and often lamented phenomenon, yet there has been a paucity of empirical research on the topic. This study was designed to investigate the types of contractors leaving the DIB and their reasons for exit, and to gain a truer estimate of the rate of exiting contractors in the “shrinking” DIB. Roughly 45,000 contractors that last held a prime contract with the Department of Defense (DoD) in Fiscal Years 2015–2022 were sent a brief survey investigating their presumed exit from the DIB. Of the 1,037 survey responses received, 679 were from contractors that acknowledged they had left the DIB and provided a detailed reason why they left. Three-quarters of the respondents were smaller businesses, reporting less than \$5 million a year in revenue and employing less than 50 employees. Roughly one-third of all confirmed exits cited an unfavorable characteristic of working with the DoD as the main reason for leaving the DIB, and moreover identified the specifically problematic characteristic(s). Results also indicated that existing estimates of contractor exits from the DIB are likely to be inflated by about 50%.

Keywords: Defense industrial base, Exiting prime contractors, Small business, Survey

Background

The defense industrial base (DIB), defined hereafter as the collection of contractors that provide the Department of Defense (DoD) with the products, services, and materials needed to operate, is a key feature of U.S. military superiority and innovation. The DIB currently includes roughly 50,000 prime contractors and a substantial number of subcontractors. The DIB is incredibly diverse. It is predominantly composed of small contractors but includes many medium-sized contractors, very large multinational corporations, academic institutions, non-profits, and global organizations. Contractors from all 50 states and dozens of international countries participate in the DIB. The DIB provides products and services across the economic spectrum “ranging from the production of complex platforms unique to the military (e.g., aircraft carriers) and the provision of highly specialized services (e.g., intelligence analysis), to the provision of general commercial products (e.g., laptop computers) and routine services (e.g., information technology support)” (Congressional Research Service, 2023, p. 1).

This juggernaut would appear robust and healthy on the surface, but several recent trends in the DIB have garnered much attention and concern. One such trend, a persistent



decline in the number of contractors that comprise the DIB, has been observed by several studies (please see (Adjei & Hendricks II, 2022; Bresler & Bresler, 2020; Hyatt, 2023; National Defense Industrial Association, 2023; Office of the Under Secretary of Defense for Acquisition and Sustainment, 2022; Sanders et al., 2022; Schwartz & Johnson, 2023; United States General Accounting Office, 2021). Although some of this research has indicated that the rate of contractor decline in the DIB is reflective of shrinkage in the overall federal contractor base, its potentially deleterious impact on the DoD’s ability to operate effectively is still a concern. Due to differences in definition and data interpretation, the normative value of the decline of prime contractors varies from source to source. Nevertheless, the general trend appears unmistakable. Figure 1 displays this decline using the data from the present study. It shows that from FY2015 to FY2022, there has been a total reduction of 19,292 contractors with an average year over year change of -4.66% (a net average loss of 2,756 contractors per year).

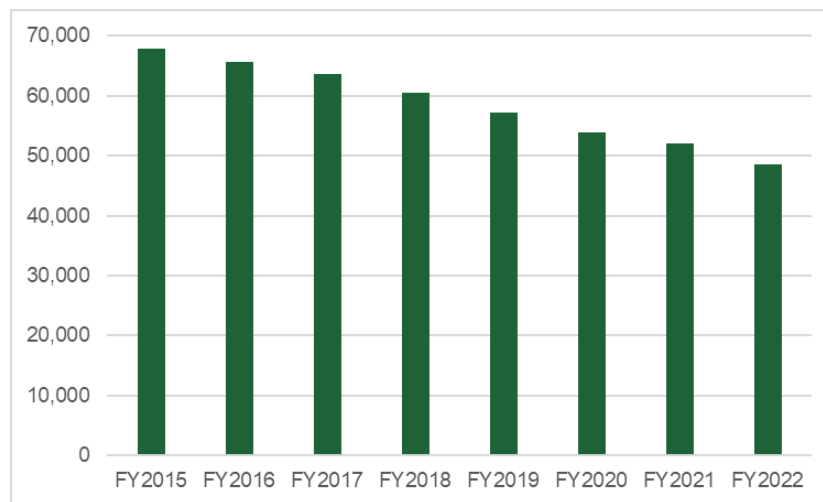


Figure 1. Number of Unique Recipient UEI

This issue has not escaped the attention of the Pentagon. DoD officials are aware of this potential issue and continue to see it as a major concern, as evidenced by comments from current and former Deputy Defense Secretaries:

The contraction of the traditional DIB (both commercial and organic) was a generation-long process and it will require another generation to modernize. (United States Department of Defense, 2023, p. 9)

What you’ve seen mostly in the more recent time is a drop in firms who are willing to enter the Defense Industrial Base, or firms who are already here leaving. . . . Why are people not staying, and how do we draw people in? Because that’s the best way to sustain competition. (State of the Defense Industrial Base, 2023, 2:01:43–2:02:44)

A declining DIB is particularly concerning because economic theory and prior research strongly suggest that higher market concentration can result in higher prices, lower quality goods and services, and lower rates of innovation. Thus, a shrinking contractor presence in the supplier base is likely to have negative implications for the federal budget and taxpayers, as well as create hazards for the DoD at a time when U.S. military superiority and innovation is sorely needed.

When discussing the “shrinking” DIB, it is important to keep in mind that any change in the number of contractors in the DIB is the net result of subtractions (i.e., exits) and additions



(i.e., entrants). Therefore, for the DIB to shrink/decline, the number of exits must exceed the number of entrants. However, while both components are important, they should be approached as theoretically unique issues since the factors that contribute to contractor exit are not necessarily the same ones needed to attract new contractors. In short, the issues of (lower) entrant rates and (higher) exit rates are likely to be at least somewhat distinct, even though they both contribute to a shrinking DIB.¹ This paper focuses on the issue of exiting contractors.

In summary, the decline of DoD prime contractors is widely reported and generally supported by the number of awards in federal government contract data. But several aspects of this broad issue are ripe for further exploration. First, *who* is actually leaving the DIB? In other words, is there a type of contractor that is disproportionately leaving the DIB, or is the problem widespread across the potential supplier base? Additionally, there has been limited research investigating exactly *why* certain contractors are leaving. This knowledge would be critical for the DoD to design effective interventions to address the most prevalent reasons for contractor exodus. Finally, while acknowledging there is a clear decline in contractor participation, *what* is the actual extent of contractor exit. This is important for understanding the magnitude of the problem of a shrinking DIB. This study was therefore developed to address these important gaps in our knowledge, and it was guided by the following three research questions:

Research Question 1. *Who* is leaving the DIB?

Research Question 2. *Why* are contractors leaving the DIB?

Research Question 3. *What* is the extent of contractor exit in the DIB?

Method

Data and Procedure

The co-authors relied upon data from two well-known sources for federal contracting data and contractor data: USASpending.gov and SAM.gov. The Award Data Archive from USASpending.gov contains batches of contract transaction data for nearly all federal government prime contract awards. The data from USASpending.gov was pulled from the February 8, 2023 batch. The raw data utilized for this study were all prime contracts for Department of Defense from FY2015 to FY2022.² This resulted in 32,106,737 DoD prime contract transactions with 284 variables for each transaction. SAM.gov provides data on all active contractors (termed entities in the SAM.gov database) as well as contractors that have become inactive in the previous six months. This study relied on a contractor information file downloaded on June 6, 2021. This relatively old file was utilized because current editions of the data from SAM.gov no longer contain entity contact information. In addition to these two primary sources, the co-authors conducted a survey to collect novel data to help answer the research questions posed above.

To conduct a survey of contractors that have exited the DIB, the co-authors needed to (1) identify the relevant contractors that have presumably exited and (2) match each contractor with the appropriate contact information. To identify the relevant contractors to survey, the co-

¹ The “shrinking” DIB is sometimes attributed to consolidation, primarily via mergers and acquisition in the defense market (see Office of the Under Secretary of Defense for Acquisition and Sustainment, 2022). However, the amount of yearly M&A activity cannot fully explain the total decline in the contractor base (see Schwartz & Johnson, 2023).

² This time frame was picked as a compromise between needing a few subsequent years to help determine which companies were likely to have “left” the DIB, but still recent enough as to limit the number of companies that no longer exist and would naturally be non-responsive to a survey.



authors began by generating a list of all contractors for each fiscal year. There are multiple identifiers by which a contractor in the transaction data can be identified; this study used the Recipient UEI to identify contractors. The Recipient UEI was chosen over Recipient DUNS or Recipient Name because it was the only variable of the three to be populated for all transactions.

Once a list of all contractors in each fiscal year had been generated, the co-authors were then able to identify the contractors that have presumably exited the DIB. An exiting contractor was defined as a UEI with no record of contract action in all subsequent years. The last year a contractor had a contract action is considered the year they left, even though the exit may have occurred during the year of the final contract action. Table 1 presents the count of contractors presumed to have exited in each fiscal year. Exiting contractors have remained relatively stable over time with an average of 11,882 per year and a minimum of 11,083 (FY2021) and a maximum of 13,170 (FY2022).³ In total, there have been 83,175 contractors that have presumably exited the DIB from FY2015 to FY2022.

With the list of exiting contractors identified, the co-authors were then able to match at least one point of contact (POC) with each contractor based upon the entity data from SAM.gov. Unfortunately, the SAM.gov file did not contain a UEI field. Therefore, to match exiting contractors with points of contact, the co-authors reverted to using the DUNS number to match contractors with their points of contact. Of the 83,175 contractors presumed to have exited, 80,390 were matched with their corresponding DUNS number from USASpending.gov. This left 2,785 unmatched UEI. Of these 2,785 unmatched UEI, 2,672 were able to be matched to a DUNS number based upon the third contractor identifier from USASpending.gov data, Recipient Name. This left 113 UEI unmatched. The co-authors were able to hand match 83 of the remaining 113 through a search of entity profiles on SAM.gov using the UEI. This left 30 UEI unmatched. The remaining 30 UEI were not able to be matched to a DUNS number. Therefore, of the 83,175 contractors presumed to have exited, the co-authors had the necessary identifiers to attempt to match point of contact information for 83,145 (99.96%).

With nearly all UEI matched to their corresponding DUNS number, the co-authors were then able to use the DUNS number to associate information from SAM.gov with each contractor. The SAM.gov file originally contained 784,305 contractors. Three cleaning steps were necessary before matching points of contact with contractors presumed to have exited. First, a few thousand cases were observed where the same contractor was listed more than once. To prevent trouble with matching, only one instance of each “duplicate” was kept, resulting in a list of 779,350 contractors. Second, there were also contractors without contact information. Contractors without any contact information data were dropped from the set since there was no viable way of contacting them for the survey. Third, duplicate points of contact needed to be removed. There are three categories for possible points of contact in the SAM datafile: (1) Government Contracts; (2) Past Performance; and (3) Electronic Business. Each contractor can have none, one, or two people listed for each category, resulting in zero to six points of contact for each contractor. Wherever necessary, duplicates of the same email address for the same contractor were removed, leaving only one instance of each point of contact for each contractor.

The initial set of presumed exited contractors and associated points of contact to survey was 49,633 contractors with 101,279 points of contact. An issue arose early in the survey process whereby the co-authors identified instances where the same point of contact was listed for multiple contractors. Since the co-authors did not want a point of contact to receive multiple

³ The spike in FY2022 is not unexpected but likely inflated because there is only a single subsequent fiscal year to “confirm” that a contractor has in fact exited the DIB.



survey invitations, and it could not be determined if the companies were truly distinct, the co-authors were unable to resolve the issue. Thus, these contractors and points of contact were removed from the distribution list and the final number of survey invitations were sent to 45,297 contractors via 89,799 points of contact. Table 1 shows the breakdown of presumed exiting contractors and corresponding points of contact per fiscal year.

Table 1. Sample Frame

Fiscal Year	Unique Contractors	Presumed Exits		Presumed Exits w/ POC	
		(Count)	(Percentage)	(Count)	(Percentage)
2015	67,768*	--	--	--	--
2016	65,669	12,057	18.4%	3,868	32.1%
2017	63,548	11,790	18.6%	4,266	36.2%
2018	60,502	11,885	19.6%	5,010	42.2%
2019	57,154	11,660	20.4%	5,962	51.1%
2020	53,866	11,530	21.4%	7,053	61.2%
2021	52,018	11,083	21.3%	8,341	75.3%
2022	48,476	13,170	27.2%	10,797	82.0%
Total	401,233	83,175	20.7%	45,297	54.5%

* Base year Unique Contractors are not included in calculations, shown for information purposes only.

Survey

The co-authors utilized the list of points of contact for presumed exited contractors to conduct a brief survey via Qualtrics.⁴ Invitations to complete the survey were sent to potential respondents using an email account specifically set up at George Mason University to handle surveys for the Baroni Center for Government Contracting. Due to daily limitations on the number of outgoing emails allowed per day, survey invitations were sent in batches of roughly 10,000 emails every business day (except Fridays) from May 30, 2023 through June 15, 2023. The survey remained officially open for new starts until 11:59pm on June 25, 2023, although respondents that had started a survey could return to complete it within 90 days of starting it.

The invitation text was customized to each recipient to include the contractor name, contractor DUNS, and presumed fiscal year of exit. This was done because personalized invitations achieve a higher rate of return and completeness (Heerwegh et al., 2005), and to ensure the respondents knew which contractor was being referenced in the survey. The invitations contained a unique link that could only be used once to complete the survey, although respondents did not have to complete it in one sitting or on a single device. Participants were assured that responses would remain confidential and only aggregated results would be reported.

In the survey, respondents were first required to confirm that the referenced contractor had in fact exited the DIB. Respondents who answered negatively to this question were thanked for their willingness to participate and exited early from the survey. This filtering question served

⁴ Median time to complete the survey was 4 minutes, 12 seconds based on the 679 complete and usable responses.



multiple purposes. It allowed the co-authors to reasonably accommodate for the fact that not all presumed contractor exits would have in reality left the DIB, it allowed the survey to reliably capture only the experiences of former DoD prime contractors, and the piped-in contractor information allowed the co-authors to later match respondents to contract-level information in the USASpending.gov data.

Respondents who confirmed their contractors had left the DIB saw two demographic questions about the contractor (net revenue and full-time employee count), followed by the all-important question about the primary reason for why the contractor no longer held a prime contract with the DoD. If a respondent selected “The entity stopped bidding for work with the DoD due to an unfavorable characteristic of working with the DoD” or “The entity has become only a subcontractor to DoD prime contractors,” a distinct follow-on question was asked to garner more details. Respondents were then allowed to add any final comments in an open answer format, and finally were given an opportunity to provide their consent and contact information for an optional post survey interview. The survey is provided in Appendix A.

Contractor Profiles

The co-authors relied on contract-level data from USASpending.gov to create contractor profiles for the entire population of the DIB (131,651 contractors). Since most contractors had multiple contract actions over time, the co-authors used only the contract action with the most recent action date in the raw data (e.g., 46,014 rows of contract administration data were associated with the 679 contractors with usable responses). In those cases where a contractor had multiple contract actions with the same action date, one was randomly selected based upon a unique row identifier. The result was a single row of contract action data for each contractor that allowed the co-authors to analyze characteristics associated with each contractor.

Results

The following section discusses the survey results, as well as the contractor profiles, in light of the three research questions: Who is leaving the DIB?; Why are companies leaving?; and What is the extent of contractor exit from the DIB?

Survey Response

The survey received 1,055 responses, but this included eleven pairs from respondents associated with the same contractor. In the case of seven pairs, the responses indicated different answers to the questions of whether or why a contractor had left the DIB; in these cases, both responses were removed since the accurate answer(s) could not be determined with certainty. The remaining four paired cases were consistent in their responses; in these cases, the most complete response, based upon Qualtrics percentage of completeness, was kept for analysis and the other one discarded. This left 1,037 total responses for potential analysis.

Of the 1,037 total responses, 176 responses were incomplete (less than 80% of survey complete) and utilized for passive non-response bias analysis (see Appendix B). The remaining 861 complete responses included 182 responses where the respondent indicated they had not left the DIB (95 responses) or they were not sure (87 responses). This left 679 responses representing contractors that were confirmed DIB exits along with a reason for departure and thus usable for analysis to address the research questions. The survey responses were skewed towards recent fiscal year exits, as was expected given the initial rates of confirmed points of contact and the practical likelihood that a more recently departed contractor would be more likely to respond.



Table 2. Survey Response Rate

Response	Number
Email invites sent	89,799
Total responses	1,037
Response rate	1.15%

Table 3. Survey Completion Rate

Response	Number
Total responses	1,037
Completed responses	861
Completion rate	83.03%

Table 4. Survey Response per Fiscal Year

	Responses		
	Number	Percent	Percent of FY Exiting Contractors
FY2016	93	9%	0.77%
FY2017	106	10%	0.90%
FY2018	106	10%	0.89%
FY2019	140	14%	1.20%
FY2020	157	15%	1.36%
FY2021	191	18%	1.72%
FY2022	244	24%	1.85%
Total	1037	100%	1.25%

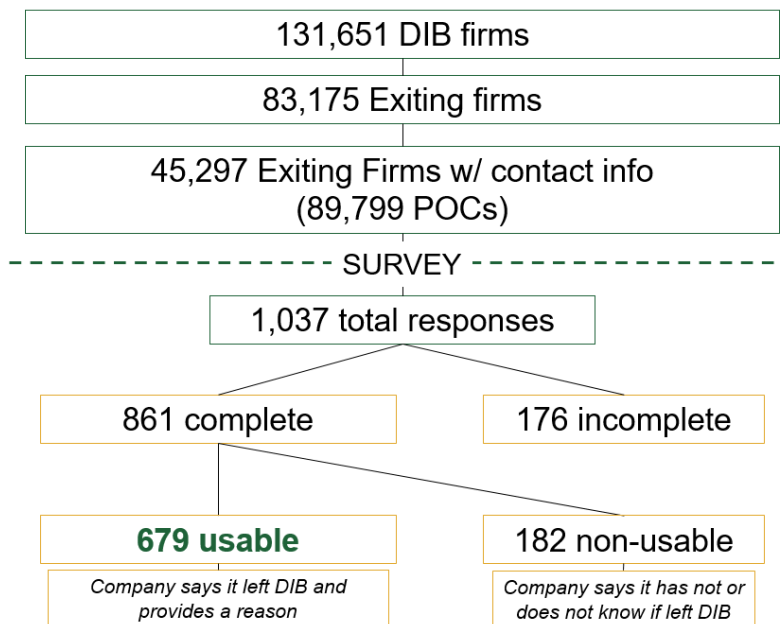


Figure 2. Survey Responses



Although the response rate was low (approximately 1%), this was not unexpected given the nature of surveying potentially no-longer-in-existence contractors using older contact information. However, the completion rate among the respondents was relatively high (approximately 83%). Most importantly, the sample size of usable responses achieves a 99% statistical confidence level with a +/- 5% margin of error, making the results potentially highly generalizable to the sub-population of contractors that have left the DIB. Additional non-response bias testing was conducted since this type of bias can threaten the external validity of survey results. Those statistical tests are detailed in Appendix B for interested readers.

RQ 1: *Who is leaving the DIB?*

The DIB is vast and includes contractors of all shapes and sizes. Table 5 displays a breakdown of contractor-level characteristics for the entire DIB (131,651 contractors), the exiting sub-population (83,175 contractors); and the usable responses (679 contractors). The co-authors chose five variables available in the USASpending.gov data that are probably of highest interest to generally describe contractor characteristics. The five variables are size, location, organization type, commodity, and industry.⁵ Overall, the exiting sub-population is similar to the entire DIB. The proportion of contractors for nearly all characteristics within each variable are only a few percentage points higher or lower than the corresponding proportion for the entire DIB. Furthermore, the characteristics constituting the greatest percentage of each variable follow the same ranking (with one exception due to high levels of unclassified data). Thus, the exodus of contractors from the DIB can be reasonably classified as broad based and impacting practically every type of contractor within the DIB.

Table 5. Contractor Characteristics*

Variable	Characteristic	Entire DIB	Presumed Exits	Usable Responses
Size	Small Business	95,834	61,930	110
	Other than Small Business	35,816	21,244	569
Location	Northeast	19,246	12,210	118
	Midwest	20,377	13,279	110
	South	49,966	30,765	242
	West	29,895	19,007	165
	Island Areas**	1,131	777	3
	International	11,009	7,117	41
Organization Type	Corporate (not tax exempt)	68,001	36,525	368
	Corporate (tax exempt)	4,383	2,200	28
	Foreign government	83	42	0
	International organization	1,513	766	6
	Partnership	12,580	7,097	59
	Sole proprietorship	10,615	6,915	33
	U.S. government entity	1,753	807	3
Commodity	Other	8,572	5,315	43
	Research and Development	8,336	4,865	72
	Products	56,155	37,917	319

⁵ See Appendix C: Study Variables for details about how each variable is defined and measured.



	Services	67,157	40,390	288
Industry	Agriculture, Forestry, Fishing and Hunting	421	283	1
	Mining, Quarrying, and Oil and Gas Extraction	385	284	1
	Utilities	1,092	582	4
	Construction	12,024	7,579	64
	Manufacturing	48,257	31,649	281
	Wholesale Trade	1,809	1,435	7
	Retail Trade	730	605	4
	Transportation and Warehousing	3,224	1,968	15
	Information	4,775	2,843	24
	Finance and Insurance	118	69	0
	Real Estate and Rental and Leasing	2,172	1,470	7
	Professional, Scientific, and Technical Services	22,816	12,237	159
	Management of Companies and Enterprises	6	3	0
	Administrative & Support and Waste Management & Remediation Services	10,346	5,964	34
	Educational Services	3,734	2,310	26
	Health Care and Social Assistance	2,618	1,861	9
	Arts, Entertainment, and Recreation	1,101	794	2
	Accommodation and Food Services	7,263	5,601	14
	Other Services (except Public Administration)	7,890	5,121	25
	Public Administration	611	289	1

* Totals for each variable will not sum to the appropriate figures for each group due to instances of missing data not being included in the table.

** Island areas include: Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Commonwealth of the Northern Mariana Islands.

Primary Characteristics of Presumed Exits

Small contractors constitute the most significant loss to the DIB at 64.62% with 61,930 contractors in the exiting sub-population. This is in line with the overall reduction for the entire DIB (63.18%). Other-than-small contractors sustained a smaller overall reduction at only 59.31%; thus, they constitute a greater proportion of the remaining sub-population (30.06%).

The exodus of contractors has impacted every region in the United States.⁶ Contractors in the South experienced the largest decrease with 30,765 in the exiting sub-population. The other three primary regions (West, Midwest, and Northeast), experienced decreases of 19,007, 13,279, and 12,210, respectively. The South, West, Midwest, and Northeast all sustained similar

⁶ The five states with the highest loss of contractors, South Dakota, Wyoming, Maine, West Virginia, and Arkansas, had an average reduction of 70.73%. In contrast, the five states with the lowest loss of contractors, Alaska, Virginia, Washington DC, Alabama, and Maryland, had an average reduction of 55.72%. There appears to be some value being in the national capital metro area.



reductions at 61.57%, 63.58%, 65.17%, and 63.44%, respectively. With slightly lower overall losses for the South, its proportion has grown in the remaining sub-population (39.61%).

Taxable corporate contractors experienced the largest loss of contractors with 36,525 in the exiting sub-population. Partnerships and Sole Proprietorships, the second and third largest cohorts, experienced decreases of 7,097 and 6,915, respectively. Taxable corporate contractors sustained an overall reduction of 53.71%. This was lower than the overall loss for Partnerships of 56.41% and much lower than Sole Proprietorships at 65.14%. These sizable differences in overall reductions are likely an artefact of the data. A sizable proportion of all contractors had missing data for organization type (24,151) with nearly all of them (23,508) being included in the exiting sub-population. Thus, the reported numbers, associated percentages, and overall reductions for each characteristic within organization type are likely undercounted.

Contractors providing services experienced a loss of 40,390 while contractors producing products experienced a loss of 37,917.⁷ Contractors engaged in R&D experienced a loss of only 4,865. Contractors producing products sustained larger reductions than contractors providing services at 67.52% and 60.14%, respectively. Contractors engaged in R&D sustained the lowest reduction at only 58.36%. Thus, R&D has grown as a proportion of the remaining sub-population and now constitutes 7.16% of the DIB. Furthermore, the lower reduction for contractors providing services versus contractors producing products has created a much wider spread for these two groups in the remaining sub-population (55.22% versus 37.62%).

Contractors in the Manufacturing industry constitute the greatest loss to the DIB. There are 31,649 in the exiting sub-population. The second greatest loss was in the Professional, Scientific, and Technical Services (PSTS) industry with 12,237 contractors in the exiting sub-population. The Manufacturing industry sustained a higher reduction than the PSTS industry at 65.58% and 53.63%, respectively. This relatively low reduction for the PSTS industry has resulted in its proportional growth in the remaining sub-population and now constitutes 21.82% of the DIB. The reduction of contractors across industries was particularly variable. The Retail Trade, Wholesale Trade, and Accommodation and Food Services industries sustained reductions of 82.88%, 79.33%, and 77.12%, respectively. In contrast, the Public Administration and Utilities industries sustained reductions of 47.30% and 53.30%, respectively.

Socio-Economic Characteristics of Presumed Exits

In addition to the characteristics discussed above, it is valuable to view the exiting sub-population from a perspective of high interest to defense market stakeholders—socio-economic classifications. Table 6 displays 16 classifications for the entire DIB, the exiting sub-population, and the usable responses. There is considerable variation in the experience of each group of contractors. For example, Alaskan Native Corporations and contractors in the Ability One Program sustained very small reductions of only 30.71% and 29.41%, respectively. In contrast, Small Disadvantage Businesses sustained losses of 87.76%.

When viewing the loss of contractors for each socio-economic classification, the overall population reduction of 63.18% should be used as a benchmark for comparison. Woman Owned Businesses (WOB) sustained an overall reduction of 63.81% (similar to the entire DIB).

⁷ Traditional defense related products, based upon Category Level 2 of Product and Service Codes, all sustained below average contractor losses. Ships and Submarines, Ammunition and Explosives, Aircraft, Guided Missiles, and Guns, experienced reductions of 44.19%, 50.57%, 50.94%, 52.00%, and 55.33% respectively. But these product levels are quite small within the DIB containing only 934 (0.71%) contractors. A second small subset of the DIB, slightly less than 1% of all contractors, experienced a very minimal loss of contractors. IT Professional Service (Labor) and Capability as a Service sustained reductions of only 8.09% and 9.31%, respectively.



WOBs and Economically Disadvantaged WOBs fared much better with reductions of only 51.94% and 50.92%, respectively. Joint Venture WOBs and Joint Venture Economic Disadvantaged WOBs fared even better with reductions of only 47.81% and 42.11%, respectively. Minority Owned Businesses experienced an overall reduction of 57.94% (better than the entire DIB). Black American Owned Businesses, Hispanic American Owned Businesses, and Asian Pacific American Owned Businesses sustained strikingly similar reductions at 59.37%, 59.95%, 59.97%, respectively. American Indian Owned Businesses fared slightly better with a reduction of only 55.03%. Native American Owned Businesses experienced much less attrition with a reduction of 45.18%. Veteran Owned Businesses sustained a reduction of 61.14%. Service-Disabled Veteran Owned Small Businesses fared much better with a reduction of only 53.42%.

Table 6. Socio-Economic Classifications

Classification	Entire DIB	Presumed Exits	Usable Responses
Alaskan Native Corporation Owned Firm	977	300	4
The Ability One Program	425	125	3
Small Disadvantaged Business	1,585	1,391	10
Woman Owned Business	20,343	12,980	140
Economically Disadvantaged Women Owned Small Business	4,723	2,405	41
Women Owned Small Business	12,539	6,513	94
Joint Venture Women Owned Small Business	594	284	5
Joint Venture Economic Disadvantaged Women Owned Small Bus	380	160	5
Minority Owned Business	19,662	11,393	98
Black American Owned Business	5,875	3,488	31
Hispanic American Owned Business	5,109	3,063	26
Asian Pacific American Owned Business	3,630	2,177	14
American Indian Owned Business	1,472	810	3
Native American Owned Business	2,738	1,237	11
Veteran Owned Business	15,565	9,516	106
Service-Disabled Veteran Owned Business	7,756	4,143	52

RQ 2: Why are contractors leaving the DIB?

The question of *why* contractors are leaving the DIB is perhaps the most central research question of this study. Expert coding (see Saldaña, 2021) was utilized in two steps *post-hoc* to make the initial survey results more meaningful for addressing this important topic.

Recoding “Other” Responses

Initially, there were 162 instances where a respondent reported “Other” as the primary reason for why the contractor no longer has an existing prime contract with the DoD. This represented nearly a quarter of all explanations for exit, which would have made the results less informative overall. In many cases, the additional text response and sometimes the Final Comments of the respondent made it clear that the “Other” reason for exit warranted a recode into an already existing category. For example, the response “Simply too hard to work with the DoD” (ID:604) was readily interpretable as an unfavorable perception of working with the DoD, and therefore reclassified as “The entity stopped bidding for work with the DoD due to an unfavorable characteristic of working with DoD.” Alternatively, in those instances where it could



not be determined if a reclassification was justified, the item remained as “Other.” For example, the descriptions “DoD rep asked us not to renew since we weren’t awarded very many jobs” (ID: 27) and “COVID stopped the services” (ID: 460) could not be easily recoded into another pre-existing category (the motivation and respondent’s reaction for not renewing was not clear, and it was not certain if COVID impacted the contractor beyond that contract), so these responses remained as “Other.”

Additionally, in instances where the item was reclassified as “The entity stopped bidding for work with the DoD due to an unfavorable characteristic of working with DoD,” the co-authors also coded the follow-on question that asked, “Why did the entity stop bidding for work with DoD?” if enough information was available for interpretation. For example, one contractor reported “Other” and “We are a small shop that can not [sic] comply with the NIST 800-171 requirements” (ID: 558). This response was recoded into the pre-existing category of “The entity stopped bidding for work with the DoD due to an unfavorable characteristic of working with the DoD.” and additionally coded as “Cybersecurity requirements” in the follow-up question. The open-ended responses to the Final Comments helped provide additional context in this regard. For example, in one instance “Hurtles with renewal process” (ID: 253) was originally thought to refer to contract renewal, but the Final Comments clearly indicated an issue with SAM.gov renewal instead.

The first step of reclassification was completed independently by the co-authors and a graduate research assistant (GRA). All three coders agreed on the new coding for 64 of the initial 162 “Other” responses, and the two co-authors initially agreed on another 28 reclassifications. If the two co-authors agreed on a recode but the GRA did not, it was assumed agreement had been achieved. This left 70 items to be reconciled, which was done after several rounds of discussion between the co-authors until all items had been agreed upon. The revised categorization resulted in the number of “Other” responses dropping from 24% (162 responses) to 10% (71 responses) of the overall sample. The other most significant change resulting from the recoding was that many of the “Other” responses were recategorized as a DIB exit due to an unfavorable characteristic of working with the DoD, thereby increasing that category from 16% (112 responses) to 24% (165 responses) of the sample.

Creating Additional “Other” Categories

A second round of coding was conducted by the co-authors to create additional categories not originally contained in the survey instrument. These categories reflected themes that arose in text responses, often corroborated by respondent Final Comments. For instance, a few respondents ($n = 11$) indicated issues with SAM.gov, not the DoD specifically, and so a new code was created to categorize these responses. Importantly, 14 respondents indicated that while they had not stopped bidding for DIB work (one of our responses), they did identify an unfavorable characteristic of working with the DoD that threatened their future participation. This second round of coding resulted in four new categories for the question of why contractors have left the DIB:

- The entity is still bidding for work but has identified an issue working with the DoD
- The entity “lost” a certain status and the work with it
- The entity has exited due to SAM.gov issues
- The entity has exited due to GSA issues

The additional categories resulted in the number of “Other” responses dropping from 10% (71 responses) to 5% (34 responses) of the overall sample. Table 7 shows the responses for this question contained in the original survey (“Original Answers”), changes based on the first round of recoding (“Revised Coding”), and the final set of all categories (“Revised Coding and New Categories”). All further discussion will reference only the final set of numbers.



Table 7. Primary Reason for DIB Exit

Response	Original Answers		Revised Coding		Revised Coding and New Categories	
	Number	Percent	Number	Percent	Number	Percent
The entity stopped bidding for work with the DoD due to an unfavorable characteristic of working with the DoD.	112	16%	165	24%	165	24%
The entity is still bidding for work but has not won anything current.	123	18%	127	19%	127	19%
The previous contract was only ever expected to be a single-time event (e.g., purchase order).	77	11%	78	11%	78	11%
DoD stopped issuing solicitations for the entity's product/service.	64	9%	78	11%	78	11%
The entity has become only a subcontractor to DoD prime contractors.	52	8%	59	9%	59	9%
Other (Please specify)	162	24%	71	10%	34	5%
The entity was originally set up to serve a single, specific contract that was completed (i.e., joint venture).	24	4%	25	4%	25	4%
The entity was party to a merger or acquisition but still conducts business with the DoD under a new name or through a parent entity.	21	3%	22	3%	22	3%
The entity changed strategic direction and is no longer seeking defense-related work.	13	2%	16	2%	16	2%
* The entity is still bidding for work but has identified an issue working with the DoD	N/A	N/A	N/A	N/A	14	2%
The entity closed the business due to reason(s) other than financial difficulties.	11	2%	13	2%	13	2%
* The entity has exited due to SAM.gov issues	N/A	N/A	N/A	N/A	11	2%
The entity no longer provides the product/service it once did for the DoD.	10	1%	10	1%	10	1%
The entity rebranded under a new name (not due to a M&A transaction) but still conducts business with the DoD under this new name.	6	1%	7	1%	7	1%
* The entity "lost" a certain status and the work with it.	N/A	N/A	N/A	N/A	6	1%
* The entity has exited due to GSA issues.	N/A	N/A	N/A	N/A	6	1%
The segment of the entity conducting work with the DoD was sold and this segment represented all defense-based business for the entity.	4	1%	5	1%	5	1%
The entity went bankrupt.	0	0%	2	0%	2	0%
The entity received a cure notice and is on probation.	0	0%	1	0%	1	0%
Total	679	100%	679	100%	679	100%

* Categories created by researchers during post-hoc analysis; not included in the original survey as an answer choice.

Discussion: Primary Reason for DIB Exit

The top five reasons given by respondents account for nearly 75% of all responses (507 out of 679). The most frequently cited reason for a contractor exiting the DIB was an unfavorable working condition with the DoD (165 responses for 24% of the sample). This is concerning and will be addressed in more detail in the next section that addresses the follow-up question that only these respondents were asked in their survey.

More optimistically, the second most frequently cited reason for an apparent DIB "exit" strongly implies that certain contractors have not actually left the DIB. These respondents indicated that they are actively bidding for work but have not won anything current ($n = 127$ respondents for 19% of the sample). This means that they appeared to have exited the DIB in



the USASpending.gov data by virtue of their not having won any current work, but they would not be considered a true “exit” if one is to consider willing and potential suppliers as part of a healthy DIB. This will also be discussed in more detail in the subsequent section answering Research Question #3 which sought to estimate the true rate of contractor exit from the DIB.

The next two top reasons, accounting for 78 responses (11% of the sample) each, are more agnostic in nature and should probably not be attributed directly to the DoD (positively or negatively) as they appear to be reasons circumstantial to business. There are plenty of business-legitimate reasons why a contract may only be a one-time event or the DoD has stopped issuing solicitations for specific products or services. As a further discussion point, this same agnostic nature applies to many of the other reasons for exit as well. For example, a contractor going bankrupt or shifting strategic direction away from defense work is probably beyond the DoD’s direct control. Even if the DoD stopped issuing solicitations for a contractor’s services/products or the contractor was established as a one-time joint venture for a specific solicitation opportunity, this should not be automatically construed as an unfavorable characteristic unique to the DoD because there are any number of legitimate reasons for a shift in purchasing behavior. How much responsibility the DoD should bear for ensuring its own supplier base through demand-side controls is a great debate topic but beyond the scope of this study.

The fifth most identified reason for departure was that the contractor had become only a subcontractor to DoD prime contractors ($n = 59$ responses for 9% of the sample). Respondents who selected this reason received a follow-on question eliciting more details in open-text response; 52 of the respondents provided such a response. Many of these respondents noted negative characteristics of working with the DoD as a prime contractor that prompted their decision to become only subcontractors. Some examples of such comments include: “We could do just as well as a subcontractor, and the larger prime contractors seemed to do better with bidding on RFPs” (ID: 231), “ease of contracting” (ID: 708), “The onerous paperwork required for each prime contract. We found the weight of the paperwork often outweighed the equipment being sold. We cannot support that level of effort for a limited return” (ID: 34), and “The current climate of only IDIQ opportunities prevents prime contract opportunities for a small company” (ID: 448). Therefore, most of the subcontractor-only respondents appear to have shifted away from being prime contractors due to an unfavorable characteristic of working with the DoD.

One of the newly created categories is also worth touching on for purposes of discussion. An additional 14 respondents (2% of the sample) indicated that while they continue participating in the DIB there are unfavorable characteristics that have forced them to change how they approach working with the DoD. For example, “The customer did not pay in time and your service was horrible. Now we deliver only by payment in advance if it is issued with SAM or the DoD” (ID: 724) and “We still supply the DoD with products but only through direct negotiations with DoD purchasing representatives or third-party vendors to avoid the administrative issues that we normally run into when dealing with the RFP/RFQ system” (ID: 188). This category is highlighted because it represents another set of contractors experiencing specific unfavorable DoD characteristics.

In conclusion, three categories stand out as representing a negative “mark” on the DoD: contractors that 1) stopped bidding outright due to an unfavorable DoD characteristic, 2) become only a subcontractor⁸, and 3) are still bidding for work but have identified a negative

⁸ Most of the reasons listed by contractors for becoming only a subcontractor related to a negative characteristic of being a prime contractor for the DoD, although it should be noted that not all the reasons



characteristic of working with the DoD. Category one (1) and three (3) are very similar with the distinction being whether contractors are still actively bidding or ceased bidding altogether. When all three categories are combined to get a sense of the magnitude of the DoD's responsibility for contractor departure, the results are sobering. The proportion of contractors exiting (or otherwise adjusting their contracting intentions) for negative reasons attributable to the DoD is approximately one-third ($n = 238$ respondents) of the overall responses (see Table 9).

Table 8. DIB Exits Due to Unfavorable Characteristics of Working with the DoD

Response	Number	Percent
The entity stopped bidding for work with the DoD due to an unfavorable characteristic of working with the DoD.	165	24%
The entity has become only a subcontractor to DoD prime contractors.	59	9%
* The entity is still bidding for work but has identified an issue working with the DoD	14	2%
Total	238	35%

* Category created by researchers during post-hoc analysis.

Unfavorable Characteristics of the DoD

The unfavorable characteristics of working with the DoD identified by contractors are undoubtedly of key interest to DoD policy makers; therefore, more details were ascertained in the survey with a follow-on question. The same two-step expert coding process (recode and additional creation of categories) was followed for the "Other" responses to the follow-on question shown to these respondents: "Why did the entity stop bidding for work with DoD?". Five new categories were created for the follow-up question of why contractors stopped bidding for work due to an unfavorable characteristic of working with the DoD (or if they were still bidding but had identified an unfavorable characteristic in their text response):

- Small business issues (including small business-specific policies)
- DoD acquisition/contracting policy issues
- Staff-related issues (e.g., expertise, racism, communication)
- Payment issues
- Not profitable or generally "worth it"

The total number of responses in the revised coding columns increased from 211 to 271 owing to the increased number of responses that had been recoded as unfavorable DoD characteristic in the preceding question. This first stage also resulted in most of those responses being identified solely as "Other" until the second stage of coding when new categories were created *ad-hoc* by the researchers. The last columns showing the final categorization of responses show a large decline in the number of "Other" responses to only 5% (15 responses) of the total responses to this question. Table 9 shows the responses for this question contained in the original survey ("Original Answers"), changes based on the first round of recoding ("Revised Coding"), and the final set of all categories ("Revised Coding and New Categories"). All further discussion will reference only the final set of numbers. As a reminder, 179 responses were from contractors that had identified a specific unfavorable characteristic

were overtly disapproving of the DoD so describing this as a wholly negative mark on the DoD should be qualified.



working with the DoD. Note that the totals shown in Table 9 are greater than 179 because multiple unfavorable characteristics could be identified by respondents.

Table 9. Reason(s) for Having Stopped Bidding for Work with the DoD

Response	<u>Original Answers</u>		<u>Revised Coding</u>		<u>Revised Coding and New Categories</u>	
	Number	Percent	Number	Percent	Number	Percent
DoD bureaucracy	63	30%	81	30%	81	28%
The solicitation process is cumbersome	65	31%	74	27%	74	26%
* Small business issues (including small business-specific policies)	N/A	N/A	N/A	N/A	34	12%
* Not profitable or generally “worth it”	N/A	N/A	N/A	N/A	28	10%
Cost and pricing issues (e.g., Truth in Negotiations Act)	23	11%	23	8%	23	8%
Accounting requirements (DCAA, CAS, etc.)	22	10%	22	8%	22	8%
Defense Federal Acquisition Regulation Supplement (DFARS) rules	19	9%	19	7%	19	7%
Cybersecurity requirements (CMMC)	17	8%	18	7%	18	6%
Other (Please specify)	34	16%	80	30%	15	5%
Security or facility clearance processes	10	5%	13	5%	13	5%
DoD profit policies	11	5%	11	4%	11	4%
DoD financing policies	9	4%	10	4%	10	3%
* Payment issues	N/A	N/A	N/A	N/A	8	3%
* DoD acquisition/contracting policy issues	N/A	N/A	N/A	N/A	5	2%
* Staff-related issues (e.g., expertise, racism, communication)	N/A	N/A	N/A	N/A	5	2%
Intellectual Property (IP) issues	1	0%	1	0%	1	0%
Total	211	100%	271	100%	286	100%

* Categories created by researchers during post-hoc analysis.

Discussion: Unfavorable Characteristics of the DoD

In the follow-up question, DoD bureaucracy and a burdensome solicitation process were clearly the two biggest issues, representing over half of the rationale for why these contractors left (81 responses for 28% and 74 responses for 26%), respectively. Note that 45 contractors listed both as a reason, so their representation is slightly elevated in the overall counts, but they remain the top two reasons, regardless. These responses indicate that the DoD should focus on reducing internal bureaucracy and improving the solicitation process as these are the greatest unfavorable characteristics expressed by contractors that have exited the DIB. The next two most notable reasons for exit are *post hoc* categories; firstly, practical issues and policy issues related to small businesses (34 responses for 12%) and secondly statements that working with



the DoD was generally not worth it or was an unprofitable venture (28 responses for 10%). Both categories contained a myriad of issues and different ways of expressing it; page constraints prohibit going into detail here, but both categories reinforce the sometimes perception that the DoD might be a poor customer. Other items like payment-related issues and staff-specific issues are also other potential areas of improvement, even though they were ranked lower as contractor concerns (8 respondents for 3% and five respondents for 2%, respectively). All of these are issues that are likely to be within the DoD's direct ability to influence in the future.

A couple of other responses are worth highlighting. If profit, financing, and payment issues are combined since those issues are likely to be practically related to one another, they would cumulatively represent 29 respondents (10% of the sample), constituting a mid-level concern. Interestingly, while acknowledging they may be issues for contractors that are currently doing business with the DoD, cybersecurity and intellectual property issues did not rate highly in the results. Cybersecurity requirements remained a middle-of-the pack concern as it was represented by only 18 respondents (6% of the sample) and intellectual property issues appear to be practically non-existent as a concern for contractors that have exited.

RQ 3: *What is the extent of contractor exit in the DIB?*

This study identified 83,175 contractors that were presumed to have exited the DIB as prime contractors from FY2015 to FY2022. This (perhaps shockingly) equates to nearly two out of every three (63.18%) prime contractors during this period. This loss has been partially offset through new entrants or returning contractors, but the net impact has been a DIB shrinking almost 5% a year with approximately 2,756 contractors leaving per year. Although widely reported, it is worth investigating the extent to which the generally observed trend reflects the reality of contractor exit as evidenced by this study. The co-authors contend that the overall trend is exaggerated, and that several adjustments should be made to more accurately estimate the number of exiting contractors. The rationale for each adjustment is grounded in four categories, each of which are discussed in more detail along with an estimate for their relative impact:

- 1) Data artefacts
- 2) Definition of DIB: Transitory contractors
- 3) Definition of DIB: Subcontractors
- 4) Definition of DIB: Active bidders

Data Artefacts

There are several artefacts identified by the co-authors that seem likely to produce an inflation of the number of exiting contractors. First, the exiting sub-population (83,175) includes contractors that appear to still be in the DIB based upon a closer examination of some contractors by name (the recipient_name field in USASpending.gov). The co-authors identified 2,945 UEI from the exiting sub-population that have a contractor name identical to the name (but different UEI) of a contractor from the existing supplier base. This is particularly acute for the large primes. For example, "Lockheed Martin Corporation" has 44 UEI in the exiting sub-population and 49 UEI in the remaining sub-population. This set of 2,945 UEI with the appearance of exit should not be considered true exits since it is certain that the contractor still conducts businesses with the DoD, even under the same name, simply through another UEI.

Second, in addition to contractors that have multiple UEI both in the exiting and remaining sub-populations, there are contractors that appear to be represented multiple times within just the exiting sub-population. The contractors considered here do not share an identical



contractor name like the set above.⁹ Instead, these contractors have a near-identical name, and they were identified as likely to be the same entities because they share the same point of contact. This has heretofore not been visible to most researchers since this study uniquely matched USASpending.gov contractor data with SAM.gov contact information. The near-identical contractor name, coupled with identical points of contact, led the co-authors to realize this was a source of likely inflation for the number of exiting contractors. The co-authors identified the number of unique email domain names among this subset of contractors, resulting in 1,218 unique email domains and 4,336 unique UEI. This means that 3,118 UEI were probably erroneously counted as unique contractors in the exiting sub-population.

Third, based upon the method of calculating exiting contractors, it was a certainty that there would be some number of false positives recorded (i.e., contractors identified as having exited but that in fact still hold an active prime contract with the DoD). These are particularly likely from the recent cohorts since there were fewer subsequent years upon which to base the initial presumption of exit. The survey results allowed for an estimate of false positives. Ninety-five contractors (9.16%) that responded to the survey indicated through the filter question that they still hold an active prime contract with the DoD. The co-authors, using the real-time award search at USASpending.gov, were able to confirm that 32 of these contractors have prime contract actions with the DoD in FY2023. Thus, 33.68% of the stated false positives appear to be true false positives.

A final area of potential inflation in the data involves mergers and acquisitions. M&A activity has been rather significant in the defense market and often receives much attention and criticism. Unfortunately, this activity can create additional false positives in the data. The survey identified 22 contractors that were party to a merger or acquisition but still conduct business with the DoD under a new name or through a parent. Thus, these contractors have not truly exited the DIB. Since some M&A activity does rightfully remove a contractor from the DIB, we assume a haircut of 50% to this survey count when considering this effect on the exiting sub-population.

$$(2,945 / 83,175) + (3,118 / 83,175) + [(32 / 95) \times (95 / 1037)] + (11 / 679) = 12.0\%$$

Definition of DIB: Transitory Contractors

Some percentage of contractors should not reasonably be considered part of the DIB due to their transitory nature. The survey indicated that some contractors were established for a single use purpose and therefore should not necessarily be expected to remain as a fixture in the supplier base for future goods or services. Such contractors were identified from the survey as those that provided one of the following answers for the primary reason for their exit: “The previous contract was only ever expected to be a single-time event (e.g., purchase order)” and “The entity was originally set up to serve a single, specific contract that was completed (i.e., joint venture).” These two categories included 78 contractors and 25 contractors, respectively.

$$(78 / 679) + (25 / 679) = 15.2\%$$

Definition of DIB: Subcontractors

The co-authors contend that the DIB should be conceptualized as the collection of both prime contractors and subcontractors serving on DoD contracts. For many contractors there is certainly an overlap in membership of the two groups, as well as some migration between groups depending on the DoD’s acquisition strategy for specific goods and services. While the

⁹ The recipient_name field in USASpending.gov data is riddled with inconsistent use of periods, commas, contractor designations, and outright misspellings that create “unique” names for the same contractor from a strict data perspective; even though they have different UEI, under closer inspection they are in fact the same contractor.



former could not be estimated from this study's data, the latter was aptly represented by those 59 contractors that indicated they had transitioned from being a prime contractor to a subcontractor only.

Also, several contractors from the batch of 95 contractors who (perhaps mistakenly) said they still have a DoD prime contract appear to have transitioned to subcontractor work. Based on subcontracting data from USASpending.gov, eight contractors (distinct from the ones counted before as a true false positive) have subcontractor contract actions for DoD contracts in FY2022 and/or FY2023. Since they are still participating in the DoD's supply chain, these eight contractors should also be removed from the exiting sub-population count.

$$(59 / 679) + [(8 / 95) \times (95 / 1037)] = 9.5\%$$

Definition of DIB: Active Bidders

It could also be reasonably argued that the DIB should include those contractors willing to participate as suppliers, as best exemplified by those contractors that are actively bidding for work. The survey indicated that there is a rather large group of contractors who appear to still be actively participating in the defense marketplace, albeit without much success in terms of winning a contract award in recent years. The two categories that captured such contractors were those that gave one of the following answers: "The entity is still bidding for work but has not won anything current" and "The entity is still bidding for work but has identified an issue working with the DoD." These categories included 127 contractors and 14 contractors, respectively.

$$(127 / 679) + (14 / 679) = 20.8\%$$

Final Estimate of Contractor Exits

Calculating an estimate for the true extent of contractors exiting the DIB requires piecing together the observations noted above. The initial estimate for the amount by which the number of exiting contractors is inflated is 57.4%. One of the co-authors felt it wise to attenuate this by a factor of 0.85 to account for any missed overlap both within and between the four categories considered above. Applying this more conservative approach, the pool of contractors having exited the DIB is likely overstated by about 48.8%. This estimate could also be considered as the midpoint of a range. The range should have a rather large margin of error; for example, a back-of-the-envelope range favored by one of the co-authors would be +/- 15% such that the low end might be 34% and the high end be 64%. Figure 3 displays the final estimate and hypothetical range for the inflation in the count of contractors exiting the DIB.





Figure 3. Estimate of Inflation of DIB Contractor Exit

While the focus of this paper and the estimate above is based on the sub-population of exiting contractors, one observation about the overall decline of the DIB is worth noting. For a decline to exist, the number of exits must exceed the number of entrants. Thus, for a sizable decline, the gap must be relatively large. Therefore, if the exiting component of the equation is significantly inflated, as argued above, then the entrants component must also be significantly inflated for a decline to exist. Without such significant inflation to the entrants component, then the DIB may in fact be relatively stable. We do not have empirical evidence to comment on the nature of the entrants component, but the overall size and scale of the “shrinking” DIB can be called into question based upon the significant inflation of the exiting set of contractors.

Conclusion

A robust DIB is fundamental to ensure that proper and sufficient resources are available for warfighting capabilities and strategies. The continuing decline in the number of prime contractors is therefore a potentially worrisome trend. This study attempted to empirically examine the issue by conducting a survey of likely exited contractors to ascertain if they had left the DIB and, if so, why that was the case. The results provided unique, empirical insight into a critical area of concern to the defense acquisition community. In short, the DoD can do a better job of retaining contractors, which would place less pressure on its need to attract new contractors to compensate for exits and to achieve its overall desire for a resilient supplier base.

Contributions

The study makes several major contributions to the base of acquisition knowledge. First, to the best of our knowledge, this is the first study to empirically examine the issue of contractor departure from the DIB beyond simply noting the trend with broad numbers. The survey achieved a high threshold for statistical validity which is an improvement on most current research that relies on opinion, rhetoric, anecdotes, individual observations, or sample sizes too small to be generalizable. The rigor of the study means that its conclusions can be heavily considered for future policymaking and interventions. In the words of Grace Hopper (computer



programming scientist, mathematician, and United States Navy rear admiral), “One accurate measurement is worth a thousand expert opinions.”

Second, the results themselves provide several key insights into the composition of the DIB. The pool of contractors exiting the DIB has been broad based, impacting contractors across the entire United States, in nearly all organization types, and within all industries, albeit with considerable variation for different cohorts. The leading reason for contractors exiting the DIB (representing just over one-third of all survey respondents) was an unfavorable characteristic of working with the DoD. This means that the DoD has a direct ability to positively impact the health of its own supplier base if it handles certain hygiene issues such as a cumbersome solicitation process and financial policies (particularly regarding profitability). These are DoD-specific factors that go beyond the general circumstances that might affect the overall business community. The knowledge of the relative prevalence of specific unfavorable characteristics can inform the DoD as it seeks to introduce more targeted policy and acquisition interventions in the future. Finally, a deep dive into the pool of contractors that appear to be exiting the DIB suggests that there is likely some meaningful inflation to the numbers often reported. All this paints the “problem” of a declining DIB in a more favorable light than it is usually portrayed. In short, the trend of lower contractor participation is likely not as grim or extreme as it is often characterized. One caveat: it would behoove the reader to keep in mind that conclusions from this study are relative to contractors that may have left years ago (some as long ago as FY2016). Thus, some of the concerns noted by respondents may already have been or are being addressed by the DoD.

Limitations

In addition to its contributions, there are several limitations worth noting. First, the entire study had to rely on a single SAM.gov static file downloaded in 2021 because contractor contact information is no longer available in the current live system. This meant that points of contact could only be matched to roughly 60% of the presumed exiting contractors, skewing towards the years closer to the download date. This is unfortunate as it may have introduced systematic bias into the study, even though older contractors are more likely to be unreachable or to respond anyway. Second, some of the analyses relied on creating contractor “profiles” based on a single USASpending.gov contract action. Since many variables are contract specific and not entity-specific (to use SAM.gov parlance), a contractor can have contract actions with conflicting designations. For example, the same contractor can have contracts designating them as a small business and simultaneously have other contracts where they are designated as a not-small-business since that designation is contract-specific. While the likelihood is high that the most recent contract action is a fair enough representation of a contractor for the purposes of this study (and many exiting contractors had only a single contract), this was not determined conclusively by the co-authors.

Future Research

The raw data from the survey that informed this study offer several possible avenues for future research. First, there is a lot of relatively unexamined information in the survey’s Final Comments. For example, at cursory glance there are many specific mentions of small business, especially from those companies that became only subcontractors. In a similar vein, the co-authors barely scratched the surface on the subcontractor follow-on question, which also contains additional information. All of this could warrant a fruitful deeper dive. There are also numerous email responses from recipients of the survey invite that should be examined more closely. A random sample of the undeliverable survey invitations, for example, might paint a



more realistic picture of how many companies have ceased operations altogether and that is why they exited the DIB. It could also be worthwhile to parse through all contract actions, not just the most recent one, to build more accurate contractor profiles for use in analyses (e.g., create “Small,” “Mostly small,” “Balanced,” “Mostly not-small,” and “Not-small” distinctions in business size). An enhanced look into the data artefacts could provide helpful insights into the true size and characteristics of the entire DIB as the current data contain major inconsistencies and errors in contractor identifiers like recipient_name. There have been suggestions that the DIB decline is more of a reversion to the mean after a significant growth in contractors in the late 2000s and early 2010s (i.e., a popping of the DIB bubble). Therefore, expanding the research time frame to incorporate more historical years would be beneficial for understanding the extent of the “shrinking” DIB over time. The issue of DIB entrants should be addressed to assess whether the DIB might in fact be relatively stable even while it is shedding net contractors each year. Finally, 352 respondents to the survey indicated that they were willing to participate in a follow-up interview. This is an extensive set of participants for future surveys or in-depth interviews to continue exploring important topics related to contractor participation in the DIB.

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