

**U.S. Department of Veterans Affairs
Office of Acquisition and Logistics**



**Supplier Perception Survey
Response Analysis Plan**

Submitted to:

Office of Management and Budget

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SECTION 1.0 EXECUTIVE SUMMARY

The Supplier Perception Survey is a component of the U.S. Department of Veterans Affairs (VA) Office of Acquisition and Logistics (OAL) Supplier Relationship Transformation (SRT) initiative. This survey is one of many enterprise feedback initiatives through which quantitative and qualitative information is systematically collected to holistically assess VA Acquisitions Supply Chain Management policies and practices.

About this Document

Subsequent to the most recent iteration of the Supplier Perception Survey, VA OAL presented the Office of Management and Budget with the results of its analysis of supplier representativeness and non-response bias. The major take-away from that discussion was for VA OAL to investigate options to incorporate objective data sources into response analyses going forward. This document presents the results of VA OAL’s investigation.

Findings

VA OAL’s investigation identified nine new data elements that will be incorporated into Supplier Perception Survey response analysis going forward. These data elements will be extracted from two data sources:

- Central Contractor Registration (CCR) Database
- VA Electronic Contract Management System (eCMS) Database

Table I.1 below outlines the list of variables that will be utilized from each database.

Table I.1 Data Elements to be Included in Supplier Response Analysis

Field / Dimension	Source
Business Type	CCR
Organization Type	CCR
Business Size	CCR
Annual Receipts	CCR
Business Tenure / Age	CCR
Contracting Support	eCMS
Contracting Activity	eCMS
VA Contract Value	eCMS
Primary NAICS Code	eCMS

These nine data elements are expected to provide for a robust assessment of suppliers who respond to this survey, as well as the entire target population suppliers. The remainder of this document provides a more detailed assessment of these data elements.



SECTION 2.0 INTRODUCTION

The Supplier Perception Survey is a component of the U.S. Department of Veterans Affairs (VA) Office of Acquisition & Logistics (OAL) Supplier Relationship Transformation (SRT) initiative. This survey is one of many enterprise feedback initiatives, through which VA OAL collects quantitative and qualitative feedback from VA Acquisitions stakeholders to holistically assess VA Acquisitions Supply Chain Management policies and practices.

Previous Response Analyses

For the most recent iteration of the Supplier Perception Survey, chi-square goodness of fit testing was performed on key supplier attributes to assess representativeness of respondents. Supplier self-reported attributes (e.g., business category) were compared with self-reported attributes from the baseline Supplier Perception Survey conducted in 2010 due to unavailability of external data sources containing detailed information on supplier attributes. Subsequent to this iteration of the survey, VA OAL has investigated options for enhancing the data leveraged for response analysis.

VA OAL’s Activities to Assess Enhancements to Response Analysis

Table II.1 below lists the data sources that have been identified as potential sources for future response analysis.

Table II.1 Data Sources Investigated by VA OAL

Data Source Investigated	Outcome
Central Contractor Registration Database	Will be used for general supplier attributes
VA Electronic Contract Management System	Will be used for VA specific supplier information
Federal Procurement Data System	Will not be used
Hoovers (Commercial) Corporate Data	Will not be used

VA OAL ultimately determined that two of the four data sources investigated – the Central Contractor Registration (CCR) database managed by the General Services Administration (GSA); and the VA Electronic Contract Management System (eCMS) managed by the VA Enterprise Acquisition Systems (EAS) Service team – would provide ample data for more robust response analysis.



3.0 CENTRAL CONTRACTOR REGISTRATION (CCR) DATABASE

The Central Contractor Registration (CCR) Database contains rich information on federal government contractors, such as organizational and business type codes. This database is managed by the General Services Administration (GSA), and is updated daily with new suppliers and updates to information of existing suppliers. All suppliers wishing to do business with the federal government outside of purchase card transactions must register with CCR.

3.1 Matching CCR to Supplier Perception Survey Sampling Frame

CCR was evaluated by matching CCR records to the sampling frame from the most recent Supplier Perception Survey. This was done in order to ensure the CCR assessment was directly applicable to VA suppliers as opposed to all federal government suppliers.

3.2 Variables to be used from CCR

The following five fields will be leveraged from CCR for Supplier Perception Survey Response analysis going forward:

- Business Type
- Organization Type
- Business Size (Average number of employees)
- Annual Receipts
- Business Tenure (age)

The remainder of this section provides summary statistics on each of these variables as appended to the Supplier Perception Survey supplier file.

3.2.1 Business Type Category

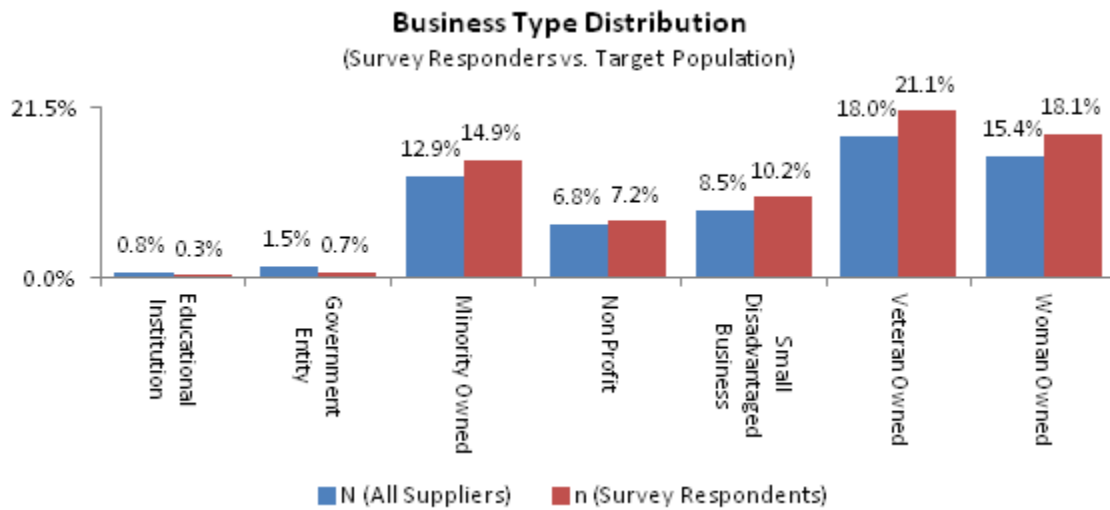
There are 74 business type codes. A firm may have one or more business type code. As many of the business type codes in CCR were either irrelevant to VA OAL’s analysis, or provided too much detail – logic was applied to consolidate relevant codes into major groups. Table III.1 below provides a summary of how business type codes were mapped to major groups. Figure III.1 provides a distribution of these groupings.

Table III.1 Business Type Codes

Business Type Grouping	Business Type Codes Included
Minority-Owned Firm	23, PI, OY, QZ, OW, FR
Government Entity	12, 2F, 2R, C6, C7, C8, NG, FO,
Woman-Owned	8A, 8C, 8D, 8E, A2
Veteran-Owned	A5, QF
Small Disadvantaged	27
Non-Profit	A7, 2U, A8



Figure III.1 Business Type Distribution



3.2.2 Organizational Type Category

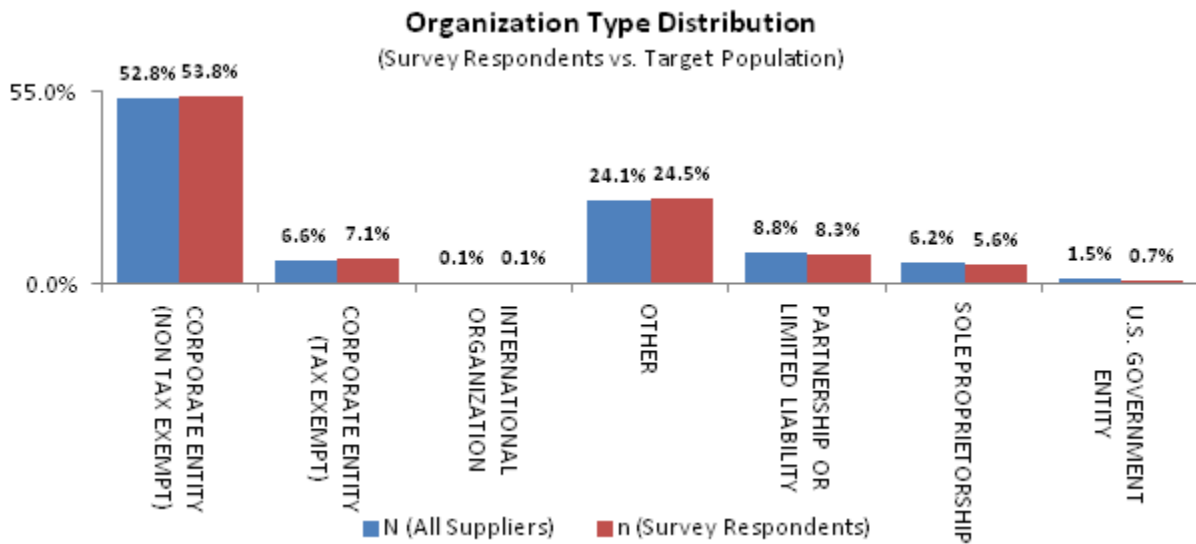
The processing of organizational type codes was less challenging as these codes provide for non-overlapping categorization of each record. Table III.2 provides a listing of these codes. Figure III.2 is a percent distribution of organizational type codes for survey respondents as well as for the target population.

Table III.2 Organizational Type Codes

Organizational Type Code	Description
2J	SOLE PROPRIETORSHIP
2K	PARTNERSHIP OR LIMITED LIABILITY
2L	CORPORATE ENTITY (NON TAX EXEMPT)
8H	CORPORATE ENTITY (TAX EXEMPT)
2A	U.S. GOVERNMENT ENTITY
CY	COUNTRY - FOREIGN GOVERNMENT
X6	INTERNATIONAL ORGANIZATION
ZZ	OTHER



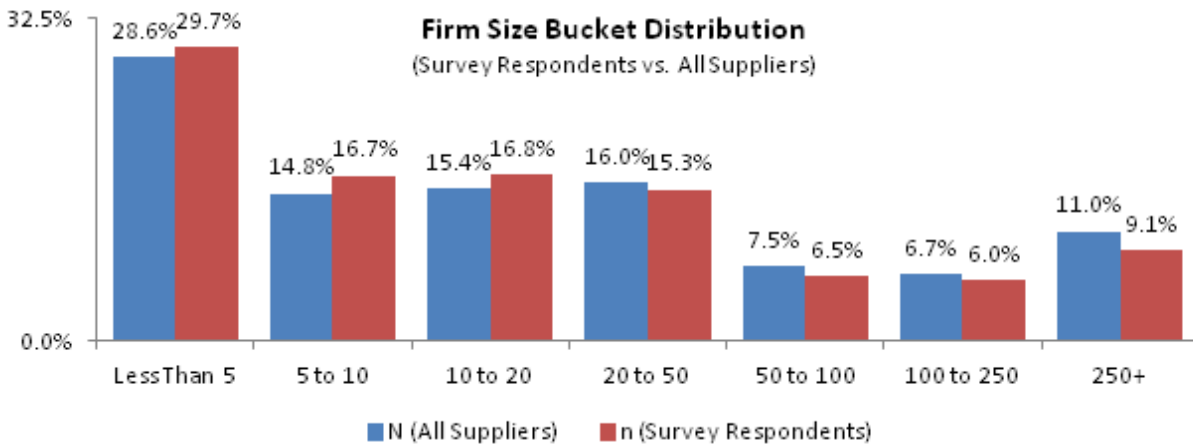
Figure III.2 Organization Type Distribution



3.3.3 Firm Size

Seven firm size buckets were derived from the CCR’s ‘Average Number of Employees’ field. Figure III.3 shows a comparison of the percent distribution of survey respondents vs. the target population.

Figure III.3 Firm Size (Average Employees) Bucket Distribution

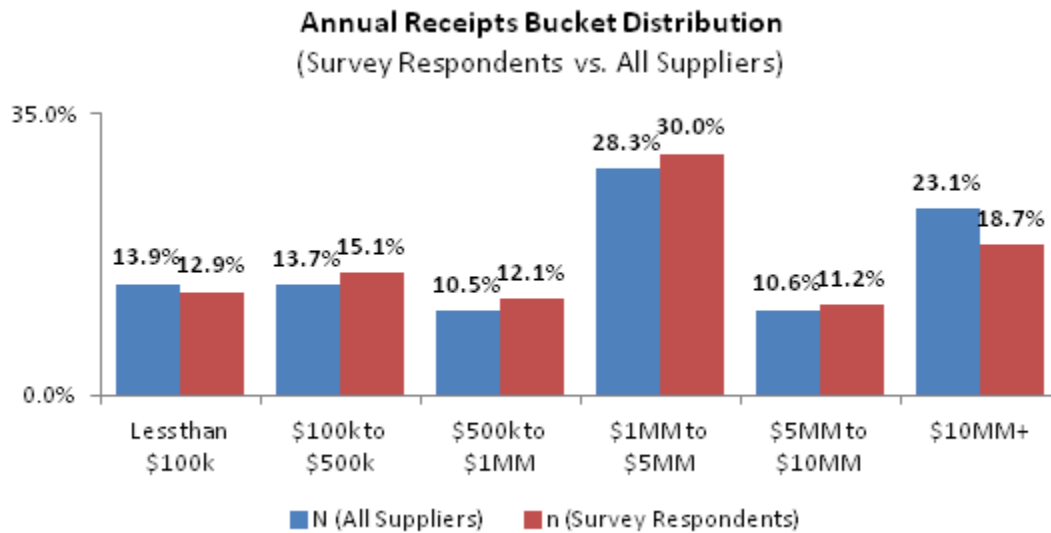


3.3.4 Annual Receipts

The ‘annual receipts’ field – provided in continuous form in CCR – is bucketed into six categories for comparison of survey respondents with the target population in Figure III.4 below.



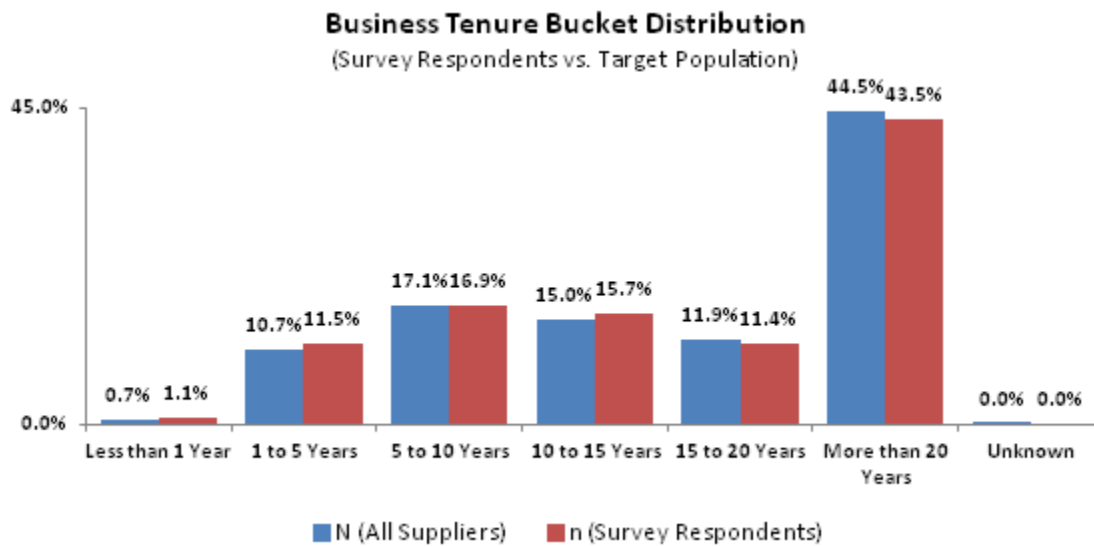
Figure III.4 Annual Receipts Bucket Distribution



3.3.5 Business Tenure Distribution

Business tenure was derived from the 'Business Start Date' field included on the CCR database. Figure III.5 below contains the business tenure distribution.

Figure III.5 Business Tenure Distribution





4.0 VA ELECTRONIC CONTRACT MANAGEMENT SYSTEM (ECMS) DATABASE

The VA Electronic Contract Management System (eCMS) is VA Acquisitions' Enterprise Resource Planning tool. Contracting staff use eCMS to enter information on procurement activity, contractors, and internal customers. As of the Q2 FY 2012 Supplier Perception Survey, eCMS has also functioned as the source from which VA supplier names are extracted for inclusion in the survey sampling frame.

The evaluation of eCMS data began with discussions between VA OAL and VA's Enterprise Acquisition Systems (EAS) Service team, the team that manages eCMS. The goal of this discussion was for VA OAL to gain a better understanding of data elements available through eCMS. This discussion ultimately led to the provision of an eCMS data extract by EAS for use by VA OAL in investigating the utility to be had by using eCMS data elements for the Supplier Perception Survey response analysis.

The data analyzed from eCMS consisted of all records entered into eCMS between January 2012 and May 2012. The objectives of this analysis were to: (1) Identify eCMS data fields that are expected to provide utility in the analysis of Supplier Perception Survey responders and non-responders alike and (2) Evaluate the quality of eCMS data fields deemed useful for survey response analysis.

4.2 eCMS Data Elements to be Leveraged

Based on OAL's analysis, the following eCMS data elements – inherent to eCMS or derived - will be incorporated into all subsequent Supplier Perception Survey response analyses:

- Contracting Support Indicator
- Contracting Activity Indicator
- VA Contract Value
- Primary NAICS Code

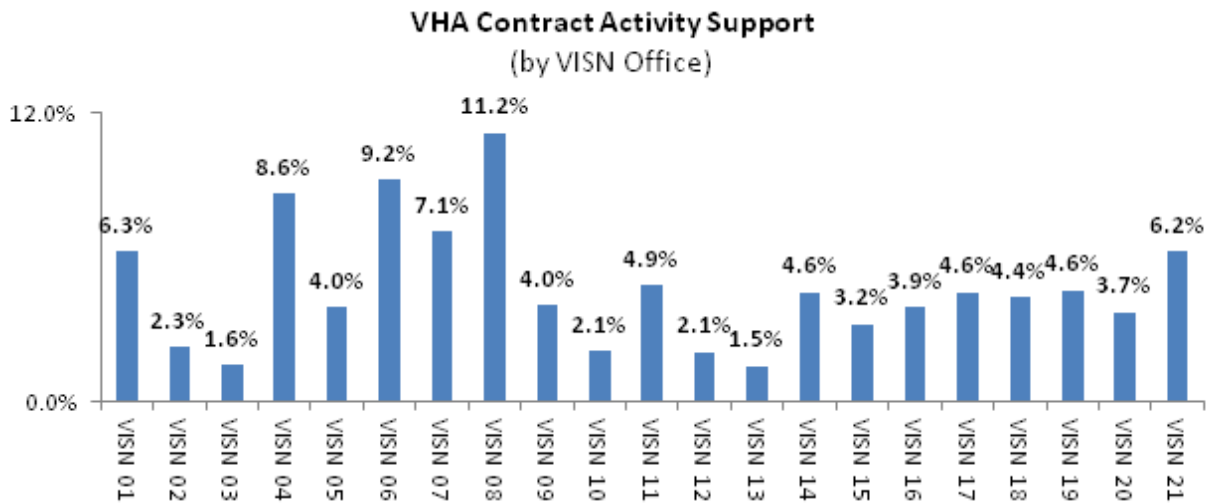
The remainder of this section provides summary statistics on these data elements for suppliers active in eCMS between January 2012 and May 2012.

4.2.1 Contracting Support by VA Office

In prior surveys, visibility into which VA offices have provided suppliers with support during a given evaluation period has been limited. VA OAL has identified new fields in eCMS that will allow for attributing contracting support at the head of contracting activity (HCA) level (e.g., Veterans Health Administration [VHA]), as well as down to the field office level. For instance, Figure IV.1 below demonstrates the distribution of contracting activity as supported by VHA's Veterans Integrated Service Network (VISN) offices. VA OAL will be able to leverage this information to compare the HCA distribution of suppliers who respond to the survey with that of the entire target population (e.g., are we getting a representative sample of VHA customers).



Figure IV.1 VHA Contract Activity Support by VISN Office



4.2.2 Contracting Activity

The transactional-level eCMS data will allow us to derive a number of ‘activity’ related metrics. This data will allow us to derive the number of eCMS transactions, the number of distinct orders, and number of distinct contracts for each supplier in eCMS for a given timeframe. Moreover, data in eCMS will allow for controlling by ‘type’ of action or contracting phase. And while it is expected that these metrics will prove useful, care will be required when using this data to account for anomalous values appropriately. Figures IV.2 and IV.3 below provide the contract and order distribution, respectively, for suppliers included in this analysis.

Figure IV.2 Supplier Percent Distribution by Number of VA Contracts

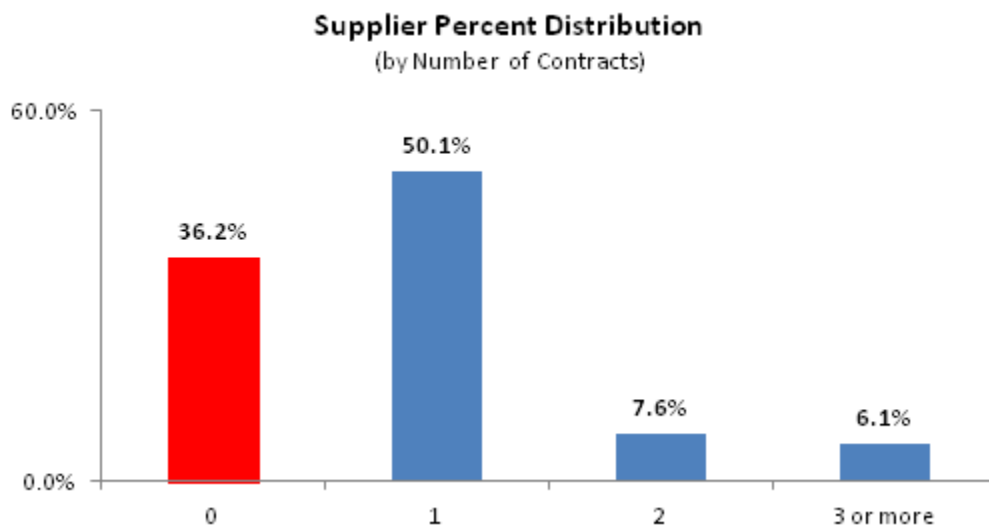
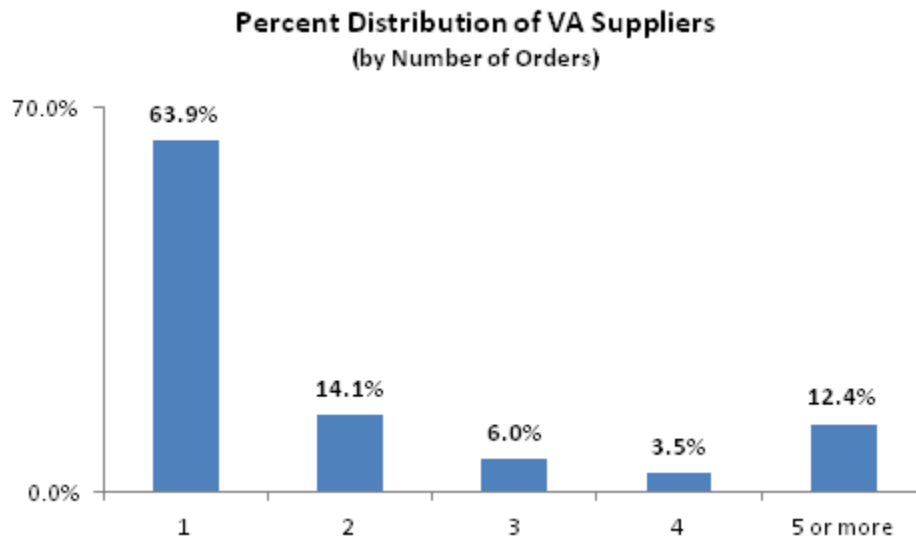




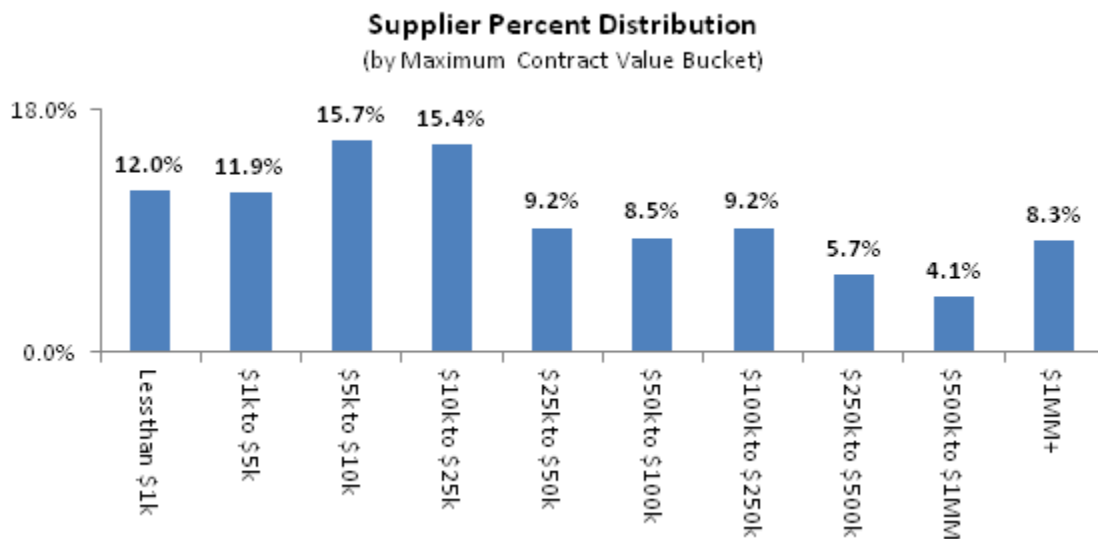
Figure IV.3 Supplier Percent Distribution by Number of VA Orders



4.2.3 VA Contract Value

eCMS also provides a continuous contract value figure, which can be manipulated and bucketed for purposes of distribution analysis and comparison between survey responders and non-responders. Figure IV.1 below provides a frequency distribution of maximum contract value buckets.

Figure IV.4 Supplier Percent Distribution by Maximum Contract Value Bucket



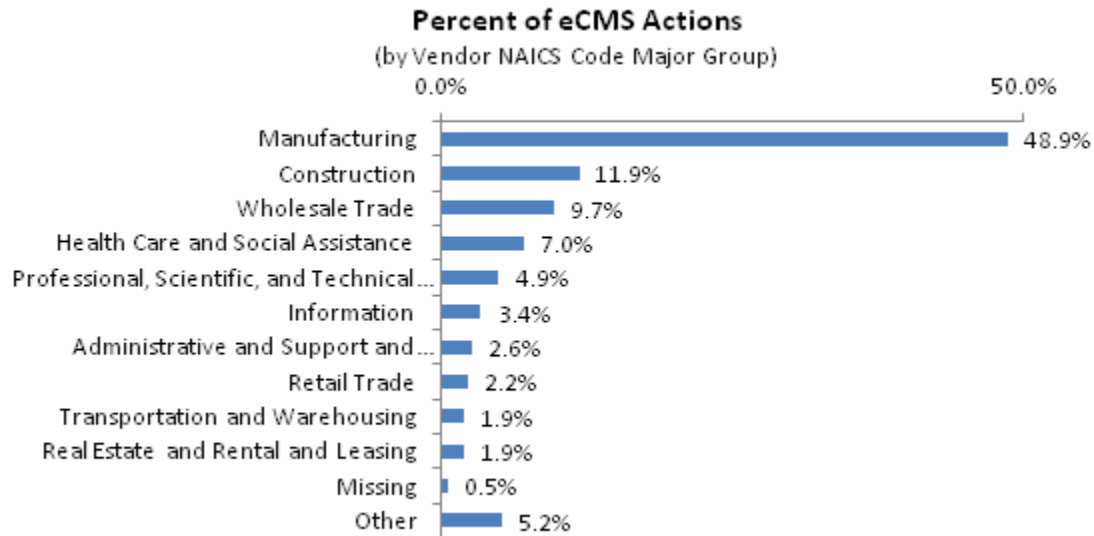
4.4.4 NAICS Code

The two-digit NAICS code provides sufficient granularity in which to compare the distribution of suppliers who respond to the survey versus that of the target population. NAICS codes as entered in eCMS are based on the VA contracting officer's determination of the supplier NAICS code applicable to



the product or service renders via the VA contract. This will allow us to assess the distribution of suppliers - and to assess satisfaction differentials - on the basis of product / service provided. Figure IV.5 below provides the NAICS major group distribution for this file.

Figure IV.5 eCMS Actions by NAICS Major Group Distribution



5.0 CONCLUSION

The nine variables identified through CCR and eCMS are expected to provide VA OAL with a long-term, systematic solution to incorporating objective data sources into analysis of survey responders and non-responders alike. This will aid tremendously in enhancing our ability to detect and address response bias in this survey, and will also further VA OAL's ability to systematically evaluate factors beyond self-reported survey data that contribute to the satisfaction and perception of suppliers.