



NATIONAL DEFENSE RESEARCH INSTITUTE

***Improving the Methodology for  
Setting Small-Business Size Standards***

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## ***Federal Government Seeks to Boost Procurement from “Small” Businesses***

- **Small Business Act seeks “to insure that a fair proportion of the total purchases . . . for the Government . . . be placed with small business[es]”**
- **Government-wide goal since 1997 is for 23 percent of “prime” contract dollars to be with small businesses**
- **Department of Defense (DoD) accounts for about two-thirds of all federal purchases and is key to meeting government-wide goal**
- **Threshold for small-business size varies by industry defined by North American Industry Classification System (NAICS)**

# ***Congress Has Used Many Different Size Thresholds for Applicability of Legislation***

<b><i>Act</i></b>	<b><i>Year</i></b>	<b><i>Threshold</i></b>
<b>Civil Rights</b>	<b>1964</b>	<b>15 employees</b>
<b>Age Discrimination in Employment</b>	<b>1967</b>	<b>20 employees</b>
<b>Occupational Safety and Health</b>	<b>1970</b>	<b>11 employees</b>
<b>COBRA (on group health plans)</b>	<b>1986</b>	<b>20 employees</b>
<b>Worker Adjustment and Retraining</b>	<b>1988</b>	<b>100 employees</b>
<b>Americans with Disabilities</b>	<b>1990</b>	<b>15 employees</b>
<b>Clean Air Amendments</b>	<b>1990</b>	<b>100 employees</b>
<b>Family and Medical Leave</b>	<b>1993</b>	<b>50 employees</b>
<b>FDA Modernization</b>	<b>1997</b>	<b>\$500K in sales</b>

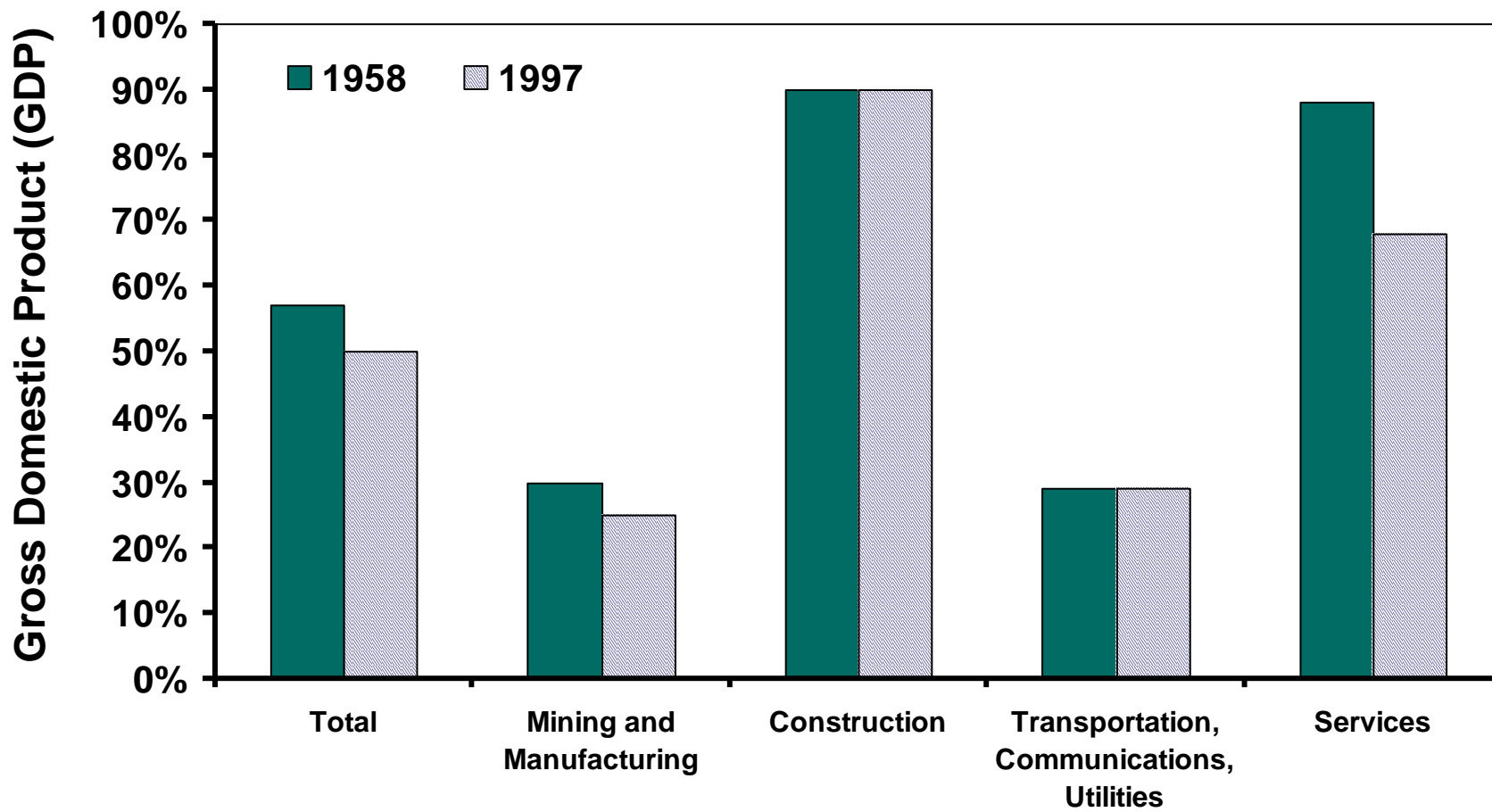
# ***The DoD Office of Small Business Programs Asked RAND to Review Issues Regarding Size Thresholds***

- 
- **Establishment and evolution of size thresholds**
    - **How large and small businesses view size threshold issues**
    - **Data issues**
    - **Possible improvements to SBA method for setting size thresholds**

# ***Small Business Administration (SBA) Has Responsibility to Set Thresholds for Its Programs***

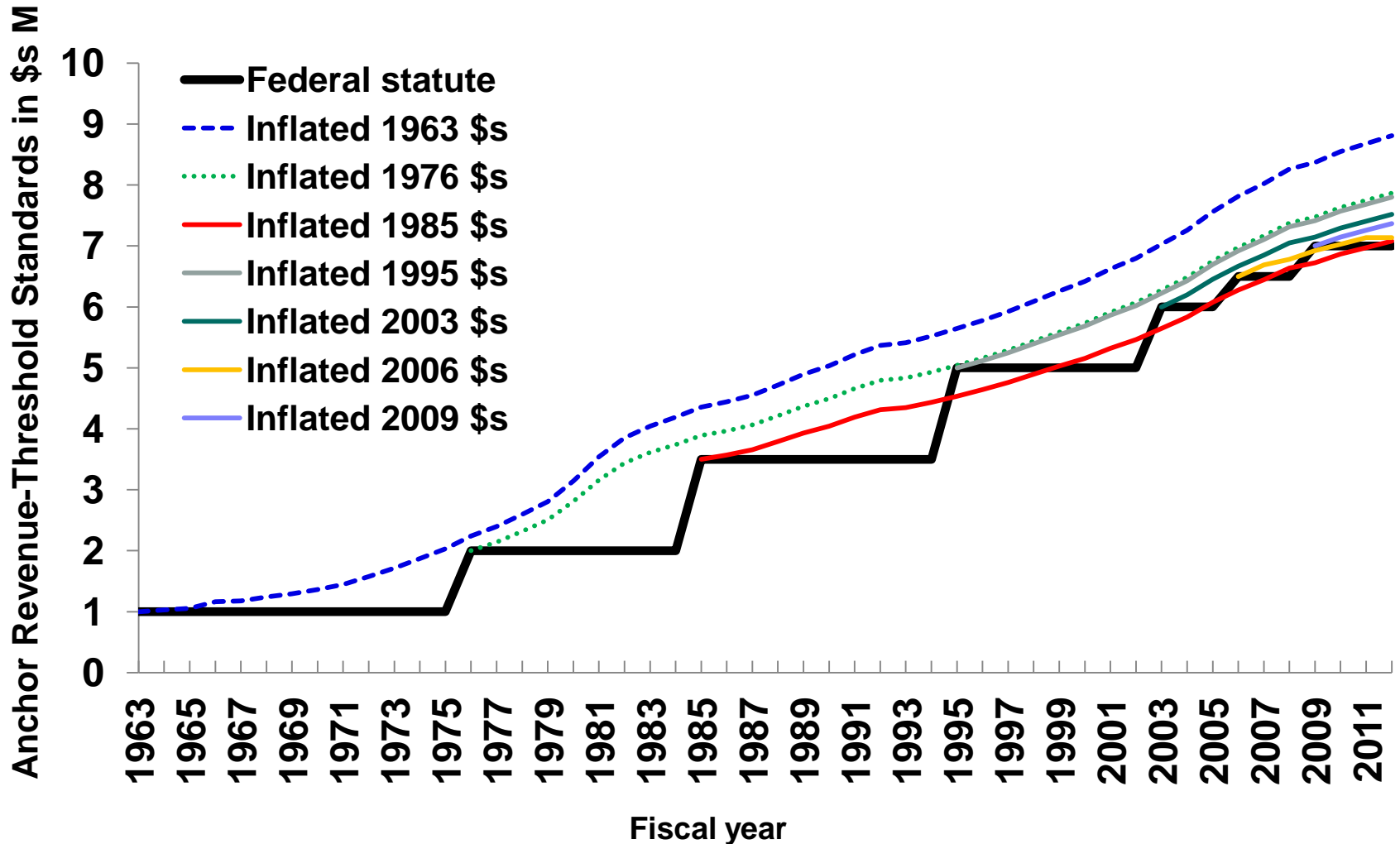
- **Small Business Act of 1953 gave SBA administrator discretion to set size thresholds**
- **Initial criteria were that a firm be**
  - **Independently owned and operated**
  - **Not dominant in its field of operations**
- **For procurement, these guidelines led to *anchor standards* of**
  - **500 employees in most manufacturing industries**
  - **\$1 million (now \$7 million) in most non-manufacturing industries**

# Small Business\* Share of Economy Has Decreased Since Thresholds First Set, Particularly for Services

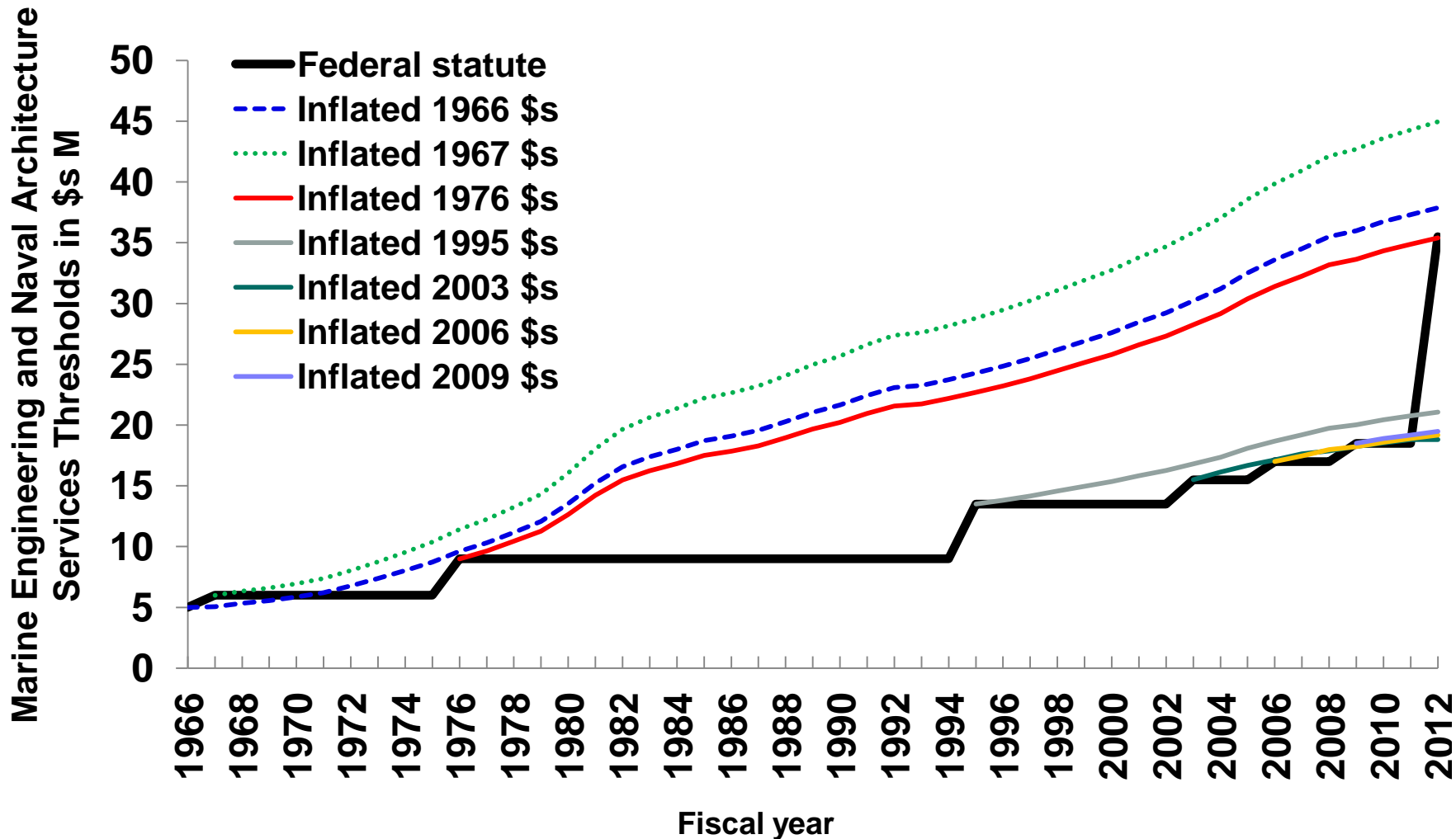


*\*Small business defined as firm with fewer than 500 employees*

# SBA Anchor Revenue Thresholds Have Not Always Kept Pace with Economic Conditions




# Marine Engineering Thresholds Have Also Changed, but Not Always at Pace of Economic Conditions





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-  • How large and small businesses view size threshold issues
- Data issues
- Possible improvements to SBA method for setting size thresholds

# ***We Interviewed Large and Small Businesses Regarding Their Experiences with Size Thresholds***

- **Interviews**
  - Lasted about 45 minutes each
  - Followed set protocol of open-ended questions
- **Large businesses**
  - Firms with extensive federal contracting experience, most in the DoD
  - Small business representative
  - Nine companies invited to participate; 4 agreed
- **Small businesses**
  - In engineering industry
  - 16 companies invited to participate; 2 agreed

# ***Large Business Representatives in Our Interviews Noted Nine Obstacles to Finding Small Partners***

- **Factors that push businesses over revenue thresholds**
  - **Capital needs**
  - **Costly inputs**
  - **Certification requirements**
  - **Employee skills**
- **Operational challenges to using small businesses**
  - **Lead Systems Integrator (LSI) trend**
  - **Emerging best practices in purchasing and supply management**
  - **Growing quickly beyond threshold**
  - **Acquisition of innovative small businesses**
  - **Methods for applying industry size exceptions**

# ***Obstacles to Finding Small Partners Are Particularly Great in Some Industries***

- **Information and technology**
- **Architectural and engineering services**
- **Legal services**
- **Accounting**
- **Aircraft manufacturing**

**Most companies reported difficulty in finding small businesses in some industries**


# ***Small Business Representatives in Our Interviews Noted Five Challenges to Being DoD Contractors***

- 1. Requirements that boost revenue but not profit**
- 2. Only two size categories: small and other-than-small**
- 3. Inconsistent industry definitions and thresholds**
- 4. Costs of government-required certification**
- 5. Large shifts in federal spending**

## ***Implications from Interviews for Small-Business Policy***

- **Large and small businesses identified multiple problems with revenue based thresholds**
- **Both suggested thresholds based on number of employees are often better metrics of size**
- **Incremental growth of business not reflected in policy → more threshold levels could help address this**

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# DoD Success in Meeting 23 Percent Goal Varies by Industry – Selected Examples

<b>Industry</b>	<b>Small business percent</b>	
	<b>2002 Economic Census</b>	<b>DoD 2002 utilization</b>
<b>Aircraft Manufacturing (336411)</b>	<b>2.6%</b>	<b>1.8%</b>
<b>Guided Missile and Space Vehicle Manufacturing (336414)</b>	<b>2.3</b>	<b>1.9</b>
<b>Military Armored Vehicle, Tank, and Tank Component Manufacturing (336992)</b>	<b>15.1</b>	<b>3.1</b>
<b>Computer Systems Design Services (541512)</b>	<b>28.1</b>	<b>26.8</b>
<b>Other Computer Related Services (541519)</b>	<b>45.1</b>	<b>25.4</b>
<b>Facilities Support Services (561210)</b>	<b>15.6</b>	<b>34.2</b>



## ***Data Used for Setting Thresholds May Also Fail to Reflect True Conditions in Defense Industries***

<b><i>Calendar/Fiscal Year 2002</i></b>	<b><i>Ammunition (except small arms) Manufacturing<sup>1</sup></i></b>	<b><i>Military Armored Vehicle, Tank, and Tank Component Manufacturing<sup>2</sup></i></b>
<b>Reported industry dollars (\$sB)<sup>3</sup></b>	<b>\$1.19</b>	<b>\$1.51</b>
<b>DoD goaling dollars (\$s B)*</b>	<b>\$1.89</b>	<b>\$1.94</b>
<b>Reported % small-business in industry<sup>3</sup></b>	<b>28.1%</b>	<b>10.5%</b>
<b>DoD % dollars to small-business in industry*</b>	<b>12.2%</b>	<b>3.1%</b>

<sup>1</sup> NAICS 332993

<sup>2</sup> NAICS 336992

<sup>3</sup>2002 Economic Census

\*2002 DD350 data

# ***Available Data Sources Differ in How They Gather and Report Identical Firms in Differing Industries***

- Gather by
  - Establishment of firm
    - Statistics on U.S. Businesses (SUSB)
    - Economic Census (EC)
    - Special Size Tabulations for SBA (SBA tabs)
    - Federal Procurement Data System (FPDS) by industry *reported* on contract action
  - Firm - Central Contractor Registry (CCR) - industries in which firm seeks to provide goods and services
- Reports primarily by
  - Establishment - Published EC
  - Firm
    - SUSB
    - SBA tabs
    - FPDS

**Different gathering and reporting → miscounting**

## ***Differing Sources Can Have Widely Varying Data – Example: Ammunition Manufacturing (332993)***

	<b><i>Published Economic Census Data</i></b>	<b><i>Special Tabulations for SBA</i></b>	<b><i>Statistics of U.S. Businesses</i></b>	<b><i>FPDS</i></b>
<b>Firms</b>	n/a	49	46	102
<b>Establishments</b>	54	54	52	139
<b>Employees</b>	7,111	6,925	5,984	n/a
<b>Receipts (\$s M)</b>	1,128	1,190	875	1,887

# Fidelity of Firm Reporting Can Lead to Under and Over Estimates of Revenue for Each NAICS

Firm X			
Business units	NAICS revenue reporting by		
	NAICS	Establishment	Firm
<b>Establishment A</b>			
NAICS 1	500,000	1,000,000	
NAICS 2	300,000		
NAICS 3	200,000		
Total Revenue	1,000,000		
<b>Establishment B</b>			
NAICS 4	1,200,000	2,000,000	
NAICS 5	800,000		
Total Revenue	2,000,000		
<b>Establishment C</b>			
NAICS 6	5,000,000	5,000,000	8,000,000
Total Firm Revenue	8,000,000		

# ***An Industry Can Be Defined Very Broadly***

- **A single industry can include very different types of goods or services**
  - **Aircraft Manufacturing (336411) includes aircraft, blimp, helicopter, ultra-light, and hang glider manufacturing**
  - **Engineering Services (541330) includes acoustical, boat, chemical, civil, construction, heating, mining, and traffic engineering services**
- **To increase competitiveness in some industries**
  - **One size standard may not be appropriate → exceptions**
  - **Industry may need to be more narrowly defined**

# ***Poor Correlation Between NAICS and Product Service Codes (PSCs) in FPDS Indicates Further Imprecision***

## **Engineering Services**

- 2007 NAICS Engineering Services ( 541330) has 640 PSCs associated with it**
- PSC Engineering and Technical Services (R425) has 144 2007 NAICS associated with it**

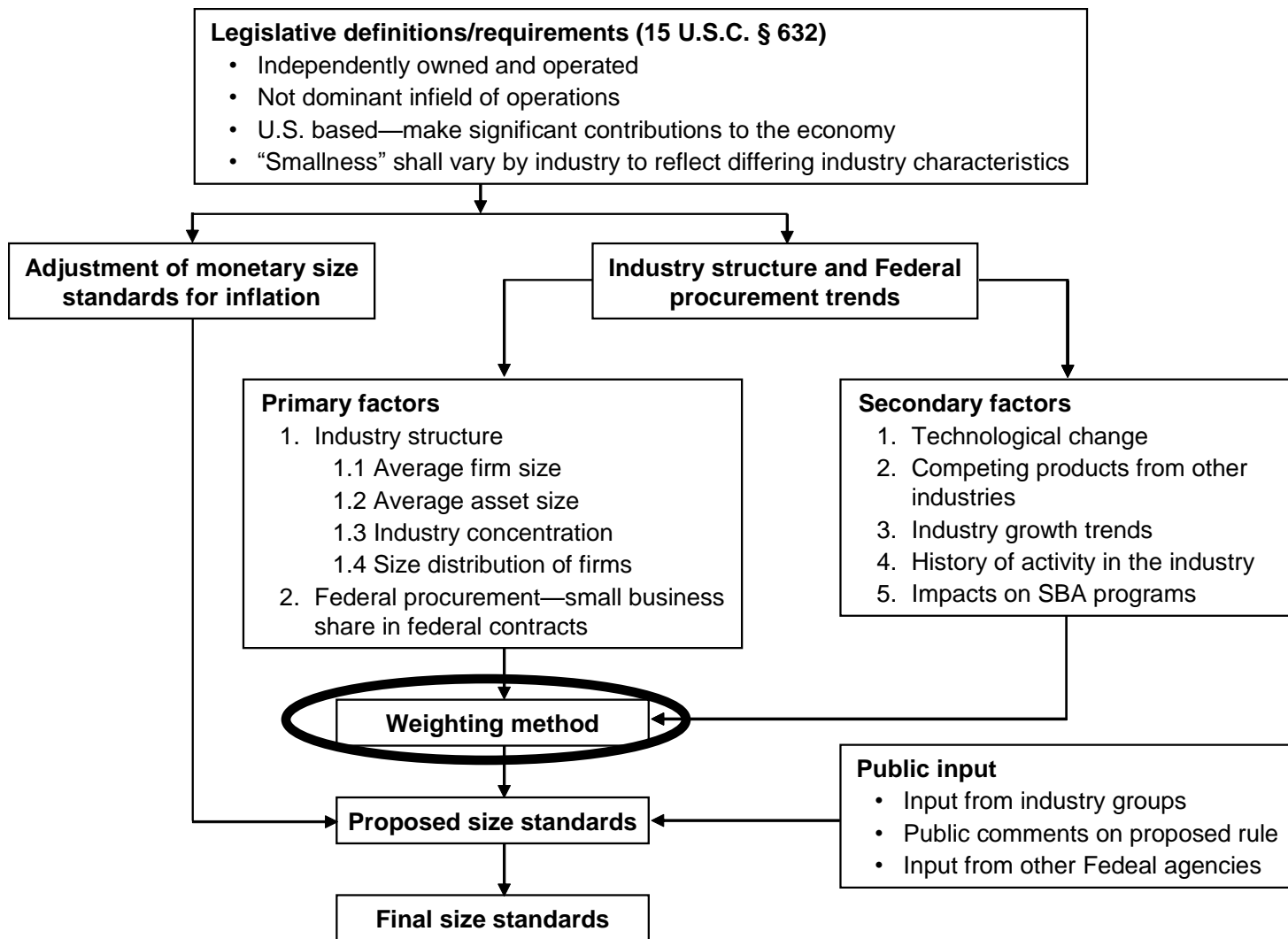
## **Facilities Support Services**

- 2007 NAICS Facilities Support Services (561210) has 328 PSCs associated with it**
- PSC Facilities Operations Support Services (S216) has 161 NAICS associated with it**

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- **Possible improvements to SBA method for setting size thresholds**
  - **Current SBA methodology**
  - **Shortcomings of SBA approach**
  - **Proposed improved methodology**

# Overview of SBA's Size Standard Methodology





## ***SBA Weighting Method Starts with Anchor Groups***

- **500 employees for manufacturing industries**
- **\$7 million in annual revenues for service industries**
- **100 employees for wholesale trade industries**

## ***SBA Periodically May Update Threshold After Comparison to Other Industries***

### **Compares**

- 1. Industry anchor size standard**
- 2. Industries with higher-size standards that were created by past adjustments of industry size standards**
  - For receipts-based standards, industries with size standards ranging from \$23 million to \$35.5 million**
  - For employee-based standards, industries with a 1,000-employee standard**

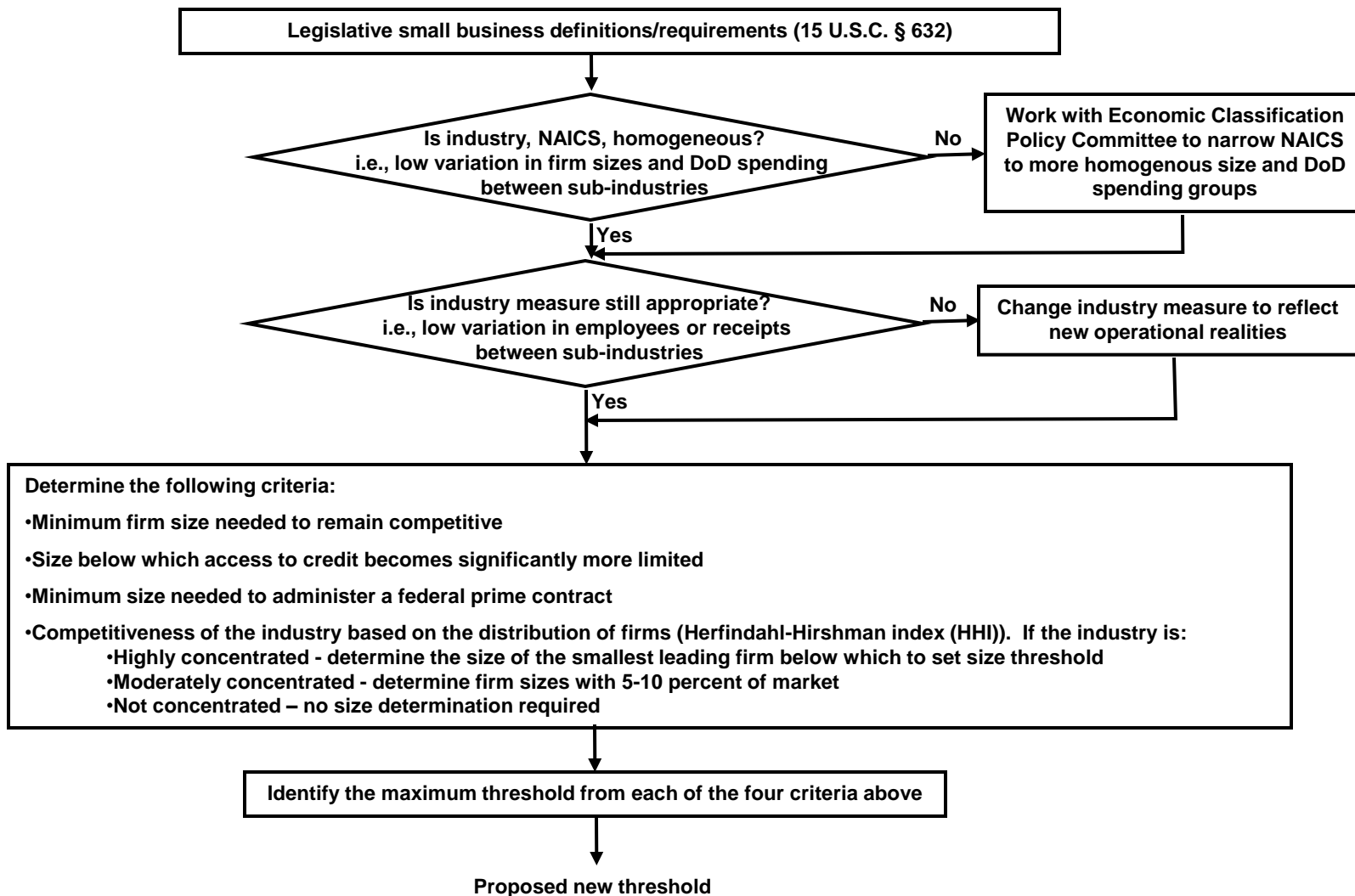
## ***Shortcomings of SBA Approach for Revising Standards***

- **No justification for anchor standards**
- **Comparison groups may be inappropriate**
- **Industry can be very broad**
- **Size metric may be inappropriate**
- **Upper bound on size standards**
- **Possibly irrelevant comparison metrics not supported by analysis**

# ***An Ideal Approach to Setting Industry Size Standards Would Directly Assess Industry Characteristics***

- **Minimum efficient production level**
- **Size below which access to credit becomes significantly more limited**
- **Minimum size needed to successfully execute a federal prime contract for the types of goods and services purchased**
- **Herfindahl-Hirschman Index (HHI) of concentration throughout industry**

# Overview of Proposed New Size Threshold Methodology



# ***Targeting Industries for Threshold Revision: Four Possible Methods***

- 1. Industries with significant changes in firm distribution between EC**
- 2. Industries with firms reported in FPDS moving above thresholds or back and forth across thresholds**
- 3. Industries where percent federal FPDS goaling dollars to small firms is significantly less than reported percent small business revenue in the EC**
- 4. Industries where**
  - Large prime contractors report having difficulty finding qualified small businesses**
  - Small prime contractors and subcontractors report having problems staying below thresholds**

# ***Findings***

- **Data supporting SBA threshold analyses is flawed**
  - **Economic Census**
  - **FPDS**
- **Current threshold metrics used for specific industries may no longer be appropriate**
- **Some industry classifications may be too broad**
- **SBA methodology for setting thresholds has a number of weaknesses**
- **SBA has no methodology for targeting industries for threshold review**

# ***Recommendations***

- **Work to improve the quality of economic census and FPDS data**
- **Before changing threshold, the SBA should analyze industry**
  - **Metric for its appropriateness**
  - **Classification regarding whether it is too broad or too narrow**
- **Improve methodology to acknowledge unique and changing aspects of industries**
- **Develop and refine a methodology for targeting industries for metric, classification, and threshold analyses**
  - **Industries with exceptions suggests that the metric or classification may need changing**
  - **Survey large and small businesses to identify industries and their problems**



# Questions?



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