

# SMALL BUSINESS AND GOVERNMENT PROCUREMENT

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Small business has been singled out by the federal government for special treatment as stated in the following declaration of policy:

The essence of the American economic system of private enterprise is free competition. . . . It is the declared policy of the Congress that the Government should aid, counsel, assist, and protect, insofar as is possible, the interests of small-business concerns in order to preserve free competitive enterprise, to insure that a fair proportion of the total purchases and contracts or subcontracts for property and services for the Government (including but not limited to contracts or subcontracts for maintenance, repair, and construction) be placed with small-business enterprises, to insure that a fair proportion of the total sales of Government property be made to such enterprises, and to maintain and strengthen the overall economy of the Nation.<sup>1</sup>

In order to aid in the carrying out of these policies the Small Business Administration was established,<sup>2</sup> and the policies have been incorporated in the provisions of the statutes and appropriation bills for the various procurement agencies of the federal government, who in turn have issued regulations concerning the implementation of these policies within their own procedures. The two most important of these regulations are the Armed Services Procurement Regulation (ASPR) which applies to purchases by the Department of Defense,<sup>3</sup> and the Federal Procurement Regulations (FPR) which apply to purchases by civilian procurement agencies.

The Small Business Administration and the various government procurement agencies have a number of programs designed to assist small business to obtain contracts and subcontracts on government work. The major programs are as follows:

1. Procurement officers are required to afford small business concerns an equitable opportunity to compete for contracts.
2. An elaborate reporting system has been established to provide information on the amount of purchases placed with small business. The statistics thus generated are used to encourage and evaluate the performance of procurement officers in placing contracts with small business.
3. Many agencies have representatives on a full or part-time basis assigned to act as advisers and specialists within their agency and to cooperate with repre-

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<sup>1</sup> 72 Stat. 384 (1958), as amended, 75 Stat. 667 (1961), 15 U.S.C. § 631(a) (Supp. 1963).

<sup>2</sup> 72 Stat. 384 (1958), as amended, 75 Stat. 757 (1961), 15 U.S.C. § 633 (1963).

<sup>3</sup> NASA Procurement Regulations are, to the maximum extent practicable, consistent with ASPR, since both are governed by the same procurement law of Chapter 137 of Title 10, U.S. Code.

- representatives of the Small Business Administration to further the small business program.
4. The small business set-aside program provides for selection of specific procurements or classes of like items or services to be restricted for placement with small business concerns.
  5. The Small Business Administration has statutory authority to certify the competency of any small business concern as to capability and credit. This aids the small business concern to establish itself as a responsible supplier.
  6. The small business subcontracting program requires government prime contractors to take positive action to subcontract with small business concerns. In prime contracts of less than \$500,000 the contractor is obliged to place the maximum amount of subcontracting with small business which is consistent with the efficient performance of the contract. For larger prime contracts the contractor is required to undertake a number of additional specific responsibilities designed to assure that small business concerns are considered fairly in the subcontracting role and to impose similar responsibilities on major subcontractors.
  7. Small businesses are kept informed of opportunities for contracts and subcontracts and are given special assistance in submitting bids and meeting government regulations through widespread publicity, district offices, and government representatives.

These programs, along with others, and with many detailed procedures, such as splitting a large procurement quantity into smaller lots so that they are feasible within small business capabilities, all provide means for furthering the participation of small business concerns in government procurement. These programs are in addition to the small business loan program and the program for small business investment companies which help provide funds for small business concerns that in turn may aid them to obtain government contracts as well as other kinds of business.

In table one the purchases from business firms for 1963 fiscal year by the federal government are shown; 17.6 per cent of the total purchases made went to small business firms. By far the largest dollar purchases came from the Department of Defense which supplied over three-fourths of the procurement from small business firms by the federal government.

As shown in the last column of table one there is a wide variation between the various executive agencies with reference to the proportion of their procurement placed with small business firms. Within the agencies of the Department of Defense, this characteristic is also present as shown by the data in table two. An obvious reason for this variation in the proportion of procurements placed with small business firms is the character of the goods and services being procured. Clothing or office supplies obviously provide a better opportunity for small business than large military weapons or missiles which require the capabilities of large business firms.

TABLE 1  
PURCHASES BY FEDERAL GOVERNMENT AGENCIES FROM BUSINESS FIRMS  
FISCAL YEAR 1963 (JULY 1962-JUNE 1963)  
(Amounts in Millions of Dollars)

Agency	Purchases from Small Business		Total Purchases		Small Business as a Percentage of Total
	Amount	Per cent	Amount	Per cent	
Department of Defense	\$4,301	76.0	\$27,144	78.5	15.8
Nat'l Aero. & Space Admin.	191	3.4	2,268	6.6	84.4
Atomic Energy Commission	84	1.5	2,600	7.5	3.2
Sub Total	4,576	80.9	32,012	92.6	14.3
Other Executive Agencies:					
General Services Administration	329	5.8	812	2.4	40.5
Department of Interior	182	3.2	430	1.2	42.3
Veterans Administration	112	2.0	221	0.6	50.8
Department of Agriculture	95	1.7	122	0.4	78.3
Federal Aviation Agency	64	1.1	165	0.5	38.7
Tennessee Valley Authority	63	1.1	158	0.5	39.8
Department of Commerce	58	1.0	240	0.7	24.1
Department of Treasury	44	0.8	107	0.3	41.0
Department of Health, Education and Welfare	41	0.7	82	0.2	50.5
Department of Justice	21	0.4	39	0.1	53.6
Post Office Department	18	0.3	29	0.1	60.6
U. S. Information Agency	16	0.3	32	0.1	50.7
Agency for Intern'l Development	13	0.2	35	0.1	37.6
All others (none over \$7,000,000)	31	0.5	60	0.2	51.5
Sub Total—Other Executive Agencies	1,087	19.1	2,332	7.4	46.6
Grand Total	\$5,663	100.0%	\$34,344	100.0%	17.6%

Source: Department of Defense, Atomic Energy Commission and General Services Administration.

TABLE 2  
PURCHASES BY DEPARTMENT OF DEFENSE FROM BUSINESS FIRMS  
FISCAL YEAR 1963 (JULY 1962-JUNE 1963)  
(Amounts in Millions of Dollars)

Agency	Purchases from Small Business		Total Purchases		Small Business as a Percentage of Total
	Amount	Per cent	Amount	Per cent	
Navy	\$1,193	27.8	\$ 7,804	28.8	15.3
Army	1,181	27.4	5,681	20.9	20.8
Air Force	978	22.8	11,189	41.2	8.7
Defense Supply Agency	943	21.9	2,326	8.6	40.5
Other Defense Agencies	6	0.1	144	0.5	4.2
Total	\$4,301	100.0%	\$27,144	100.0%	15.8%

Source: Office of Secretary of Defense, *Military Prime Contract Awards and Subcontract Payments, July 1962-June 1963*, p. 0.

TABLE 3

PURCHASES BY PROCUREMENT PROGRAMS BY DEPARTMENT OF DEFENSE FROM BUSINESS FIRMS  
 FISCAL YEAR 1963 (JULY 1962-JUNE 1963)  
 (Amounts in Millions of Dollars)

Agency	Purchases from Small Business		Total Purchases		Small Business as a Percentage of Total
	Amount	Per cent	Amount	Per cent	
All actions of less than \$10,000	\$1,399	32.6	\$2,609	9.6	53.6
Construction	584	13.6	1,132	4.2	51.5
Misc. Hard Goods	363	8.4	1,133	4.2	32.0
Electronic & Comm. Equipment	358	8.3	3,061	11.3	11.7
Services	318	7.4	1,504	5.5	21.1
Subsistence	301	7.0	586	2.2	51.3
Fuels & Lubricants	177	4.1	877	3.2	20.2
Textiles, Clothing & Equipage	162	3.8	259	0.9	62.5
Ships	160	3.7	1,683	6.2	9.5
Aircraft	154	3.6	5,479	20.2	2.8
Missiles	109	2.4	6,689	24.6	1.6
Ammunition	99	2.3	886	3.3	11.2
Tanks—Automotive	71	1.7	1,032	3.8	6.9
Weapons	46	1.1	214	0.8	21.7
<b>Total</b>	<b>\$4,301</b>	<b>100.0%</b>	<b>\$27,144</b>	<b>100.0%</b>	<b>15.8%</b>

Source: Office of the Secretary of Defense, *Military Prime Contract Awards and Subcontract Payments*, July 1962-June 1963, p. 20.

TABLE 4

PURCHASES BY FEDERAL GOVERNMENT AGENCIES FROM SMALL BUSINESS FIRMS  
 FISCAL YEARS 1951-1963  
 (Millions of Dollars)

Year	Dep't of Defense	NASA & AEC	Other Agencies	Total
1951.....	\$6,436			
1952.....	7,066			
1953.....	4,608			
1954.....	2,902			
1955.....	3,214			
1956.....	3,475			
1957.....	3,783			
1958.....	3,729			
1959.....	3,783			
1960.....	3,440			
1961.....	3,657	\$255	\$ 964	\$4,876
1962.....	4,622	315	1,155	6,093
1963.....	4,301	275	1,087	5,663

Source: Office of Secretary of Defense, *Military Prime Contract Awards and Subcontract Payments*, July 1962-June 1963, p. 12; SMALL BUSINESS ADMINISTRATION, 1962 ANN. REP. p. 45; General Service Administration, *Procurement by Civilian Executive Agencies*, 1962 and 1963 -- and Atomic Energy Commission, Annual Reports.

TABLE 5  
PROPORTION OF PURCHASES PLACED WITH SMALL BUSINESS FIRMS  
BY FEDERAL GOVERNMENT AGENCIES  
FISCAL YEARS 1951-1963

Year	Dep't of Defense	NASA & AEC	Other Agencies	Total
1951.....	20.9%			
1952.....	17.0%			
1953.....	16.6%			
1954.....	25.3%			
1955.....	21.5%			
1956.....	19.6%			
1957.....	19.8%			
1958.....	17.1%			
1959.....	16.6%			
1960.....	16.1%			
1961.....	15.9%	10.7%	42.3%	17.6%
1962.....	17.7%	10.3%	49.0%	19.3%
1963.....	16.5% <sup>a</sup>	7.6%	46.6%	17.0%

<sup>a</sup> Reported figure was 15.8% but is not comparable with prior years due to a change in reporting coverage. The 10.5% in this table is comparable with data reported for previous years.

Source: Department of Defense, Atomic Energy Commission, General Services Administration, and Small Business Administration.

The importance of the type of commodities purchased is further emphasized in table three, in which the procurement programs of the Department of Defense are arrayed by the size of purchases placed with small business firms. For recent years the dollar trends of the purchases are shown in table four and the proportion placed with small business are shown in table five. In interpreting the data for the Department of Defense, care should be taken with 1954 and 1955 which were the lowest dollar years but the highest percentage years. These figures reflect the termination of hostilities in Korea when there was a sharp cutback in military procurement of heavy equipment from large suppliers. This resulted in a correspondingly sharp increase in the percentage of awards calculated for small business firms who did not suffer such drastic cancellation of contracts. From the data in table five it is apparent that the proportion of Department of Defense procurements placed with small business firms has decreased somewhat over the past thirteen years.<sup>4</sup>

How should the data presented in tables one through five be interpreted and evaluated? What are some of the contracting requirements and practices of the federal government which tend to affect favorably or adversely the small businessman in his attempt to participate in government procurement? The remainder of this paper will try to consider some of the factors involved in these questions by discussing the following issues:

<sup>4</sup> A trend line was calculated by the method of least squares for the data in Table 5, and its slope indicates that the Department of Defense procurement with small business has decreased at the rate of .38 of a percentage point per year. Part of the decline is due to a change in the mix of the programs (missiles have gone from 5.6% in FY 1956 to 24.6% in FY 1963), and part is due to a drop of the small business share in certain programs that are very important to small business (actions of less than \$10,000 dropped from 66.6% in FY 1956 to 53.6% in FY 1963 and construction dropped from 71.8% in FY 1956 to 51.5% in FY 1963).

1. The share of government procurement obtained by small business firms.
2. The method by which prime contract awards are made to small business firms.
3. The participation of small business firms at the subcontract level as compared to the prime contract level for government procurement.

#### FAIR PROPORTION

As previously noted, it is the declared policy of Congress that a "fair proportion" of the procurement of the government be placed with small business concerns. The statutes do not define the meaning of "fair proportion" but these words repeatedly appear in the regulations.<sup>5</sup> Since one of the basic objectives of the small business program of the government is to provide that a "fair proportion" of its procurement is placed with small business firms, it would seem that it is essential to evaluate the program in these terms.<sup>6</sup>

The concern over "fair proportion" is evident from the letter sent by Senator John Sparkman, Chairman of the Senate Select Committee on Small Business, to President Kennedy in the fall of 1963.<sup>7</sup> In his letter Senator Sparkman noted with concern that the share of small business firms in defense prime contracts awards had declined from 17.7 per cent in fiscal year 1962 to 16.5 per cent in fiscal year 1963. He informed the President:

As a former member of this Committee, you know of the long and continued interest of this Committee and of the Congress to assure that small concerns have an equitable opportunity to consider and to compete for government purchases and contracts. I am much concerned that the declining rate of defense prime contract awards to small business may indicate that such an opportunity is not being afforded the American small business community.

Further emphasis to this problem was given by Mr. Irving Maness, Deputy Administrator of the Small Business Administration, who addressed the Society of Business Magazine Editors and stated that small business is not receiving a fair share of government expenditures and that greater efforts are needed to help small business obtain a fair share of government contracts.<sup>8</sup>

One way to interpret the "fair proportion" policy is by examining the specific actions taken by procurement officers. The ASPR 1-702(b) requires that the policy shall be implemented by "affording small business concerns an equitable opportunity to compete for prime contracts." "Equitable opportunity" is then explained to include such specific actions as: (1) the maintenance of bidder mailing lists to include all established and potential small business suppliers who have made applications for inclusion; (2) invitations for bids or requests for proposals shall be sent to all

<sup>5</sup> ASPR 1-702, and 1-708; and FPR 1-1.702.

<sup>6</sup> For a discussion of the policy and administrative problems see Marcus, *The "Fair Share" Debate*, 19 WASH. BUS. REV. 41-46 (1959).

<sup>7</sup> Reported in the Weekly Staff Report to the Senate Small Business Committee, Nov. 9, 1963.

<sup>8</sup> Small Business Administration Press Release No. 1505, Nov. 13, 1963.

firms on the appropriate list or on a pro rata basis; (3) procurement quantities shall be divided into reasonable lots, maximum bidding time shall be allowed, and delivery schedules shall be established on a realistic basis to encourage small business participation; and (4) applicable specifications, plans, and drawings shall be provided the potential bidders or they shall be notified where such information can be obtained or reviewed. The FPR contain an equivalent statement regarding "equitable opportunity to compete." These statements of definition, based on specific action to be taken by procurement officers, provide guidelines for a qualitative evaluation of the policy but lack the foundation for a quantitative evaluation.

Thus the words "fair proportion" and "equitable opportunity to compete" appear in a number of places, but nowhere are these terms specifically defined or explained in a manner that will permit ready quantitative evaluation. The terms are subjective, and normative patterns are very difficult to obtain. Specific proposals have been made in Congress but have not been acted upon. For example, the House Select Committee on Small Business recommended: "A specific small-business target of at least thirty-five per cent or more of the dollar volume of military purchases is reasonable and attainable."<sup>9</sup> The justification for the thirty-five per cent recommendation was not presented.

In exploring this problem with a number of small businessmen, the typical responses received by the author have been "fair is a little more than what we are now getting," or "if the contract is placed with me instead of my competitor, it will be fair," or "the unfair part is all the paper work that is involved in a Government contract" and many other similar statements that merely present a very limited point of view.

One clue to an evaluation procedure is suggested by the statement in the Navy Procurement Directive 1-702, which states that a fair proportion "is considered to be that portion which small business concerns *can win in open competition* when they are given an equitable opportunity to compete. . . ."<sup>10</sup>

The idea of "can win in open competition" contained in the Navy Procurement Directives suggests that one approach to the problem may be to assume that the natural forces in the civilian sector of our economy under the free enterprise system will automatically establish the "fair" and "equitable" portion of business that is done with small business firms by means of the "laws of supply and demand."

If the civilian sector is accepted as a "standard" then the proportion of purchases and contracts placed with small business firms by government procurement programs can be compared to this standard. If the proportion of government procurement from small business firms is equal to or greater than the proportion established in

<sup>9</sup> House Comm. on Small Business, *Review of Small Business*, H.R. REP. No. 2513, 82d Cong., 2d Sess. 12, 176-77 (1952).

<sup>10</sup> (Emphasis added.) The military departments within the Department of Defense issued supplemental instructions implementing the ASPR. These include the Navy Procurement Directives (NPD), the Army Procurement Procedures (APP), the Air Force Procurement Instructions (AFPI), and the Defense Supply Procurement Regulations (DSPR).

the civilian sector of the economy, then there may be a presumption that small business is obtaining its fair proportion or more. If the government procurement from small business firms is less than the civilian proportion, then there may be a presumption that small business is not getting its fair proportion. The problem now becomes one of locating the proper statistics for comparison and analysis.

A number of governmental agencies collect and publish statistical data about industry, its employment, sales, profits, size of firms, and so forth. The classifications used by the various agencies often differ from one another and normally the statistics do not differentiate between "small" business and "large" business. The statute<sup>11</sup> provides that "a small business concern shall be deemed to be one which is independently owned and operated and which is not dominant in its field of operation." In addition the Administrator of the SBA is authorized to establish detailed definitions using such criteria as number of employees and dollar volume of business. In general, firms that employ not more than 500 employees are considered to be small businesses.

There are many exceptions, however, to the 500 employee rule. Certain industries have 750 or 1,000 employees designated as the dividing point. Small business firms in the construction industries must have annual sales that do not exceed \$7,500,000. In the petroleum industry small firms must not have more than 30,000 barrels per day crude oil capacity. For trucking or warehousing operations the annual receipts must not exceed \$3,000,000. There are other special definitions that complicate the problems of determining what is a small business. The Census of Manufacturers collects data by size of establishments every five years; and a first approximation can be made by classifying the statistics for those establishments with less than 500 employees as compared to those with 500 or more employees. This is a rough approximation because of the exceptions to the 500 employee rule, but it is a starting point. This data is shown in table six. Unfortunately, the Census of Manufacturers does not report "value of shipments" for major industrial groups which would be more

TABLE 6  
MANUFACTURING ESTABLISHMENTS BY EMPLOYMENT SIZE: 1958

	All Establishments	Establishments with Less Than 500 Employees	Establishments with 500 or More Employees
Number of Establishments	298,182 100.0%	293,564 98.5%	4,618 1.5%
Total Employment (1,000)	15,394 100.0%	8,806 57.3%	6,588 42.7%
Value Added by Manufacture (\$1,000,000)	141,270 100.0%	72,780 51.5%	68,490 48.5%

Source: U. S. DEP'T OF COMMERCE, 1958 CENSUS OF MANUFACTURES, vol. I, pt. 2, table 1, at 2-2.

<sup>11</sup> 72 Stat. 384 (1958), 15 U.S.C. § 632 (1963).



desirable to evaluate "fair proportion" than the data reported of employment or "value added by manufacture."

A greater fault of the Census of Manufacturers data for the purpose herein is that it is reported on an "establishment" basis.<sup>12</sup> A significant number of the establishments, however, are listed as part of multi-unit companies, as shown in table seven. Thus, many establishments shown as having less than 500 employees are

TABLE 7  
MANUFACTURING ESTABLISHMENTS BY TYPE OF OPERATION: 1958

	All Establishments	Establishments in Single Unit Companies	Establishments in Multiunit Companies
Number of Establishments	298,182 100.0%	256,311 86.0%	41,871 14.0%
Total Employment (1,000)	15,394	5,317 34.6%	10,077 65.4%
Value Added by Manufacture (\$1,000,000)	141,270 100.0%	37,853 26.8%	103,417 73.2%

Source: U.S. DEPT OF COMMERCE, 1958 CENSUS OF MANUFACTURES, vol. I. pt. 3, table 1, at 3-2.

really part of larger organizations and should be classified as large rather than small business. The use of establishments as the dividing criterion in table six overstates the proportion assigned to small business firms. In spite of this deficiency, however, it is interesting to note from table six the proportion for establishments with less than 500 employees for total employment of 57.3 per cent and for the value added by such manufacturers of 51.5 per cent roughly corresponds to the 46.6 per cent of purchases from small business by government agencies other than the Department of Defense (DOD), National Aeronautics and Space Administration (NASA), and the Atomic Energy Commission (AEC), as shown in table one. If establishments in single unit companies, as shown in table seven, are used as the basis of comparison, then the small business share drops to 34.6 per cent based on total employment and to only 26.8 per cent based on the value added by small manufacturers. It is difficult to determine whether such an assumption overstates or understates the situation since small and large business firms are undoubtedly included in each category.

In addition to the "establishment" difficulty, another problem confounds the proper interpretation of the proportion statistics. As shown in table three there are significant differences in the character of various government procurement programs, especially those of the Department of Defense, as compared to civilian procurement activities. Thus, while military purchases include almost every kind

<sup>12</sup> A company operating establishments at more than one location is counted separately at each location. In addition, if a company is engaged in distinctly different lines of activity at one location and the activities are substantial in size, then each activity is counted as a separate establishment.

of item that is used in the civilian sector, they also involve many items not in the civilian sector, particularly those of a highly technical nature. This suggests that it is desirable to classify the procurement by industrial groups or commodity classes in order to observe the statistical differences between comparable commodities. Normally the industrial statistics collected by the various government agencies are reported in accordance with the Standard Industrial Classification (SIC).<sup>13</sup> The various procurement agencies, however, do not report their statistics by SIC groups, but rather by procurement programs, as shown in table three. It is possible, however, to match up approximately certain SIC groups with elected procurement programs. This was done by Peck and Scherer for selected military procurement programs for fiscal year 1959, as compared with the SIC groups, using percentage of employees in establishments with less than 500 employees for 1955 from the Census of Manufacturers data.<sup>14</sup> In spite of the problem of over-statement of small business proportion by use of "establishments," these authors concluded, "there is the same rough correspondence . . . between the percentage of small business in an industry and its share of the comparable military procurement."

Thus, the Census of Manufacturers data is difficult to use for the purpose of evaluating the small business fair share: "establishments" do not permit the proper identification of firms which are small business, the SIC code used does not match the procurement programs, and finally the detailed data is only collected for every fifth year and is not available until several years after the census year.

The author has attempted to circumvent the deficiencies encountered from using Census of Manufacturers "establishments" by means of a mathematical expedient applied to other data. Annual data is available for business receipts of major industrial groups based on income tax returns classified by size of receipts and form of organizations.<sup>15</sup> Annual data is also available for employment by various SIC groups classified by employment size of establishments.<sup>16</sup> By combining the data on business receipts and employment as described in the following paragraph it is believed that a very close approximation can be obtained of the true small business share of the civilian market by major industrial groups. Table eight illustrates the method of analysis for Textile Mill Products, SIC Group 22.

For each major industry the employment situation was determined from the Department of Labor data for March 1960, as shown in section A of table eight. Total business receipts by SIC major industry groups were determined from the

<sup>13</sup> U.S. OFFICE OF STATISTICAL STANDARDS, BUREAU OF THE BUDGET, EXECUTIVE OFFICE OF THE PRESIDENT, STANDARD INDUSTRIAL CLASSIFICATION MANUAL (1957).

<sup>14</sup> See *Small Business Share by Program and Percentage of Employees in Small Business Firms for Corresponding Industries*, in MERTON J. PECK & FREDERICK M. SCHERER, *THE WEAPON ACQUISITION PROCESS: AN ECONOMIC ANALYSIS* table 5.16, at 145 (1962).

<sup>15</sup> U.S. TREAS. DEP'T, INT. REV. SERV., STATISTICS OF INCOME, 1960-61: U.S. BUSINESS TAX RETURNS (1963).

<sup>16</sup> U.S. DEP'T OF LABOR, BUREAU OF EMPLOYMENT SECURITY, EMPLOYMENT AND WAGES BY INDUSTRY AND STATE, STATISTICAL SUPPLEMENT TO LABOR MARKET AND EMPLOYMENT SECURITY (published in the first quarter of each year).

TABLE 8  
SMALL BUSINESS PROPORTION FOR TEXTILE MILL PRODUCTS—SIC GROUP 22

A. Manufacturing Employment, March 1960: <sup>a</sup>	<i>Employees</i>	<i>%</i>	
In establishments employing 500 or less	489,876	52.5	
In establishments employing over 500	443,374	47.5	
Total	933,250	100.0	
B. Business Receipts: <sup>b</sup>			
Sole proprietorships	\$ 67,749,000		
Active partnerships	246,140,000		
Active corporations	13,592,873,000		
Total	\$13,906,762,000		
C. Business receipts per employee (B÷A) = $\frac{\$13,906,762,000}{933,250}$ = \$14,900			
D. Business receipts for a small business firm of 500 employees (C × 500) = \$14,900 × 500 = \$7,450,000			
E. Classified Business Receipts <sup>b</sup> (In million dollars):	<i>Small Business Firms</i>	<i>Large Business Firms</i>	<i>All Business Firms</i>
Sole proprietorships	\$ 68		\$ 68
Active partnerships	246		246
Active corporations by size of business receipts:			
Under \$5	4,004		4,004
\$5-10	786 <sup>c</sup>	\$ 819 <sup>c</sup>	1,605
Over \$10		7,983	7,983
Corporation Total	4,790	8,802	13,592
Grand Total	\$5,104	\$ 8,802	\$13,906
F. Proportion	36.6%	63.4%	100.0%

<sup>a</sup> Source: U.S. DEPT OF LABOR, BUREAU OF EMPLOYMENT SECURITY, EMPLOYMENT AND WAGES BY INDUSTRY AND STATE, STATISTICAL SUPPLEMENT TO LABOR MARKET AND EMPLOYMENT SECURITY (First Quarter 1960 total on p. 20; employees by size category calculated from data on p. 98).

<sup>b</sup> U.S. TREASURY DEPT., INTERNAL REVENUE SERVICE, STATISTICS OF INCOME, 1960-61: U.S. BUSINESS TAX RETURNS 22, 64, and 61. (1963).

$$^c \text{Small} = 1605 \times \frac{(7.45 - 5)}{(10 - 5)} = 786$$

$$\text{Large} = 1605 \times \frac{(10 - 7.45)}{(10 - 5)} = 819$$

U.S. Treasury Department, Internal Revenue Service data for organizations with accounting periods that ended between July 1960 and June 1961 as shown in section B of table eight. Dividing the business receipts by total employment gave a figure for business receipts per employee as shown in section C of table eight. This figure was then multiplied by the number of employees specified by the SBA regulations for the appropriate small business category to determine the dividing point between small and large firms based on business receipts, as shown in section D of table eight. This dividing point value was then referred to the Internal Revenue Service tables showing business receipts (by size of firm in terms of business receipts); and the data for each class by size was then separated into the small or large firm category,

using the dividing benchmark as shown in section E of table eight. In the case of the class size into which the benchmark figure fell, the business receipts for that class were mathematically prorated between large and small firms. From the total values accumulated for each category, proportions were then determined between small and large business firms as shown in section F of table eight. These figures were then paired with comparable procurement programs as shown in table nine.

The military program for Textiles, Clothing and Equipage, showing small

TABLE 9

SMALL BUSINESS SHARE BY SELECTED MILITARY PROCUREMENT PROGRAMS AND PERCENTAGE OF BUSINESS RECEIPTS OF SMALL BUSINESS FIRMS FOR CORRESPONDING INDUSTRIES

Small Business Percentage of Military Procurement by Program (FY 1961)		Percentage of Business Receipts of Business Firms Employing less than 500 for Accounting Periods ending July 1960-June 1961
Textiles, Clothing & Equipage	55.9%	Textile Mill Products 36.6%
		Apparel 71.1%
		Leather 59.5%
		Combined 54.7%
Subsistence	55.8%	Food and Kindred Products 37.8%
Construction	53.6%	General Building Contractors 80.9%
		Highway, Steel & Heavy Construction 55.3%
		Specialty Trade Contractors 93.0%
		Total Construction 82.2%
Military Building Supplies	53.0%	Lumber & Wood Products 73.4%
Tank-Automotive:		
Combat Vehicles	9.2%	Motor Vehicles and Equipment 6.0%
Non-Combat Vehicles	11.6%	
Transportation Equipment	30.1%	
Aircraft:		
Airframes	1.2%	Transportation Equipment except Motor Vehicles 10.0%
Aircraft engines	2.3%	
Other Aircraft Equipment and Supplies	10.8%	
Ships	8.6%	
Fuels and Lubricants	24.3%	Petroleum Refining & Related Industries 2.1%
Medical & Dental Supplies & Equipment	30.2%	Instruments & Related Products 25.2%
Photographic Equipment & Supplies	46.4%	
Electronic & Communications Equipment	8.3%	Electrical Machinery Equipment 22.3%

Source: Military procurement ratios from Office of the Secretary of Defense, *Military Prime Contract Awards and Subcontract Payments* July 1960-June 1961, p. 20. Business receipts ratios calculated by author—see table eight and supporting text.

business procurement of 55.9 per cent, is roughly comparable to the SIC Group 22 for Textile Mill Products, Group 23 for Apparel, and Group 31 for Leather and Leather Products, which combined show 54.7 per cent of business receipts generated by small business firms. In a similar manner the military item Subsistence is roughly comparable to the SIC group Food and Kindred Products. In this pairing,

however, the military subsistence proportion placed with small business of 55.8 per cent is substantially higher than the business receipts proportion of small business firms for Food and Kindred Products of 37.8 per cent. On the other hand, military procurement from small business of Electronic Communications Equipment amounted to 8.3 per cent, as compared with 22.3 per cent for business receipts of small business firms in the Electrical Machinery, Equipment and Supplies Industry. An examination of the various proportions for the military items with the corresponding industry groups indicates that about half of the pairs show a higher percentage for military procurement than for business receipts, and about half show a lower percentage for military procurement than for business receipts.

An analysis was made for all manufacturing industries, similar to the method presented in table eight; and it showed that small business firms obtained 32.2 per cent of total business receipts in 1960-61, and large business firms obtained 67.8 per cent. The 32.2 per cent calculated by this method should be compared to the procurement proportions shown in table one. The Department of Defense situation must be examined in depth by programs as previously shown in table nine. Because of the nature of the commodities that it purchases, NASA procurement must be similarly analyzed; but the data was not available to do so for this report. The very low small business proportion of 3.2 per cent for the AEC is not comparable because a major part of AEC procurement is for the construction and operation of large-scale facilities, generally requiring the services of firms far larger than small business firms. For the other executive agencies it would appear, in general, that the federal procurement programs have provided small business firms with at least a fair proportion of the awards. It may even be argued by some that small business firms have received more than their fair proportion, and that large business firms are being unfairly discriminated against.

The interpretation that small business firms are receiving their fair proportion, or more, of government purchases, if proven true, should not be an unexpected surprise. After all, the basic policy favoring small business, and the specific and significant programs that have been developed to assist small business provides important advantages to such firms. This advantage is probably gained at the expense of slightly larger firms, say up to 2,000 or 3,000 employees, rather than from the very large firms. The question of social justification, however, in shifting business and employment from a group of larger firms to a group of smaller firms is beyond the scope of this paper. It may be noted, however, that the successful small firms who grow beyond 500 employees and become large firms lose the advantage of their former small size. Thus, in this respect, their success becomes a penalty.

An implicit assumption behind the small business programs is that buyers and procurement officers tend to be prejudiced against small business firms and more favorable to placing orders with large business firms. It is not clear whether such an assumption is based on the effect of reciprocity, interlocking corporate director-

ships, unfair competitive practices, price, quality or services. It is the author's opinion, based on his experience as a small business manufacturer and from his research, that the opposite situation is more often the case. Buyers and procurement officers tend to prefer to place orders with small rather than large business firms, other factors being equal, because small businessmen are often more cooperative, easier to deal with, and will allow the buyer greater access to information regarding their operations.

The mathematical expedient used to calculate the small business share from business receipts as shown in table eight, is substantially more accurate than the use of "establishments"; but it still leaves much to be desired as far as analytical procedure is concerned. A better method, however, requires changes in the manner in which statistical data is collected. It would be very helpful if the procurement agencies could classify their purchases by the SIC group of their suppliers. Because of the increasing complications and variation in the size standard for various industrial groups to distinguish between small and large business firms, it also would be desirable if the income tax returns could indicate whether each company is classified as a small or a large business firm. It would be particularly useful if this were also applied to the 10,000 firms in the sample used by the Federal Trade Commission and the Securities & Exchange Commission as the basis of their quarterly data reported in the *Quarterly Financial Report for Manufacturing Corporations*. If this were done it would permit reasonably current comparisons to be made directly between the government procurement actions and the total competitive markets, and thus provide a more reasonable answer to the question of what is a "fair proportion."

#### VENDOR SELECTION BY ADVERTISED VERSUS NEGOTIATED METHODS

A basic objective of government procurement policy for over 150 years has been to give all potential suppliers a reasonable opportunity to compete for government awards. The first federal statute regarding this matter was passed in 1809 and provided that ". . . all purchases and contracts for supplies or services which are or may, according to law, be made by or under the direction of either the Secretary of the Treasury, the Secretary of War, or the Secretary of the Navy, shall be made either by open purchase, or by previously advertising for proposals respecting the same . . . ." <sup>17</sup>

The choice between "open purchases" or "advertising for proposals" was interpreted by the Attorney General to mean that advertising was required in all cases except where public exigencies necessitated immediate contract performance. In such a case the procurement would be "negotiated" in the open market in a manner similar to that for ordinary commercial transactions.

Following this statute many laws were passed specifying in increasing detail the precise manner by which procurement by advertising would be carried out. Concurrent with the increasing regulations regarding the use of advertising for obtaining

<sup>17</sup> Act of March 3, 1809, § 5, 2 Stat. 535-36.

bids there developed a number of exceptions which provided for negotiation of contracts when such methods better served the government's purpose. The philosophy of using advertised bidding methods as the normal way of procuring government goods and services and using negotiated bidding methods as the exceptional way of procuring government goods and services has continued to this day for peacetime conditions.

It is interesting to note, however, that during wartime conditions the historic restrictions on procurement methods have inevitably been removed. Thus, the First War Powers Act of 1941<sup>18</sup> permitted the abandonment of advertising procedures during the national emergency and provided for procurement by negotiation. In spite of this, many procurement officers persisted in the use of advertised bidding (perhaps because it provided protection from the criticisms and investigations that were painful memories from World War I). It was necessary for the War Production Board to issue Directive No. 2 on March 3, 1942, directing that procurement by advertising be abandoned, and requiring contracts to be awarded by negotiation.

After World War II, President Truman, upon signing the Armed Services Procurement Act on February 19, 1948,<sup>19</sup> wrote to the Secretary of Defense linking small business and bidding methods. His letter, in part, stated:<sup>20</sup>

This bill grants unprecedented freedom from specific procurement restrictions during peacetime. That freedom is given to permit the flexibility and latitude needed in present day national defense activities. The basic need, however, remains to assure favorable price and adequate service to the Government. To the degree that restrictions have been diminished, therefore, responsibility upon the Defense Establishment has been increased. There is danger that the natural desire for flexibility and speed in procurement will lead to excessive placement of contracts by negotiation and undue reliance upon large concerns, and this must not occur.

The ASPR provides in section two that all goods and services shall be procured by advertised bidding except that negotiation may be permitted under the specific condition outlined in section three. A recent modification (November 15, 1963) to the ASPR 2-102.1(a) now tightens the exceptions and provides that formal advertising shall be used whenever feasible and practicable, even though conditions satisfy section three of ASPR which lists these seventeen situations where negotiated bidding is permitted:

1. National emergency
2. Public exigency
3. Purchases not more than \$2,500
4. Personal or professional services
5. Services of educational institutions
6. Purchases outside the United States

<sup>18</sup> 55 Stat. 838 (1941), 50 U.S.C. App. § 601 (1958).

<sup>19</sup> Act of Feb. 19, 1948, 62 Stat. 21.

<sup>20</sup> Reported in Case Notes prepared for the Aircraft Industry Purchasing Course, by Harbridge House, Inc., Boston, 1952.

7. Medicines or medical supplies
8. Supplies purchased for authorized resale
9. Perishable or nonperishable subsistence supplies
10. Impracticable to secure competition by formal advertising
11. Experimental, developmental or research work
12. Classified products
13. Technical equipment requiring standardization and interchangeability of parts
14. Substantial initial investment or extended periods of manufacture
15. Negotiation after advertising
16. National defense or industrial mobilization
17. Otherwise authorized by law

Similar provisions are contained in the Federal Procurement Regulations and the regulations for other agencies.

What has been the impact on the welfare of small business firms of the basic government policy favoring advertised bidding methods over negotiated bidding methods? It should be noted that the formal advertised bidding method is almost nonexistent in the commercial business world, even though the federal government has used the procedure for over 150 years. Many voices, including those of the Small Business Administration and the Attorney General, purporting to protect and advance the position of small business firms, have strongly advocated further extensive use of advertised bidding and a reduction in the use of negotiated bidding. Others have taken the opposite point of view.<sup>21</sup>

<sup>21</sup> See Carl G. Hokenson and others, of the Military Procurement Advisory Committee, to Senator George A. Smathers, *HOW TO IMPROVE FEDERAL PROCEDURES FOR BUYING NATIONAL DEFENSE MATERIALS* c. 1, "Advertised versus Negotiated Procurement" (Aug. 18, 1961). This committee of seven authorities from both large and small companies and government agencies was appointed to study certain problem areas in the Department of Defense purchasing system. They, in turn, called on a large number of associates to study the problems in depth, and expended more than 50,000 man-hours in compiling the report. Their recommendations included the following statement:

"In light of the significant position of negotiated procurement as the most appropriate method for expenditure of the greater portion of our defense funds, it is recommended that the statute be modified to eliminate the preference for advertising over negotiation and that the ASPR be modified correspondingly to permit the military department to exercise its judgment in selecting the type of procurement which best satisfies the specific conditions for each proposed contract.

"In areas of both advertised and negotiated procurement, it is recommended that greater emphasis be placed upon all of the major procurement factors including quality, delivery, and technical advances rather than the lowest bid price alone.

"While it is the Committee's judgment that formally advertised procurements should, by statute and by regulation, have equal stature with negotiated procurement that involves some form of effective competition, the Committee believes that single or sole source procurements should be treated separately both in the statutes and regulations, and should, as a precautionary measure against misuse, continue to require justification. Title 10, section 2304, of the United States Code dealing with this matter should be amended to delete from the seventeen exceptions those which presently apply to competitive negotiation and to include only those justifications deemed necessary when single or sole source procurement is utilized by the military departments. The Code should be amended, furthermore, to clearly define three methods of procurement: namely, formal advertising, competitive negotiation, and single or sole source procurement, the latter requiring careful justification. The Committee believes that if competitive negotiation were released from the requirement of justification as an exception, the tendency would be for the military departments to exact fuller explanation from Contracting Officers for single or sole source



In order to determine what small businessmen themselves thought about the procedure, the author and others undertook in 1960 a survey believed to be the first definitive study of this problem.<sup>22</sup>

A questionnaire was sent to a carefully selected group of 5,014 manufacturers located throughout the United States. Responses from 1,165 small business firms formed the basis of the study. Although they varied in size from the smallest to the largest permitted under the small business size classification, the median-sized company employed fifty-two workers. Total annual sales for the companies amounted to \$1,657,775,000, with the median company having sales of approximately three quarters of a million dollars per year. Most of the firms were in the "hard goods" industries (none were in food or tobacco products). Table ten is a break-

TABLE 10  
SALES BY RESPONDENTS  
(University of Washington Survey)

Sales to Government Agencies:		
Department of Defense	\$148,265,000	
Other	43,569,750	
		\$ 191,834,750
Sales to Business Firms as a Subcontractor for Defense Programs	569,707,500	
Commercial Non-defense	705,940,000	1,275,647,500
		1,467,482,250
Sales not Classified		190,292,750
		\$1,657,775,000

Source: ALBERT N. SCHRIEBER, SUMNER MARCUS, ROBERT A. SUTERMEISTER & EDWARD G. BROWN, DEFENSE PROCUREMENT AND SMALL BUSINESS table 57, at 76 (1961).

down of their sales. These firms sold almost \$200 million worth of goods and services to the federal government (about three-fourths to defense agencies, one-fourth to other agencies—a proportion that was almost identical to the proportions shown in table one) and in their remaining sales to business firms \$570 million involved subcontracts on defense programs. These figures are cited merely to indicate that the respondents to the survey represented a large and responsible group of companies who had experience with both government and commercial procurement procedures.

The respondents were asked, "How do you generally prefer to sell your products or services? (Assume your competitors have the same opportunity)." The response of those who indicated a preference is shown in table eleven.

A recent survey of small businesses in research and development industries in Maryland and metropolitan Washington, D.C. asked exactly the same question and

actions which should be the subject of such attention. In short, the emphasis would be placed where it belongs."

<sup>22</sup> ALBERT N. SCHRIEBER, SUMNER MARCUS, ROBERT A. SUTERMEISTER & EDWARD G. BROWN, DEFENSE PROCUREMENT AND SMALL BUSINESS (1961).

TABLE 11  
CHOICE OF BIDDING METHODS FOR RESPONDENT'S OWN PRODUCTS<sup>1</sup>  
(University of Washington Survey)

	<i>Number of Firms</i>	<i>%</i>
Advertised Bidding.....	89	8.2
Negotiated Bidding.....	711	65.7
Sole Source Bidding.....	151	13.9
No Preference.....	132	12.2
	<hr/>	<hr/>
Not Answered.....	1,083	100.0
	82	
	<hr/>	
	1,165	

<sup>1</sup>In response to the question: "How do you generally prefer to sell your products or services? (Assume your competitors have the same opportunity)."

Source: SCHRIEBER, MARCUS, SUTERMEISTER & BROWN, *op. cit. supra* table 10, at table 104, p 105.

obtained the response shown in table twelve. This study was made under a grant from the Small Business Administration. From these studies it is apparent that there is a serious dichotomy between views of the practicing small businessmen and the views of those who claim to be their spokesmen. The basic government policy is to emphasize advertised bidding; the overwhelming preference of small business is for negotiated bidding.

TABLE 12  
CHOICE OF BIDDING METHODS FOR RESPONDENT'S OWN PRODUCTS†  
(University of Maryland Survey)

	<i>Number of Firms</i>	<i>%</i>
Advertised Bidding.....	1	1.7
Negotiated Bidding.....	18	31.6
Sole Source Bidding.....	31	54.4
No Preference.....	7	12.3
	<hr/>	<hr/>
Not answered.....	57	100.0
	16	
	<hr/>	
	73	

† In response to the question: "How do you generally prefer to sell your products or services? (Assume your competitors have the same opportunity)."

Source: SPENCER M. SMITH & MICHAEL B. CARTER, PERFORMANCE AND POTENTIAL OF SMALL BUSINESS IN RESEARCH AND DEVELOPMENT INDUSTRIES, table C-20, at 41.

An analysis of the detailed responses from the various companies in the University of Washington study suggests the following possible reasons for the small business preference for negotiated bidding:

1. Negotiated bidding is more profitable to the supplier.
  - a. The cost of preparing bids for negotiated contracts is believed to be less than for advertised contracts in relation to profits, as shown in table thirteen.

TABLE 13  
RELATIONSHIP BETWEEN COST OF PREPARING BIDS FOR DEFENSE BUSINESS  
AND BIDDING METHOD EMPLOYED

Cost of preparing bids compared to profit on awards received	Advertised Bidding		Negotiated Bidding	
	Prime Contracts	Sub- Contracts	Prime Contracts	Sub- Contracts
	Percentage of Firms	Percentage of Firms	Percentage of Firms	Percentage of Firms
Excessive.....	61.2%	43.2%	42.2%	27.5%
Reasonable.....	31.4	50.1	51.9	65.9
Low.....	7.4	6.7	5.9	6.6
Total.....	100.0%	100.0%	100.0%	100.0%

Source: SCHRIEBER, MARCUS, SUTERMEISTER, & BROWN, *op. cit. supra* table 10, at table 23, p. 30.

b. The profits on negotiated contracts are believed to be higher than on advertised contracts, as shown in table fourteen.

TABLE 14  
RELATIONSHIP BETWEEN PROFITS ON BUSINESS AND TYPE OF CONTRACT

	Advertised Bidding		Negotiated Bidding	
	Prime Contracts	Sub- Contracts	Prime Contracts	Sub- Contracts
	Percentage of Firms	Percentage of Firms	Percentage of Firms	Percentage of Firms
Higher.....	2.6%	2.5%	3.9%	5.5%
Same.....	27.1	44.2	42.4	56.9
Lower.....	57.7	48.5	49.2	35.7
Loss.....	12.6	4.8	4.5	1.9
Total.....	100.0%	100.0%	100.0%	100.0%

Source: SCHRIEBER, MARCUS, SUTERMEISTER, BROWN, *op. cit. supra* table 10, at table 24, p. 31.

c. It is believed that there is a greater likelihood of securing a contract after negotiated bidding than after advertised bidding, as shown in table fifteen.

TABLE 15  
PERCENTAGE OF TIME RESPONDENTS WERE SUCCESSFUL IN GETTING AN  
AWARD BY TYPE OF BIDDING

	Prime Contractors	Sub-Contracts
Advertised bidding.....	13.7%	19.6%
Negotiated bidding.....	27.4%	43.0%

Source: SCHRIEBER, MARCUS, SUTERMEISTER, BROWN, *op. cit. supra* table 10, at table 26, p. 32.

- d. The respondents are of the opinion that the risks of the supplier in contracts awarded under negotiated bidding are likely to be less than in those awarded under advertised bidding.
2. Negotiated bidding affords greater protection to the proprietary information of the creative supplier. The pressure to get specifications for advertised bidding leads military agencies to demand excessive design information from originators of privately developed products and tends to reduce incentive for private development.
3. The buyer is more likely to get the product he wants more economically under the negotiated bidding system than under the advertised bidding system.
  - a. There is greater danger in advertised than in negotiated bidding that an irresponsible or unsophisticated supplier will be awarded the contract.
  - b. The buyer will get a better product at a lower cost under competitive negotiated contract procedure than under any other method.
  - c. Negotiated bidding permits the buyer to eliminate contingency from the price in cases where advertised bidding does not permit this.
  - d. Advertised bidding impedes new developments because it requires freezing of design in order to prepare the specifications that are necessary for advertised bidding.
4. Negotiated bidding favors neither large nor small suppliers.
5. The respondents indicated that they favored the method of bidding with which they were most familiar.

One of the methods by which small business is favored is provided by the set-aside program, under which the procuring agency designates a specific procurement that must be awarded to small business. Usually such programs are offered to small business firms on an advertised bidding procedure. In fiscal year 1963 the Defense Department reported that under the small business and labor surplus area set-aside programs it had placed awards totaling almost one and a half billion dollars. Other agencies are estimated to have placed awards under the small business set-side program amounting to about one quarter billion dollars. Undoubtedly the set-side program has resulted in some awards being made to small businesses that might otherwise have gone to larger companies who could have bid a lower price or provided a more advantageous contract for the government. The Small Business Administration and others have attached particular importance to the set-side program and have pushed it very hard. The set-aside program, however, does have its dangers as is illustrated in the following case.

#### THE CASE OF THE PROMOTED ADVERTISED BID

An example of the conditions that can result from the extreme promotion of advertised bidding is the following situation which took place a few years ago in one of the military services. The description of the situation relies on the memory

of the civilian procurement officer involved on a "recall" basis, and includes some rough estimates; hence the specific numbers may not be completely accurate. Even if the situation is treated as hypothetical, however, it does present the order of magnitude of the problem from several points of view—those of the suppliers, the procurement agency, and the person gauging overall social costs. This incident also illustrates an area that needs a great deal of additional objective research to describe and document the spectrum of situations that can occur under various bidding methods. Such research can lead to better analysis of alternatives which, in turn, may suggest improved optimum, rather than suboptimum, solutions.

Prior to 1954 a small manufacturer developed a special electronic amplifier for military use. Although there were several standard catalog items available that were similar to the required device, special military requirements regarding quality, environmental conditions, and functional performance necessitated a new design.

The design showed promise, and a development contract on a cost-plus basis for a few units was negotiated between the manufacturer and a military agency. This contract was successfully completed, and was followed by several additional production contracts totaling a few thousand units—which led to the stabilization of the design and provided the contracting officer with complete cost information (costs had progressively declined in close accordance with "improvement curve theory").<sup>23</sup> The price of the unit had been reduced to \$235, based on audited costs of about \$215 per unit (production performance was considered to be reasonably efficient) and profit of \$20 per unit.

Additional requirements later developed within the military service involved, so that action was taken to procure 5,000 more units. By this time the design characteristics had been fixed; and, based on data supplied by the manufacturer, the procurement agency had a complete set of both design and production drawings. The technology of the job required some skills, but not at an unusually high level for many manufacturers of electro-mechanical devices. At a conference held between representatives of the Small Business Administration and the procurement officer of the military agency, it was agreed that this project was an ideal one for small business and that there was sufficient lead time to use standard procurement procedures. As a result, it was classified as falling under the set-aside program of the Armed Services Procurement Regulation.

Copies of the invitations to bid and appropriate drawings and specifications were

<sup>23</sup>Improvement or "learning" curve theory suggests that costs in manufacturing operations reduce at a constant rate as quantities are doubled. Thus, if the costs of the 10th unit are 80% of those of the 5th unit, then the 100th unit will cost 80% of that for the 50th unit, and so on. This theory suggests that those firms which get into production on a given item ahead of their competitors will move down the improvement curve and have a distinct cost advantage in future competitions. If this theory is true, then the original manufacturer reported in this situation, merely by virtue of his head start on a production program, should have had a distinct cost advantage over his competitors of equivalent average productive efficiency. Significant underbidding of the original manufacturer's quotation by others could, therefore, possibly be considered unusual and justify the need for an explanation of the relative quotations. See Hirschmann, *Profit from the Learning Curve*, 42 HARV. BUS. REV. 125 (1964).

fanned out to all the Small Business Administration offices and procurement offices of the military service involved. Representatives of each local Small Business Administration office called on those manufacturers in their area who they thought could do a satisfactory job.

The procurement was also advertised in the *Department of Commerce Daily*, which is a synopsis of United States government proposed procurements, sales, and contract awards. It is estimated that approximately 800 potential firms were alerted to the proposed procurement and received specifications and drawings. In order to avoid favoritism, special inquiries received from some firms for specific or additional information were referred back to the standard specification and design drawings that had been distributed.

This activity in publicizing the procurement resulted in two hundred manufacturers submitting bids that ranged from a low of \$110 per unit to a high of over \$900 per unit. Approximately one third of the bids submitted were below the \$235 price of the previous procurement. The original source bid \$225 per unit.

The large number of bids and their wide range posed a serious dilemma for the procurement officer. Why were so many bids significantly lower than that of the previous supplier, whose costs had been carefully audited and were definitely known to be reasonable? Possible explanations of this dilemma were:

1. Some manufacturers had special competence that permitted them to bid substantially lower than the bid of the original source.
2. Some companies might be "buying" the business by bidding lower than their expected costs, but expecting to make up the losses by price adjustments for "changes" or from future follow-on contracts that they might obtain when their costs were at a lower point on the "improvement curve."
3. Some bidders might have been inexperienced in the work involved and prepared their bid in error.
4. Some bidders might have had inadequate cost data and erroneously estimated their costs too low.

Because of the fixed-price type of contract to be used in this situation, it would be impossible and, of course, undesirable to "bail out" any supplier who received the contract and subsequently discovered that he had bid too low on the work involved. As a result it was decided that each bidder had to demonstrate complete financial responsibility to handle the contract even though he lost money on the program.

It was therefore decided to classify as an irresponsible bidder those whose net worth was less than the difference between the \$235 price per unit of the previous procurement and their specific bid price. On the basis of this restriction the fourteen lowest bidders, in an array of bidders by price, were stricken as being financially irresponsible because of limited net worth. The fifteenth lowest bidder had a net worth that was slightly above the potential loss based on the difference

between his bid price of \$195 and \$235 per unit. An award was made to this bidder and to three others at slightly higher prices to avoid placing undue reliance on a single source.

One of the four suppliers experienced production troubles and required technical assistance from the military service. All four suppliers, however, eventually completed their contract. Because of the use of fixed-price contracts, the procurement officer could not accurately obtain the cost experience of the suppliers, but he doubted whether any made a profit and he suspected several had serious losses.

The final contract prices averaged \$200 per unit for the five thousand units, so that about \$1,000,000 was bid for the total procurement program. It was estimated that the solicitation costs by the military service and the Small Business Administration for drawings, specifications, and personnel time amounted to at least \$10 per manufacturer contacted, resulting in a total expenditure of \$8,000 for the eight hundred potential suppliers. Those who did not submit a bid were estimated to have spent approximately \$50 in studying the plans and deciding not to bid. This involved six hundred suppliers who thus spent \$30,000 in total, but who did not participate.

The two hundred firms that submitted bids were estimated to have spent approximately \$1,000 each in studying the plans and specifications, obtaining material prices, estimating the production operations and the costs involved thereto. Thus it appears that \$200,000 was spent by those who submitted bids.

The original supplier submitted a bid of \$225 per unit which would have resulted in a total price of \$1,125,000. This was \$125,000 higher than the bids of the companies that actually received the award. The actual manufacturers, however, are believed to have had costs exceeding their prices and thus sustained losses of at least \$250,000. In addition, because their facilities were committed on this contract, they were forced to refuse some other business with which they were familiar and on which they were likely to have made a profit.

With two hundred bidders and only four awards involved in this action it is evident that each bidder had a probability of success of only two per cent. Many of the bidders inferred, because they had been solicited by the Small Business Administration to participate in the program, that the government wanted them and that they were almost certain to get the contract. It is highly questionable whether very many would have submitted bids if they had known the previous prices charged by the original supplier and the number of bidders who had been invited to participate in the new procurement.

The original sole source supplier would have provided a completely satisfactory product for \$1,125,000. The advertised bidding procedure gave a great many firms the opportunity to participate in the competition, but the total "social cost"<sup>24</sup>

<sup>24</sup>

Cost of promoting invitation for bids: \$10 x 800	\$	8,000
Cost of examining invitation by those who did not bid: \$50 x 600		30,000
Costs of preparing bids by those who competed: \$1,000 x 200		200,000
Cost of production by manufacturers receiving awards:		

amounted to \$1,488,000 and resulted in suppliers who sustained losses and were diverted from producing for other customers, and in many disgruntled firms who had failed to receive a contract.

The author does not want to suggest on the basis of the previous data, comments, and example that advertised bidding methods are completely undesirable for the small businessman. On the contrary, there are circumstances where advertised bidding is a preferred method.

The point being made, however, is that government procurement procedures should not be unduly biased in favor of advertised bidding methods and against negotiated bidding methods. The preference should be made between "competitive" and "noncompetitive" methods. This would suggest that the procurement regulations could be rewritten to emphasize competition and describe more carefully the various circumstances in which different methods are to be preferred: formal advertised methods, two-step advertised procedures, and competitive negotiations. Sole source procurement would then be separated from competitive negotiated procurement and be given the special attention and restrictions that this procedure requires. Historical data showing the success of small business firms in obtaining awards from the Department of Defense by advertised, as compared with negotiated, procurement methods is contained in tables sixteen through nineteen that accompany the following discussion of subcontracting.

#### PRIME CONTRACTS VS. SUBCONTRACTS

A final topic for discussion is to give recognition to the relative importance of subcontracts obtained by small business firms from larger business firms who have obtained prime contracts from the government.

The Department of Defense has a mandatory subcontracting program with all of its prime contractors and subcontractors who obtain total contracts of \$500,000 or more with substantial subcontracting possibilities.<sup>25</sup> These prime contractors are required to report their subcontract payments (rather than contract awards)<sup>26</sup> to small businesses. As shown in table sixteen, military subcontract payments to small businesses have amounted to about as much as direct military prime contract awards to small businesses. In recent years the large prime contractors have reported

Bid prices	\$1,000,000	
Losses	<u>250,000</u>	
		<u>1,250,000</u>
TOTAL		<u>\$1,488,000</u>

<sup>25</sup> Prior to Jan. 1, 1962 the mandatory requirements were for \$1,000,000 or more, and prior to Jan. 1, 1960 the program was voluntary. These changes account for the increasing numbers of large contractors reporting subcontract payments in recent years. Since not all prime contractors make reports, the subcontract payments shown in table 16 are understated.

<sup>26</sup> The comparison of "prime awards" and "subcontract payments" involves a minor statistical inconsistency since they are not in the same time phase. On a trend basis, however, this inconsistency can be largely ignored. Effective July 1, 1963 the reporting of subcontracts on a "payment" basis was changed to a "commitments" or award basis.



that approximately forty-seven per cent of their total receipts on defense contracts have in turn been paid out to other business concerns as subcontract payments. Of these subcontract payments thirty-eight per cent have been made to small businesses.

TABLE 16  
SOURCES OF MILITARY BUSINESS RECEIVED BY SMALL BUSINESS FIRMS  
BY FISCAL YEARS 1957-1963  
(Dollar Amounts in Millions)

	1957	1958	1959	1960	1961	1962	1963	1st Half 1964
Prime Awards by Advertised Bidding	\$1,973	\$1,794	\$1,466	\$1,175	\$1,008	\$1,089	\$ 867	\$ 388
Prime Awards by Negotiated Bidding	1,810	1,935	2,317	2,265	2,649	3,533	3,434	1,528
Total Prime Subcontract Payments by Large Contractors	3,783	3,729	3,783	3,440	3,657	4,622	4,301	1,916
	3,562	3,242	3,336	3,587	3,495	4,011	4,341	N.A.
Total	\$7,345	\$6,971	\$7,119	\$7,027	\$7,152	\$8,633	\$8,642	
Number of Large Contractors Reporting Subcontract Payments	298	294	298	298	309	378	453	N.A.

Source: Office of the Secretary of Defense, *Military Prime Contract Awards and Subcontract Payments*, July-Dec. 1963, pp. 31, 35 and 49.  
N.A.: Not available as of March 1, 1964.

In table seventeen the dollar amounts of table sixteen have been converted to proportions. It is striking to note the trend in the relative importance of the source and method of receipts for small business firms. Subcontract payments provide about half of their funds, and this proportion has remained about the same or moved slightly up during the past seven years. During this period, however, the importance of advertised bidding as a source of receipts has dropped from twenty-seven per cent to ten per cent and negotiated bidding has increased from twenty-five per cent to forty per cent.

This trend has apparently been caused by the decreasing ability of small business firms to compete effectively for prime awards by advertised bidding methods. As shown in table eighteen the success of small business firms in this competitive arena has drastically dropped from almost sixty per cent to less than twenty-five per cent between 1957 and 1963. During the same period small business firms have been able to increase their success in negotiated bidding at the prime level from about ten per cent (1958) to a high of over fifteen per cent (1962). The greatest success for small business firms, however, is at the subcontract level, where their success ratio is about thirty-eight per cent of total subcontract payments (as against sixty-two per cent for large business firms). It should also be noted that close to 100 per cent of all awards made at the subcontract level are on the basis of negotiated bidding methods.

TABLE 17  
SOURCES OF MILITARY BUSINESS RECEIVED BY SMALL BUSINESS FIRMS  
BY FISCAL YEARS 1957-1963  
(Proportion by Source and Method)

	1957	1958	1959	1960	1961	1962	1963
Prime Awards by Advertised Bidding	26.9%	25.8%	20.6%	16.7%	14.1%	12.6%	10.0%
Prime Awards by Negotiated Bidding	24.6	27.7	32.6	32.2	37.1	40.9	39.7
Total Prime Subcontract Payments by Large Contractors	51.5	53.5	53.2	48.9	51.2	53.5	49.7
	48.5	46.5	46.8	51.1	48.8	46.5	50.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Calculated from table 16 by author.

The importance of subcontracting to small business firms in defense procurement is repeated to an even greater degree in the procurement program of the Atomic Energy Commission. Here the prime contract awards to small business are sig-

TABLE 18  
RATIO OF SMALL BUSINESS FIRMS TO ALL BUSINESS FIRMS BY SOURCES OF  
MILITARY BUSINESS BY FISCAL YEARS 1957-1963

	1957	1958	1959	1960	1961	1962	1963	1st Half 1964
Prime Awards by Advertised Bidding	59.4%	57.6%	47.4%	34.5%	36.2%	31.9%	24.5%	23.8%
Prime Awards by Negotiated Bidding	11.4%	10.3%	11.8%	12.4%	13.1%	15.5%	14.5%	14.6%
Subcontract Payments by Large Contractors	38.2%	35.9%	36.5%	37.1%	37.2%	38.0%	38.0%	N.A.

Source: Office of the Secretary of Defense, *Military Prime Contract Awards and Subcontract Payments*, July-Dec. 1963, prime award ratios calculated by author from data on p. 34, 35; other data on p. 49.

N.A.: Not available as of March 1, 1964.

nificantly lower than in the Department of Defense; this holds true because the Commission's major procurement is for the operation and construction of large installations, which require large prime operating contractors that have manpower and other resources far beyond the capability of small business firms. The large prime contractors, however, have a major subcontracting program in effect in which small business firms were successful in winning forty-five per cent of the awards, as shown in table nineteen. Thus, out of AEC activities, small business firms obtain only twenty per cent of their receipts from prime contracts and eighty per cent of their receipts from subcontracts.

If the effect of subcontracting with small business firms is traced beyond the

TABLE 19  
 ATOMIC ENERGY COMMISSION PRIME CONTRACT AND SUBCONTRACT AWARDS RECEIVED BY  
 SMALL BUSINESS FIRMS BY FISCAL YEARS 1961-1963  
 (Dollar Amounts in Millions)

	1961	1962	1963
Prime Contract Awards	\$190	\$191	\$ 84
Ratio of Small Business Firms to Total Prime Procurement	7.3%	7.0%	3.2%
Subcontracts Awards	\$277	\$338	\$335
Ratio of Small Business Firms to Total Subcontracts	41.4%	45.9%	45.0%

Source: AEC presentation to the House Select Committee on Small Business, Washington, D. C., Nov. 13, 1963, Exhibits C and E.

first tier (awards made by prime contractors) through the second tier to the *N*th tier subcontract level the relative importance of subcontracting becomes even greater. For these lower tier subcontract levels the author has estimated that at least fifty per cent more—or about \$2.5 billion dollars more than the \$4.3 subcontracted in 1963 at the first tier (see table sixteen)—accrued to small business firms from Department of Defense programs.

The small businessman is not unaware of this situation and clearly perceives the advantage of obtaining subcontracts. In the University of Washington survey the companies were asked, "When you have a choice, what type of defense contract do you generally prefer to receive?" (by contract level). The responses of those who indicated a preference are shown in table twenty. For those who expressed a preference, subcontracts were thus preferred over prime contracts in the ratio of four to one.

TABLE 20  
 PREFERENCES OF RESPONDENTS BY CONTRACT LEVEL<sup>1</sup>

	Number of Firms	%
Prime Contract with Government.....	155	14.4
Subcontract with Another Company.....	632	58.6
No Preference.....	291	27.0
No Answer.....	1,078	100.0
	87	
	1,165	

<sup>1</sup>Response to question: "When you have a choice, what type of defense contract do you generally prefer to receive?"  
 Source: SCHREIBER, MARCUS, SUTERMEISTER & BROWN, *op. cit.* *supra* table 10, at table 103, p. 105.

### CONCLUSION

This paper has tried to present the overall policy and size of federal procurement with reference to small business firms and to point out some fundamental problem areas. Due to conceptual problems and to inadequate statistical information it is

difficult to determine precisely whether small business firms obtain a fair proportion of government purchases, but the general appearance of the data available suggests that they do. Although advertised bidding methods are strongly favored by government policy, small businessmen have indicated that they strongly prefer negotiated bidding methods. Finally, small businessmen have indicated they prefer to participate in government procurement programs as subcontractors to other prime contractors, rather than as prime contractors themselves. The indicated preferences of small businessmen are backed up by the facts that they derive more of their business receipts from negotiated bidding than from advertised bidding methods, and that more of their business receipts are at the subcontract level than at the prime contract level.