

**ECONOMIC IMPACT OF SMALL BUSINESS DEVELOPMENT CENTER  
COUNSELING ACTIVITIES IN THE UNITED STATES: 2002-2003**

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**EXECUTIVE SUMMARY**

This report presents the results of the seventh national study of the economic impact of Small Business Development Center (SBDC) counseling activities in the United States. The report analyses the changes in sales and employment, jobs and sales revenue maintained, and financing obtained by a sample of 5,640 established businesses and 3,796 pre-ventures that received five or more hours of counseling assistance (long-term clients) in 2002.

Data from 55 of the 58 SBDCs in the United States were used in the study. The 9,436 usable responses represented 15.5 percent of the clients surveyed (60,917).<sup>1</sup> The clients surveyed represented the entire long-term client population of the 55 Small Business Development Centers analyzed. Analysis indicated that response bias did not appear to be a threat to the study.

The performance improvements of the responding sample in the year after receiving assistance were compared to the weighted average changes in performance of all businesses in the 55 participating states. The incremental improvements in the sample's performance -- over and above what they would have been had they performed like the average business -- were extrapolated across the entire long-term client population of the participating centers. To avoid overestimation of the impact of the SBDC program, only those clients who indicated that the SBDC's services were beneficial were used to calculate performance improvements. These performance improvements were then used to estimate the tax revenues generated for state and federal governments as a result of SBDC counseling. The tax revenues generated by the long-term clients were compared to the total cost of providing the services offered by the SBDC.

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<sup>1</sup> The size of the population was estimated based on data supplied by 52 of the 55 participating Centers.

To gain additional insights into the value of the services offered by the SBDC clients were asked whether comparable services were available from private sector sources at a price they could afford. Finally, the financing obtained by clients as a direct result of SBDC assistance was analyzed.

The 55 SBDCs studied counseled an estimated 60,917 long-term clients during the year: 32,156 (52.8%) were classified as established businesses and 28,761 (47.2%) were classified as pre-ventures. Most respondents (86%) indicated that the service received from the SBDC was beneficial. Of the pre-venture clients, it was estimated that about 52.7 percent started new businesses in 2002 or 2003.

Results indicate that, after adjustments, the long-term clients of the 55 SBDCs studied generated a total of approximately \$5.9 billion in sales and 56,258 new full time equivalent jobs as a result of assistance from the SBDC (see Table 1). The average cost of generating each job was \$3,408. Based on clients' assessments, we estimate that an additional \$7.0 billion in sales and 59,489 jobs were saved due to SBDC counseling.<sup>2</sup>

The incremental performance improvements resulted in \$210.3 million in additional tax revenues from established businesses and \$264.8 million from pre-venture clients who started new businesses. This amounted to a total of approximately \$475.1 million in tax revenues, of which \$211.6 million went to the federal government and \$263.5 million went to the various states where the counseling was conducted. When compared to the cost of operating all 58 SBDCs in the U.S. (\$194.1 million), these counseling activities generated approximately \$2.45 in tax revenues for every \$1 spent on the entire program. Compared to the cost of operating the 55 centers (\$191.7 million) participating

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<sup>2</sup> Tax revenues from jobs and revenues saved are not included in the estimates of impact reported in this study. However, we estimate that the tax revenues maintained as a consequence of the jobs and sales saved by clients due to SBDC counseling amounted to \$529.8 million. This amount was 2.76 times as large as the budget for the 55 participating SBDCs. Furthermore, counting total jobs saved and created, the cost per job was \$1,657.

in the study, the benefit to cost ratio was 2.48 to 1.00. Finally, it should be noted that the tax revenues generated exceeded the direct cost of the counseling provided to long-term clients by a ratio of 6.32 to 1.00.

Approximately \$2.0 billion in financing was obtained by clients as a result of the counseling received (\$903 million in SBA loans, \$821 million in debt financing from other sources, and \$255 million in equity financing). These figures suggest that every dollar expended on the operation of the 55 SBDCs included in this study was leveraged by approximately \$10.32 in new capital raised from external sources.

**TABLE 1**  
**IMPACT OF SBDC COUNSELING ON THE ECONOMY OF THE UNITED STATES**

	Established Firms (N = 32,156)	New Firms (N = 28,761)	All Firms (N = 60,917)
Aggregate sales impact	\$3,170,715,300	\$2,746,013,700	\$5,916,729,000
Aggregate employment impact	20,188 new jobs	36,070 new jobs	56,258 new jobs
Sales revenues maintained	\$6,977,273,100		\$6,977,273,100
Jobs saved	59,489 jobs saved		59,489 jobs saved
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State tax revenues generated	\$134,376,210	\$129,164,900	\$263,541,110
Federal tax revenues generated	<u>\$ 75,925,320</u>	<u>\$135,660,470</u>	<u>\$211,585,790</u>
Total tax revenues generated	\$210,301,530	\$264,825,370	\$475,126,900
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Cost of SBDC operations (all 58 centers)			\$194,086,948
Benefit to cost ratio	1.08 to 1.00	1.36 to 1.00	2.45 to 1.00
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Cost of SBDC operations (55 participating centers)			\$191,739,815
Benefit to cost ratio	1.10 to 1.00	1.38 to 1.00	2.48 to 1.00
Cost per job generated			\$3408 per job
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Cost of all counseling (55 participating centers)			\$114,085,910
Benefit to cost ratio	1.84 to 1.00	2.32 to 1.00	4.16 to 1.00
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Cost of long-term counseling	\$ 47,687,610	\$ 27,494,530	\$ 75,182,140
Benefit to cost ratio	4.41 to 1.00	9.63 to 1.00	6.32 to 1.00
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SBA financing	\$ 544,146,660	\$358,488,600	\$ 902,635,260
Other debt financing	\$ 547,813,980	\$273,609,140	\$ 821,423,120
Equity financing	<u>\$ 126,300,530</u>	<u>\$128,860,780</u>	<u>\$ 255,161,310</u>
Total financing obtained	\$1,218,261,170	\$760,958,520	\$1,979,219,690
Financing "Leverage" (55 centers)	6.35 to 1.00	3.97 to 1.00	10.32 to 1.00

## **INTRODUCTION**

This report describes the results of a study designed to assess the economic impact of the long-term counseling activities of the Small Business Development Center (SBDC) Program in the United States in 2002. Long-term clients are defined as those who received a minimum of five hours of counseling assistance from the SBDC. The economic impact of counseling activities was analyzed by comparing the increases in sales and employment experienced by SBDC clients between 2002 and 2003 with the average changes in performance for all businesses in the states of the participating centers in the United States during this time period. The growth in sales and employment in excess of national averages was used to calculate the incremental federal and state tax revenues generated the year after counseling assistance was provided. The tax revenues generated by SBDC-counseled clients were then compared to the cost of the service to determine if it was cost effective.

To supplement this analysis, clients were also asked to estimate the number of jobs saved and sales revenues maintained as a result of the counseling. In addition to this, clients were asked to indicate whether the SBDC program had assisted them obtain financing and if so, the amount of debt and equity financing they were able to obtain as a direct result of the counseling received from the SBDC.

Finally, a host of qualitative questions were asked concerning the availability of comparable assistance from private consultants and the quality of the counselors.

The remainder of this report describes the methodology and results of the study.

### **OVERVIEW: THE 2002-2003 NATIONAL IMPACT STUDY**

In 2002, the 55 SBDCs which participated in this study provided long-term counseling assistance to an estimated population of 60,917 clients, of which 32,156 were owners of established small businesses and 28,761 were seeking to

start new businesses (pre-ventures).<sup>3</sup> All of these long-term clients was sent two mailing of a questionnaire in the Spring and Summer of 2004 asking them to evaluate the SBDC's services, provide their sales revenues and employment levels for 2002 and 2003, estimate jobs and sales revenues maintained, and indicate the amount of financing they were able to obtain that could be credited to the SBDC program (Appendix 1).<sup>4</sup> A total of 5,640 established business clients and 3,796 pre-venture clients returned questionnaires. This represented a 15.5 percent response rate (9,436 of 60,917). Because of missing data and the decision to analyze only clients who indicated that the SBDCs' services were beneficial, the effective sample sizes for the impact estimates were 4,657 established business clients and 2,992 pre-venture clients.<sup>5</sup>

#### SAMPLE SIZE

The procedures described below were utilized to determine if the number of responding clients and the number of participating centers obtained from our sampling plan were sufficient to obtain a statistically reliable sample.

The Confidence Interval of the Means. In order to determine if the number of respondents were actually sufficient to obtain a reliable and valid estimation of the average changes in sales revenue and employment of SBDC clients, the following formula was used.

$$Z = (nE^2/s^2)^{1/2} \tag{1}$$

where: n = effective sample sizes (4,657 established, 2,992 pre-ventures).  
s = standard deviation of the sample (standardized value = 1).

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<sup>3</sup> The study includes 55 SBDCs in operation in 2002: Alabama, Alaska, Arizona, Arkansas, California, Colorado Connecticut, Delaware, District of Columbia, Florida, Georgia, Guam, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, Tennessee, Texas-Dallas, Texas-Houston, Texas-Lubbock, Texas-San Antonio, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming. The American Samoa, South Dakota, and Virgin Islands SBDCs did not provide data for this study.

<sup>4</sup> The questionnaire also included some questions intended for other research projects. Those questions are not analyzed in this study nor are they included in Appendix 1.

<sup>5</sup> These figures represent the number of clients who indicated the service received was beneficial. The effective sample sizes for the analyses conducted varied.

Z = confidence interval for the mean.  
E = amount of error in the mean to be tolerated (5% of s).

With sample sizes of 4,657 and 2,992 and a tolerated error of .05 standard deviation it was determined that the confidence interval of the sales and employment means for both the pre-venture and established business respondents were reliable at better than the 99 percent level (99.9% and 99.4%, respectively). In other words, we were more than 99 percent confident that our sample means were no more than one-twentieth of one standard deviation from the population means for the participating centers.

Analysis of Number of Participating Centers Needed. To determine if the number of participating centers was adequate to provide statistical reliability, a similar formula to that shown in equation (1) was utilized. This formula, however, accounts for the fact that the number of centers needed to obtain adequate representation is a substantial proportion of the total number of centers. As a consequence, the formula must account for the size of the population, as shown in equation (2).

$$Z = [nNE^2/(Ns^2 - ns^2)]^{1/2} \quad (2)$$

where: N = number of SBDC state centers (58).  
n = number of participating centers (55).  
s = standard deviation of the sample (standardized value = 1).  
E = amount of error in the mean to be tolerated (10% of s).

With 55 participating centers, we obtained a confidence level of .999. In other words, we were 99.9 percent confident that our estimates of the SBDC's impact on the participating centers could be extrapolated to the centers that were not included in the study. However, to remain conservative, we refrained from extrapolating our impact estimates to the nonparticipating centers.

#### **SAMPLE VALIDATION**

Although we surveyed the entire population of long-term clients, when a mail survey is conducted there is no way to ensure that 100 percent of those surveyed will respond to the questionnaire. Therefore, it is necessary to conduct statistical tests to ensure that respondents are representative of the



population, there is a minimum likelihood of response bias, and that the data are reliable. The following procedures were used.

Representativeness. Each center was asked to provide demographic information (gender and ethnic background of client, industry in which business competes) for all clients surveyed and for all respondents (Appendix 2).<sup>6</sup> Comparisons and Chi-square goodness-of-fit tests indicated that both the pre-venture and established business respondents were proportionally representative of the population with respect to industry. Established business respondents were also representative of the population with respect to the gender of the owner(s).

Nonwhites were underrepresented in the samples of both groups of clients. Thus, nonwhite clients accounted for 18.1 percent of the established business population and only 13.4 percent of the responses. Likewise, nonwhites made up 24.8 percent of the pre-venture population but only 17.8 percent of the respondents. Furthermore, male entrepreneurs were underrepresented among the pre-venture sample (48% of the sample versus 51.2% of the population). However, it was not expected that these differences alone were severe enough to have caused any significant bias in our findings; we have no evidence of a systematic difference in the size or type of business owned or started by ethnic background or gender. Nevertheless, the findings of this study should be interpreted with caution and do not necessarily represent the performance of either nonwhite clients in general or male entrepreneurs who were seeking to start new ventures.

Response Bias. Two mailings of the questionnaire were conducted. Respondents were divided into early and late responders according to which questionnaire they responded. This procedure made it possible to investigate the issue of response bias. T-tests indicated that there was no significant

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<sup>6</sup> The comparative statistical analysis of the population and respondents were conducted with data from 46 state centers. The remaining state SBDCs did not provide complete demographic data for this analysis.

difference between respondents to the first or second mailings for either pre-venture or established business clients in terms of their levels or growth in sales revenue or employment, sales or jobs saved, financing obtained, or their evaluation of the SBDC's services. Since later responders could be expected to be more similar to non-respondents than earlier responders are, we conclude that there is no reason to suspect bias along any of the key variables analyzed in this study. This conclusion is supported by the results of previous impact studies.

Reliability. The reliability of the questionnaire was assessed by a point biserial correlation analysis comparing clients' perception of whether the SBDC's services were beneficial, and their evaluations of the knowledge and expertise of the counselors, their working relationships with the counselors, and their willingness to recommend the SBDC to others. The results of the respective comparisons were statistically significant at better than the .001 for both pre-venture clients ( $r = .64$ ;  $r = .65$ ;  $r = .74$ ) and established business clients ( $r = .62$ ;  $r = .63$ ;  $r = .67$ ). Thus, clients' responses to the questionnaire appeared to be reliable.

#### **DATA ANALYSIS METHODS**

The methods for estimating the economic impact of SBDC counseling services are described below.

#### **EXISTING BUSINESSES**

For existing businesses who received at least five hours of assistance, the changes in sales and employment between the year in which counseling was received (2002) and the year after counseling was received (2003) was calculated. Two part-time employees were considered equivalent to one full-time employee.<sup>7</sup>

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<sup>7</sup> All employment data reported in this study refers to full time equivalent jobs.

Rates of sales and employment growth for the existing clients were compared with the weighted average growth rates in the home states of the participating centers on each measure. Statewide averages were weighted according to the number of clients served by each center as a proportion of the total number of clients served by the participating centers.<sup>8</sup> This procedure guards against potential biases that might exist if response rates to the survey differ by state center or if the number of clients counseled across the states varied in proportion to the state populations.

The difference between the growth rate of clients and weighted average growth rates for all businesses was used to estimate the incremental or marginal changes in sales and employment growth of the sample. Only those clients who indicated that the SBDC's services were beneficial were used to calculate the incremental growth rates.<sup>9</sup> The incremental growth rates were multiplied by the average sales and employment of the respondents for the year before counseling was received.

Weighted averages of each tax figure (sales taxes, state and federal income taxes) were calculated based on the proportion of clients served by each state compared to the total number of clients served by the participating SBDCs to guard against potential bias that might exist if response rates or counseling intensity differ by state.<sup>10</sup> The weighted average sales tax rate was reduced by 25 percent to reflect the fact that not all businesses pay sales taxes even

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<sup>8</sup> Average state sales growth rates were supplied by 51 centers. Average state employment growth rates were supplied by 51 centers. The average growth rates were computed using a weighting scheme that took into account the long-term client population of the SBDCs. Most growth rates were for the 2002-2003 period. However, for a few states where current data were unavailable, earlier growth rates were used (2001-2002 or 2000-2001).

<sup>9</sup> Although reasons for client dissatisfaction may be unrelated to the quality of the advice (e.g., it was not what the client wanted to hear), it did not seem appropriate to count the performance improvements of clients who did not feel they received value from the SBDC.

<sup>10</sup> Sales tax data were supplied by 51 state centers. State income tax data were supplied by 49 state centers. The average tax rates were computed using a weighting scheme that took into account the long-term client population of the SBDCs. Federal tax data was used for 52 centers that provided the data needed for the weighting scheme.

though some of their sales may eventually "pass through" to the final consumer. This adjustment may still overestimate taxes paid on sales. However, this approach is more realistic and conservative in its assessment of sales tax contributions than no adjustment, yet still captures the added value of those businesses whose sales are not directly taxed. Furthermore, any overestimate must be weighed against the fact that such businesses are taxed in ways not measured in this study (e.g., payroll taxes, corporate income taxes, social security payments).

Federal income tax data for 2001, the most recent year available, were obtained from the Internal Revenue Service's Statistics of Income Bulletin (Spring, 2003). The median figure rather than the average was used to be conservative and to better reflect the types of employment opportunities offered by our respondents. The median state income tax paid per return for each state was estimated by dividing its median federal income tax paid per return by the average federal income tax paid per return and multiplying that proportion by the average state income tax paid per return. A weighted national average was then computed.<sup>11</sup>

Adjusted weighted sales tax rates and state personal income taxes were multiplied by the average incremental improvements in sales and employment respectively to arrive at the value added figures. Weighted federal personal income tax figures were multiplied by the average incremental improvement in employment. All these numbers were then multiplied by the total number of existing business clients after adjusting for the proportion of the respondents who indicated the SBDC's services were beneficial. The formula for the calculations can be expressed as follows:

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<sup>11</sup> Each responding state provided state income tax data for the most recent year available. In most cases this was 2003; however, some states were only able to obtain data for 2001 or 2002.

$$\text{Average Growth} \times \text{Tax Rate} \times \text{Proportion of Clients Satisfied w/Service} \times \text{Total Number of Clients} = \text{Total Tax Revenues} \quad (3)$$

**DATA ANALYSIS METHODS: PRE-VENTURE CLIENTS**

Similar procedures were used for pre-venture clients who received at least five hours of assistance, with the following exceptions. First, as pre-ventures had no previous sales or employees from which to calculate growth, the raw averages were used to assess economic impact. Second, this average was adjusted to account for the total number of pre-venture clients who failed or did not start a business between 2002 and 2003 (about 47.3% of the sample). This adjustment was made as follows:

$$\text{Average Performance} = \text{AS} \times (\text{NS}/\text{NP}) \quad (4)$$

where: AS = average performance (sales, employment) of successful pre-ventures  
 NS = number of successful pre-ventures  
 NP = number of pre-ventures (successful + unsuccessful)

Once this adjustment was made, the average performance of the pre-venture respondents was multiplied by the corresponding tax rates, the proportion of pre-ventures who judged the SBDC's services to be beneficial, and the total estimated number of pre-venture clients. This formula is shown below.

$$\text{Average Performance} \times \text{Tax Rate} \times \text{Proportion of Clients Satisfied w/Service} \times \text{Total Clients} = \text{Total Tax Revenues} \quad (5)$$

**BENEFIT OF SBDC SERVICES TO COST**

The tax revenue generated by the SBDC was divided by the total cost of providing the services to arrive at a benefit to cost ratio. The total operating budget of the SBDC, per data supplied by the Small Business Administration, was used for this calculation. This was an conservative approach since only 55 of the centers were included in the study (and accounted for only 98.8 percent of the combined budgets of the 58 SBDCs), only about 59.5 percent of the total budget of the participating centers was used for counseling, and only about 65.9 percent of that amount was used for long-term

clients.<sup>12</sup> Thus, the calculations compare the impact of assistance, which consumed a total of 38.7 percent of the United States SBDC program's budget (and 39.2% of the budget of the participating centers) with the amount spent on the entire SBDC operation.

Therefore, to provide additional insights we also made cost benefit comparisons with the cost of operating the 55 participating centers, the counseling budget of those centers, and the portion of their counseling budget spent on assisting long-term established and pre-venture clients.

#### **OTHER ANALYSES**

Evaluation of Quality of Counseling Services. Clients were asked whether the services provided by the SBDC were beneficial. This question was used to determine whether clients' performance improvements might have been affected by SBDC counseling. As noted above, the performance improvements of responding clients were adjusted to account for the proportion that believed the SBDC's services were beneficial when extrapolating the results to the full population of clients.

Clients were also asked to assess the knowledge and expertise of counselors assigned to their cases as well as their working relationship with the counselors. Clients evaluated their counselors' knowledge/expertise and working relationship on a five-point scale: (1) poor, (2) below average, (3) average, (4) above average, and (5) excellent. These questions provide further evidence of the quality of the counseling services. In the main, however, these questions were used to assess the reliability of the question concerning whether the SBDC's services were beneficial.

Comparison with Private Consultants. Clients were asked if they could have obtained assistance of the same quality from a private consultant at a price they were willing to pay. A primary rationale of government-funded

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<sup>12</sup> Estimates of counseling budgets were made from data supplied by 50 centers and then applied to the entire budget for the 55 participating centers.

programs is that there is a paucity of private sector assistance available to resource poor entrepreneurs. A major criticism of public programs is, on the other hand, that they may squeeze out private sector initiatives by providing unfair, subsidized competition. By analyzing the availability of alternative sources of assistance, this question made it possible to test whether the rationale for the SBDC program is valid, as well as whether criticisms about unfair competition are warranted.

Revenue and Job Retention. Established business clients were asked to estimate the number of full- and part-time jobs that were saved as a result of the assistance received from the SBDC. We also asked clients to estimate the amount of previous sales revenue maintained as a result of SBDC assistance. The average responses were then extrapolated to the population of established business clients.

Financing. Established business and pre-venture clients were also asked to estimate the amounts of SBA guaranteed loans, other loans, and equity financing obtained directly as a consequence of SBDC counseling activities. To remain conservative, only those clients who indicated that the SBDC assisted them prepare to obtain financing were used for this analysis. Extrapolation to the entire client population was made after adjusting for the proportion of clients who indicated the SBDC assisted them raise capital.

## **RESULTS**

The results of the analysis of the counseling services provided by the SBDC to established business and pre-venture clients are presented below.

### **ESTABLISHED BUSINESSES**

Perceptions of the Quality of Counseling. Of the 5,413 clients who provided usable responses to the service evaluation question, 86 percent (4,657) indicated that the SBDC's services were beneficial. Furthermore, clients gave a rating of 4.34 out of a possible 5.00 on the knowledge and expertise of their counselors and a rating of 4.34 on their working relationship with the

counselors (See Table 2). Finally, 93 percent of the responding established business clients (5,041 of 5,420) indicated that they would recommend the SBDC's services to other business owners.

Comparison with Private Consultants. Results indicated that 66 percent of the responding clients (3,188 of 4,831) believed that it would not have been possible for them to obtain private consulting services of a similar quality at a price they were willing to pay.

Economic Impact Estimates. Table 3 compares the 2002 and 2003 sales and employment levels of established small business clients. As this Table shows, these clients enjoyed an average increase in sales of \$129,754 (from \$764,372 in 2002 to \$894,126 in 2003). There was also a marked increase in the number of individuals employed by clients in 2003 compared to levels in 2002 (8.20 versus 7.44).

Table 4 compares the growth in sales and employment between 2002 and 2003 of SBDC clients with the growth experienced by the average business in the United States. As shown, the sales growth rate of established business clients was larger than that experienced by the average business in the U.S. (17.0% versus 2.0%). In addition, employment levels of established clients increased by 10.2 percent compared to 0.4 percent for U.S. businesses in general.

The overall impact estimate for established business clients suggests that the SBDC's services led to a total of approximately \$210.3 million in new tax contributions: approximately \$134.4 million went to state governments and \$75.9 million went to the federal government (See Table 5). As shown in Table 6, these additional tax revenues were eight percent more than the operating budgets of the entire SBDC program, including nonparticipating centers, and 10 percent more than the budgets of the 55 SBDCs that participated in the study. Furthermore, established clients generated tax revenues that were 84 percent greater than the total counseling budget of the participating SBDCs; these



revenues also represented a return of \$4.41 for every dollar those SBDCs spent on established business clients who received long-term assistance.

Revenue and Job Retention. To supplement the impact estimates we also asked established clients if the SBDC helped them save jobs and retain existing revenues. On average, clients estimated that the SBDC program was responsible for saving \$216,982 in revenues and 1.85 full-time equivalent jobs. In total, this amounted to \$7.0 billion in revenues retained and 59,489 jobs saved.<sup>13</sup>

Financing Obtained. According to the respondents, 21.6 percent of established business clients were assisted in preparing to seek financing. Those clients obtained an average of \$175,398 in capital, of which \$78,343 came from SBA loans, \$78,871 came from other forms of debt financing, and \$18,184 came from equity financing. Extrapolations indicate that \$544 million in SBA loans, \$548 million in other debt financing, and \$126 million in equity financing (approximately \$1.2 billion in total) was raised by clients with the help of the SBDC.<sup>14</sup> This suggests that the total expenditure of tax dollars on the SBDC were leveraged by public and private financing at a ratio of 6.35 to 1.00 for long-term established business clients alone.

#### **PRE-VENTURE CLIENTS**

Perceptions of the Quality of Counseling. Of the 3,482 pre-venture clients who provided an evaluation of the SBDC's services, 85.9 percent (2,992) felt the counseling was beneficial. In addition, clients gave a rating of 4.25 out of a possible 5.00 on their counselors' knowledge and expertise and a rating of 4.22 their working relationship with the counselors (See Table 7). Finally,

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<sup>13</sup> It should be noted that revenues retained and jobs saved were not figured into the benefit to cost estimates.

<sup>14</sup> This analysis was based on the 1,166 respondents who indicated that the SBDCs assisted them in preparing to obtain financing and provided data on financing. Our estimates suggest that of the 32,156 established business clients served 2,782 received SBA guaranteed loans as a consequence of SBDC assistance. Furthermore, 2,883 obtained other loans and 1,001 obtained equity financing.

91 percent (3,186 of 3,501) indicated that they would recommend the SBDC's services to other entrepreneurs.

Comparison with Private Consultants. A total of 66 percent of the responding clients (1,951 of 2,956) believed that it would not have been possible for them to obtain private consulting services of a similar quality at a price they were willing to pay.

Economic Impact Estimates. After adjusting for unsuccessful clients, we calculated that an average of \$111,149 in sales and 1.46 new jobs were created per pre-venture client.<sup>15</sup> As Table 8 indicates, these new employees generated tax payments of approximately \$264.8 million to the state and federal governments (\$129.16 million to the state and \$135.66 million to the federal).

When compared to the cost of operating all of the SBDCs in the United States, the tax revenues generated by pre-venture clients returned \$1.36 for every dollar expended to operate the entire SBDC system and \$1.38 for every dollar expended on the 55 SBDCs that participated in this study. Furthermore, the tax revenues generated exceeded the cost of all counseling activities by a ratio of 2.32 to 1.00. Finally, the tax revenues from pre-venture clients were 9.63 times the amount spent on long-term pre-venture counseling (See Table 9).

Financing Obtained. According to the responses, 20 percent of all pre-venture clients received assistance from the SBDC in preparing to obtain financing. The average raised was \$62,322 in SBA loans, \$47,566 in other sources of debt financing, and \$22,402 in equity financing for a total of \$132,290. Extrapolating to the population suggests that a total of \$358 million in financing from SBA loans, \$274 million from other sources of debt, and \$129 million in financing from equity investors was raised. The grand total of

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<sup>15</sup> Given that only 52.7% of all responding clients started businesses, the estimate of sales and employment for start-ups would be \$210,909 and 2.77, respectively.

approximately \$761 million suggests that each tax dollar expended on the SBDC was leveraged by \$3.97 in public and private financing for new ventures.<sup>16</sup>

#### SUMMARY AND CONCLUSIONS

Results of this study indicate that the SBDC Program makes an important contribution to the economic development of the United States. Our analysis indicated that the SBDC's long-term clients added \$5.9 billion in incremental sales and 56,258 new jobs to the nation. The latter number suggests that the cost of generating a new job through investment in the SBDC was \$3,408 per job. In addition, our estimates suggest that 59,489 jobs were saved and 7.0 billion in sales revenues were maintained as a result of the counseling. Finally, 52.7 percent of all pre-venture clients started businesses within one year of receiving counseling.

Estimates suggest that the one-year tax benefits accruing as a consequence of the performance improvements of SBDC-counseled long-term clients returned \$2.45 for every dollar spent on the entire SBDC Program and \$2.48 for every dollar spent on the 55 SBDCs that participated in this study.<sup>17</sup> Furthermore, our estimates indicate that \$6.32 was returned for each dollar expended counseling the long-term clients of the 55 SBDCs included in the study.

Finally, our estimates indicate that approximately \$2.0 billion in capital was raised by clients as a direct result of the assistance received from the SBDC. This suggests that each dollar expended on the SBDC Program was later leveraged by approximately \$10.32 in debt and equity capital.

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<sup>16</sup> This analysis includes the 729 pre-venture clients who indicated that the SBDCs assisted them in obtaining financing and provided data on financing. Our estimates suggest that of the 28,761 pre-venture clients served 2,304 received SBA guaranteed loans as a consequence of SBDC assistance. Furthermore, 2,241 obtained other loans and 1,223 obtained equity financing.

<sup>17</sup> As noted in the Executive Summary, we estimate that the tax revenues maintained as a consequence of the jobs and sales saved by clients due to SBDC counseling amounted to \$529.8 million. This amount is 2.76 times as large as the budget for the 55 participating SBDCs. Furthermore, counting total jobs saved and created, the cost per job was \$1,657.

The numbers presented in this report are only estimates based on responses to a questionnaire. It is possible that the respondents were not representative of the population of clients, factors such as social desirability bias may have inflated the estimates, or SBDC clients tend to exceed the sales and employment growth rates of "average" businesses in the United States for reasons unrelated to the counseling provided. It is also possible that some of the gains of the clients were not net gains to the economy.

While impact methodologies are always susceptible to such problems the tests conducted for bias and reliability suggest that the results are accurate enough to conclude that the SBDC program in the United States makes a positive contribution to the economy. Furthermore, although the numbers presented in this report are only estimates, their magnitude suggests that even if we greatly overestimated the economic impact of the SBDC our overall conclusions would remain the same. Furthermore, the estimates reported herein do not consider (1) the impact of the nonparticipating centers, (2) the other programs the SBDC offers (e.g., workshops, seminars), (3) the value added to the operations of short-term clients, (4) the continuing tax revenues generated by long-term clients after the year of analysis, (5) the many failures SBDC assistance helps stave off and the individuals with unviable business ideas it discourages, (6) the other tax revenue sources such as corporate taxes, property taxes, unemployment taxes, social security payments, or (7) any multiplier effects of a healthier small business sector. Taking all these factors into account, we believe that the results presented in this study tend to be conservative.

From a public policy standpoint, the implication of this research is that the SBDC makes an important contribution to the economies of the United States. As this study shows, the SBDC plays an important role in the U.S. economy. By assisting established small businesses, SBDCs across the United States help create new job opportunities in growing firms and contribute to the retention of jobs in small companies trying to turn around or reorient their businesses. The

SBDC work with pre-venture clients helps individuals identify and initiate viable new business ventures that invigorate the economy. And as the findings show, this assistance is provided to small business owners and would-be entrepreneurs who often cannot afford the luxury and expense of a private consultant.

In conclusion, the evidence presented in this report indicates that SBDC-assisted clients (1) generate sales and employment opportunities that return more tax revenues to state and federal governments than the cost of operating the Program, (2) believe that the SBDC contributed substantially to the performance improvements of their businesses, (3) are able to save jobs and sales revenues that might have otherwise been lost, and (4) are better able to raise capital to support the start-up and growth of their businesses. It is believed that this is ample justification for the continuation and proliferation of the SBDC Program.

**TABLE 2**  
**QUALITATIVE EVALUATIONS OF THE COUNSELING PROVIDED TO**  
**ESTABLISHED BUSINESS CLIENTS BY THE SBDC PROGRAM**

Knowledge and Expertise of Counselors

	Number	Percentage
5. Excellent	3167	58.5%
4. Above Average	1333	24.6%
3. Average	657	12.1%
2. Below Average	103	1.9%
1. Poor	150	2.8%
	<hr/>	<hr/>
Totals	5410	100.0%

Average = 4.34

Clients' Working Relationship with Counselors

	Number	Percentage
5. Excellent	3336	61.7%
4. Above Average	1047	19.4%
3. Average	706	13.1%
2. Below Average	149	2.8%
1. Poor	169	3.1%
	<hr/>	<hr/>
Totals	5407	100.0%

Average = 4.34

**TABLE 3**  
**2002-2003 AVERAGE SALES AND EMPLOYMENT OF ESTABLISHED CLIENTS**  
**WHO INDICATED THAT SBDC ASSISTANCE WAS VALUABLE**

	2002	2003	Average Change
Sales *	\$764,372	\$894,126	+ \$129,754 17.0%
Employment **	7.44 jobs	8.20 jobs	+ 0.76 jobs 10.2%

\* Based on analysis of the 3,604 clients that provided usable sales data for both 2002 and 2003 and indicated SBDC services were beneficial.

\*\* Based on analysis of the 4,547 clients that provided usable employment data for both 2002 and 2003 and indicated SBDC services were beneficial.

**TABLE 4**  
**CHANGES IN SALES AND EMPLOYMENT BETWEEN 2002-2003:**  
**SBDC ESTABLISHED BUSINESS CLIENTS VERSUS AVERAGE**  
**BUSINESS IN PARTICIPATING STATES**

	Average % change in small business sample	Average % change all U.S. firms	Average incremental change in small business sample	
			percent	aggregate
Sales	+17.0%	+ 2.0%	+15.0%	+ \$114,656
Employment	+10.2%	+ 0.4%	+ 9.8%	+ 0.73 jobs



**TABLE 5**  
**INCREMENTAL TAX REVENUES ADDED TO STATE AND FEDERAL GOVERNMENTS**  
**AS A RESULT OF SBDC COUNSELING OF ESTABLISHED BUSINESS CLIENTS**

STATE TAX REVENUES

	Tax	X	Tax	X	% Clients	X	# of Long	=	Total Tax
	Base		Rate		Valuing		Term Clients		Revenues
					Service				Generated
Sales	114,656		.038*		.860		32,156		\$120,487,180
Employment	0.73		\$688**		.860		32,156		<u>\$ 13,889,030</u>
Total									\$134,376,210

FEDERAL TAX REVENUES

	Tax	X	Tax	X	% Clients	X	# of Long	=	Total Tax
	Base		Rate		Valuing		Term Clients		Revenues
					Service				Generated
Employment	0.73		\$3761***		.860		32,156		\$ 75,925,320
									<hr/>
TOTAL INCREMENTAL STATE AND FEDERAL TAX REVENUES									\$210,301,530

\* Figure represents 75 percent of the weighted average state sales tax rate in the United States applicable to participating SBDCs in 2003 (5.1%).

\*\* Figure represents the weighted average of the estimated state income taxes paid per return by median income filers in 2003.

\*\*\* Figure represents the weighted average of estimated federal income taxes paid per return by median income filers in 2001.

**TABLE 6**  
**THE COSTS AND BENEFITS OF SBDC COUNSELING IN**  
**PARTICIPATING STATES: ESTABLISHED BUSINESSES**

Total incremental State and Federal tax revenues Added by long-term established business clients	\$210,301,530
Cost of operating 58 SBDC programs	\$194,086,948
Benefit to cost ratio	1.08 to 1.00
Cost of operating 55 participating SBDCs	\$191,739,815
Benefit to cost ratio	1.10 to 1.00
Cost of all counseling (55 centers)*	\$114,085,190
Benefit to cost ratio	1.84 to 1.00
Cost of counseling to long-term established business clients (55 centers)**	\$ 47,687,610
Benefit to cost ratio	4.41 to 1.00

\* The average cost of counseling was estimated to be 59.5 percent of the SBDCs' total operating budgets in 2002.

\*\* Long-term counseling provided to established businesses was approximately 41.8 percent of the SBDCs' total counseling budgets in 2002.

**TABLE 7**  
**QUALITATIVE EVALUATIONS OF THE COUNSELING PROVIDED TO**  
**PRE-VENTURE CLIENTS BY THE SBDC PROGRAM**

Knowledge and Expertise of Counselors

	Number	Percentage
5. Excellent	1925	54.6%
4. Above Average	890	25.3%
3. Average	492	14.0%
2. Below Average	95	2.7%
1. Poor	121	3.4%
	<hr/>	<hr/>
Totals	3523	100.0%

Average = 4.25

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Clients' Working Relationship with Counselors

	Number	Percentage
5. Excellent	2023	57.4%
4. Above Average	682	19.4%
3. Average	552	15.7%
2. Below Average	105	3.0%
1. Poor	160	4.5%
	<hr/>	<hr/>
Totals	3522	100.0%

Average = 4.22

**TABLE 8**  
**INCREMENTAL TAX REVENUES ADDED TO STATE AND FEDERAL GOVERNMENTS**  
**AS A RESULT OF SBDC COUNSELING OF PRE-VENTURE CLIENTS**

STATE TAX REVENUES

	Tax Base	X	Tax Rate	X	% Clients Valuing Service	X	# of Long Term Clients	=	Total Tax Revenues Generated
Sales	111,149*		.038 @		.859		28,761		\$104,348,520
Employment	1.46 **		\$688 @@		.859		28,761		<u>\$ 24,816,380</u>
Total									\$129,164,900

FEDERAL TAX REVENUES

	Tax Base	X	Tax Rate	X	% Clients Valuing Service	X	# of Long Term Clients	=	Total Tax Revenues Generated
Employment	1.46		\$3761 @@@		.859		28,761		<u>\$135,660,470</u>

TOTAL INCREMENTAL STATE AND FEDERAL TAX REVENUES \$264,825,370

\* Based on analysis of the 2,571 clients that provided usable sales data for 2003 and indicated SBDC services were beneficial.

\*\* Based on analysis of the 2,967 clients that provided usable employment 2001 and indicated SBDC services were beneficial.

@ Figure represents 75 percent of the weighted average state sales tax rate in the United States in 2003 (5.1%).

@@ Figure represents the weighted average of the estimated state income tax paid per return by median income filers in 2003.

@@@ Figure represents the weighted average of estimated federal income taxes paid per return by median income filers in 2001.

**TABLE 9**  
**THE COSTS AND BENEFITS OF SBDC COUNSELING IN THE UNITED STATES:**  
**PRE-VENTURES**

Total incremental State and Federal tax revenues Added by long-term pre-venture clients	\$264,825,370
Cost of operating all SBDC programs	\$194,086,948
Benefit to cost ratio	1.36 to 1.00
Cost of operating participating SBDCs	\$191,739,815
Benefit to cost ratio	1.38 to 1.00
Cost of all counseling (participating centers)*	\$114,085,190
Benefit to cost ratio	2.32 to 1.00
Cost of counseling to long-term pre-venture clients (participating centers)**	\$ 27,494,530
Benefit to cost ratio	9.63 to 1.00

\* The average cost of counseling was estimated to be 59.5 percent of the SBDCs' total operating budgets in 2002.

\*\* Long-term counseling provided to pre-ventures was approximately 24.1 percent of the SBDCs' total counseling budgets in 2002.

**APPENDIX 1**  
**SMALL BUSINESS DEVELOPMENT CENTER IMPACT STUDY QUESTIONNAIRE**

ALL INFORMATION WILL BE KEPT CONFIDENTIAL

1. When was your business started?

Year Started \_\_\_\_\_ Never Started

2. What was the major activity of your business or proposed business in 2002?  
*Please check one.*

- Retailing (food, apparel, autos, etc.)
- Services (motel, laundry, law, etc.)
- Wholesale (distributor, etc.)
- Manufacturing
- Construction (all general, and other contractors)
- Other (please specify) \_\_\_\_\_

3. Not counting yourself, how many full-time employees (35 hours or more per week) and part-time employees (less than 35 hours per week) did you have at the end of each of the following years that you were in business? *If you were not in business just write N/A in the appropriate blank(s).*

2002 \_\_\_\_\_ full-time employees  
2003 \_\_\_\_\_ full-time employees

2002 \_\_\_\_\_ part-time employees  
2003 \_\_\_\_\_ part-time employees

3. Please estimate the number of new jobs that were created and/or existing jobs that were saved as a result of the assistance received from the SBDC.

Full-time jobs created \_\_\_\_\_  
Part-time jobs created \_\_\_\_\_

Full-time jobs saved \_\_\_\_\_  
Part-time jobs saved \_\_\_\_\_

4. What were your total sales revenues for each of the following (calendar) years you were in business? *If you were not in business during one of these years write N/A (not applicable) in the appropriate blank(s).*

2002 \$ \_\_\_\_\_  
2003 \$ \_\_\_\_\_

5. Please estimate the amount of new sales revenues generated and existing sales revenues maintained as a result of the SBDC's assistance.

New revenues generated \$ \_\_\_\_\_  
Existing revenues maintained \$ \_\_\_\_\_

7. Did the SBDC assist you in obtaining financing?

Yes  No

8. Please estimate the amount of debt and equity capital raised by your business in 2002-2003.

SBA Loans \$ \_\_\_\_\_  
Other Loans \$ \_\_\_\_\_  
Equity Raised from Investors \$ \_\_\_\_\_

9. Was the overall service you received from the Small Business Development Center beneficial?

Yes  No

10. Was assistance of the same quality available from a private consultant at a price you were willing to pay?

Yes  No

11. How would you rate the knowledge and expertise of your SBDC counselor?

Excellent  Below Average  
 Above Average  Poor  
 Average

12. How would you describe your overall working relationship with the SBDC counselor who provided counseling to you?

Excellent  Below Average  
 Above Average  Poor  
 Average

13. Would you recommend that other businesspersons contact the Small Business Development Center?

Yes  No

**APPENDIX 2**  
**DEMOGRAPHIC DATA COLLECTED FROM CLIENTS**

**DEMOGRAPHIC DATA FORM #1**

THE FOLLOWING INFORMATION SHOULD BE PROVIDED FOR **ALL CLIENTS** WHO RECEIVED FIVE HOURS OR MORE OF COUNSELING ASSISTANCE FROM YOUR STATE SBDC IN 2002 **REGARDLESS** OF WHETHER THEY RESPONDED TO THE SURVEY OR NOT.

1. Total number of clients served (5 hours or more) in 2002.

Pre-venture \_\_\_\_\_

Existing businesses \_\_\_\_\_

2. Type of Business (number)          **PRE-VENTURES**          **EXISTING**

Retail    \_\_\_\_\_          \_\_\_\_\_

Service    \_\_\_\_\_          \_\_\_\_\_

Wholesale    \_\_\_\_\_          \_\_\_\_\_

Manufacturing    \_\_\_\_\_          \_\_\_\_\_

Construction    \_\_\_\_\_          \_\_\_\_\_

Other    \_\_\_\_\_          \_\_\_\_\_

3. Gender of clients (number)          **PRE-VENTURE**          **EXISTING**

Male    \_\_\_\_\_          \_\_\_\_\_

Female    \_\_\_\_\_          \_\_\_\_\_

Male/Female    \_\_\_\_\_          \_\_\_\_\_

4. Ethnic background (number)

**PRE-VENTURE**          **EXISTING**

White    \_\_\_\_\_          \_\_\_\_\_

Other    \_\_\_\_\_          \_\_\_\_\_

**CENTER:** \_\_\_\_\_

**CONTACT PERSON:** \_\_\_\_\_

**PHONE/FAX/E-MAIL:** \_\_\_\_\_



**DEMOGRAPHIC DATA FORM #2**

THE FOLLOWING INFORMATION SHOULD BE PROVIDED **ONLY** FOR CLIENTS (FIVE HOURS OR MORE OF COUNSELING) WHO RESPONDED TO THE SBDC IMPACT STUDY SURVEY.

1. Total number of responding clients (5 hours or more)

Pre-venture \_\_\_\_\_

Established businesses \_\_\_\_\_

2. Type of Business (number)

	<b>PRE-VENTURES</b>	<b>EXISTING</b>
Retail	_____	_____
Service	_____	_____
Wholesale	_____	_____
Manufacturing	_____	_____
Construction	_____	_____
Other	_____	_____

3. Gender of clients (number)

	<b>PRE-VENTURE</b>	<b>EXISTING</b>
Male	_____	_____
Female	_____	_____
Male/Female	_____	_____

4. Ethnic background (number)

	<b>PRE-VENTURE</b>	<b>EXISTING</b>
White	_____	_____
Other	_____	_____

**CENTER:** \_\_\_\_\_

**CONTACT PERSON:** \_\_\_\_\_

**PHONE/FAX/E-MAIL:** \_\_\_\_\_

**DEMOGRAPHIC DATA FORM #3**

THE FOLLOWING INFORMATION SHOULD BE PROVIDED AS IT PERTAINS TO YOUR SBDC.

1. Total SBDC expenditures in 2002 (including federal, state, local, and in-kind funding) \$\_\_\_\_\_
  
2. Counseling hours
  - Total number of counseling hours provided to all clients (regardless of hours) in 2002 \_\_\_\_\_ hours
  
  - Total number of counseling hours provided clients in 2002 who received five 5 or more hours of assistance
    - PRE-VENTURE \_\_\_\_\_ hours
    - EXISTING \_\_\_\_\_ hours
  
3. Proportion of total budget allocated to counseling (counselors' pay, benefits, expenses, and other allocated costs divided by total budget) \_\_\_\_\_%
  
4. State sales tax rate in 2003 \_\_\_\_\_%
  
5. Average state personal income tax paid per return in 2003\* \$\_\_\_\_\_
  
6. Percentage growth in total business sales in your state between 2002-2003\* \_\_\_\_\_%
  
7. Percentage growth in total business employment in your state between 2002-2003\* \_\_\_\_\_%

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If data for this time period is not available please provide data for the most recent year and indicate that time period.

**CENTER:** \_\_\_\_\_

**CONTACT PERSON:** \_\_\_\_\_

**PHONE/FAX/E-MAIL:** \_\_\_\_\_