

**ECONOMIC IMPACT OF SMALL BUSINESS DEVELOPMENT CENTER
COUNSELING ACTIVITIES IN THE UNITED STATES: 2016-2017**

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COUNSELING ACTIVITIES IN THE UNITED STATES: 2016-2017**

EXECUTIVE SUMMARY

This report presents the results of the 22nd national study of the economic impact of Small Business Development Center (SBDC) counseling activities in the United States. The report analyzes the changes in sales and employment, jobs and sales revenue maintained, and financing obtained by a sample of 4,503 established businesses and 2,471 pre-ventures that received five or more hours of counseling assistance (long-term clients) in 2016.

Data from 62 of the 63 SBDCs in the United States were used in the study. The 6,974 responses represented 11.6% of the clients that were sent questionnaires (60,054). The clients surveyed represented the entire long-term client population of the 62 Small Business Development Center programs in the United States that participated in the study. 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 United 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 SBDC. 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 from 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. To gain additional insights, the financing obtained by clients as a direct result of SBDC assistance was analyzed.

Of the 60,054 long-term clients in 2016, 35,811 (59.6%) were classified as established businesses and 24,243 (40.4%) were classified as pre-ventures. Most respondents (92%) indicated that the service received from the SBDC was beneficial. Of the pre-venture clients, it was estimated that about 60.7% started new businesses subsequent to the counseling (54.4% within one year).

Results indicate that, after adjustments, the long-term clients of the SBDC generated a total of approximately \$7 billion in sales and 93,471 new full time equivalent jobs from the assistance received (see Table 1). The average cost of generating each job was \$2,739.

The incremental performance improvements resulted in \$325.59 million in additional tax revenues from established businesses and \$278.87 million from pre-venture clients who started new businesses. This amounted to a total of approximately \$604.46 million in tax revenues, of which \$355.64 million went to the state governments and \$248.82 million went to federal government. When compared to the cost of operating the 62 SBDCs that participated in the study (\$255.98 million), these counseling activities generated approximately \$2.36 in tax revenues for every \$1 spent on the entire program. It should also be noted that the tax revenues generated exceeded the direct cost of the counseling provided to long-term clients by a ratio of 5.11 to 1.00.

Finally, approximately \$5.9 billion in financing was obtained by clients as a result of the counseling received (\$2.65 billion in SBA loans, \$2.54 billion in debt financing from other sources, and \$0.73 billion in equity financing). These figures suggest that every dollar expended on the operation of the SBDC program in the U.S. was leveraged by approximately \$23.15 in new capital raised from external sources.

TABLE 1
IMPACT OF SBDC COUNSELING ON THE UNITED STATES ECONOMY

	Established Firms (N = 35,811)	Pre-Ventures (N = 24,243)	All Firms (N = 60,054)
Aggregate sales impact	\$4,502,351,000	\$2,492,668,000	\$6,995,019,000
Aggregate employment impact	40,165 new jobs	53,306 new jobs	93,471 new jobs
State tax revenues generated	\$218,667,900	\$136,969,800	\$355,637,700
Federal tax revenues generated	<u>\$106,919,500</u>	<u>\$141,899,300</u>	<u>\$248,818,800</u>
Total tax revenues generated	\$325,587,400	\$278,869,100	\$604,456,500
Cost of all SBDC operations (63 Centers)			\$260,757,635
Benefit to cost ratio	1.25 to 1.00	1.07 to 1.00	2.32 to 1.00
Cost of SBDC operations (62 participating Centers)			\$255,982,492
Benefit to cost ratio	1.27 to 1.00	1.09 to 1.00	2.36 to 1.00
Cost per job generated			\$2,739 per job
Cost of all counseling			\$156,149,320
Benefit to cost ratio	2.09 to 1.00	1.79 to 1.00	3.87 to 1.00
Cost of long-term counseling	\$ 80,104,601	\$ 38,100,434	\$118,205,035
Benefit to cost ratio	4.06 to 1.00	7.32 to 1.00	5.11 to 1.00
SBA financing	\$1,490,849,000	\$1,160,566,000	\$2,651,415,000
Other debt financing	\$2,004,195,000	\$ 540,396,000	\$2,544,591,000
Equity financing	<u>\$ 500,699,000</u>	<u>\$ 228,927,000</u>	<u>\$ 729,626,000</u>
Total financing obtained	\$3,995,743,000	\$1,929,889,000	\$5,925,632,000
Financing "Leverage"	15.61 to 1.00	7.54 to 1.00	23.15 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 2016. 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 2016 and 2017 with the changes in performance for businesses in the states and territories the program served during this 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 indicate whether the SBDC program had assisted them to 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 was 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 2016-2017 NATIONAL IMPACT STUDY

In 2016, the 62 SBDCs (of 63) in the United States that participated in this study provided long-term counseling assistance to a population of 60,054 clients, of which 35,811 were owners of established small businesses and

24,243 were seeking to start new businesses (pre-ventures).¹ The entire population of long-term clients of the participating centers was sent a questionnaire in the summer of 2017. In the questionnaire clients were asked to evaluate the SBDC's services, provide their sales revenues and employment levels for 2016 and 2017, and indicate the amount of financing they were able to obtain that could be credited to the SBDC program (See Appendix 1). In total, 4,503 established business clients (12.6% response rate) and 2,471 pre-venture clients (10.2% response rate) returned questionnaires. This represented an 11.6% overall response rate for the clients sent questionnaires (6,974 of 60,054). However, because of missing data and the decision to analyze only clients who indicated that the SBDCs' services were beneficial, the samples used for the impact estimates were 3,798 established business clients and 2,156 pre-venture clients.²

SAMPLE SIZE

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

Confidence Interval of the Means. In order to determine if the number of respondents was 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.

¹ The SBDCs in the United States in 2016 include: Alabama, Alaska, American Samoa, Arizona, Arkansas, California-UC Merced, Northeastern California, California-Los Angeles, California-San Diego/Imperial Counties, Northern California, California-Orange County/Inland Empire, 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, South Dakota, Tennessee, North Texas (Dallas), Texas Gulf Coast (Houston), Northwest Texas (Lubbock), South Texas Border (San Antonio), Utah, Vermont, Virgin Islands, Virginia, Washington, West Virginia, Wisconsin, and Wyoming. The Indiana SBDC did not participate in the study.

² These figures represent the number of clients who indicated the service received was beneficial. The effective sample sizes for the analyses conducted varied.

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

where: n = effective sample sizes (3,798 established, 2,156 pre-ventures).
s = standard deviation of the sample (standardized value = 1).
Z = confidence interval for the mean.
E = amount of error in the mean to be tolerated (5% of s).

Based on the above statistics, it was determined that the confidence interval of the sales and employment means for the established business and pre-venture respondents were reliable at the 99.8% and 98% levels, respectively. In other words, we were confident at the 98% rate or better that our sample means were no more than one-twentieth of one standard deviation from the population means for the 62 centers that participated in this study.

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% 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 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 (See Appendix 2).³ Comparisons and Chi-square goodness-of-fit tests using standardized data indicated that, in general, both established business and pre-venture respondents were proportionally representative of the population, the exception being that responding pre-ventures were over-represented among firms in retailing and underrepresented among firms in services.

³ The comparative statistical analysis of the population and respondents were conducted with data from 61 participating SBDCs.

Response Bias. The questionnaire was sent to clients in several waves in the spring and summer of 2017. Respondents were divided into groups of according to when they responded to the questionnaire and compared in terms of their reported sales revenue, employment, financing obtained, and evaluation of the SBDC's services. This procedure made it possible to investigate the issue of response bias. Taken together, statistical tests indicated that there were generally no differences in the responses of early and late for responding established business and pre-venture clients. However, late-responding established businesses reported SBA loans that were higher on average than early-responding established businesses. Similarly, late-responding pre-ventures reported non-SBA (other) loans that were higher on average than those reported by early-responding pre-ventures. Given that late respondents could be expected to be more similar to non-respondents than earlier responders are, there does not appear to be any strong reason to believe the estimates reported in this study have an upward bias.

Reliability. The reliability of the questionnaire was assessed by a point biserial correlation analysis comparing clients' perceptions of whether the SBDC's services were beneficial and their (1) evaluations of the knowledge and expertise of the counselors, (2) working relationships with the counselors, and (3) willingness to recommend the SBDC to others. The results of the respective comparisons were statistically significant at better than the 1% level for both established business clients ($r = .61$; $r = .63$; $r = .69$) and pre-venture clients ($r = .60$; $r = .63$; $r = .74$). 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

The changes in sales and employment for the period before and after counseling was received were calculated for businesses receiving at least five hours of assistance. For employment, both regular employees and independent contractors were considered. One full-time independent contractor was considered equivalent to one full-time employee. Two part-time employees or independent contractors were considered equivalent to one full-time employee.⁴

Rates of sales and employment growth for the existing clients were compared with the weighted average growth rates in the home states or territories of the 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 SBDC system. This procedure guards against potential biases that might exist if the number of clients counseled across the states and territories varied in proportion to their 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.⁵ Only clients who indicated that the SBDC's services were beneficial were used to calculate incremental growth rates.⁶ The incremental growth rates were multiplied by the average sales and employment of the respondents for the year before counseling was received.

⁴ All employment data reported in this study refers to full-time equivalent jobs.

⁵ GSP growth among private industries between 2016 and 2017 was used as a surrogate for the average rate of sales growth in each state. We used data obtained from the Bureau of Economic Analysis to estimate state sales growth. The average rate of employment growth in each state was obtained from the Bureau of Labor Statistics. The average growth rates were computed using a weighting scheme that took into account the long-term client population of the SBDCs.

⁶ 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 believe they received value from the SBDC.

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 or territory compared to the total number of clients served by the centers to guard against potential bias that might exist if counseling intensity differed by state, region, or territory.⁷ The weighted average sales tax rate was reduced by 25% to reflect the fact that not all businesses pay sales taxes even 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, and still captures the value added by those businesses whose sales are not directly taxed. Furthermore, any overestimate must be weighed against the fact that other tax sources are not measured in this study (e.g., payroll taxes, corporate income taxes, social security payments).

Federal income tax data for 2015, the most recent year available, were obtained from the online version of the Internal Revenue Service's *Statistics of Income Bulletin* (2018). The estimated median (based on an analysis of tax brackets), 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 the median federal income tax paid per return by the average federal income tax paid per return within the state and multiplying that proportion by the average state income tax paid per return. A weighted

⁷ State sales tax information was available for the 62 of the participating SBDCs. State income tax data were available from the 60 SBDCs. 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 were available for all participating centers.

national average was then computed based on the populations of clients served by each SBDC.⁸

Adjusted weighted sales tax rates and personal income taxes (state or territory and federal) were multiplied by the average incremental improvements in sales and employment respectively to arrive at the value added figures. As shown below, 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.⁹

$$\text{Average Growth} \times \text{Tax Rate} \times \text{Proportion of Clients Satisfied w/Service} \times \text{Total Number of Clients} = \text{Total Tax Revenues} \quad (2)$$

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 number of pre-venture clients who failed or did not start a business between 2016 and 2017 (about 45.6% of the sample did not start a business by the end of 2017). The adjustments are shown below.

$$\text{Average Performance} = \text{AS} \times (\text{NS}/\text{NP}) \quad (3)$$

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 number of pre-venture clients. The formula is shown below.

⁸ Each responding SBDC provided state or territory income tax data for the most recent year available. In most cases, this was 2016 or 2017; however, some SBDCs were only able to obtain data for 2014 or 2015. Since experience shows these numbers do not vary much from year to year, it is unlikely this had a significant impact on the results.

⁹ Aggregate figures for sales generated and jobs created were calculated by multiplying average performance by the total number of clients.

$$\text{Average Performance} \times \text{Tax Rate} \times \text{Proportion of Clients Satisfied w/Service} \times \text{Total Clients} = \text{Total Tax Revenues} \quad (4)$$

BENEFIT OF SBDC SERVICES TO COST

The tax revenue generated by the SBDC was divided by the total cost of operating the participating centers to arrive at a benefit to cost ratio.¹⁰ The total budget of the SBDC, per data supplied by the Small Business Administration for fiscal year 2016, was used for this calculation. This was a conservative approach since only part of the budgets of the centers was used for counseling, and some of that amount was spent on short-term rather than long-term clients.¹¹ Thus, the calculations compare the impact of assistance to long-term clients, which consumed about 46.2% of the United States SBDC program's budget, with the amount spent on the entire SBDC program.

To provide additional insights we also made cost-benefit comparisons with the cost of counseling for the participating centers, as well as 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

¹⁰ We also compared the tax impact with the entire SBDC budget for the full complement of 63 centers.

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.

Financing. Established business and pre-venture clients were asked to estimate the amounts of SBA guaranteed loans, other loans, and equity financing obtained directly because of SBDC counseling activities. To remain conservative, only those clients who indicated that the SBDC assisted them 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 in raising 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 4,128 clients who provided usable responses to the service evaluation question, 92% indicated that the SBDC's services were beneficial (3,810). Furthermore, clients gave a rating of 4.52 out of a possible 5.00 on the knowledge and expertise of their counselors and a rating of 4.51 on their working relationship with the counselors (See Table 2). Finally, 95% of the 4,126 responding established business clients indicated that they would recommend the SBDC's services to other business owners.

Economic Impact Estimates. Table 3 compares the 2016 and 2017 sales and employment levels of established small business clients. As this Table shows, these clients reported an average increase in sales of \$177,787 (from \$983,153

¹¹ Estimates of counseling budgets were made from data supplied by 60 SBDCs.

in 2016 to \$1,160,940 in 2017). There was also an increase in the number of individuals employed by clients in 2017 (10.03) compared to 2016 (8.70).¹²

Table 4 compares the growth in sales and employment between 2016 and 2017 of SBDC clients with the growth experienced by the average business in the United States. As shown, the sales of established business clients increased by 18.1% compared to an increase of 4.2% for the average business in the U.S. In addition, employment levels of established clients increased by 15.3% compared to a 1.3% increase for U.S. businesses in general.¹³

The overall impact estimate for established business clients suggests that the SBDCs' services led to a total of approximately \$325.6 million in new tax contributions: approximately \$218.7 million went to state governments and \$106.9 million went to the federal government (Table 5). As shown in Table 6, these additional tax revenues were 25% greater than the operating budget of the entire SBDC program and 27% greater than the operating budget of the centers that participated in the study. Furthermore, established clients generated tax revenues that were 2.09 times greater than the total counseling budget of the participating SBDCs; these revenues also represented a return of \$4.06 for every dollar those SBDCs spent on established business clients who received long-term assistance.

Financing Obtained. According to the respondents, 21% of the 4,108 established business clients who responded to the questions were assisted in preparing to seek financing. Those clients obtained an average of \$531,713 in capital, of which \$198,387 came from SBA loans, \$266,698 came from other forms of debt financing, and \$66,628 came from equity financing. Extrapolations indicate that clients raised \$1.49 billion in SBA loans, \$2.00 billion in other debt financing, and \$0.50 billion in equity financing (approximately

¹² If we exclude independent contractors, the employment of established business clients grew from an average of 7.22 full-time employees in 2016 to 8.36 in 2017, a 15.8% increase.

\$4.0 billion in total) with the help of the SBDC. This suggests that the total expenditure of tax dollars on the SBDC was leveraged by public and private financing at a ratio of 15.61 to 1.00 for long-term established business clients alone. Our estimates also suggest that 3,040 established business clients received SBA guaranteed loans because of SBDC assistance. Furthermore, 3,789 obtained other loans and 1,129 obtained equity financing.

PRE-VENTURE CLIENTS

Perceptions of the Quality of Counseling. Of the 2,343 pre-venture clients who provided an evaluation of the SBDC's services, 92% felt the counseling was beneficial (2145). In addition, clients gave a rating of 4.47 out of a possible 5.00 on their counselors' knowledge and expertise and a rating of 4.47 on their working relationship with the counselors (See Table 7). Finally, of the 2,342 clients who answered the question, 94% indicated they would recommend the SBDC's services to other entrepreneurs.

Economic Impact Estimates. After adjusting for unsuccessful clients, we calculated that an average of \$111,761 in sales and 2.39 new jobs were created per pre-venture client.¹⁴ As Table 8 indicates, these new employees generated tax payments of approximately \$278.9 million to the state and federal governments (\$137.0 million to the state and \$141.9 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 \$1.07 for every dollar expended. Compared to the operating budget of the SBDCs that participated in the study, the benefit to cost ratio was 1.09 to 1.00. Furthermore, the tax revenues generated exceeded the cost of all counseling activities by a ratio of 1.79 to 1.00. Finally, the tax revenues from pre-

¹³ Again, the national figures were calculated by state averages weighted by the number of long-term clients served per SBDC.

¹⁴ Since only 60.7% of all responding clients started businesses within one year, the estimate of sales and employment for ventures started in 2016 or 2017 is \$184,120 and 3.94, respectively. Furthermore, excluding independent contractors, the average initial employment of pre-venture clients was 1.98 full-time employees in 2017.

venture clients were 7.32 times the amount spent on long-term pre-venture counseling (See Table 9).

Financing Obtained. According to the responses, 20% of the 2,357 pre-venture clients who responded to the question received assistance from the SBDC in preparing to obtain financing. The average raised was \$239,361 in SBA loans, \$111,454 in other sources of debt financing, and \$47,215 in equity financing for a total of \$398,030. Extrapolating to the population suggests that a total of \$1.16 billion in financing from SBA loans, \$0.54 billion from other sources of debt, and \$0.23 billion from equity investors were raised. The grand total of approximately \$1.9 billion suggests that each tax dollar expended on the SBDC was leveraged by \$7.54 in public and private financing for new ventures. Finally, our estimates suggest that 2,557 pre-venture clients received SBA guaranteed loans, 2,051 obtained other loans, and 1,089 obtained equity financing with the aid of the SBDC.

SUMMARY AND CONCLUSIONS

Results suggest that the SBDC Program makes an important contribution to the economic development of the United States. Our analysis indicated that the SBDCs' long-term clients added \$7 billion in incremental sales and 93,471 new jobs to the nation. The latter number suggests that the cost of generating a new job through investment in the SBDC was \$2,739 per job. In addition, 60.7% of all pre-venture clients started businesses after receiving counseling (54.4% within one year).

Estimates suggest that the one-year tax benefits accruing as a consequence of the performance improvements of SBDC-counseled long-term clients returned \$2.36 for every dollar spent on the 62 (of 63) SBDCs that participated in the study. Furthermore, our estimates indicate that \$5.11 was returned for each dollar expended on counseling long-term clients. Finally, our estimates indicate that approximately \$5.9 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 \$23.15 in debt and equity capital.

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 that "self-selected" 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.

Impact methodologies are always susceptible to potential problems of obtaining adequate control groups, the possibilities of response bias or self-selection bias, and displacement effects. Nevertheless, the tests conducted for bias and reliability, as well as the use of weighted statewide comparison groups, suggests 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.

In addition, the estimates reported herein do not consider the following. (1) The other programs the SBDC offers (e.g., workshops, seminars). (2) The value added to the operations of short-term clients. (3) The tax revenues long-term clients generate after the year of analysis. (4) The many failures SBDC assistance helps stave off and the individuals with unviable business ideas it discourages. (5) The other tax revenues generated by corporate taxes, property taxes, unemployment taxes, and social security payments. (6) The multiplier effects associated with a healthier small business sector. Considering all these factors, we believe that the results presented in this study tend to be conservative.

From a public policy standpoint, the implication of this study is that the SBDC makes an important contribution to the economy of the United States. 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.

In conclusion, the evidence presented in this report indicates that SBDC-assisted clients generate sales and employment opportunities that return more tax revenues to state and federal governments than the cost of operating the Program. Clients believe that the SBDC contributed substantially to the performance improvements of their businesses and are better able to raise capital to support the start-up and growth of their businesses. This is 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	2,782	67.4%
4. Above Average	885	21.4%
3. Average	338	8.2%
2. Below Average	57	1.4%
1. Poor	65	1.6%
	<hr/>	<hr/>
Totals	4,127	100.0%

Average = 4.52

Clients' Working Relationship with Counselors

	Number	Percentage
5. Excellent	2,906	70.4%
4. Above Average	682	16.5%
3. Average	357	8.7%
2. Below Average	96	2.3%
1. Poor	86	2.1%
	<hr/>	<hr/>
Totals	4,127	100.0%

Average = 4.51

TABLE 3
2016-2017 AVERAGE SALES AND EMPLOYMENT OF ESTABLISHED CLIENTS
WHO INDICATED THAT SBDC ASSISTANCE WAS VALUABLE

	2016	2017	Average Change
Sales *	\$983,153	\$1,160,940	+ \$177,787 18.1%
Employment **	8.70 jobs	10.03 jobs	+ 1.33 jobs 15.3%

* Based on analysis of the 3,213 clients that provided usable sales data for both 2016 and 2017 and indicated that the SBDC's services were beneficial.

** Based on analysis of the 3,157 clients that provided usable employment data for both 2016 and 2017 and indicated that the SBDC's services were beneficial.

TABLE 4
CHANGES IN SALES AND EMPLOYMENT BETWEEN 2016-2017:
SBDC ESTABLISHED BUSINESS CLIENTS VERSUS AVERAGE U.S. BUSINESS

	Average % change in small business sample	Average % change all U.S. firms	Average incremental change in small business sample	
			percent	aggregate
Sales	+18.1%	+ 4.2%	+13.9%	+ \$136,658
Employment	+15.3%	+ 1.3%	+14.0%	+ 1.22 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	136,658		.044*		.92		35,811		\$198,103,400
Employment	1.22		\$512**		.92		35,811		<u>\$ 20,564,500</u>
Total									\$218,667,900

FEDERAL TAX REVENUES

	Tax	X	Tax	X	% Clients	X	# of Long	=	Total Tax
	Base		Rate		Valuing		Term Clients		Revenues
					Service				Generated
Employment	1.22		\$2662***		.92		35,811		\$106,919,500
TOTAL INCREMENTAL STATE AND FEDERAL TAX REVENUES									<u>\$325,587,400</u>

* Figure represents 75% of the weighted average state sales tax rate in the United States in 2017 (5.8%).

** Figure represents the weighted average of the estimated state income taxes paid per return by median income filers in 2016-2017.

*** Figure represents the weighted average of estimated federal income taxes paid per return by median income filers in 2015.

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

Total incremental State and Federal tax revenues added by long-term established business clients	\$325,587,400
Cost of operating all SBDC programs	\$260,757,635
Benefit to cost ratio	1.25 to 1.00
Cost of operating participating SBDCs	\$255,982,492
Benefit to cost ratio	1.27 to 1.00
Cost of all counseling*	\$156,149,320
Benefit to cost ratio	2.09 to 1.00
Cost of counseling long-term established business clients**	\$ 80,104,601
Benefit to cost ratio	4.06 to 1.00

* The weighted average cost of counseling was estimated to be 61% of the SBDCs' total operating budgets in 2016.

** Long-term counseling provided to established businesses was approximately 51.3% of the SBDCs' total counseling budgets in 2016.

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	1,515	64.7%
4. Above Average	556	23.7%
3. Average	188	8.0%
2. Below Average	33	1.4%
1. Poor	50	2.1%
	<hr/>	<hr/>
Totals	2,342	100.0%

Average = 4.47

Clients' Working Relationship with Counselors

	Number	Percentage
5. Excellent	1,597	68.2%
4. Above Average	417	17.8%
3. Average	212	9.1%
2. Below Average	58	2.5%
1. Poor	58	2.5%
	<hr/>	<hr/>
Totals	2,342	100.0%

Average = 4.47

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	X	Tax	X	% Clients	X	# of Long	=	Total Tax
	Base		Rate		Valuing		Term Clients		Revenues
					Service				Generated
Sales	111,761*		.044†		.92		24,243		\$109,677,400
Employment	2.39 **		\$512††		.92		24,243		<u>\$ 27,292,400</u>
Total									\$136,969,800

FEDERAL TAX REVENUES

	Tax	X	Tax	X	% Clients	X	# of Long	=	Total Tax
	Base		Rate		Valuing		Term Clients		Revenues
					Service				Generated
Employment	2.39		\$2662†††		.92		24,243		<u>\$141,899,300</u>

TOTAL INCREMENTAL STATE AND FEDERAL TAX REVENUES \$278,869,100

* Based on an analysis of the 1,792 clients that provided usable sales data for 2017 and indicated that the SBDC's services were beneficial.

** Based on analysis of the 1,816 clients that provided usable employment data for 2017 and indicated that the SBDC's services were beneficial.

† Figure represents 75% of the weighted average state sales tax rate in the United States in 2017 (5.8%).

†† Figure represents the weighted average of the estimated state income tax paid per return by median income filers in 2016-2017.

††† Figure represents the weighted average of estimated federal income taxes paid per return by median income filers in 2015.

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	\$278,869,100
Cost of operating all SBDC programs	\$260,757,635
Benefit to cost ratio	1.07 to 1.00
Cost of operating participating SBDCs	\$255,982,492
Benefit to cost ratio	1.09 to 1.00
Cost of all counseling*	\$156,149,320
Benefit to cost ratio	1.79 to 1.00
Cost of counseling to long-term pre-venture clients**	\$38,100,434
Benefit to cost ratio	7.32 to 1.00

* The weighted average cost of counseling was estimated to be 61% of the SBDCs' total operating budgets in 2016.

** Long-term counseling provided to pre-ventures was approximately 24.4% of the SBDCs' total counseling budgets in 2016.

APPENDIX 1
SMALL BUSINESS DEVELOPMENT CENTER IMPACT STUDY QUESTIONNAIRE

ALL DATA WILL BE HELD IN STRICT CONFIDENCE AND REPORTED ONLY IN THE AGGREGATE WITHOUT IDENTIFYING ANY INDIVIDUAL RESPONDENT

1. Please indicate the year you either started or purchased your business. (If never please indicate.)

Year Started _____ or
Year Purchased _____
Never Started or Purchased

2. What is the current status of this business?

- Business is still in operation under my ownership
 Business was sold to a new owner
 Business was closed

3. What was the major activity of your business or proposed business in 2016? *Please check one.*

- Retailing
 Services (personal or professional)
 Wholesale (distribution, etc.)
 Manufacturing
 Construction (all general and other contractors)
 Other (please specify) _____

4. Including yourself, and other owners, how many people did you employ at the end of each calendar year below? If you were not operating, please enter N/A.

2017 Number of full-time paid employees (35 hours or more per week)

2017 Number of part-time paid employees (fewer than 35 hours per week)

2017 Number of full-time independent contractors (35 hours or more per week) _____

2017 Number of part-time independent contractors (fewer than 35 hours per week) _____

2016 Number of full-time paid employees (35 hours or more per week)

2016 Number of part-time paid employees (fewer than 35 hours per week)

2016 Number of full-time independent contractors (35 hours or more per week) _____

2016 Number of part-time independent contractors (fewer than 35 hours per week) _____

5. What was the approximate gross sales revenue of your business during each of the calendar years below? If you were not operating, enter N/A.

2017 \$____,____,____.00
2016 \$____,____,____.00

6. Did the SBDC assist you in obtaining debt or equity financing?

Yes No

7. Estimate the total amount of debt and/or equity financing your business obtained in 2016-2017. Please enter in whole dollars. If you did not obtain new financing, please enter N/A.

SBA Loans \$____,____,____.00
Other Loans \$____,____,____.00
Equity Raised from Investors \$____,____,____.00

8. Was the overall service you received from the SBDC beneficial?

Yes No

9. How would you rate the knowledge and expertise of your SBDC advisor? (Please circle one).

Excellent Above Average Average Below Average Poor

10. How would you describe your overall working relationship with the SBDC advisor who provided counseling to you? (Please circle one).

Excellent Above Average Average Below Average Poor

11. Would you recommend the SBDC to a friend or business associate?

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 2016 REGARDLESS OF WHETHER THEY RESPONDED TO THE SURVEY OR NOT.

1. Total number of clients served (5 hours or more) in 2016.

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, EMAIL: _____

DEMOGRAPHIC DATA FORM #2

INFORMATION ON POINTS 1-4 SHOULD BE PROVIDED ONLY FOR CLIENTS SERVED IN 2016 (FIVE HOURS OR MORE OF COUNSELING ASSISTANCE) WHO RESPONDED TO THE SBDC IMPACT STUDY SURVEY. PLEASE ALSO INDICATE THE NUMBER OF UNDELIVERABLE QUESTIONNAIRES AT THE BOTTOM (POINT 5).

1. Total number of responding clients (5 hours or more) in 2016

Pre-venture _____

Established 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	_____	_____

5. UNDELIVERABLE QUESTIONNAIRES _____

CENTER: _____

CONTACT PERSON: _____

PHONE, FAX, EMAIL: _____

DEMOGRAPHIC DATA FORM #3

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

1. Counseling hours*
 - a. Total number of counseling hours provided to all clients
(regardless of hours) in 2016 _____ hours
 - b. Total number of counseling hours provided to clients in 2016 who
received five (5) or more hours of assistance LONG-TERM PRE-VENTURES _____ hours
LONG-TERM EXISTING CLIENTS _____ hours
2. Proportion of total budget allocated to counseling
[counseling hours (from 1a above) + travel hours/
total hours worked by all counselors] in 2016 _____ %
3. State sales tax rate in 2017 _____ %
4. Average state personal income tax
paid per return in 2017** \$ _____

* *Counseling Hours:* For the purpose of the national impact studies conducted under the auspices of the ASBDC, counseling hours shall include all time spent by counselors in the following activities: (1) direct one-on-one contact with clients in person or by telephone, (2) preparation for client meetings, (3) research activities on behalf of clients, (4) correspondence with clients by mail, fax, or email.

** 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, EMAIL: _____