

**ECONOMIC IMPACT OF SMALL BUSINESS DEVELOPMENT CENTER
COUNSELING ACTIVITIES IN THE UNITED STATES: 2010-2011**

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EXECUTIVE SUMMARY

This report presents the results of the 16th 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 7,849 established businesses and 3,094 pre-ventures that received five or more hours of counseling assistance (long-term clients) in 2010.

Data from 60 of the 63 SBDCs in the United States were used in the study. The 10,943 usable responses represented 17.5% of the clients that were sent questionnaires (62,523). The clients surveyed represented the entire long-term client population of the 60 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 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. To gain additional insights, the financing obtained by clients as a direct result of SBDC assistance was analyzed.

The 60 participating SBDCs counseled 62,523 long-term clients in 2010: 38,022 (60.8%) were classified as established businesses and 24,501 (39.2%) were classified as pre-ventures. Most respondents (90%) indicated that the service received from the SBDC was beneficial. Of the pre-venture clients, it was estimated that about 59.2% started new businesses in 2010 or 2011.

Results indicate that, after adjustments, the long-term clients of the SBDC generated a total of approximately \$7.7 billion in sales and 75,166 new full time equivalent jobs as a result of the assistance received (see Table 1). The average cost of generating each job was \$3,153. Based on clients' assessments, we estimate that an additional \$7.3 billion in sales and 83,268 jobs were saved due to SBDC counseling.¹

The incremental performance improvements resulted in \$324.0 million in additional tax revenues from established businesses and \$251.7 million from pre-venture clients who started new businesses. This amounted to a total of approximately \$575.7 million in tax revenues, of which \$356.9 million went to the state governments and \$218.8 million went to federal government. When compared to the cost of operating the 60 SBDCs that participated in the study (\$237.0 million), these counseling activities generated approximately \$2.43 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 5.89 to 1.00.²

¹ 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 result of the jobs and sales saved by clients totaled \$590.5 million. This amount was 2.49 times larger than the national budget for the participating SBDCs in 2010. Thus, if we include jobs and revenues saved, the combined benefit to cost ratio would be 4.92 to 1.00. Furthermore, counting total jobs saved and created, the cost per job would be \$1,496.

² If we consider **only** the 10,943 clients who responded to the study, the tax revenues these clients generated ($\$575.7 \text{ million} \times .175 = \100.8 million) were 3% greater than the long-term counseling budget. Furthermore, the **combined** impact of the jobs and revenues created **and** saved by those clients ($\$575.7 + \$590.5 \text{ million} \times .175 = \204.1 million) was 86% of the total budget of the 60 participating SBDCs, 49% greater than the total counseling budget, and 2.09 times greater than the portion of the budget spent on long-term counseling.

Approximately \$3.3 billion in financing was obtained by clients as a result of the counseling received (\$1.43 billion in SBA loans, \$1.37 billion in debt financing from other sources, and \$0.53 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 \$14.05 in new capital raised from external sources.

TABLE 1
IMPACT OF SBDC COUNSELING ON THE UNITED STATES ECONOMY

	Established Firms (N = 38,022)	New Firms (N = 24,501)	All Firms (N = 62,523)
Aggregate sales impact	\$5,171,570,000	\$2,487,033,000	\$7,658,603,000
Aggregate employment impact	32,167 new jobs	42,999 new jobs	75,166 new jobs
Sales revenues maintained	\$7,331,858,000		
Jobs saved	83,268 jobs saved		
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State tax revenues generated	\$230,401,500	\$126,520,910	\$356,922,410
Federal tax revenues generated	<u>\$ 93,637,010</u>	<u>\$125,170,830</u>	<u>\$218,807,840</u>
Total tax revenues generated	\$324,038,510	\$251,691,740	\$575,730,250
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Cost of all SBDC operations (63 Centers)			\$241,115,354
Benefit to cost ratio	1.34 to 1.00	1.04 to 1.00	2.39 to 1.00
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Cost of SBDC operations (60 participating Centers)			\$236,996,128
Benefit to cost ratio	1.37 to 1.00	1.06 to 1.00	2.43 to 1.00
Cost per job generated			\$3,153 per job
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Cost of all counseling			\$136,983,760
Benefit to cost ratio	2.37 to 1.00	1.84 to 1.00	4.20 to 1.00
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Cost of long-term counseling	\$ 70,546,640	\$ 27,122,780	\$ 97,669,420
Benefit to cost ratio	4.59 to 1.00	9.28 to 1.00	5.89 to 1.00
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SBA financing	\$1,098,364,300	\$ 329,806,500	\$1,428,170,800
Other debt financing	\$1,052,905,200	\$ 314,628,600	\$1,367,533,800
Equity financing	<u>\$ 391,923,200</u>	<u>\$ 141,790,700</u>	<u>\$ 533,713,900</u>
Total financing obtained	\$2,543,192,700	\$ 786,225,800	\$3,329,418,500
Financing "Leverage"	10.73 to 1.00	3.32 to 1.00	14.05 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 2010. 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 2010 and 2011 with the average changes in performance for all businesses in the states and territories served by the program 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 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 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 2010-2011 NATIONAL IMPACT STUDY

In 2010, the 60 SBDCs (of 63) in the United States that participated in this study provided long-term counseling assistance to a population of 62,523 clients, of which 38,022 were owners of established small businesses and

24,501 were seeking to start new businesses (pre-ventures).³ The entire population of long-term clients of the 60 participating centers was sent a questionnaire in the spring and summer of 2011. In the questionnaire clients were asked to evaluate the SBDC's services, provide their sales revenues and employment levels for 2010 and 2011, 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 (See Appendix 1).⁴ A total of 7,849 established business clients (20.6% response rate) and 3,094 pre-venture clients (12.2% response rate) returned questionnaires. This represented a 17.5% overall response rate for the clients sent questionnaires (10,943 of 62,523). However, since approximately 5,388 (8.6%) questionnaires were undeliverable, the effective response rate was 19.2%. Furthermore, 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 6,694 established business clients and 2,606 pre-venture clients.⁵

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.

³ The SBDCs in the United States in 2010 include: Alabama, Alaska, American Samoa, Arizona, Arkansas, California-UC Merced, Northeastern California, California-Los Angeles, California-San Diego/Imperial Counties, Northern California (Norcal), California-Santa Ana Tri-county (now 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-Houston, Northwest Texas (Lubbock), South Texas Border (San Antonio), Utah, Vermont, Virgin Islands, Virginia, Washington, West Virginia, Wisconsin, and Wyoming. The American Samoa, Connecticut, and district of Columbia SBDCs did not participate in the study.

⁴ 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.

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

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.

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

where: n = effective sample sizes (6,694 established, 2,606 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).

With sample sizes of 6,694 and 2,606 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 the 99% level. In other words, we were 99% confident that our sample means were no more than one-twentieth of one standard deviation from the population means for the 60 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).⁶ Comparisons and Chi-square goodness-of-fit tests using

⁶ The comparative statistical analysis of the population and respondents were conducted with data from 59 state centers. The remaining state SBDCs did not provide complete or usable demographic data for this analysis.

standardized data indicated that both the established business and pre-venture respondents were proportionally representative of the population in terms of the gender of the primary owner. Non-whites were under-represented among pre-venture respondents (27.5% of the population but only 21.8% of the responses) and manufacturing firms were over-represented among established business respondents (12.6% of the population as opposed to 20.6% of the responses).

Response Bias. The questionnaire was sent to clients in several waves in the spring and summer of 2012. Respondents were divided into groups of early and late responders 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, t-tests and Analysis of Variance (ANOVA) indicated that early responding established business clients evaluated the SBDC's services more favorably than late responding clients. Furthermore, early responding pre-venture clients reported higher first-year sales than clients who responded later. The evidence generally suggests a lack of an upward bias in the data used to estimate the performance of the client population. However, given that later responders could be expected to be more similar to non-respondents than earlier responders, the findings should still be viewed with caution.

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 ($r = .58$; $r = .58$; $r = .69$) and pre-venture clients ($r = .60$; $r = .60$; $r = .71$). 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 that received at least five hours of assistance, sales and employment changes between the year in which counseling was received (2010) and the year after counseling was received (2011) were calculated. Two part-time employees were considered equivalent to one full-time employee.⁷

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.⁸ Only clients who indicated that the SBDC's services were beneficial were used to calculate incremental growth rates.⁹ The incremental growth rates were multiplied by the average sales and employment of the respondents for the year before counseling was received.

⁷ All employment data reported in this study refers to full-time equivalent jobs.

⁸ GSP growth among private industries between 2010 and 2011 was used as a surrogate for average state sales growth rates. We used data obtained from the Bureau of Economic Analysis to estimate state sales growth rates. Average state employment growth rates were 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.

⁹ 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.

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 or territory.¹⁰ 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 added value of 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 2010, the most recent year available, were obtained from the Internal Revenue Service's *Statistics of Income Bulletin* (Spring 2012). 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 national average was then computed based on the populations of clients served by each SBDC.¹¹

¹⁰ Sales tax data were available for all 60 of the participating SBDCs. A total of 59 SBDCs supplied state income tax data. 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 also available for all participating centers.

¹¹ Each responding SBDC provided state or territory income tax data for the most recent year available. In most cases this was 2010 or 2011; however, some states were only able to obtain data for 2008 or 2009. Since experience shows that these numbers do not vary much from year to year it is unlikely that this influenced the results.

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. 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.¹² The formula for the calculations can be expressed as follows:

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

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 2010 and 2011 (about 45.4% of the sample did not start a business). This adjustment was made as follows:

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

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 estimated number of pre-venture clients. This formula is shown below.

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

¹² Aggregate figures for sales generated and jobs created were calculated using a similar formula: average performance X proportion of satisfied clients X total number of clients (tax rate not included).

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. We also compared the tax impact with the entire SBDC budget for the full complement of 63 centers. The total operating budget of the SBDC, per data supplied by the Small Business Administration for fiscal year 2010, 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.¹³ Thus, the calculations compare the impact of assistance to long-term clients, which consumed a total of 42% of the United States SBDC program's budget, with the amount spent on the entire SBDC operation.

To provide additional insights we also made cost-benefit comparisons with the cost of the 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

¹³ Estimates of counseling budgets were made from data supplied by 59 centers and then applied to the entire budget for all 60 participating 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.

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 could afford. A primary rationale of government-funded 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 directly extrapolated to the population of established business clients.

Financing. Established business and pre-venture clients were 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 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 7,438 clients who provided usable responses to the service evaluation question, 90% indicated that the SBDC's services were beneficial. Furthermore, clients gave a rating of 4.45 out of a possible 5.00 on the knowledge and expertise of their counselors and a rating of 4.45 on their working relationship with the counselors (See Table 2). Finally, 94% of the 7,434 responding established business clients indicated that they would recommend the SBDC's services to other business owners.

Comparison with Private Consultants. Results indicated that 72% of the responding clients (n = 7,508) believed that it would not have been possible for them to obtain private consulting services of a similar quality at a price they could afford.

Economic Impact Estimates. Table 3 compares the 2010 and 2011 sales and employment levels of established small business clients. As this Table shows, these clients reported an average increase in sales of \$188,163 (from \$853,831 in 2010 to \$1,014,994 in 2011). There was also an increase in the number of individuals employed by clients in 2011 (8.59) compared to 2010 (7.56).

Table 4 compares the growth in sales and employment between 2010 and 2011 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 22.0% compared to an increase of 4.3% for the average business in the U.S. In addition, employment levels of established clients increased by 13.6% compared to a 1.2% increase for U.S. businesses in general.¹⁴

¹⁴ Again, the national figures were calculated by state averages weighted by the number of long-term clients served per SBDC.

The overall impact estimate for established business clients suggests that the SBDCs' services led to a total of approximately \$324.0 million in new tax contributions: approximately \$230.4 million went to state governments and \$93.6 million went to the federal government (Table 5). As shown in Table 6, these additional tax revenues were 34% greater than the operating budget of the entire SBDC program and 37% greater than the operating budget of the centers that participated in the study. Furthermore, established clients generated tax revenues that were 2.37 times greater than the total counseling budget of the participating SBDCs; these revenues also represented a return of \$4.59 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 \$192,832 in revenues and 2.19 full-time equivalent jobs. In total, this amounted to \$7.3 billion in revenues retained and 83,268 jobs saved.¹⁵

Financing Obtained. According to the respondents, 20% of established business clients (1,471 of 7,354) were assisted in preparing to seek financing. Those clients obtained an average of \$334,437 in capital, of which \$144,438 came from SBA loans, \$138,460 came from other forms of debt financing, and \$51,539 came from equity financing. Extrapolations indicate that clients raised \$1.10 billion in SBA loans, \$1.05 billion in other debt financing, and \$391.92 million in equity financing (approximately \$2.5 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 10.73 to 1.00 for long-term established business clients alone.

¹⁵ It should be noted again that revenues retained and jobs saved were not figured into the benefit to cost estimates.

Our estimates also suggest that of the 38,022 established business clients served, 3,184 received SBA guaranteed loans as a consequence of SBDC assistance. Furthermore, 3,423 obtained other loans and 1,313 obtained equity financing.

PRE-VENTURE CLIENTS

Perceptions of the Quality of Counseling. Of the 2,895 pre-venture clients who provided an evaluation of the SBDC's services, 90% felt the counseling was beneficial. In addition, clients gave a rating of 4.42 out of a possible 5.00 on their counselors' knowledge and expertise and a rating of 4.41 on their working relationship with the counselors (See Table 7). Finally, of the 2,883 clients who answered the question on whether they would recommend the SBDC's services to other entrepreneurs, 93% responded in the affirmative.

Comparison with Private Consultants. A total of 73% of the responding clients (n = 1,690) believed that it would not have been possible for them to obtain private consulting services of a similar quality at a price they could afford.

Economic Impact Estimates. After adjusting for unsuccessful clients, we calculated that an average of \$112,786 in sales and 1.95 new jobs were created per pre-venture client.¹⁶ As Table 8 indicates, these new employees generated tax payments of approximately \$251.7 million to the state and federal governments (\$126.5 million to the state and \$125.2 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 \$1.04 for every dollar expended. Compared to the operating budget of the SBDCs that participated in the study, the benefit to cost ratio was 1.06 to 1.00. Furthermore, the tax revenues generated exceeded the cost of all counseling

¹⁶ Since only 59.2% of all responding clients started businesses within one year, the estimate of sales and employment for start-ups is \$195,517 and 3.29, respectively.

activities by a ratio of 1.84 to 1.00. Finally, the tax revenues from pre-venture clients were 9.28 times the amount spent on long-term pre-venture counseling (See Table 9).

Financing Obtained. According to the responses, 17% of all pre-venture clients (482 of 2,838) received assistance from the SBDC in preparing to obtain financing. The average raised was \$79,182 in SBA loans, \$75,538 in other sources of debt financing, and \$34,042 in equity financing for a total of \$188,762. Extrapolating to the population suggests that a total of \$329.81 million in financing from SBA loans, \$314.63 million from other sources of debt, and \$141.79 million in financing from equity investors were raised. The grand total of approximately \$786.2 million suggests that each tax dollar expended on the SBDC was leveraged by \$3.32 in public and private financing for new ventures.

Finally, our estimates suggest that of the 24,501 pre-venture clients served, 1,776 received SBA guaranteed loans as a consequence of SBDC assistance. Furthermore, 1,648 obtained other loans and 879 obtained equity financing.

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 \$7.7 billion in incremental sales and 75,166 new jobs to the nation. The latter number suggests that the cost of generating a new job through investment in the SBDC was \$3,153 per job. In addition, our estimates suggest that 83,268 jobs were saved and \$7.3 billion in sales revenues were maintained as a result of the counseling. Finally, 59.2% 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 \$2.43 for every dollar spent on the 60 (of 63) SBDCs that participated in the study.¹⁷ Furthermore, our estimates indicate that \$5.89 was returned for each dollar expended on counseling long-term clients.

Finally, our estimates indicate that approximately \$3.3 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 \$14.05 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. Again, as noted in the Executive Summary, if we consider only the 10,943 clients

¹⁷ 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 \$590.5 million. This amount was 2.49 times larger than the budget for the 60 participating SBDCs. Furthermore, counting total jobs saved and created, the cost per job was \$1,496.

who participated in the study, the tax revenues these clients generated (\$575.7 million X .175 = \$100.8 million) were 3% greater than the counseling budget for all of the 62,523 long-term clients served. Furthermore, the combined impact of the jobs and revenues created and saved by those clients (\$1.17 billion X .175 = \$204.1 million) was 86% of the total budget of the 60 participating SBDCs, 49% greater than the total counseling budget, and 2.09 times greater than the portion of the budget spent on long-term counseling.

In addition, the estimates reported herein do not consider (1) the other programs the SBDC offers (e.g., workshops, seminars), (2) the value added to the operations of short-term clients, (3) the continuing tax revenues generated by long-term clients 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 revenue sources such as corporate taxes, property taxes, unemployment taxes, social security payments, or (6) 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 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 (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 provides 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	4,737	63.6%
4. Above Average	1,766	23.7%
3. Average	673	9.0%
2. Below Average	115	1.5%
1. Poor	153	2.1%
	<hr/>	<hr/>
Totals	7,444	100.0%

Average = 4.45

Clients' Working Relationship with Counselors

	Number	Percentage
5. Excellent	4,947	66.5%
4. Above Average	1,428	19.2%
3. Average	729	9.8%
2. Below Average	155	2.1%
1. Poor	179	2.4%
	<hr/>	<hr/>
Totals	7,438	100.0%

Average = 4.45

TABLE 3
 2010-2011 AVERAGE SALES AND EMPLOYMENT OF ESTABLISHED CLIENTS
 WHO INDICATED THAT SBDC ASSISTANCE WAS VALUABLE

	2010	2011	Average Change
Sales *	\$853,831	\$1,104,994	+ \$188,163 22.0%
Employment **	7.56 jobs	8.59 jobs	+ 1.03 jobs 13.6%

* Based on analysis of the 5,594 clients that provided usable sales data for both 2010 and 2011 and indicated SBDC services were beneficial.

** Based on analysis of the 6,216 clients that provided usable employment data for both 2010 and 2011 and indicated SBDC services were beneficial.

TABLE 4
 CHANGES IN SALES AND EMPLOYMENT BETWEEN 2010-2011:
 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	+22.0%	+ 4.3%	+17.7%	+ \$151,128
Employment	+13.6%	+ 1.2%	+12.4%	+ 0.94 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	151,128		.041*		.90		38,022		\$212,034,360
Employment	0.94		\$571**		.90		38,022		<u>\$ 18,367,140</u>
Total									\$230,401,500

FEDERAL TAX REVENUES

	Tax	X	Tax	X	% Clients	X	# of Long	=	Total Tax
	Base		Rate		Valuing		Term Clients		Revenues
					Service				Generated
Employment	0.94		\$2911***		.90		38,022		\$ 93,637,010
									\$324,038,510
TOTAL INCREMENTAL STATE AND FEDERAL TAX REVENUES									

* Figure represents 75% of the weighted average state sales tax rate in the United States in 2011 (5.5%).

** Figure represents the weighted average of the estimated state income taxes paid per return by median income filers in 2010.

*** Figure represents the weighted average of estimated federal income taxes paid per return by median income filers in 2010.

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	\$324,038,510
Cost of operating all SBDC programs	\$241,115,354
Benefit to cost ratio	1.34 to 1.00
Cost of operating participating SBDCs	\$236,996,128
Benefit to cost ratio	1.37 to 1.00
Cost of all counseling*	\$136,983,760
Benefit to cost ratio	2.37 to 1.00
Cost of counseling long-term established business clients**	\$ 70,546,640
Benefit to cost ratio	4.59 to 1.00

* The weighted average cost of counseling was estimated to be 57.8% of the SBDCs' total operating budgets in 2010.

** Long-term counseling provided to established businesses was approximately 51.5% of the SBDCs' total counseling budgets in 2010.

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	1,837	63.3%
4. Above Average	650	22.4%
3. Average	286	9.9%
2. Below Average	54	1.9%
1. Poor	75	2.6%
<hr style="width: 20%; margin-left: auto; margin-right: 0;"/>		
Totals	2902	100.0%

Average = 4.42

Clients' Working Relationship with Counselors

	Number	Percentage
5. Excellent	1,896	65.5%
4. Above Average	526	18.2%
3. Average	330	11.4%
2. Below Average	59	2.0%
1. Poor	85	2.9%
<hr style="width: 20%; margin-left: auto; margin-right: 0;"/>		
Totals	2896	100.0%

Average = 4.41

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	112,786*		.041†		.90		24,501		\$101,968,040
Employment	1.95 **		\$571††		.90		24,501		<u>\$ 24,552,570</u>
Total									\$126,520,910

FEDERAL TAX REVENUES

	Tax	X	Tax	X	% Clients	X	# of Long	=	Total Tax
	Base		Rate		Valuing		Term Clients		Revenues
					Service				Generated
Employment	1.95		\$2911†††		.90		24,501		<u>\$125,170,830</u>

TOTAL INCREMENTAL STATE AND FEDERAL TAX REVENUES \$251,691,740

* Based on analysis of the 2,221 clients that provided usable sales data for 2011 and indicated SBDC services were beneficial.

** Based on analysis of the 2,385 clients that provided usable employment 2010 and indicated SBDC services were beneficial.

† Figure represents 75% of the weighted average state sales tax rate in the United States in 2011 (5.5%).

†† Figure represents the weighted average of the estimated state income tax paid per return by median income filers in 2010.

††† Figure represents the weighted average of estimated federal income taxes paid per return by median income filers in 2010.

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	\$251,691,740
Cost of operating all SBDC programs	\$241,115,354
Benefit to cost ratio	1.04 to 1.00
Cost of operating participating SBDCs	\$236,996,128
Benefit to cost ratio	1.06 to 1.00
Cost of all counseling*	\$136,983,760
Benefit to cost ratio	1.84 to 1.00
Cost of counseling to long-term pre-venture clients**	\$ 27,122,780
Benefit to cost ratio	9.28 to 1.00

* The weighted average cost of counseling was estimated to be 57.8% of the SBDCs' total operating budgets in 2010.

** Long-term counseling provided to pre-ventures was approximately 19.8% of the SBDCs' total counseling budgets in 2010.

APPENDIX 1
SMALL BUSINESS DEVELOPMENT CENTER IMPACT STUDY QUESTIONNAIRE

ALL INFORMATION WILL BE KEPT CONFIDENTIAL

1. Please indicate the year your business was either started or acquired (if never please indicate).

Year Started _____ or Year Acquired _____

Never Started

2. What was the major activity of your business or proposed business in 2010?
Please check one.

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

3. 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).*

2010 _____ full-time employees
2011 _____ full-time employees

2010 _____ part-time employees
2011 _____ part-time employees

4. Please estimate the number of jobs saved as a result of the assistance received from the SBDC.

Existing Full-time jobs saved _____
Existing Part-time jobs saved _____

5. What were your gross sales revenues (i.e. before expenses) for the following (calendar years)? *If you were not in business during either years write N/A (not applicable) in the appropriate blank(s).*

2010 \$ _____
2011 \$ _____

6. Please estimate the amount of sales revenues maintained as a result of the SBDC's assistance.

Existing revenues maintained \$ _____

7. Did the SBDC assist you in obtaining financing?

Yes No

8. Please estimate the total amount of debt and equity financing your business raised in 2010-2011.

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

<input type="checkbox"/> Excellent	<input type="checkbox"/> Below Average
<input type="checkbox"/> Above Average	<input type="checkbox"/> Poor
<input type="checkbox"/> Average	

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

<input type="checkbox"/> Excellent	<input type="checkbox"/> Below Average
<input type="checkbox"/> Above Average	<input type="checkbox"/> Poor
<input type="checkbox"/> Average	

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

Yes No

13. Was comparable assistance available from a private consultant at a price you could afford?

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 2010 REGARDLESS OF WHETHER THEY RESPONDED TO THE SURVEY OR NOT.

1. Total number of clients served (5 hours or more) in 2010.

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 2010 (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 2010

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: _____

