

**ECONOMIC IMPACT OF SMALL BUSINESS DEVELOPMENT CENTER
COUNSELING ACTIVITIES IN NEW MEXICO: 2018-2019**

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EXECUTIVE SUMMARY

This report analyzes the sales and employment changes and financing obtained by a sample of established businesses and pre-ventures (persons aspiring to start a business) that received five or more hours of counseling assistance (long-term clients) from the New Mexico Small Business Development Center (SBDC) in 2018. The report also provides an estimate of the jobs saved and existing sales retained through SBDC counseling.

There were 89 responses to a questionnaire, a 13.3% response rate. The clients surveyed represent the entire population of long-term clients (received five hours or more of counseling) of the New Mexico SBDC in 2018. The sales and employment changes of the sample in 2019 (the year after receiving assistance) were compared to the average change in sales and employment of all businesses in New Mexico. The incremental improvement in the sample's performance, above the performance of the average New Mexico business, was extrapolated across the entire long-term client population to estimate the tax revenues generated through SBDC counseling. To be conservative, only clients who indicated that the SBDC's services were beneficial were used. The tax revenues generated by long-term clients were compared to the total cost of the New Mexico SBDC. Established business clients were also asked to estimate jobs and revenues saved due to the counseling services provided by the SBDC.

To gain additional insights into the value of the services offered by the New Mexico SBDC the financing obtained by clients as a direct result of SBDC assistance was analyzed.

The New Mexico SBDC counseled 671 long-term clients during 2018. Of these, 424 were established businesses and 247 were pre-ventures. Approximately 89% of the respondents said that the services received were

beneficial. In aggregate, the long-term clients of the New Mexico SBDC generated \$61.1 million in incremental sales and 697 new jobs because of SBDC counseling assistance (see Table 1). We estimate that an additional \$48.8 million in sales and 1,395 jobs were saved due to the counseling.¹

The incremental performance of established business clients yielded \$1.2 million in tax revenues; another \$3.5 million in tax revenues were gained from pre-venture clients who started new businesses. The total amounted to approximately \$4.7 million in tax revenues, of which \$2.8 million went to the state and \$1.9 million, went to the federal government.

Compared to the total cost of operating the SBDC (\$4.4 million), the counseling provided to both established business and pre-venture clients generated \$1.07 in tax revenues in one year for every \$1 spent on the entire program. The average cost of each new job generated was \$6,292.

Furthermore, an estimated \$63.5 million in financing was obtained by clients due to the counseling received. This figure suggests that every dollar expended on the SBDC operation was leveraged by approximately \$14.47 in new capital raised from external sources.

¹ Revenues retained and jobs saved were not figured into the benefit to cost estimates.

TABLE 1
ESTIMATED IMPACT OF SBDC COUNSELING

	Established Firms (N = 424)	Pre-Ventures (N = 247)	All Firms (N = 671)
Aggregate sales impact	\$9,935,000	\$51,206,000	\$61,141,000
Aggregate employment impact	235 new jobs	462 new jobs	697 new jobs
Existing revenues maintained	\$48,802,000		
Existing jobs saved	1395 jobs saved		
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State tax revenues generated	\$ 549,500	\$2,283,400	\$2,832,900
Federal tax revenues generated	\$ 629,100	\$1,234,600	\$1,863,700
Total tax revenues generated	\$1,178,600	\$3,518,000	\$4,696,600
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Cost of entire SBDC operation			\$4,385,642
Benefit to cost ratio	0.27/1.00	0.80/1.00	1.07/1.00
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Cost per job			\$6,292
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Cost of all counseling			\$3,859,365
Benefit to cost ratio	0.31/1.00	0.91/1.00	1.22/1.00
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Cost of long-term counseling	\$1,674,964	\$702,404	\$2,377,368
Benefit to cost ratio	0.70/1.00	5.01/1.00	1.98/1.00
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SBA financing clients obtained	\$11,554,800	\$ 3,334,500	\$14,889,300
Debt financing clients obtained	\$ 1,068,500	\$40,847,600	\$41,916,100
Equity clients obtained	\$ 0	\$ 6,669,000	\$ 6,669,000
Total financing obtained	\$12,623,300	\$50,851,100	\$63,474,400
Financing Leverage	2.88/1.00	11.59/1.00	14.47/1.00

INTRODUCTION

This report describes the results of a study designed to assess the economic impact of the long-term counseling activities of the New Mexico Small Business Development Center (SBDC) program in 2018. Long-term clients are those who received a minimum of five hours of counseling assistance from the SBDC. The economic impact of counseling activities was analyzed by comparing clients' sales and employment changes between 2018 and 2019 with the average changes for all New Mexico businesses during this time period. The growth in sales and employment in excess of statewide 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 jobs and revenues saved as a consequence of the counseling received. In addition to this, clients were asked to indicate the amount of debt and equity financing they were able to obtain as a direct result of the counseling received from the SBDC.

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

THE STUDY

In 2018 the New Mexico SBDC provided long-term counseling assistance to 671 clients, of whom 424 owned established small businesses and 247 were seeking to start new businesses (pre-ventures). The entire population of long-term clients was sent a questionnaire by mail or email. A total of 89 clients returned usable questionnaires, a 13.3% response rate.²

² Not all of the respondents provided usable responses to every question; therefore, the effective sample sizes for the analyses may vary.

SAMPLE SIZE

To determine if the number of responses received were statistically reliable, the following formula was used:

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

where: n = actual sample size (89).
 N = size of population (671).
 s = standard deviation of the population (standardized value = 1).
 Z = confidence interval for the mean.
 E = amount of error in the mean to be tolerated (20% of s).

Based on these statistics, we were 95.8% confident that our sample means were no more than one-fifth of one standard deviation from the population means.

SAMPLE VALIDATION

Statistical tests were conducted to ensure that there was a minimum likelihood of response bias and the responses to the questionnaire were reliable. The following procedures were used.

Response Bias. To test for response bias, we compared early and late responding established business and pre-venture clients along the following dimensions: number of employees, sales revenues, financing obtained, and the evaluation of the benefits of the SBDC's services. This analysis showed no evidence of an upward bias on the performance data provided by respondents.

Reliability. The reliability of the questionnaire was assessed by a correlation analysis comparing clients' perceptions of whether the SBDC's services were beneficial and their evaluations of (1) the quality of their counselors, and (2) their willingness to recommend the SBDC to others. Results of the correlation analyses were statistically significant at the 5% level for established businesses and pre-ventures.

DATA ANALYSIS METHODS: ESTABLISHED 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.

The rate of growth in sales and employment for established clients was compared with the average growth of all businesses in New Mexico.³ The difference between the growth rate of clients' businesses and that of businesses in the state was used to estimate the incremental or marginal changes in the sales and employment of the sample. To be conservative, we chose not to impute impact to clients who did not believe they received value from the SBDC. Thus, only those who indicated that its services were beneficial were used to calculate incremental growth rates.

The incremental growth rates were multiplied by the average sales and employment of the respondents for the year counseling was received. The incremental change in sales was then multiplied by the state sales tax rate. The state sales tax rate was reduced by 25% to reflect the fact that some businesses do not pay sales taxes. This adjustment was arbitrary and may still overestimate taxes paid on sales. However, it compensates for the fact that businesses are taxed in ways not measured in this study (e.g., corporate income tax rates, property taxes, etc.).

The incremental change in employment was multiplied by the median state and federal income taxes paid per return for the state of New Mexico. Federal income tax data were obtained from Table 2 of the SOI Bulletin published by the IRS (2019). Tax data for 2017, the most recent figure available, was used. Income taxes paid per return for persons of median incomes were used rather than average income taxes for all returns. This was done to better reflect the types of employment opportunities offered by responding small business owners. This again represents a conservative adjustment to the data.

³ Comparative data on sales were obtained from the Bureau of Economic Analysis database. Comparative data on employment were obtained from the Bureau of Labor Statistics.

Information on state income tax paid in 2014, the most recent year available, was obtained from the website of the New Mexico Taxation and Revenue Department. Since the median federal income tax paid per return was less than the New Mexico average, the average state income tax paid per return was adjusted accordingly.

Adjusted sales tax rates and median state personal income tax payments were multiplied by the average incremental improvement in sales and employment, respectively, to arrive at the state value added figures. Median federal personal income tax paid per return was also multiplied by the average incremental improvement in employment. All these numbers were then multiplied by the total number of established business clients, adjusted for the proportion of the respondents who indicated the SBDC's services were beneficial. The formula for the calculations can be expressed as follows:

Average	X	Tax Rate	X	Proportion of Clients	X	Total Number	=	Total Tax
Incremental				Satisfied w/Service		of Clients		Revenues
Growth								

DATA ANALYSIS METHODS: PRE-VENTURE CLIENTS

Similar procedures were used for long-term pre-venture clients, with the following exceptions. First, since pre-ventures start with no sales or employees, it is impossible to calculate a rate of growth. Thus, raw averages were used to assess economic impact. Second, the averages were adjusted to account for the total number of pre-venture clients who failed or did not start a business. This adjustment was made as follows:

Average Performance = $AS \times (NS/NP)$

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

Once this adjustment was made, the sales and employment growth of 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. The formula is shown below.

$$\begin{array}{ccccccc} \text{Average} & \times & \text{Tax} & \times & \text{Proportion of Clients} & \times & \text{Total} \\ \text{Performance} & & \text{Rate} & & \text{Satisfied w/Service} & & \text{Clients} \end{array} = \begin{array}{c} \text{Total Tax} \\ \text{Revenues} \end{array}$$

BENEFIT TO COST OF SBDC SERVICES

The benefit of the services provided by the SBDC was divided by the total cost of providing the services to arrive at a benefit-to-cost ratio. The SBDC's total operating budget was used for this calculation. This was a conservative approach since only part of the SBDC's' budget was spent on counseling assistance. Thus, to obtain further insights we also compared the tax revenues generated by clients with the cost of counseling activities both in total and for long-term established and pre-venture clients separately. The cost of long-term counseling was estimated based on the proportion of total counseling hours devoted to those clients, per data supplied by the SBDC.

OTHER ANALYSES

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

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.

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

RESULTS

The results of the analysis of the counseling services provided by the New Mexico SBDC are presented below.

ESTABLISHED BUSINESSES

Quality of Counseling. Of those who provided usable responses to the service evaluation question, 91% indicated that the SBDC's services were beneficial. Furthermore, clients gave a rating of 4.42 out of a possible 5.00 on the knowledge and expertise of their counselors and a rating of 4.52 on their working relationship with the counselors (scores of 3 indicated an average rating, scores of 4 indicated an above average rating, and scores of 5 indicated an excellent rating). Finally, 94% of the responding established business clients indicated that they would recommend the SBDC's services to others.

Economic Impact Estimates. Table 2 compares the 2018 and 2019 sales and employment levels of established small business clients. Table 3 compares the SBDC clients' growth in sales and employment between 2018 and 2019 with the growth experienced by the average business in New Mexico. As shown, SBDC clients had an average increase in sales of \$37,931. In percentage terms this

increase was larger than the change in sales experienced by the average New Mexico business (11.2% versus 3.6%). There was an increase in the number of individuals employed by clients in 2019 compared to 2018 (6.83 versus 6.12). Employment levels of established clients increased by 11.6% compared to a 1.6% increase in employment for New Mexico businesses in general.

The overall impact estimate for established business clients suggests that the SBDC's services led to a tax contribution of approximately \$1.18 million. This broke down as a contribution of approximately \$0.55 million to the state government and \$0.63 million to the federal government (See Table 4).

As shown in Table 5, these tax revenues were 27% of the SBDC's total operating budget, 31% of its counseling budget, and 70% of the amount spent on long-term established clients.

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 \$115,100 in revenues and 3.29 full-time equivalent jobs. In total, this amounted to \$48.8 million in revenues retained and 1,395 jobs saved.⁴

Financing Obtained. According to the respondents, 18% of established business clients were assisted in preparing to seek financing. Those clients obtained an average of \$165,400 in capital, of which \$151,400 came from SBA loans, \$14,000 came from other forms of debt financing, and \$0 came from equity financing. Extrapolations indicate that clients raised \$11.55 million in SBA loans, \$1.07 million in other debt financing, and \$0 in equity financing (\$12.6 million in total) with the help of the SBDC. This suggests that the total expenditure of tax dollars on the SBDC were leveraged by public and private financing at a ratio of 2.88 to 1.00 for long-term established businesses.

⁴ It should be noted that revenues retained and jobs saved were not figured into the benefit to cost estimates.

Our estimates suggest that 76 established business clients received SBA loans as a consequence of SBDC long-term counseling. Furthermore, 15 received other loans and 0 received equity financing.

PRE-VENTURE CLIENTS

Perceptions of the Quality of Counseling. Of the pre-venture clients who provided an evaluation of the SBDC's services, 85% felt the counseling was beneficial. In addition, clients gave a rating of 4.30 out of a possible 5.00 on their counselors' knowledge and expertise, and a rating of 4.15 on their working relationship with the counselors (scores of 3 indicated an average rating, scores of 4 indicated an above average rating, and scores of 5 indicated an excellent rating). Moreover, 85% of the responding pre-venture clients indicated that they would recommend the SBDC's services to others.

Economic Impact Estimates. After adjusting for unsuccessful clients, we calculated that an average of \$243,896 in sales and 2.20 new jobs were created per pre-venture client. As Table 6 shows, these new ventures generated tax payments of \$3.5 million (\$2.3 million to the state and \$1.2 million to the federal government).

When compared to the cost of the entire SBDC operation, the tax revenues from pre-venture clients generated \$0.80 for every dollar expended. Furthermore, the tax revenues generated were 91% of the cost of the SBDC's counseling activities. Finally, the tax revenues from pre-venture clients were 5.01 times greater than the amount expended on pre-venture who received long-term counseling (see Table 7).⁵

⁵ Pre-ventures had no sales or employees at the time the counseling was received. Therefore, we did not attempt to measure revenue or job retention.

Financing Obtained. According to the responses, 18% of all pre-venture clients received assistance from the SBDC in preparing to obtain financing. The average raised was \$75,000 in SBA loans, \$918,750 in other sources of debt financing, and \$150,000 in equity financing for a total of \$1,143,750. Extrapolating to the population suggests that a total of \$50.85 million in financing was obtained: \$3.33 million in SBA financing, \$40.85 million in debt financing from other sources, and \$6.67 million in equity financing. This total indicates that each tax dollar expended on the SBDC was leveraged by \$11.59 in public and private financing for new ventures.

Our estimates also suggest that as a consequence of SBDC long-term counseling, 22 of the pre-venture clients received SBA loans, 22 received loans from other sources, and 22 received equity financing.

SUMMARY AND CONCLUSIONS

Results of this study suggest that the New Mexico SBDC makes an important contribution to the economic development of the State of New Mexico. Our analysis indicated that SBDC clients generated approximately \$61.1 million in incremental sales and 697 new jobs for the state. The latter number suggests that the cost of generating a new job through investment in the New Mexico SBDC was \$6,292 per job. Furthermore, \$48.8 million in sales and 1,395 jobs were saved because of the SBDC's interventions.

Estimates suggest that the one-year tax benefits accruing as a consequence of the performance improvements of SBDC-counseled clients generated a return of \$1.07 for every dollar spent on the entire SBDC operation in New Mexico. Furthermore, when compared to the cost of long-term counseling our estimates indicate that \$1.98 was returned for each dollar expended.

Finally, we estimate that \$63.5 million in capital was raised by clients as a direct result of the assistance of the SBDC. This suggests that each dollar expended on the New Mexico SBDC program was later leveraged by approximately \$14.47 in debt and equity capital. From all these analyses, we

conclude that the New Mexico SBDC is both effective and efficient in the discharge of its charter.

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 SBDC clients are especially prone to exceed sales and employment growth rates of "average" businesses in the state. It is also possible that some of the gains of the clients were not net gains to the economy.

While impact methodologies are always susceptible to such problems the tests conducted for bias and reliability suggest that the results are accurate enough to conclude that the SBDC program in New Mexico makes a positive contribution to the economy. Furthermore, the results must be viewed in light of the fact that they are net of all the conservative downward adjustments in performance described earlier in this report. Thus, the estimates reported herein do not consider the impact of other SBDC services, the continuing tax revenues generated by long-term clients after the year of analysis, the many failures avoided through SBDC assistance, the unviable business ideas it discouraged, nor the jobs and revenues saved. Other tax revenue sources such as corporate taxes, property taxes, unemployment taxes, social security payments, and so on are also not included in the analysis.

From a public policy standpoint, the implication of this research is that the SBDC makes a contribution to the economies of New Mexico and U.S. By assisting established small businesses improve their operations and raise capital the New Mexico SBDC contributes to the more efficient allocation and utilization of resources. Furthermore, these small firms provide employment opportunities for the citizens of New Mexico. The SBDC also plays an important role in fostering entrepreneurship through the assistance it provides to pre-venture clients. Those clients add to the economic development of New Mexico

and the United States and, not incidentally, generate a large number of new jobs. Because the SBDC provides assistance to small businesspeople and would-be entrepreneurs who often cannot afford the luxury and expense of a private consultant, its contributions become even more important. The evidence that its assistance returns tax revenues to state and federal governments, and value and capital to its clients that are greater than the direct cost of providing the services makes the existence of the New Mexico SBDC program justifiable from a public policy perspective.

TABLE 2
2018-2019 AVERAGE EMPLOYMENT OF ESTABLISHED CLIENTS
WHO INDICATED THAT SBDC ASSISTANCE WAS VALUABLE

	2018	2019	Change
	<hr/>	<hr/>	<hr/>
Sales	\$338,801	\$376,732	+\$37,931
Employment	6.12	6.83	+ 0.71

TABLE 3
CHANGES IN EMPLOYMENT BETWEEN 2018-2019: SBDC ESTABLISHED
BUSINESS CLIENTS VERSUS AVERAGE STATE BUSINESS

	Average % change in small business sample	Average % change all firms in state	Average incremental change in small business sample	
	<hr/>	<hr/>	percent	aggregate
			<hr/>	<hr/>
Sales	+11.2%	+ 3.6%	+ 7.6%	+\$25,749
Employment	+11.6%	+ 1.6%	+10.0%	+0.61 jobs

TABLE 4
INCREMENTAL TAX REVENUES ADDED TO STATE AND FEDERAL GOVERNMENTS
AS A RESULT OF SBDC COUNSELING OF ESTABLISHED BUSINESS CLIENTS

STATE TAX REVENUES

	Tax Base	X	Tax Rate	X	% Clients Valuing Service	X	# of Long Term Clients	=	Total Tax Revenues Generated
Sales	25,749		.038*		.91		424		\$377,500
Employment	0.61		\$731**		.91		424		<u>\$172,000</u>
									\$549,500

FEDERAL TAX REVENUES

Employment	0.61		\$2673***		.91		424		<u>\$ 629,100</u>
TOTAL INCREMENTAL STATE AND FEDERAL TAX REVENUES									\$1,178,600

* Figure represents 75% of state sales tax rate (5.125%) in 2019.

** Figure represents average state income tax paid per return by persons of median incomes in 2014.

*** Figure represents average federal income tax paid per return by persons of median incomes in New Mexico in 2017.

TABLE 5
THE COSTS AND BENEFITS OF SBDC COUNSELING: ESTABLISHED BUSINESSES

Total incremental State and Federal Tax Revenues Added by Established Business Clients	\$1,178,600
Cost of operating the SBDC	\$4,385,642
Benefit to cost ratio	0.27/1.00
Cost of all counseling *	\$3,859,365
Benefit to cost ratio	0.31/1.00
Cost of long-term counseling provided to established business clients **	\$1,674,964
Benefit to cost ratio	0.70/1.00

* Approximately 88% of the total SBDC budget was used for counseling long- and short-term clients.

** Established business clients who received long-term counseling accounted for approximately 43.4% of the total counseling budget.

TABLE 6
INCREMENTAL TAX REVENUES ADDED TO STATE AND FEDERAL
GOVERNMENTS AS A RESULT OF SBDC COUNSELING OF PRE-VENTURE CLIENTS

STATE TAX REVENUES

	Tax Base	X	Tax Rate	X	% Clients Valuing Service	X	# of Long Term Clients	=	Total Tax Revenues Generated
Sales	243,896		.038*		.85		247		\$1,945,800
Employment	2.20		\$731**		.85		247		<u>\$ 337,600</u>
									\$2,283,400

FEDERAL TAX REVENUES

Employment	2.20		\$2673***		.85		247		<u>\$1,234,600</u>
TOTAL INCREMENTAL STATE AND FEDERAL TAX REVENUES									\$3,518,000

* Figure represents 75% of state sales tax rate (5.125%) in 2019.

** Figure represents average state income tax paid per return by persons of median incomes in 2014.

*** Figure represents average federal income tax paid per return by persons of median incomes in New Mexico in 2017.

TABLE 7
THE COSTS AND BENEFITS OF SBDC COUNSELING: PRE-VENTURES

Total incremental State and Federal Tax Revenues Added by Pre-Venture Clients	\$3,518,000
Cost of operating the SBDC	\$4,385,642
Benefit to cost ratio	0.80/1.00
Cost of all counseling *	\$3,859,365
Benefit to cost ratio	0.91/1.00
Cost of long-term counseling provided to pre-venture clients **	\$702,404
Benefit to cost ratio	5.01/1.00

* Approximately 88% of the total SBDC budget was used for counseling long- and short-term clients.

** Pre-venture clients who received long-term counseling accounted for approximately 18.2% of the total counseling budget.