



Small Business Development Centers
Helping businesses start, grow, and prosper.



Widener
University



Moneyball your Network: Data Analytics to Maximize Stakeholder ROI

ASBDC 2025 Conference

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A Manager's Guide to the Lineup- Boring Data & Statistics Information

This Handout is meant to provide you with excruciatingly boring detail for the methodology and statistical measures we used to 'play Moneyball.' We are more than happy to have an in-depth conversation with you about this process, but didn't want to put the attendees to sleep today with this information.

Enjoy at your leisure!

5 Year Penetration Study

In order to create the following statistics, the Widener SBDC performed a comprehensive analysis of the previous 5 fiscal years of the Pennsylvania SBDC Network Counseling Sessions. The process generated over a million records of data with individual counseling sessions and Neoserra entries. Below is a summary of several decisions made to clean and prepare the data for analysis:

1. **Center Assignment Rules** – In order to give centers proper ‘credit’ for session/milestones/clients served metric/etc. we used the following rules:
 - a. Only one center gets credit for each client in any given fiscal year.
 - b. Credit is given to whichever center hosted the client last.
 - c. If a client only attends training, the center who hosted that training gets credit
 - d. If a client receives counseling, the host institution of that consultant gets credit, regardless of training
 - e. This will assign based on date of last engagement, so if a client consults w/ 2 centers, this will only assign to the center who has the latest counseling entry with them
2. **Territory Assignment** – To insure in territory/out of territory calculations were correct, we created a reference table w/ each center’s territory in each given year. All subsequent analysis relied on this reference table for appropriate calculations. Below is a reference to the columns and first few rows of data in this reference table:

County Lookup	UID	Number	Center	Territory	Year
1ADAMS	1ADAMS2024	1	Shippensburg	ADAMS	2024
1Adams	1Adams2022	1	Shippensburg	Adams	2022
1Adams	1Adams2021	1	Shippensburg	Adams	2021
1Adams	1Adams2020	1	Shippensburg	Adams	2020
1ALLEGHENY	1ALLEGHENY2024	1	Duquesne	ALLEGHENY	2024
2ALLEGHENY	2ALLEGHENY2024	2	Pitt	ALLEGHENY	2024
1Allegheny	1Allegheny2023	1	Duquesne	Allegheny	2023
2Allegheny	2Allegheny2023	2	Pitt	Allegheny	2023
1Allegheny	1Allegheny2022	1	Pitt	Allegheny	2022
2Allegheny	2Allegheny2022	2	Duquesne	Allegheny	2022
1Allegheny	1Allegheny2021	1	Pitt	Allegheny	2021
2Allegheny	2Allegheny2021	2	Duquesne	Allegheny	2021
1Allegheny	1Allegheny2020	1	Duquesne	Allegheny	2020
2Allegheny	2Allegheny2020	2	Pitt	Allegheny	2020
1ARMSTRONG	1ARMSTRONG2024	1	PennWest	ARMSTRONG	2024

3. In order to support many of our calculations, we used population and business data compiled by our Network Lead Office. These data points included the following:
 - a. County Name
 - b. County Square Mileage
 - c. County Population (Total)
 - d. County Population (18-65)
 - e. County Total Number of Businesses

Definitions

1. **Clients Served** – If a client receives any type of SBDC Assistance (counseling or training) they are considered a client served. A client can only be included in this list once per fiscal year, as this ties to our reported clients served metric.
2. **Clients Serviced** – A client serviced is counted if:
 - a. They received consulting:
 - i. Core Funding was Used
 - ii. They are in a PA County
 - iii. It was a substantial consulting engagement (no admin/or new)
 - b. If they received Training:
 - i. Core Funding was Used
 - ii. They are in a PA County
 - iii. They Attended an In-Person Training (*for purposes of center efficiency we only looked at in person trainings because webinars would greatly skew metrics and online/digital marketing is not considered a *unique* strength of any individual center, but rather a *broad* strength among the entire network)
 - c. If either A or B is true, the CRM record was deemed a “Touchpoint” each “Touchpoint” is considered a client serviced
3. **Network Penetration Rate** – A measure of how seen the network is throughout the state. This is a direct assessment of performance and looks at how well we are meeting our targeted constituents of startups and established businesses. Inherently not a positive/negative number w/o more context and reference. Goal should be to raise this in general and see metrics rise as a result.
4. **County Penetration Rate** – Similar to network penetration rate, this measures the same thing on a county by county basis. This is a way to see what work well in your state, and which counties are being underserved compared to the rest of the state.
5. **Center In-Territory Penetration Rate** – This evaluates clients serviced by centers and how much activity and presence they’re able to generate in their assigned territories. For each territory assigned, each centers numbers are aggregated to give them a Penetration Score for all territories assigned.
6. **Regionalization Score** – This is meant to assess how a center performs outside it’s assigned territory; higher regionalization scores indicate that a center is well connected with other ecosystem partners and/or has broad service offerings that draw client’s attention. Think of regional centers as lighthouses that attract and guide clients across the state. To measure this, we created 4 additional metrics:
 - a. (30%) Out of Territory Counseling – How much counseling is performed with clients from outside the center’s assigned territory?
 - b. (5%) Out of Territory Attendees – How many in person attendees does this center draw from outside their territory? The percentage is very low because at least in our network, we’re not seeing high attendance counts that fit this description, but it is still worth including in the model.
 - c. (40%) Out of Territory Resource Percentage – How much of the center’s total touchpoints, also thought of as resources, are dedicated to helping people they aren’t funded sub-awarded to serve. This is a high percentage as a high number indicates

success without funding. Therefore, if more funding were allocated we'd expect an even higher ROI.

- d. (25%) County Support – How much of any given Network activity is performed by each center in counties. County officials may be familiar 1-4 centers that help their constituents, this is really measuring if a center were reassigned or moved, how big would the aftershock be to any particular county.

Network Penetration Rate

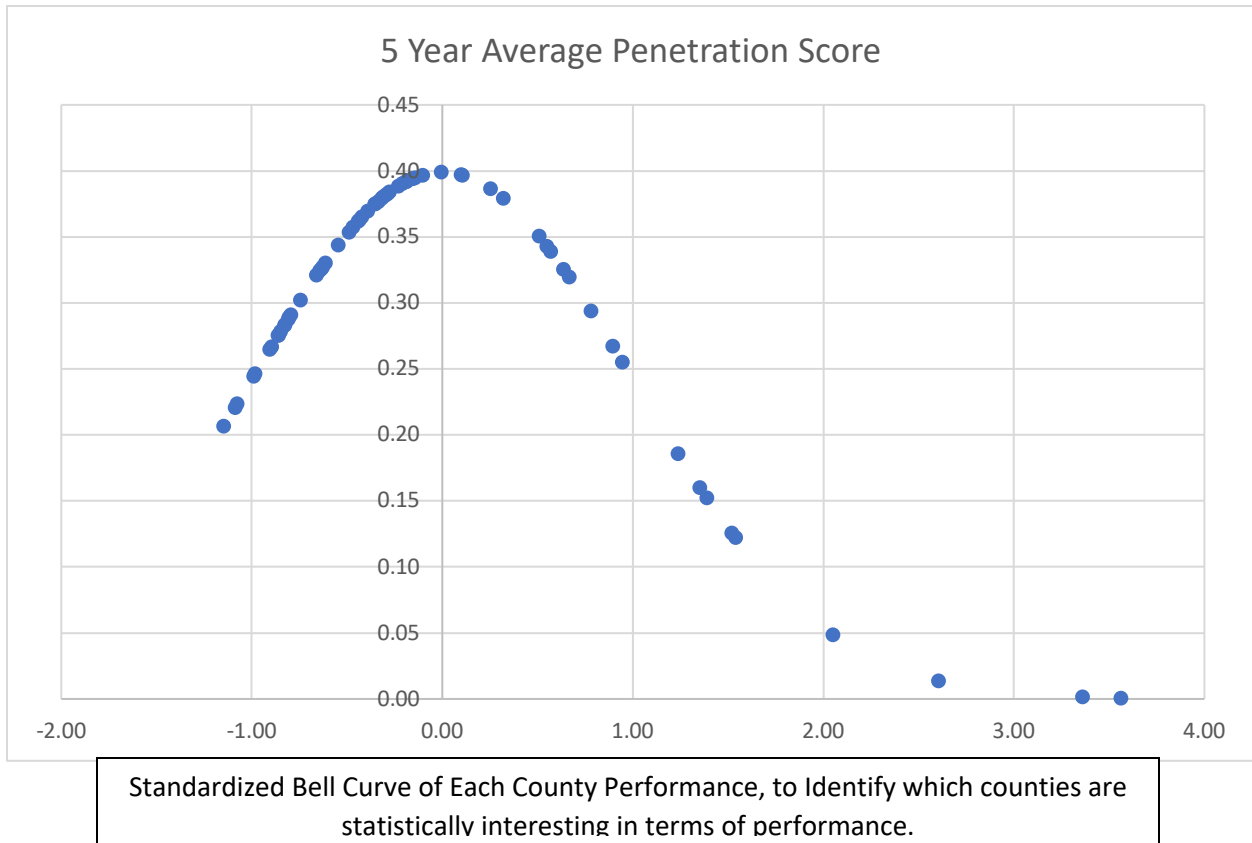
$$\left(\frac{\text{Clients Served in State}}{\text{State Population 18-65}}\right) * .5 + \left(\frac{\text{Clients Served in State}}{\text{Total Businesses in State}}\right) * .5 = \text{Penetration Score}$$

Average County Penetration Rate in 2024	3.07%		
Standard deviation of County Penetration Rates in 2024	2.12%		
High	11.16%		
Low	0.59%		
Average	3.07%		
Total Clients Served	13,350.00		
Penetration Score	3.07%		
Percentage of Population 18-65	0.24%	7,132,641.91	24 out of 1000 residents 18-65 have worked with an sbdc.
Percentage of Total Businesses	5.90%	303,346.00	5.9 out of 100 businesses have worked with an SBDC

- Helps Understand PASBDC Visibility to Populations in Counties
- Shows the Number of Startups/dreamers we reached given the total available pool
- Shows the number of established businesses we reached

County Penetration Rate

$$\left(\frac{\text{Clients Served in County}}{\text{County Population 18-65}}\right) * .5 + \left(\frac{\text{Clients Served in County}}{\text{Total Businesses in County}}\right) * .5 = \text{Penetration Score}$$



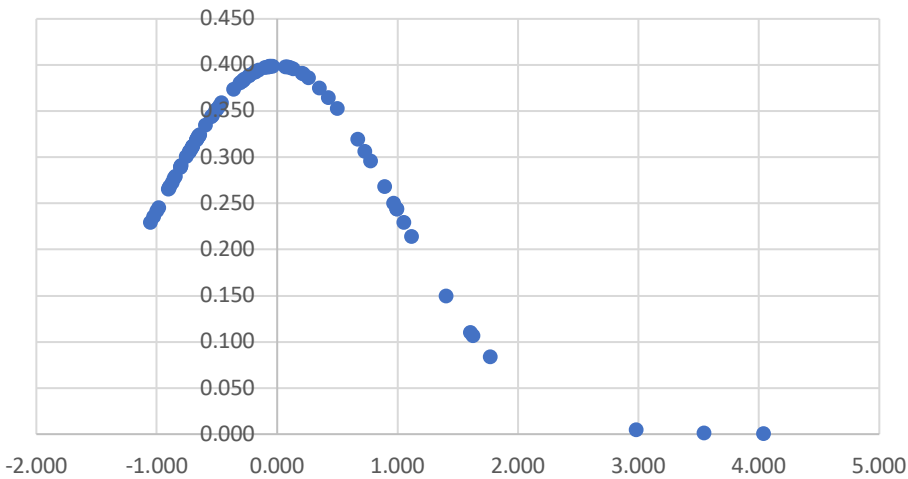
Mean Penetration Score	3.32%
Standard Deviation	2.37%
High	11.74%
Low	0.60%
Total Clients Served	66,996.00

- 55 Counties fall within +/- 1 Standard Deviation. Which on bell curve accounts for 68% of data.
- 12 Counties fall outside of +/- standard deviation. This accounts for other 32%.
- 4 Counties fall outside + 2 standard deviation. This accounts for 2.5% of the data set - these are uber high performers.

Center In-Territory Penetration Rate

$$\left(\frac{\text{Clients Served in Territory by a Center}}{\text{County Population 18-65}} \right) * .5 + \left(\frac{\text{Clients Served in County by a Center}}{\text{Total Businesses in County}} \right) * .5 = \text{Penetration Score}$$

5 Year Pen Score by Center In Territories



Mean	2.39%
Stdev P	2.14%
High	11.05%
Low	0.1%
Average	2.39%
Penetration Score	2.39%
Percentage of Population 18-65	0.19%
Percentage of Total Businesses	4.59%

Standardized Bell Curve of Each Center’s Performance in their Assigned Counties, to Identify which counties are statistically interesting in terms of performance.

Individual Center	Average of Weighted Service by County
Player 1	5.21%
Player 2	4.15%
Player 3	3.00%
Player 4	2.72%
Player 5	2.43%
Player 6	2.25%
Player 7	1.66%
Player 8	1.44%
Player 9	1.30%
Player 10	1.25%
Player 11	1.23%
Player 12	1.14%
Player 13	1.01%
Player 14	0.99%
Player 15	0.98%

Aggregated Penetration Rates of Each Center in Their Assigned Counties

Regionalization Score

Player	Regionalization Rank	Weights		30%	5%	40%	25%	100%	Regionalization Score
		Center	Territory Coun	Out of Territory Attendees	Out of Territory %	County Support			
Player 1	5	Player 2	6.38	4.49	5.85	1.23	4.79		
Player 2	7	Player 12	2.19	10.00	4.39	3.05	3.68		
Player 3	14	Player 4	1.00	3.98	1.00	1.63	1.31		
Player 4	2	Player 13	4.67	7.36	7.42	6.60	6.39		
Player 5	8	Player 10	1.38	7.69	3.21	3.35	2.92		
Player 6	4	Player 3	4.40	4.26	8.95	1.90	5.59		
Player 7	9	Player 1	2.28	8.26	2.66	1.32	2.49		
Player 8	1	Player 14	10.00	10.00	6.06	5.16	7.21		
Player 9	11	Player 5	1.69	1.45	2.29	2.25	2.06		
Player 10	10	Player 9	1.35	2.13	2.19	3.32	2.22		
Player 11	15	Player 8	1.16	1.00	1.51	1.13	1.28		
Player 12	13	Player 15	1.41	0.83	3.30	1.00	2.03		
Player 13	6	Player 7	2.47	2.52	3.03	10.00	4.58		
Player 14	3	Player 11	3.70	6.79	10.00	3.15	6.24		
Player 15	12	Player 6	1.53	1.34	2.53	2.04	2.05		

- *Out of Territory Counseling* – How many Hours a center counsels outside their assigned counties
- *Out of Territory Attendees* – How many In Person Attendees come for events from outside territory
- *Out of Territory % of Total Activity* – Total dedication of resources to counties that do not belong to center
- *County Support* – Weighted by population, number of times a center is a top 3 performer in a county

Out of Territory Counseling

Sum of Counseling Hours Outside of Territory

Center	2020	2021	2022	2023	2024	Total	Score (1-10)
Player 2	748	1,435	2,813	2,350	955	8,300	6.38
Player 12	246	482	426	706	276	2,136	2.19
Player 4	105	47	40	149	49	390	1
Player 13	1,116	1,709	919	706	1,327	5,777	4.67
Player 10	220	283	193	132	118	946	1.38
Player 3	1,316	1,295	1,111	780	893	5,394	4.4
Player 1	386	703	229	259	690	2,266	2.28
Player 14	2,829	5,436	1,361	2,557	1,436	13,619	10
Player 5	224	360	370	195	258	1,405	1.69
Player 9	188	211	132	220	154	905	1.35
Player 8	24	219	124	147	115	628	1.16
Player 15	147	290	232	262	61	993	1.41
Player 7	626	708	530	291	403	2,557	2.47
Player 11	552	564	1,138	1,412	690	4,356	3.7
Player 6	371	223	194	219	167	1,174	1.53

Out of Territory Attendees

Count of all attendees from out of a center's territory to in person events.

Center	2020	2021	2022	2023	2024	Grand Total	Score (1-10)
Player 2	21		10	23	11	65	4.49
Player 12		1	22	37	103	163	10
Player 4	12	3	16	23	2	56	3.98
Player 13	19		4	79	14	116	7.36
Player 10	48		11	15	48	122	7.69
Player 3	7		3	20	31	61	4.26
Player 1	53	11	34	11	23	132	8.26
Player 14	17		30	72	44	163	10
Player 5	8				3	11	1.45
Player 9	3	5		3	12	23	2.13
Player 8	1		1	1		3	1
Player 15	0						0.83
Player 7	12		1	14	3	30	2.52
Player 11	3	26	2	45	30	106	6.79
Player 6	8	1				9	1.34

Out of Territory % of Total Activity

Counts the total number of touchpoints with clients by each center. This includes counseling sessions and in person

Center	In Territory	Out of Territory	IT %	OOT %	Score (1 - 10)
Player 2	17,238	2,757	86%	14%	5.85
Player 12	31,128	3,568	90%	10%	4.39
Player 4	29,775	655	98%	2%	1
Player 13	24,403	5,197	82%	18%	7.42
Player 10	17,396	1,401	93%	7%	3.21
Player 3	18,083	4,871	79%	21%	8.95
Player 1	32,481	2,121	94%	6%	2.66
Player 14	50,860	8,483	86%	14%	6.06
Player 5	28,328	1,570	95%	5%	2.29
Player 9	18,159	958	95%	5%	2.19
Player 8	9,178	320	97%	3%	1.51
Player 15	6,062	503	92%	8%	3.3
Player 7	38,205	2,886	93%	7%	3.03
Player 11	10,041	3,127	76%	24%	10
Player 6	22,864	1,415	94%	6%	2.53

County Support

The weighted Ranking of centers in county

Center	# of Player Counties	Score (1 - 10)
Player 2	3%	1.23
Player 12	6%	3.05
Player 4	4%	1.63
Player 13	13%	6.60
Player 10	7%	3.35
Player 3	4%	1.90
Player 1	3%	1.32
Player 14	11%	5.16
Player 5	5%	2.25
Player 9	7%	3.32
Player 8	3%	1.13
Player 15	2%	1.00
Player 7	20%	10.00
Player 11	7%	3.15
Player 6	5%	2.04