Nonprofit Location, Survival, and Success: A Case Study of El Sistema USA

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Abstract

As nonprofits work to serve their communities, they must choose a place to locate that best suits their needs and the needs of the population they aim to serve. Locational characteristics such as median income and population density have been shown to impact how many nonprofits choose to locate in a given area. However, few studies have examined the impact of locational characteristics on how nonprofits survive and thrive. This study examines the impact of geographic and demographic factors on nonprofit survival and success through a case study of El Sistema USA (ESUSA), a nationwide network of music education programs with the goal of helping underserved youth. The study analyzes panel survey data from 131 El Sistema-inspired programs in the U.S. from 2005 to 2018 along with demographic data from the American Community Survey, charitable giving data from the IRS, and GIS data compiled through a review of ESUSA program websites. By using regression models of ESUSA program survival and success (defined by more students served and higher program budgets), this study found that ESUSA programs in areas of more need are more likely to survive and thrive.

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Introduction

Nonprofits have a unique potential to aid the underserved. They seek to inspire and equitize access by addressing communities and issues often unaddressed by the private sector. Despite this mission, nonprofits, like private firms, are threatened by a high likelihood of failure in the beginning stages of their development. This study explores the factors that lead to nonprofit survival and success in El Sistema USA programs, early-stage music for social change nonprofits, with a focus on the characteristics of their surrounding communities.

El Sistema USA is a network of organizations that are expanding access to high-quality music instruction to children with the fewest resources and greatest need. Based on the Venezuelan model of El Sistema started by musician and social activist José Antonio Abreu, ESUSA programs facilitate intensive ensemble practice at program sites within the student's communities. These students from underserved schools and communities strive for artistic excellence under the guidance of teaching artists. These programs encourage students to develop essential life skills and habits of mind and "become agents of social change within their own communities" (National Alliance of El Sistema Inspired Programs, n.d.).

From 2007-2016, ESUSA existed as a loose coalition of programs across the United States united by a shared mission and a central website (Nechyba, Schmid, Mburi, & Wyatt, 2017). Eric Booth's Guiding Principles articulate the shared goals of ESUSA programs: to pursue social change, access, and musical excellence through intense ensemble instruction. From an early age, ESUSA students are taught by teaching artists that serve as role model citizens, artists, teachers, and scholars, with the hope that, in adulthood, these students will become the role models for future generations. The Guiding Principles also place an emphasis on community, saying instruction should take place within the student's community and programs should encourage families and community members to support the students by attending classes and concerts. Finally, the Guiding Principles suggest that ESUSA programs band together as an El Sistema network in order to collectively inspire ambition and social change in communities across the country (Booth, 2013). This was accomplished in 2016, when ESUSA hired their first full-time Executive Director and developed criteria for membership.

Also in 2016, ESUSA partnered with Duke University to research and evaluate its member programs, producing a study supported by the National Endowment for the Arts. The resulting working paper, "Elements of Organizational Success: Understanding Differences in Structure and Values in El Sistema USA Programs," conducted a complete organizational ecology of the El Sistema-inspired

program population to better understand the composition of ESUSA's network. Focused on 165 El Sistema-inspired organizations in the United States, the study sought to understand the types of organizational structures and values that lead to strong organizational performance (Nechyba et al., 2017).

In surveying the ESUSA population, the study found that a large majority of El Sistema-inspired programs share similar missions and values, but overall, these programs vary considerably across budget, staffing, and programming indicators. Programs differ greatly in their age, organizational structure, financial and social capital, demographics, and geographic location (Nechyba et al., 2017).

The variability found across all aspects of ESUSA programs presents an obstacle for studying or managing these programs, as they cannot be treated as a homogenous population. Many ESUSA programs have different goals in terms of the number of students they aim to serve, the geographic area they intend to serve, and the budget they need to reach their goals. Specifically, program leaders in smaller, more rural geographic areas have expressed concern over being compared to large ESUSA programs in urban centers. This study aims to research how geographic and demographic factors affect ESUSA's organizational diversity and individual program success and failure.

In particular, this paper investigates:

1. Does the geographic and demographic environment surrounding an ESUSA program have an impact on its probability of organizational survival?
2. How do geographic and demographic factors impact indicators of success in ESUSA programs (i.e. number of students served, size of budget)?

The geographic distinctions between programs have important implications for both conducting research and providing resources to these organizations. By learning how geographic and demographic factors impact ESUSA programs, this study can help ESUSA provide more targeted resources to address differences in locations and help programs become more successful.

Literature Review

Previous research on ESUSA, Nechyba et al. (2017), defined organizational success as objective improvements in resources and increases in scope (i.e. more students served and more programming offered). In particular, Nechyba et al. (2017) found that ESUSA members showed better organizational success than non-members, as measured by differences in financials, staffing, and programming. On average, member organizations tend to have higher operating budgets, spend more per student, employ

more teaching artists, and provide more classes than non-member organizations. Using similar indicators, the study found that El Sistema-inspired programs operating as an independent 501(c)(3) organizations have larger budgets and serve more students, thus have greater organizational success, than organizations operating as a part of a larger nonprofit such as an orchestra, community partnership, or school (Nechyba et al., 2017).

While this study continues to examine organizational success through resources and scope, it also addresses factors that lead an ESUSA program to survive or fail. Most ESUSA programs were founded within the past ten years; 68% of ESUSA programs were founded after 2009, when Dr. Abreu visited America and won the TED prize (Nechyba et al., 2017). The population of ESUSA programs is constantly changing, with entrants and exits over time. As of 2017, 21% of ESUSA programs had changed their name two or more times. In addition, some ESUSA programs had changed their organizational structure; they were established as part of a larger nonprofit but later gained independent 501(c)(3) status (Nechyba et al., 2017). While some programs have thrived for years, other ESUSA programs have struggled to get off the ground, reinvented themselves, or ceased to exist.

Organizational failures are not unusual in the nonprofit performing arts sector. Bowen, Nygren, Turner and Duffy (1994) found that performing arts nonprofits had a higher failure rate than other nonprofits. From 1984 to 1992, nonprofit organizations overall failed at an average rate of 2.2% annually, while the average annual failure rate for arts nonprofits was 3.0% (Bowen, Nygren, Turner, & Duffy, 1994). Harrison and Laincz (2008) created a model of nonprofit entry and exit dynamics by extending a Jovanovic model of firm entry and exit to nonprofits and confirming theoretical expectations with data from the National Center for Charitable Statistics. According to their model, new nonprofits act like start-up firms, beginning smaller but growing faster than incumbent organizations. Nonprofits are more likely to fail in the first few years of existence. The chance of failure decreases as nonprofits get older and bigger. Since many ESUSA programs are only a few years old, this model could help explain the incidence of exit and reinvention among ESUSA programs. Alternatively, the changes made by early-stage ESUSA organizations could be explained by a low cost of changing organizational goals and structures in the early stages of a nonprofit's development. New organizations have the ability to adapt well, leading to greater change and diversity among early-stage nonprofits like ESUSA programs (Katz & Gartner, 1988).

Much of the literature on nonprofit survival cites causes of financial flexibility and social networks, factors with roots in a nonprofit's geographic and demographic surroundings (Hager, 2001;

King & Whitt, 1997). Several studies have shown that location has a large impact on success and survival of nonprofit organizations. Many nonprofits, especially education-focused nonprofits like ESUSA, operate primarily at the local level (Wolpert, 1993). These nonprofits are heavily influenced by the communities directly around them, simultaneously receiving resources from endowed and altruistic members of the community and providing support to less-fortunate community members (Bielefeld, Murdoch & Waddell, 1997). This two-way interaction between nonprofits and their surrounding communities embodies the two schools of thought on where nonprofits choose to locate: demand-side and supply-side arguments (Bielefeld et al., 1997; Abzug & Turnheim, 1998).

Demand-side arguments for why nonprofits choose their locations focus on how nonprofits respond to consumer benefits or unmet needs (Abzug & Turnheim, 1998). Bielefeld et al. (1997) found that communities with a higher concentration of minorities tend to have more nonprofits because diverse populations demand service from a variety of nonprofits. Wolch and Geiger (1983) also found support for demand-side arguments; nonprofits in Los Angeles County were more concentrated in areas with high infant mortality rates, high crime rates, and a large elderly population.

Supply-side arguments hinge on the idea that nonprofits choose to locate where resources are available (Abzug & Turnheim, 1998). Studies with a supply-side bent focus on the income and generosity of individual community members as well as the availability of government funding and experienced staff in the geographic area surrounding the nonprofit. In general, nonprofits want to be close to those who will donate. Bielefeld et al. (1997) found a positive relationship between the average income and number of nonprofits in a census block. Similarly, Lam and McDougle (2016) found that human service nonprofits are less prevalent in low-income areas and more prevalent in areas with higher public expenditures. Each locale comes with its own talent pool, influencing the nonprofit's access to staff and volunteers that provide expertise and necessary support. For example, nonprofits in cities have access to a larger and more diverse talent pool, nonprofits near universities benefit from highly educated talent, and arts nonprofits in areas with a vibrant arts scene may attract a more creative staff (Lai & Poon, 2009).

This study will include area demographic variables that address both demand-side and supply-side explanations of nonprofit location in order to assess the impact of these variables on ESUSA program success and survival.

Theoretical Framework

The literature suggests that location has an impact on the number of nonprofits that cluster in a given area. While this paper focuses on success and survival rather than entry or proliferation of nonprofits, it is likely that the factors that lead to more nonprofits also lead to more successful nonprofits, assuming nonprofits rationally cluster in areas with the greatest chance of success. In this case, demand-side and supply-side theories of nonprofit location influence nonprofit success and survival.

This paper models demand-side variables such as population density and poverty ratio for the county in which the ESUSA program is located and the average travel distance between the program site and base schools. Demand-side theory would suggest that ESUSA programs are more likely to cluster in an urban area with a high population density. Extending the theory to survival and success, I hypothesize that programs in more dense population areas are more successful because they can more easily serve a large target population. Demand-side theory does not predict whether higher need areas (e.g. areas with more poverty and at-risk schools) breed more successful and long-lasting programs than lower need areas. However, since ESUSA's core mission is to serve students with the greatest need, addressing higher need communities could be seen as a successful tactic for ESUSA programs. Distance, and therefore lengthy transport, between feeder schools and the program site provides a barrier for the lowest income students to attend. To address this issue, some ESUSA programs provide transportation from feeder schools to the program site, but this can be costly to the program. For these reasons, I hypothesize that programs located closest to their feeder schools are more likely to survive and be successful.

This paper also includes supply-side variables in the model such as the median income of the surrounding county, charitable giving in the surrounding zip code, and the nearby presence of universities. Supply-side theory indicates that ESUSA programs would be more likely to locate in areas with higher income and higher charitable giving (Bielefeld et al., 1997). Assuming that nonprofits choose to locate in these areas to secure more funding, it is likely that ESUSA programs in higher income, more charitable areas have higher revenues. It is reasonable to assume that higher revenues increase chance of survival, as revenues provide a financial safety net. In addition, higher revenues provide financial flexibility for programs to expand, attract high-quality staff, and invest in better resources, all of which make an ESUSA program more successful. For similar reasons, I expect

programs located near universities to be more successful due to the accessibility of high-quality talent and institutional support.

In addition to location factors, the models in this paper control for several organizational characteristics that have been found in the literature to impact program survival and success. Nechyba et al. (2017) found that organizational structure, defined as whether a program operates as an independent 501(c)(3) nonprofit or as part of a larger nonprofit like a symphony orchestra, impacted program success. Therefore, it is included in this study's analysis. Since older and larger nonprofits have better survival rates than less developed nonprofits (Harrison and Laincz, 2008), this study controls for the age of each ESUSA program.

Empirical Specification

This paper's empirical approach has two components, modeling ESUSA program survival and ESUSA program success. First, a probit regression model (Model 1) is used to investigate whether the geographic and demographic environment surrounding an ESUSA program has an impact on its probability of organizational survival. Second, this study adopts two random effects panel regressions to explain how geographic and demographic factors impact indicators of success in ESUSA programs. In these regressions, success is operationalized through the size of the program's budget (Model 2) and the number of students served (Model 3).

I. Survival/Failure Model

The probit model for the probability of ESUSA program survival is specified as follows:

$$\textbf{(1)}\ \boldsymbol{\widehat{P}(Survive_i) = \phi(\beta_0 + \beta_1 Density_{it} + \beta_2 Poverty_{it} + \beta_3 Income_{it} + \beta_4 Charity_{it} + \beta_5 University_i + \beta_6 Travel_i + \beta_7 (Travel_i\ x\ Transportation_i) + \beta_8 IndependentOrg_i + \beta_9 Age_{it} + \beta_{10} Year_t + u_i)}$$

In the above specification, the dependent variable $\hat{P}(Survive_i)$ represents the probability that an ESUSA program *i* still exists (did not fail between 2005 and 2020). For each program in the data set, the indicator variable $Survive_i$ takes on a 1 if the program is still operating and a 0 if the program has failed. In this context, a program is marked as failed if it appears that it has ceased operations, based on responses to ESUSA surveys and a thorough review of program websites and social media accounts. $Density_{it}$, the population density of the county in which the program is located, and $Poverty_{it}$, the poverty ratio within the county, are included as independent variables that address demand-side

arguments for ESUSA program location. $Income_{it}$, the median income of the program's county, $Charity_{it}$, total charitable giving in the program's zip code, and $University_i$, an indicator for a university within a five-mile radius of the program site, are supply-driven independent variables that reflect the availability of nearby resources to support the ESUSA program. $Travel_i$, the average travel distance between the program site and feeder schools, measures the strain that transportation places on a program's operations. Some programs provide transportation from feeder schools to the program site, taking the burden off of students and their families. To capture these cases, $Travel_i$ is interacted with $Transportation_i$, an indicator for whether or not program *i* provides transportation between their feeder schools and program sites.

Model (1) controls for whether a program operates independently or under a larger nonprofit ($IndependentOrg_i$) and the age of the program (Age_{it}). Nonprofits are more likely to fail when they are younger and smaller, and their chance of survival increases as they become older and more established (Harrison and Laincz, 2008). This study controls for the age of ESUSA programs to account for this survivor bias. The year dummy, $Year_t$, controls for any year-specific shocks in the panel data.

II. Success Models

Models (2) and (3) are nearly identical random effects panel models with proxies for success as dependent variables. These models are specified as follows:

(2) $$\boldsymbol{Budget_{it} = \beta_0 + \beta_1 Density_{it} + \beta_2 Poverty_{it} + \beta_3 Income_{it} + \beta_4 Charity_{it} + \beta_5 University_i + \beta_6 Travel_i + \beta_7 (Travel_i \; x \; Transportation_i) + \beta_8 IndependentOrg_i + \beta_9 Age_{it} + \beta_{10} Year_t + u_i}$$

(3) $$\boldsymbol{Student_{it} = \beta_0 + \beta_1 Density_{it} + \beta_2 Poverty_{it} + \beta_3 Income_{it} + \beta_4 Charity_{it} + \beta_5 University_i + \beta_6 Travel_i + \beta_7 (Travel_i \; x \; Transportation_i) + \beta_8 IndependentOrg_i + \beta_9 Age_{it} + \beta_{10} Year_t + u_i}$$

In Model (2), the dependent variable $Budget_{it}$ measures the total budget of ESUSA program *i* in year *t*. Total budget is used as a proxy for nonprofit success, assuming that programs with larger budgets have capacity to deliver better quality programming and help more students. Since total budget varies widely across ESUSA programs, this regression also provides insight into the factors that might explain this variation (Nechyba et al. 2017). Model (3) modifies the previous model of success by using $Student_{it}$, the total number of students served by the ESUSA program *i* in year *t*, as the dependent variable. Both regressions include the location terms $Density_{it}$, $Poverty_{it}$, $Income_{it}$, $Charity_{it}$,

$University_i$, $Travel_i$, and $Travel_i$ x $Transportation_i$ described above to examine the impact of demand-side and supply-side location variables on ESUSA program success**.** Like Model (1), the success models control for whether the program operates as an independent nonprofit or as part of a larger entity ($IndependentOrg_i$) and the age of the program (Age_{it}).

Data

In this study, I use ESUSA survey data from 2005-2018, supplemented by information from ESUSA program websites. In addition, my data set includes geographic and demographic data at the county level from the American Community Survey and charitable giving data by zip code from the IRS. Relational geographic data, such as the average distance between program sites and feeder schools and the presence of universities near program sites, were compiled using GIS software.

I. ESUSA Surveys and Population

This study uses a data set that includes 12 years of data from ESUSA's annual survey of El Sistema-inspired programs in the United States, collected each academic year from 2005-2006 to 2017-2018, with the exception of 2016-2017. From the 2005-2006 school year to the 2015-2016 school year, ESUSA collected data on the demographics, programming, financials, staffing, and needs of El Sistema-inspired programs in the United States. Survey participants accessed the survey in Google Documents through a direct link sent to them by ESUSA or through a link on the ESUSA website. Response rates were overall low but difficult to calculate for surveys before 2017-2018. ESUSA's membership base was not well defined before 2017, and it is unclear how many programs were targeted. These surveys were analyzed by researchers at George Mason University, and later, by researchers at Duke University.

In 2017-2018, ESUSA partnered with Duke's Social Science Research Institute to implement a revised version of the survey and limited the survey to ESUSA member programs. The 2017-2018 survey was emailed to 97 member organizations, and 85 organizations responded between July 9, 2018 and August 10, 2018. Three of these respondents were dropped from the analysis due to duplication. Without duplicates, the 2017-2018 survey had 82 unique respondents and a response rate of 85%.

While the general themes of demographics, programming, financials, and staffing are consistent throughout every survey year, question wording and specifics have changed over time. The variables chosen for use in this study are asked fairly consistently across the years. The total number of students in each program has been asked consistently from 2005-2006 to 2017-2018, though some years have low response rates. The total budget of each ESUSA program has been asked consistently from 2012-2013 to

2017-2018. Addresses for the program were collected in the 2017-2018 survey, but not in prior years. Addresses were added and checked in the website review process.

The study sample (n=131 unique organizations) includes ESUSA programs that responded to survey questions about the total number of students and total budget in their program in at least one survey.[1] It is important to mention that not every program in the study sample responded to the survey in all the years in which they were active, but all programs in the study sample responded in one or more of the years surveyed.

II. Website Review

I thoroughly reviewed the website of every ESUSA program in the study sample to supplement the ESUSA survey data with new variables, fill in missing addresses, and verify existing addresses, founding years, and program names. By reviewing each program's website and social media accounts, I determined whether the program is still in operation or what year the program appears to have ceased operations. This information is used to capture program survival and failure, the dependent variable in Model (1) above.

Websites were reviewed to find the addresses of program sites, any feeder schools listed, and how students travel from their feeder school to the program site each day. In some cases, the program sites are located at the feeder schools, so no transportation is required. Other programs list that they provide transportation between feeder schools and program sites. These insights were coded for use in building the GIS data set and calculating the average distance between program sites and feeder schools.

I used the website review to verify the program name, founding year, and main site address of each program. Several program names have changed over time and differed across survey years. By carefully reviewing the history of each program on their website and, in some cases, using a web archive service (https://archive.org/web/), I verified that data from the same program were matched over time despite name changes. I also collected the year the ESUSA program was founded from their websites to fill in missing data from the survey. The year founded data are used in this study to calculate the age of each program. While addresses were collected in the 2017-2018 ESUSA survey, many of them were mailing addresses (i.e. P.O. boxes). Also, addresses were not collected in survey years before 2017-2018, so programs in the sample that did not fill out the 2017-2018 survey were missing addresses

[1] Thirty-five additional program respondents began the survey but did not answer questions about this study's variables of interest, total number of students and total budget. These programs were dropped. Since ESUSA focuses on El Sistema-inspired programs in the United States, three survey respondents outside the U.S. were dropped.

needed for GIS analysis and zip code matching. Program addresses were found for every program in the study sample by finding the name of the program site on their website and looking up its address.

III. Demographic Data

The study data set includes population density, real median household income, and the poverty ratio for each year and county associated with an ESUSA program. These data come from the American Community Survey (ACS), a nationwide survey administered by the U.S. Census Bureau. Population density is defined as the number of individuals per square mile in each county. The poverty ratio is calculated by dividing the number of families with income under their poverty threshold[1] by the total number of families in each county.

The data set also includes data on charitable giving from IRS tax returns. Specifically, this study uses the total charitable contributions made by individuals filing income tax returns in each year from 2005-2017 in each ESUSA program's zip code. Total charitable giving is reported in thousands of dollars.

IV. GIS Analysis

Geographic Information System (GIS) mapping software was used to calculate the average distance between ESUSA program sites and their feeder schools. Program site addresses were geocoded using ArcGIS software and mapped onto a coordinate system. Next, a GIS layer of public schools from the National Center for Educational Statistics (NCES) was added to the coordinate system. Using QGIS's distance matrix tool, I calculated the average distance in miles between each program site and the five nearest public schools in the NCES school layer. These calculations are used as a proxy for the average distance between program sites and feeder schools for programs in which their program site is not at their feeder school(s). For programs with program sites at their feeder schools, zero miles was recorded for their average distance.

This study also uses GIS software to find whether a university is located within five miles of a program site. A GIS layer of colleges and universities from the U.S. Homeland Infrastructure Foundation-Level Data project was added to QGIS along with the geocoded program site addresses described above. With QGIS's distance matrix tool, I calculated the distance in miles from each program site to the nearest university. After merging these data into Stata, I created an indicator variable that is

[1] Poverty thresholds are determined each year by the U.S. Census Bureau. The thresholds vary based on how many people reside in each household and the number of children under age 18 that reside in the household. For example, in 2016, the federal poverty threshold for a household with three people: two adults and one child was $19,318. Households of this size and composition with a pre-tax annual income of less than $19,318 were considered in poverty.

equal to one when the nearest university to the program site is less than or equal to five miles away and equal to zero when the nearest university is more than five miles away from the program site.

IV. Interpolated Data

Some values for the total number of students served by a program and the total budget of a program were interpolated using existing data to account for survey non-response in certain years. Values were only added when the program responded to the question in both the year prior and the year after. If programs filled out the survey in surrounding years, I assumed that interpolated data points were missing due to survey non-response, not program failure. In order to estimate the value for the missing year, I interpolated on a straight-line basis from the prior year's value to the following year's value. For example, consider a program that reported 20 students in 2011-2012, did not answer the survey in 2012-2013, and reported having 26 students in 2013-2014. In this case, I would fill in an assumption of 23 students for this program in 2012-2013.

V. Descriptive Statistics

Of the 131 ESUSA programs in the study sample, 10 surveyed programs have failed. In 2020, the median age of surviving programs was 9 years. Tables 1 and 2 provide descriptive statistics for the two measures of success used in this study: total students served and total budget of ESUSA programs.

Table 1. Number of students served by programs, by ESUSA survey year (after interpolation)

Year	N (programs)	Mean[1]	Median	SD	Min	Max
2005-2006	4	2,046	143	3,894	15	7,885
2006-2007	5	1,677	58	3,478	18	7,893
2007-2008	8	1,111	58	2,829	9	8,100
2008-2009	15	641	36	2,115	15	8,257
2009-2010	17	620	55	1,991	18	8,286
2010-2011	25	488	60	1,709	20	8,575
2011-2012	34	383	52	1,483	18	8,619
2012-2013	47	386	75	1,347	4	8,782
2013-2014	56	322	85	1,196	8	8,875
2014-2015	78	199	108	289	7	1,940
2015-2016	59	184	111	296	7	2,140
2017-2018	69	233	101	530	0	4,229

[1] Very few programs reported their number of students in early survey years. Outliers biased the mean number of students upwards for these years.

Table 2. Average program budget, by ESUSA survey year (after interpolation)

Year	N	Mean	Median	SD	Min	Max
2012-2013	52	$251,711	$103,215	$444,999	$4,350	$2,261,436
2013-2014	61	$278,250	$116,852	$496,510	$0	$2,715,079
2014-2015	71	$302,421	$125,000	$456,035	$11,500	$2,750,000
2015-2016	39	$555,328	$328,000	$741,369	$2,500	$3,907,597
2017-2018	68	$390,832	$182,000	$612,151	$155	$3,661,062

Table 3 displays descriptive statistics for the key geographic and demographic variables in this study. In addition to the statistics listed for continuous variables in Table 3, this study found that 110 ESUSA programs are located near a university (within a five-mile radius), while 21 programs were not. Table 4 segments the statistics in Table 3 by programs that are still operating and programs that have failed. The statistics from Table 4 indicate that ESUSA programs that have survived tend to be located closer to feeder schools, in more population dense areas, and in areas with higher poverty rates, lower median income, and lower charitable giving than ESUSA programs that have failed.

Table 3. Geographic/demographic variables

Variable	N	Mean	Median	SD	Min	Max
Avg distance from program site to feeder school (mi)	131	0.46	0.39	0.58	0	5.11
Population Density (county, pop. per sq. mi)	131	4,878	1,459	11,462	11	72,996
Poverty Rate (county, last 12 mo)	131	12%	12%	6%	2%	64%
Median Income (county, last 12 mo, in $)	131	$55,979	$53,963	$12,881	$30,936	$117,515
Total Charitable Giving (zip code, in thousands of $)	131	$14,678	$8,771	$24,036	$259	$347,705

Table 4. Geographic/demographic variables by survival status

Variable	Still Operating?	Mean	Median	SD	Min	Max
Avg Distance from Program Site to Feeder School (mi)	Yes	0.45	0.39	0.58	0	5.11
	No	0.60	0.67	0.56	0	1.65
Population Density (county, pop. per sq. mi)	Yes	5,165	1,456	11,866	11	72,996
	No	1,318	1,604	900	30	2,921

Poverty Rate (county, last 12 mo)	Yes	12%	12%	6%	2%	64%
	No	10%	10%	4%	3%	27%
Median Income (county, last 12 mo, in $)	Yes	$55,475	$53,682	$12,356	$30,936	$106,761
	No	$62,234	$56,853	$17,044	$44,652	$117,515
Total Charitable Giving (zip code, in thousands of $)	Yes	$14,273	$8,541	$24,378	$259	$347,705
	No	$20,796	$14,044	$18,433	$2,844	$98,647

Results

I. Survival Model

The results of Model (1), the probit model for the probability of ESUSA program survival, are reflected in Table 6. Ten of the 131 programs have failed since being created, and this model attempts to explore patterns among these organizations. The poverty rate and median income are highly correlated (see Table 5). To account for possible collinearity, I chose to exclude median income in my main regressions and focus on poverty rate, which is less correlated with charitable giving.

Table 5. Correlation matrix between location variables

	Poverty Rate	Median Income	Total Charitable Giving
Poverty Rate	1.000		
Median Income	-0.5759	1.000	
Total Charitable Giving	-0.1075	0.2049	1.000

Table 6. Random Effects Probit Model (1), Probability of ESUSA program survival (1 if survived, 0 if failed), Marginal Effects

VARIABLES	(1) Survive
Population Density	0.0000363***
	(5.27e-06)
Poverty Rate	0.162
	(0.319)
Charitable Giving	-5.78e-07
	(3.99e-07)
University in 5mi	0.0113
	(0.0240)
Avg Travel Distance	-0.00792
	(0.0196)

Travel x Transport[1]	-
Independent Org	-0.0358
	(0.0258)
Age	-0.000444
	(0.00285)
Program-years	1,395
Programs	118
	Wald $X^2(8) = 14.76$
	Prob > $X^2 = 0.6784$
	Psuedo-$R^2 = 0.1358$

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

All else equal, ESUSA programs located in counties with higher population density are more likely to survive than programs located in less dense areas. Assuming greater population density indicates greater need for ESUSA programs, this finding supports the demand-side theory that nonprofits respond to need in their community. Greater perceived need for an ESUSA program could mobilize donors, staff, and parents to keep the program running. Population-dense areas may be rich in resources too. Denser population areas are more likely to be walkable and offer public transportation which would make it easier for students to travel to the program. ESUSA programs in people-rich areas may have a larger, more competitive pool of talent to recruit for staff and volunteer positions. Anecdotally, staff turnover is high for some ESUSA programs, which could threaten their ability to continue operating from year to year. Programs located in areas with a large talent pool may find it easier to continuously recruit new, qualified talent.

None of the programs that failed offered transportation to and from the program. Also, descriptive statistics suggest that failed programs are further away from feeder schools on average, though average travel distance was not statistically significant in my models. While these results do not imply a causal relationship between program travel accessibility and survival, they suggest that lengthy student travel is likely an obstacle to successful program operations.

It is important to mention that only 10 ESUSA programs in the sample of 131 programs have failed from 2005-2020. While I believe that this is a high failure rate in context, 10 failures could be too

[1] While I was interested in the interaction of average travel distance and the transportation dummy variable, this variable was dropped by Stata because none of the failed programs provided transportation.

few to predict trends in nonprofit failure. In addition, it is possible that some of the programs closed due to factors not directly reflected in my models, such as a sudden leadership change or loss of support from a partner.

II. Success Models

The results of Model (2), which uses budget as a proxy for ESUSA program success, are shown in Table 7 below. As in the case of Model (1), I focus here on a version of Model (2) with population density, poverty rate, and charitable giving as the main location variables, excluding median income to prevent collinearity. According to the results of Model (2), the poverty rate of the county surrounding an ESUSA program and the age of the program have a statistically significant effect on the program's total budget.

Table 7. Random Effects Panel Model (2), Total Budget ($) Success Model

VARIABLES	(1) Budget
Population Density	-2.870
	(3.637)
Poverty Rate	1.951e+06**
	(898,922)
Charitable Giving	0.934
	(1.282)
University in 5mi	-149,370
	(108,973)
Avg Travel Distance	-48,859
	(66,369)
Travel x Transport	-23,625
	(182,138)
Independent Org	112,209
	(75,180)
Age	65,268***
	(11,575)
Constant	-81,962
	(141,550)
Program-years	285
Number of Programs	114
	Wald $X^2(12) = 116.35$
	Prob > $X^2 = 0.0000$
	$R^2 = 0.3165$

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Model (2) indicates that ESUSA programs located in counties with higher poverty rates have higher budgets on average. This is consistent with the demand-side hypothesis; higher poverty areas have a greater need for nonprofits. If this need is known and the ESUSA program is valued in its community, donors are more likely to support the program. Increased financial support translates to larger program budgets. Replacing poverty rate with median income in this model produces the same demand-side effect. As shown in Appendix Table 2, programs located in counties with lower median incomes (with accompanying higher poverty rates) tend to have higher budgets than programs in higher income counties. The directionality of median income in this regression supports demand-side arguments over supply-side arguments of location success. While higher income communities might have more resources, lower income communities seem to be better able to attract funds to address community needs. Put together, these findings seem to suggest that ESUSA programs are the most financially successful when located in low-income, high-need areas. Perhaps, when located in high-need communities, ESUSA programs receive more attention, and thus, attract the funds they need to grow their budget.

Model (3), shown in Table 8 below, uses the number of students served by the ESUSA program as a proxy for program success. Based on the model's results, the poverty rate of the county surrounding the ESUSA program, the program's proximity to a university, the program's organizational structure, and the program's age have a significant effect on the number of students served by the program.

Table 8. Random Effects Panel Model (3), Total Students Served Success Model

VARIABLES	(1) Students Served
Population Density	-0.00603
	(0.00574)
Poverty Rate	2,052*
	(1,244)
Charitable Giving	0.000467
	(0.00223)
University in 5mi	-739.4***
	(194.7)
Avg Travel Distance	-106.7
	(122.5)
Travel x Transport	-114.0
	(313.8)
Independent Org	275.9**
	(130.6)
Age	55.99***

	(19.82)
Constant	594.0
	(368.7)
Program-years	404
Programs	114
	Wald $X^2(19) = 30.69$
	Prob > $X^2 = 0.0436$
	$R^2 = 0.1966$

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Model (3) shows that on average, ESUSA programs located in counties with higher poverty rates serve more students. This is consistent with the demand-side hypothesis. High-poverty areas have greater need for free student activities like ESUSA that develop and educate students without financial burden on their families. ESUSA programs will meet the demand for their service, accepting as many students as they can into their program. These results are echoed by a negative relationship between the county's median income and the number of students served when median income replaces poverty rate in Model (3) (see Appendix Table 3). Programs in high-poverty, low-income areas seem to be larger in scope and thereby are successful in meeting the needs of more students.

The results of Model (3) also illustrate that there is a significant negative relationship between the presence of a university nearby and the number of students served by an ESUSA program, holding all other factors constant. This contradicts my hypothesis that the presence of a university near a program site would increase resources available to ESUSA programs, thus increasing capacity to serve more students. One potential explanation for this phenomenon is that neighborhoods close to universities are more populated by young adults, rather than families. If this is the case, ESUSA programs near universities might have a smaller population of students to serve. The five-mile radius around universities may be too small to be appropriate for this study's analysis, as much of this area could be taken up by university-affiliated student housing, classroom buildings, and office buildings. Further studies that wish to investigate the role of universities in nonprofit success should use a wider radius or a different measure.

While not all location variables are significant in these regressions, the results suggest that the location of ESUSA programs matters for program survival and success. Particularly, the population density, poverty rate, and median income of the county surrounding a program site seem to influence

how effectively programs operate. These results indicate that ESUSA programs respond to the needs in their community.

Conclusions

This study examines the impact of geographic and demographic factors on ESUSA program survival and success. Past literature on nonprofit location focuses on demand-driven and supply-driven reasons that influence where nonprofits choose to locate. The past literature does not, however, comment on how these locational factors contribute to nonprofit survival or success. By combining ESUSA survey data with county-, zip code-, and address-level data, this study bridges the gap between nonprofit location and nonprofit survival and success.

The results of this study suggest that geographic and demographic factors, especially population density, poverty rate, and median income, have an impact on nonprofit survival and success. The demographics for the areas surrounding an ESUSA program were significant throughout the survival and success models, controlling for the age and organizational structure of the program.

Overall, the results of this study support the demand-side reasons for nonprofit location over the supply-side reasons. When significant, the surrounding county's population density and poverty rate consistently had a positive relationship with program survival and success measures. Consistent with demand-side theory, ESUSA programs seem to have better chances of survival and success when located in areas of greater need: areas with higher population density and higher poverty rates. Supply-side theory for nonprofit location suggests that nonprofits in resource-rich areas would be more likely to survive and succeed. This study tests this hypothesis with three supply-focused variables: median income in the county, charitable giving in the zip code, and an indicator for a university nearby. Because median income and poverty rate are highly negatively correlated, median income mirrored the demand-side effects captured by the poverty rate variable. Charitable giving was not significant in my models, and the university indicator, when significant, did not support supply-side arguments. While these results are particular to ESUSA, they may indicate a greater trend: nonprofits are more likely to survive and prosper if located in areas where they are most needed.

This study is limited by the presence of missing data in the ESUSA survey across years. While this study's panel data set attempts to account for data gaps, low observations in the early survey years may impact this analysis. As ESUSA continues to survey their population of programs, this study should be repeated with more years of ESUSA survey and demographic data to show a longer-term view and a more robust picture of the ESUSA population. Future research should also be conducted with other

geographically diverse nonprofit networks to further illuminate the relationship between nonprofit location and nonprofit survival and success.

It is possible that the demographic variables used in this study affect a nonprofit's initial location choice rather than directly impact its future survival and success. While this distinction cannot be fully investigated with my current data set, further studies could illuminate which variables impact initial location choice for ESUSA programs or other nonprofits by comparing demographic data from where the nonprofit chose to locate with demographic data from neighboring counties or zip codes. In addition, this study could be repeated using other measures of ESUSA program success, such as student outcomes, that were not available with this study's data set. Nonprofit success is multifaceted, and further study is warranted on how location impacts success outside of total budget and number of students served.

Despite these limitations, this study could help ESUSA understand their population of programs and what leads to program survival and success. ESUSA programs are located in wide-ranging geographic and demographic situations. The national ESUSA organization should keep this diversity in mind when developing resources and best practices to support the entire network. Programs located in areas with low population density have a lower chance of survival, on average. These programs may need extra financial resources, check-ins, and targeted attention to ensure they can continue to serve their community. In addition, ESUSA should focus their efforts on developing new programs in areas of the greatest need (i.e. high population density, high poverty). In these areas, ESUSA programs are most likely to capture the attention of the surrounding community, survive, and successfully fulfill their mission of music for social change.

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Appendix

Appendix Table 1. Random Effects Probit Model (1), Original Model Effects

VARIABLES	(1) Survive
Population Density	0.00214***
	(0.000663)
Poverty Rate	9.547
	(19.45)
Charitable Giving	-3.40e-05
	(2.38e-05)
University in 5mi	0.663
	(1.429)
Avg Travel Distance	-0.466
	(1.182)
Travel x Transport	-
Independent Org	-2.104
	(1.401)
Age	-0.0261
	(0.166)
Constant	7.869***
	(3.034)
Program-years	1,395
Programs	118
	Wald $X^2(8) = 14.76$
	Prob > $X^2 = 0.6784$
	Psuedo-$R^2 = 0.1358$

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Appendix Table 2. Random Effects Panel Model (2) Version 2, median income replaces poverty rate

VARIABLES	(2) Budget
Population Density	-0.509
	(3.484)
Median Income	-6.725**
	(2.709)
Charitable Giving	0.937
	(1.273)
University in 5mi	-168,120

	(109,948)
Avg Travel Distance	-73,591
	(67,419)
Travel x Transport	5,617
	(182,855)
Independent Org	120,989
	(75,378)
Age	68,552***
	(11,530)
Constant	541,073**
	(210,781)
Program-years	285
Programs	114
	Wald $X^2(12) = 118.46$
	Prob > $X^2 = 0.0000$
	$R^2 = 0.3159$

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Appendix Table 3. Random Effects Panel Model (3) Version 2, median income replaces poverty rate

VARIABLES	(2) Students Served
Population Density	-0.00351
	(0.00559)
Median Income	-0.00796*
	(0.00484)
Charitable Giving	0.000485
	(0.00223)
University in 5mi	-778.3***
	(202.2)
Avg Travel Distance	-132.9
	(124.4)
Travel x Transport	-83.96
	(317.1)
Independent Org	285.2**
	(131.6)
Age	60.03***
	(19.84)
Constant	1,261***
	(466.1)
Program-years	404

Programs	114
	Wald $X^2(12) = 30.54$
	Prob > $X^2 = 0.0454$
	$R^2 = 0.1859$

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1