Examining the Substitutional Effect between Human Services based 501(c)(3) Organizations and Means-Tested Government Programs

Prepared for

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Abstract

Some economists believe that the nonprofit sector is becoming the third sector of the U.S. economy. This sector helps employ and provide services to millions of individuals every year. With welfare program expenditures under constant political scrutiny in the nonprofit organizations may be forced to fill the gap left between welfare services and the basic needs of food and shelter for low income individuals and families. This study seeks to examine if human services based 501(c)(3) organizations can successfully act as a substitute for, or crowd out, means-tested government programs in the United States.
Examining the Substitutional Effect between Human Services based 501(c)(3) Organizations and Means-Tested Government Programs

I. Introduction

According to the National Center for Charitable Statistics, in 2016 there were 1,571,056 tax-exempt organizations in the United States, 1,097,689 of these organizations are public charities (National Center for Charitable Statistics, 2013). In 2014, nonprofits accounted for 5.3% of the United States’ GDP, and these organizations made up 9.2% of all wages and salaries paid in the United States (National Center for Charitable Statistics, 2013). In the 2014 fiscal year, Americans gave $258.51 billion to nonprofits, an increase of 5.7% from 2013 (National Center for Charitable Statistics, 2013). The nonprofit sector of the economy is also responsible for employing a large portion of the labor force at approximately 11.4 million people or 10.2% of the American workforce (National Council of Nonprofits, 2017). On a global scale, if the world’s nonprofit sector were to be combined, it would be considered the sixteenth largest economy in the world (National Council of Nonprofits, 2017).

Most recently, the Trump Administration announced plans to cut funding from the Supplemental Nutrition Assistance Program (SNAP) and incorporate a Blue Apron-esque program to provide food aid to low income families (Dewey, 2018). If a family receives more than $90 per month for food, the proposal involves cutting their benefits nearly in half. In return for giving less money to families for food, the government plans on buying specific food and delivering it to families. Participants of this program will then be able to spend the remaining balance on foods of their choosing. The projected savings are $17 billion in 2019 and close to $213 billion over the next ten years (Dewey, 2018). There is debate whether this proposal will help or hurt participants of SNAP. With less spending on SNAP millions of individuals and families may struggle to purchase enough food. Nonprofits may have to fill this void by providing more food assistance to those affected.

The purpose of this study is to see if higher income, assets, and total revenue of human services based, 501(c)(3) organizations can act as a substitute of means-tested government programs. A means-tested government program is one that a participant must qualify for in order to receive assistance. The two means-tested government programs that I focus on in my study are the SNAP and the Special Supplemental Nutrition Program for Women Infants and Children (WIC). These programs are more commonly referred to as welfare programs. Through the Department of Agriculture, SNAP and WIC help millions every year to put food on the table. SNAP, commonly referred to as food stamps, is the largest hunger based program in the United States, and helps low income individuals and families pay for food with reloadable debit cards.
that can be used at various food vendors (United States Department of Agriculture, 2016). Users of this program can use their funds to purchase any food they deem fit for their needs. WIC however, is specifically for low-income pregnant, breastfeeding, or postpartum women, infants and children who are at nutritional risk (United States Department of Agriculture, 2016). Instead of a certain amount of funds given on a debit card, this program gives participants waivers that can be used to purchase specific foods at no cost to them.

The motivation behind my study is to see if nonprofits can be a substitute for individuals who rely on government welfare programs. I believe that nonprofits will successfully crowd out government spending on means-tested government programs. If my hypothesis is correct, this effect will most likely be minimal.

Currently, there is no relevant research on the ability of nonprofits to act as a substitute for government welfare programs. This is surprising considering the vast number of people that the nonprofit community serves. Nonprofits are an integral part of many individuals and families lives ranging from local grassroot organizations to large national organizations. This paper seeks to communicate two things, the crowding out effect of human services nonprofits, and the importance of these organizations in the daily lives of millions of individuals.

This study could provide the government evidence to reallocate some of its budget from welfare programs to other projects, or directly to nonprofits. Depending on how much nonprofits affect government spending, the tax code could be changed to incentivize more donations. For example, the government could increase the deductibility of donations. Currently donations to nonprofits can be deducted from an individual’s taxable income on a 1:1 ratio up to a specific limit determined by Congress. If nonprofits can successfully crowd-out or take the place of means-tested government programs in the United States, then donations to human service based nonprofits can be deducted at a higher ratio.

II. Methods

The data for this study comes from all 50 states in the United States from the time period of 2012 to 2016. Washington, DC and territories of the United States will not be included. I focus on total state level spending on SNAP and the WIC. For my study, nonprofit characteristics that are focused on are the sum of income, assets, and revenue. This nonprofit data is from the National Center for Charitable Statistics’ IRS Business Master Files. I also include a control for state personal income per capita as well as a control for state poverty level per capita. This data comes from The Bureau of Economic Analysis and the United States Census Bureau Current Population Survey, respectively. State GDP per capita is also included as a control variable and is available through the Bureau of Economic Analysis. To control for race, White and African American per capita are included. Asian per capita was omitted to avoid multicollinearity. Race variables are collected through the United States Census Bureau Current Population Survey. Property crimes per capita is obtained by data collected from the Federal Bureau of Investigation. Property crimes are a sum of burglary, larceny-theft, motor vehicle theft, and arson crimes. These crimes have the purpose of stealing money or property, but without force or threat of force against the victim (Federal Bureau of Investigation, 2012). The sum of property crimes and violent crimes is total crimes. For this reason, violent crimes are omitted to avoid
multicollinearity. The regressions also include region fixed effects, with region following the Census Bureau definition.

Percent Poverty, White per Capita, African American per Capita, and Nonviolent Crimes per Capita all underwent logarithmic transformations. Specifically these variables underwent Level-Log transformations.

Specifically, only 501(c)(3) organizations are used. The 501(c)(3) designation is for organizations that are charitable, religious, educational, scientific, or literary, or that test for public safety, foster national or international amateur sports competition, or prevent cruelty to children or animals (Internal Revenue Service, 2017). To avoid large organizations that would skew results, such as large universities, Boy Scouts, etc., only human services based organizations categorized by the National Taxonomy of Exempt Entities as ‘Food, Agriculture, and Nutrition’ (label K) and ‘Housing, Shelter’ (label L) are used.

With the previously described dataset, I use the following empirical models to predict the substitution effect between characteristics of human services based 501(c)(3) organizations and means-tested government programs. Equation (1) corresponds to SNAP, while Equation (2) corresponds to WIC.

\[
\text{SNAP} = \beta_0 + \beta_1 \text{Income} + \beta_2 \text{Assets} + \beta_3 \text{Total Revenue} + \beta_4 \text{Personal Income per Capita} + \beta_5 \text{Log Percent Poverty} + \beta_6 \text{State GDP per Capita} + \beta_7 \text{Log White per Capita} + \beta_8 \text{Log African American per Capita} + \beta_9 \text{Log Property Crimes per Capita} + \beta_{10} \text{South} + \beta_{11} \text{MidWest} + \beta_{12} \text{West}
\]

\[
\text{WIC} = \beta_0 + \beta_1 \text{Income} + \beta_2 \text{Assets} + \beta_3 \text{Total Revenue} + \beta_4 \text{Personal Income per Capita} + \beta_5 \text{Log Percent Poverty} + \beta_6 \text{State GDP per Capita} + \beta_7 \text{Log White per Capita} + \beta_8 \text{Log African American per Capita} + \beta_9 \text{Log Property Crimes per Capita} + \beta_{10} \text{South} + \beta_{11} \text{MidWest} + \beta_{12} \text{West}
\]

A series of seemingly unrelated estimation regressions are used to quantify how the level of means-tested transfer spending relates to characteristics of nonprofits in the state. Seemingly unrelated estimation regressions are chosen because my model may contain different linear equations due to observing each state. For each of these linear equations, the error terms are correlated. This data is organized by utilizing a balanced panel data set.

III. Results

Table 1 shows how the level of output SNAP and WIC relates to Income, Assets, Total Revenue, Personal Income per Capita, Log Percent Poverty, State GDP per Capita, Log White Per Capita, Log African American per Capita, Log Property Crimes per Capita, South, Midwest, and West.
Out of all nonprofit characteristics, assets are the only statistically significant variable. It is significant at the 1% level. All else equal, states with $1 billion more in nonprofit assets spend approximately $658 million more on SNAP. Assets are also positively correlated to government expenditures on SNAP. This means nonprofits do not necessarily reduce the amount of money the government allocates to SNAP spending. A similar result is seen between the relationship of WIC spending and asset value. All else equal, states with $1 billion more in nonprofit assets spend approximately $61.4 million more on WIC. This difference of almost $600 million is most likely attributable to the broader vision of the SNAP program.

Even though a positive relationship is demonstrated between these relationships, these results are important. They show that nonprofits are in areas that are in need of their services because as a state’s nonprofit assets increase, welfare spending for the state increase as well. This means if a state’s poverty issues increase, more nonprofits may enter the market to help those in need. With the introduction of more nonprofits, the aggregate nonprofit asset total for the state rises. Concurrently, the government injects more welfare spending in the state to help those in need. By contrast, the relationship displayed between nonprofit income and total revenue are small and imprecisely estimated.

Percent Poverty is significant at the 1% level for both SNAP and WIC. For every one percent increase of Percent Poverty, SNAP will increase by $10.5 million and WIC will increase by $904 thousand.
In all of these regressions, after controlling for the other variables, the Midwest has the lowest spending on SNAP and WIC statistically distinguishable from zero at the 5% level for SNAP and 1% level for WIC. This may suggest people are less likely to use SNAP and WIC if they live in the Midwest. The Northeast (the omitted region) has the largest amount of spending on SNAP, statistically significant at the 1% level, and WIC statistically significant at the 5% level.

Figure 1 shows the residual plot for SNAP for all states during the years of 2012-2016. An R Square value of .6126 is also shown by looking at Figure 1. There is also a right skewed distribution. This positive distribution is due to the fact that the average is greater than the median value.

Figure 2 shows the residual plot for WIC for all states during the years of 2012-2016. An R Square value of .5207 is also shown in Figure 2. This lower R Square can be attributed to the narrow scope of the WIC program. Much like SNAP, WIC displays right skewed distribution.
IV. Conclusion

Overall, assets are the most significant part of a nonprofit, compared to income and total revenue. Assets tend to be the largest category on a nonprofits income statement. Within the assets category, ‘land, buildings, and equipment’ is constantly the largest subcategory. This suggests that the most important aspect of a nonprofit is their location.

For future studies on this subject, the Midwest can be more closely examined to explain why there is less spending on SNAP and WIC after controlling for other relevant state characteristics. One possible explanation is the nonprofits in this region do a better job distributing resources to those in need. The Northeast region can also be studied more as to why the United States spends more on SNAP and WIC. This excess of spending is potentially related to the amount of large cities in the geographic region. Other variables such as educational attainment and a cross examination of individuals on multiple forms of welfare could prove to be significant.

In conclusion, in the calendar year 2015, almost 15.06 million individuals were eligible to partake in WIC. Approximately 52.7%, 7.94 million, people actually participated in the program (United States Department of Agriculture, 2016). In the same calendar year, nearly 50.04 million individuals were eligible to enroll in SNAP. Roughly 83%, 41.53 million people, were enrolled for SNAP (United States Department of Agriculture, 2016). During this time, 43.1 million people lived below the poverty threshold (United States Census Bureau, 2016). So, 96.4% of individuals who live in poverty participate in SNAP while 18.4% of impoverished persons participate in WIC. While human services based 501(c)(3) organizations cannot act as a substitute to means-tested government programs, their importance to almost all individuals who live below the poverty line are clearly demonstrated.
References


Appendix: Code Book

import excel "C:\Users\jms12497\Downloads\Thesis Data.xlsx", sheet("STATA GEO")
cellrange(A1:P251) firstrow

encode State, gen( State4)

xtset State4 Year

summarize GEO

generate South = 0
replace South = 1 if GEO == 1

generate NorthEast = 0
replace NorthEast = 1 if GEO == 2

generate MidWest = 0
replace MidWest = 1 if GEO == 3

generate West = 0
replace West = 1 if GEO == 4

gen logPercentPovertyLevel = log(PercentPovertyLevel)
gen logWhitePerCapita = log(WhitePerCapita)
gen logAfricanAmericanPerCapita = log(AfricanAmericanPerCapita)
gen logNonviolentCrimes = log(NonviolentCrimes)

sureg SNAP INCOME Assets TotalRevenue PersonalIncome logPercentPovertyLevel StateGDPPerCapita logWhitePerCapita logAfricanAmericanPerCapita logNonviolentCrimes South MidWest West

predict residuals1, residuals

twoway (scatter SNAP residual1) (lfit SNAP residual1)

sureg WIC INCOME Assets TotalRevenue PersonalIncome logPercentPovertyLevel StateGDPPerCapita logWhitePerCapita logAfricanAmericanPerCapita logNonviolentCrimes South MidWest West

predict residuals2, residuals

twoway (scatter WIC residuals2) (lfit WIC residuals2)