Jad Elgaali
3/22/19

Trust based on education attainment: at the local neighborhood level

I. Introduction:

The research question I am addressing is: Is there a relationship between an individual's education level and the how much they trust their neighbors? My hypothesis is that people with a higher education are more likely to trust their neighbors. To determine if the data shows significance, I conducted a chi-square test using data from the National Health Interview Survey (NHIS) data from 2017. As the wealth inequality continues to rise in this country (Norton et. al, 2011), it is important to assess whether there is a trust deficit as well as a result of fewer economic opportunities. It is understood that having a university degree drastically improves the economic outlooks of people (Glaeser et. al, 2002). With the increased cost of attendance and racial factors there is a great barrier to be able to attend. The chi-square tests conducted in this study confirm that there is a significant association between education level and neighborhood trust level. Those with at least a bachelor's degree were more likely to "definitely agree" that they trust their neighbors than those without a college degree; and those without a high school diploma were the most likely to "strongly disagree" to the notion that people in their neighborhood can be trusted.

II. Literature Review:

There has been much research done over the past several decades studying social cohesion, and in particular, social capital and levels of trust (Glaeser et. al., 2002, Subramanian et. al., 2003, Harrison et. al., 2019). Studies have further deconstructed their work to measure the specific components of social capital (Subramanian et. al., 2003), and how it relates to trust or mistrust, there has been important research measuring how educational attainment affected reported trust (Glaeser et. al., 2002). There is an important distinction between education and social capital, with education typically being considered human capital and trust being an aspect of social capital (Norton et. al., 2011). Much of the research conducted in this field has reached the conclusion that higher levels of education lead to higher levels of trust, or conversely lower levels of mistrust and that individuals with lower levels of education have higher levels of mistrust (Glaeser et. al., 2002, Subramanian et. al., 2003). This indicates that there is a relationship between human capital (education) and social capital (trust), specifically that they are complementary to one another (Norton et. al., 2011). An analysis is based on the 1995 survey in Chicago called the Community Survey of the Project on Human Development in Chicago Neighborhoods (PHDCN) found that 21% of Chicago reported mistrust on average (Subramanian et. al., 2003). The research conducted by Subramanian et. al. found a statistically significant association between educational attainment and levels of mistrust. Interestingly, there was a significant effect in the very low and very high education individuals for lowest levels of mistrust, forming an inverse U-shape relationship. However, when the other variables were added to the model such as income and race, the non-linear relationship disappeared. Furthermore, the Hispanic category produced unique, significant results when the interaction of race and education were measured for levels of mistrust. The Hispanic group was the only group that measured higher levels of mistrust with higher education (Subramanian et. al., 2003). Differences between how much trust there is within a neighborhood cannot be determined by demographic or socioeconomic factors alone, but marital status, income and education were far more robust variables in determining the levels of trust within a particular neighborhood. Some neighborhoods that one would expect to have a high level of social cohesion based on social

capital determined by demographics or socioeconomic status moves into the low social capital category and report statistically significant levels of mistrust when the variables are replaced with marital status, income, or education, and the opposite is true as well (Subramanian et. al., 2003). Overall, differences in neighborhood trust levels can be determined by education levels. A reason for this could be because people who invest in education also invest in social capital or being more willing to trust others (Norton et. al., 2011).

However, not all studies have found results that are in line with the majority-consensus. A study by Intravia et. al. (2016), focusing on neighborhood disorder found evidence that goes counter to what has been generally thought to contribute to low levels of neighborhood trust. The trust measured is generalized trust which is defined as the belief in the integrity of other people (Intravia et. al. 2016), namely that education is not an important factor of neighborhood trust with two of their models producing a correlation of 0.01 and one model producing a correlation of 0.05. This is interesting because this study is done in 2016 and also used the Community Survey of the Project on Human Development in Chicago Neighborhoods (PHDCN) from 1995, yet they did not find education to be a statistically significant variable (Subramanian et. al., 2003). A reason could be that while neighborhood trust was a variable in the study, it focused specifically on neighborhood disorder (Intravia et. al. 2016). Unfortunately, while neighborhood disorder is not explicitly defined, there are some implicit aspects which can be inferred from what is discussed in conjunction with neighborhood disorder, that being fear and suspicion of the police, high levels of crime, and low trust. Fear of the police and negative relations with them, termed negative police efficacy, had a large impact on neighborhood disorder and trust. A poor relationship with law enforcement caused a neighborhood disorder and mistrust of 79% when taken together. It is suggested that with increased generalized trust, fear and suspicion can decrease, and this can be done by increasing neighborhood attachment and more important, improving police-citizen relations in the community (Intravia et. al. 2016).

There are several reasons why education leads to the acquisition of social capital, and subsequently, individual and neighborhood trust, one of which is that education leads to the development of social skills, knowing how to work in groups, learning to cooperate, and being aware of others (Harrison et. al., 2019). Having inadequate access to quality education or only limited exposure to schooling could seriously hinder the development of these pro-social behaviors. These disadvantaged neighborhoods (Intravia et. al. 2016). particularly negatively impact minorities and therefore lower educational attainment is partially a reason for the persistence of this trend (Harrison et. al., 2019). Interestingly, in their research of the Western United States of America Harrison et. al. (2019) found that college degrees did not correlate with poverty. Believing this to be an error, they tried other variables that would substitute in for education such as number of years in schooling; however, this would produce the same result. A potential reason for this is that many people with college degrees are currently still studying, placing them below the poverty and causing this result. However, having a bachelor's degree did produce statistically significant result in predicting social capital, and by extension, levels of trust (Harrison et. al. 2019). This was the case for all three of the models tested. In fact, education was one of the variables that stood out as the strongest in predicting social capital, so much so that it is proposed that investing in education is investing in the building of social capital. Additionally, communities with more individuals that trust one another may be more likely to cooperate; however, this should be done carefully as past studies have shown that high population densities reduce trust within a neighborhood (Harrison et. al., 2019).

III. Analysis:

Table 1

Ecucation Level	Freq.	Percent
No High School Diploma	20,034	25.64
High School Diploma	58,098	74.36
Total	78,132	100

Table 2

Education Level	Freq.	Percent
No Bachelor's Degree	53,563	68.55
Bachelor's Degree	24,569	31.45
Total	78,132	100

In this study there were two independent variables and one dependent variable. The independent variables were possessing at least a bachelor's degree and possessing at least a high school diploma. The dependent variables were the neighborhood trust level. Tables 1 and 2 show the descriptive statistics for the independent variables and were a starting point which were used to ensure that the data was accurate. Table 1 accurately shows how about 74% of the country has at least a high diploma and Table 2 correctly indicates the percentage of Americans with at least a bachelor's degree at 31%. The data shown in Table 3 indicates that the overwhelming majority of Americans do trust their neighbors, with about 85% saying they either somewhat agree or definitely agree when asked by the surveyors "How much do you agree that people in this neighborhood can be trusted?" Conversely, this shows that about 15% of the people do not trust their neighbors. However, the purpose of this study was to see if this how these results vary when measured specifically for education level. In other words, does a person's education level change or affect how likely they are to trust their neighbors. To determine if there is a statistically significant relationship, a chi-square test was conducted. As evident in Tables 4 and 5, having a bachelor's degree or high school diploma, respectively, are statistically significant for neighborhood trust.

Table 3

How much do you agree that people in this neighborhood can be trusted?	Freq.	Percent
Definitely agree	12,311	48.74
Somewhat agree	9,096	36.01
Somewhat disagree	2,182	8.64
Definitely disagree	1,672	6.62
Total	25,261	100

Table 4

	No Bachelor's Deegree	Bachelor's Degree	Total
Definitely agree	7686	4625	12,311
	45.84	54.44	48.74
Somewhat agree	5980	3116	9,096
	35.67	36.68	36.01
Somewhat disagree	1685	497	2,182
	10.05	5.85	8.64
Definitely disagree	1415	257	1,672
	8.44	3.03	6.62
Total	16766	8495	25,261
	100	100	100
Pearson chi2(3)= = 452.0342 Pr = 0.000			

Table 5

	No High School Diploma	High School Diploma	Total
Definitely agree	1171	11140	12,311
	41.54	49.64	48.74
Somewhat agree	947	8149	9,096
	33.59	36.31	36.01
Somewhat disagree	344	1838	2,182
	12.2	8.19	8.64
Definitely disagree	357	1315	1,672
	12.66	5.86	6.62
Total	2819	22442	25,261
	100	100	100
Pearson chi2(3) = 260.7314 Pr = 0.000			

The results confirm my hypothesis that the higher an individual's education, the more likely they are to trust their neighbors, and the lower the individuals' education, the less likely they were to trust their neighbors. Essentially, there is a positive relationship between education and mistrust. This hypothesis is also in line with the majority of literature produced on the topic, including those covered in this paper, specifically the studies by Harrison et. al. and Subramanian et. al. Predictably, the results show that as the education level decreased so did the trust levels. For example, in the category of those who say they "definitely agree" that they believe people in their neighborhood can be trusted, people with a bachelor's degree were the most likely to

choose this category with 54%, people with a high school diploma or equivalent were second most likely with 50% of them choosing this category, and people without a high school diploma were least likely to choose this category with 42%. This trend of a positive relationship remained consistent for all the other categories as well.

The two categories for mistrust produced very interesting results, as a total of 9% of the higher education cohort did not trust their neighbors to a degree while 24.9% of those without a high school diploma had mistrust for their neighbors. This indicates that nearly a quarter of the sample of those without a high school diploma did not trust their neighbors. To put this in perspective, of those with a bachelor's degree, 3% "definitely disagree" and 6% "somewhat disagree" that their neighbors can be trusted, resulting in a mistrust total of about 9%. For those without a high school diploma, the result was for levels of mistrust was 12% per category. A reason for this disparity in trust by education is potentially due to the fact that while in school people learn pro-social behaviors such as how to work in groups and having an increased awareness that other people have different views (Harrison et. al., 2019). The longer someone stays in the education system the more these skills are reinforced in a fairly controlled setting. These skills translate later in life as social capital, an aspect of which is trust of others.

The literature also discusses the role race and ethnicity and how they are involved in the relationship between educational attainment and neighborhood trust. Subramanian et. al. (2003) studied the relationship between race and education and found no statistically significant result in reporting higher levels of mistrust with one exception. The one group that was the exception was Hispanics, whose trust levels decreased as their education levels increased (Subramanian et. al., 2003). This indicates that when education is introduced as a variable, most racial groups tend to witness a positive relationship between educational attainment and trust levels. However, the study by Intravia et. al. (2016) indicated that education plays no role in trust levels and that negative police efficacy was to blame for lower levels of trust for racial minorities. The results show that neighborhood with low residential stability, higher homicide rates, racial and ethnic diversity, as well as higher population densities have lower trust than those without these characteristics (Intravia et. al. 2016). Additionally, Harrison et. al. (2019) pointed out that the reason racial minorities in general might have higher mistrust is that their lower education levels prevent them from building social capital, and by extension trust. During school, people learn how to work in groups, cooperate, and that others have different viewpoints (Harrison et. al., 2019). The longer one stays in school, the more these concepts are reinforced, and therefore, are building positive social skills that help them learn to trust people later in life. If one has a shorter time in school, they might have a deficit in some of these skills that help build trust. The lower educational levels of minorities (Harrison et. al., 2019) could be a reason why in general they generally have lower trust levels in their communities.

One of the potential limitations of this study is the this the question was phrased. The question "How much do you agree that people in this neighborhood can be trusted?" is convoluted and less direct than asking "Do you trust the people in this neighborhood?" The categorical answers can reflect the question by having categories such as "yes, a lot," "somewhat," "not really" and "no". However, these categories in and of themselves are not the best measures for such a study. Phrases such as "somewhat agree" and "definitely disagree" are ambiguous and could mean different things to different people. Using a number ranking system could be more straightforward for people to answer as well as be more precise to accurately reflect how much people trust their neighbors.

IV. Conclusion:

In this study 2017 NHIS data was used to study the relation between education and neighborhood trust. The research question in this study is: Is there a relationship between an individual's education level and the how much they trust their neighbors? The hypothesis that the higher the educational attainment the more likely people are to trust their neighbors, and the lower the educational attainment, the less likely people are to trust their neighbors was confirmed by the chi-square test. This was in line with the majority of the literature conducted on the topic of education and trust or social capital in general. For the remaining population not receiving a high school education, it is imperative that local and federal officials have a plan to ensure that everyone at least finish high school as not doing so has proven negative effects on their trust of their neighbors, and by extension, negatively impacts the social cohesion of the community in general. This study shows how not having a high school diploma negatively impacts the likelihood of trusting one's neighbors. Additionally, this study demonstrates a new way of understanding how education relates to trust by following each stage of educational progress and the resulting effects on neighborhood trust; and how at each level from being in high school to completing high school to completing a bachelor's degree trust levels change.

Works Cited

1. Glaeser, Edward L., David Laibson, and Bruce Sacerdote. "An economic approach to social capital." *The economic journal*112.483 (2002): F437-F458.

2. Harrison, Jane L., Claire A. Montgomery, and P. Wilner Jeanty. "A spatial, simultaneous model of social capital and poverty." *Journal of Behavioral and Experimental Economics* 78 (2019): 183-192.

3. Intravia, Jonathan, et al. "Neighborhood disorder and generalized trust: a multilevel mediation examination of social mechanisms." *Journal of criminal justice* 46 (2016): 148-158.

4. Norton, Michael I., and Dan Ariely. "Building a Better America—One Wealth Quintile at a Time." *Perspectives on Psychological Science* 6 (2011): 9–12.

5. Subramanian, S. V., Kimberly A. Lochner, and Ichiro Kawachi. "Neighborhood differences in social capital: a compositional artifact or a contextual construct?." *Health & place* 9.1 (2003): 33-44.