2017

Race, Poverty, and Basic Needs

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SUBMITTED TO

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BY

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For
Senior Thesis
Spring 2017
24 April 2017

Abstract

Black Americans experience poverty at disproportionately high rates that are concerning both because of the perils of poverty as well as the belief that one's race should not affect one's opportunities in life. This paper extends the Capability Approach and argues that basic needs play an important economic role in providing people with a minimum level of opportunity that allows them to avoid poverty. Using MSA-level data on basic needs access and poverty rates, this paper finds that increasing rates of homeownership, high school graduation, and car access as well as decreasing rates of disability are all significantly associated with lower poverty rates for Black Americans. However, the empirical results also show that higher rates of high school graduation and car access for White populations are associated with higher rates of Black poverty, likely due to spillover effects in the labor market that crowd out Black workers.

Acknowledgements

I am incredibly grateful to my reader, Professor Cameron Shelton, for his continual support of my work as well as for his ability to answer my seemingly endless number of questions. He has pushed me to always dive deeper and engage more critically with my analysis, and I cannot express how much my courses with you have shaped and improved my CMC education.

A sincere thank you as well to my fantastic friends for their companionship during this process and for being the source of the most wonderful conversations and experiences during my four years at CMC. A special shout-out to 671B, Off in the Woods, and the FIFA crew for providing some much-needed stress-relief.

I will likely never know the extent of the sacrifices my family made to allow me to attend CMC and pursue my passions, but I hope this work is a signal that my experiences here have not been fruitless. Thank you for your unqualified love; it pushes me to be and do better in every facet of my life.

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Section I: Introduction

The Oxford English Dictionary defines poverty as, "the condition of having little or no wealth".[1] The United States Government attempts to quantify this state of being by defining poverty as living in a household with an income that is less than three times the cost of a minimum food diet.[2] And at a time when the US national poverty rate is over fifteen percent, it is clear that our supposedly developed country has not been able to ensure an adequate life for everyone. What is particularly troubling about poverty in the United States is the extent to which race, a characteristic that most Americans would likely agree should not affect one's opportunities or outcomes, causes variation in poverty rates. Around twenty-seven percent of Black Americans live in poverty, and the goal of this paper is to help explain why this rate is so disproportionately high and how we should work to reduce it.

One might question whether we should focus on poverty as an outcome rather than on whether all Americans have similar opportunities. But, while equality of opportunity is an admirable goal, it is not feasible at the individual level; children of mathematicians, for example, will always have extra opportunities to further their mathematical abilities. And unless we work to remove every influence that people can have on one another to equalize opportunity so that only natural talent and hard work dictate success, we must accept that individuals will have different opportunities to attain different outcomes. On the other hand, equality of opportunity is a reasonable

[1] OED Online (2017)
[2] United States Census Bureau (2014)

goal when evaluating racial groups. One's race should not affect the kinds of opportunities that are available to them, and it makes sense to strive for a society where racial groups all have similar levels of opportunity.

However, our society is not yet at that ideal stage. As such, I propose that in our current society, we should focus on providing people with a minimum level of opportunity, not one that is somehow equal to everyone else's. To identify this minimum level of opportunity, we can look at basic needs as a representation of whether one has the opportunity to live their life above the poverty line that we as a society identify as a basic standard of living. Basic needs are what we believe every person should have access to in order to be able to pursue a good life. They give people the opportunity to participate in society and to work to improve their socioeconomic standing. Necessities like food and shelter are what allow people to maintain their well-being, while education and transit give people the abilities to join the labor force. There is a good amount of research describing how these necessities expand people's opportunities and lower their chances of living in poverty. I will go over this research later, but what I have found is a particular dearth of work analyzing how the provision of these basic needs can help explain the disproportionately high Black poverty rate.

In order to attempt to create solutions to lower poverty rates for Black Americans, we have to understand exactly how these various goods affect poverty rates. It might make no sense to provide rental assistance to poor black families if the stability provided by home ownership is what actually better reduces poverty rates. As such, I intend to evaluate how the levels of basic needs met within different communities

affects poverty rates for Black Americans. Is it that they have not reached some threshold of basic needs, or that they are disadvantaged because they have not reached the same level as White Americans? Essentially, I want to understand whether racial inequalities in basic needs explain Black poverty, or whether we should work to provide for the basic necessities of Black Americans independently of their White neighbors.

To quickly provide an overview of the rest of the paper, in Sections II and III I will discuss why basic needs are important and also how they specifically relate to poverty. Section IV will then explain why my research is focused on Black poverty rates. Sections V, VI, and VII shift the focus onto my empirical strategy, data sources, and the regression process. Lastly, Section VIII will provide an overview of the empirical results and Section IX will conclude and discuss the implications of my findings.

Section II: Why Basic Needs Matter

There are certainly numerous theories for why poverty exists in general, ranging from broad institutional critiques to failures in personal character. However, an area where there is a relatively high level of consensus, or at least of evidence, is in the relationship between basic needs and poverty. As I will detail in this section, basic necessities are what provide protection from financial catastrophe, maintain our personal well-being, increase our human capital, and allow us to participate in society and the labor market in order to provide for ourselves and our families. Essentially, basic needs are required for people to truly have the opportunity to not live in poverty. In this

sense, access to basic needs is not a measure of outcome, but of opportunity. Meeting basic needs for all individuals does not create equal opportunity for everyone to attain high levels of success, but it does provide the opportunity to maintain an adequate standard of living that should exist for all members of our society.

In doing so, they fulfill an important moral goal for our developed society. Consider the moral philosophical arguments of Martha Nussbaum and Amartya Sen regarding the importance of capabilities in ensuring justice. In their views, the equal dignity and value inherent in all people means that everyone should be free and, "able to do certain basic things".[3] These things, or capabilities, are what give people agency and a sense of choice within their lives. While various philosophers have proposed different sets of capabilities, they often include physical abilities, internal emotional measures, and economic freedoms. While I certainly believe that the first two are important, I am mostly concerned with how various capabilities/basic needs contribute to fiscal freedom. For people to truly have personal agency throughout their life, they have to have the opportunity to attain a certain level of earnings such that they do not have to constantly worry about providing for themselves. And so long as the government does not guarantee this level of minimum income to all people, a decent paying job is still the best method for adults to avoid poverty.

Certainly, we will never be able to provide everyone with exactly equal economic opportunities. But, what we can do is improve our system so as to ensure that a minimum standard of resources, namely an income above the poverty level, is possible

[3] Sen (1979). 218.

for all individuals. Transit, education, housing, and health care are all morally necessary in Nussbaum and Sen's view due to the direct capabilities (movement, shelter, self-fulfillment, etc.) they create[4]. But, they are additionally relevant when we consider how they contribute to giving people an opportunity to escape poverty and broaden their economic capabilities.

One might question, however, whether basic needs truly do exist at a threshold that we can identify or whether there is simply a continuous distribution of resources along which more is always better. I do not disagree that access to more resources generally expands one's set of opportunities. However, as we are only interested in providing a certain level of opportunity and not in maximizing that level, the existence of a spectrum does not appear to be an issue. I should still note that it is possible that basic needs do not exist at a poverty-alleviating threshold. Perhaps simply having health insurance is not a crucial part of what gives someone the opportunity to not live in poverty because only the gold-standard health insurance plans truly provide enough financial protection. As such, one of the goals of my analysis is to contribute to the research on whether basic needs thresholds exist that do help individuals escape poverty.

[4] Physical security is often also included in this list, but I do not address it in this paper due to the fact that while it can be economically relevant, the link is more tenuous than for the other goods.

Section III: Existing Research on Basic Needs and Poverty

Before that however, I will provide a brief overview of the existing scholarship on the effects of meeting certain basic needs' thresholds. This research describes and evaluates some of the mechanisms through which basic needs can expand people's opportunities and reduce poverty, and showcases some of the thresholds that do exist in terms of lifting individuals to that minimum level of opportunity.

Shelter is often viewed as a fundamental part of human living, in terms of providing protection from harmful weather. But, shelter can be as basic as a temporary mass homeless residence shelter or even a tent in a park. When looking at shelter as a basic necessity in our current society, I believe we should be referring to physical housing that families/households can occupy. Bratt (2010) describes how adequate housing not only provides shelter, but also provides people with greater self-confidence and provides a sense of stability that contributes to personal well-being. Additionally, Newman (2008)'s literature review finds that housing can improve health outcomes and also increase earnings through greater access to jobs. When individuals have a stable residence, they are better able to look for long-term work and to be more reliable and successful in the labor market. It seems correct then that government programs that provide housing assistance are able to help people escape poverty[5]. They provide stable housing and can also help people move to more well-off neighborhoods where they often live in less stressful circumstances. In a similar vein, homeownership, the most stable form of housing, has been shown to have significantly positive outcomes on

[5] Turner (1998)

children in these households[6]. They exhibit fewer behavioral problems and also attain greater educational achievement, independent of the other circumstances present within their households. Thus, we can see how housing functions as a basic need by not only providing shelter, but by improving the chances that a family can move out of poverty in current and future generations.

Good health is also an integral aspect of living fully, and one of the most effective means through we can help provide it is through health care coverage. Health insurance not only protects people's finances in cases of health emergencies, but also increases access to preemptive care and necessary doctor visits that lead to significantly improved health outcomes[7]. Health coverage also has poverty-reducing benefits; Sommers and Oellerich (2013) show how Medicaid keeps almost 4 million Americans out of poverty by reducing their out of pocket spending. The improved health outcomes also help reduce poverty by increasing both educational achievement and worker productivity to better allow people to participate fully in the economy.

Health coverage is particularly important in the context of people with disabilities. While disabilities certainly exist on a gradient, they tend to limit personal, social, and/or economic opportunities to some extent. Yeo (2001) and Elwan (1999) describe how disabled individuals are at significantly greater risk of living in poverty. Not only do they require increased health care and bear the burden of the associated expenses, but they are also often at a disadvantage in the labor market. While laws such

[6] Haurin et al (2002)
[7] Bernstein et al (2010); Thornton and Rice (2008)

as the ADA attempt to even the playing field, they are only able to do so much. This mechanism also works in the opposite direction; poor Americans are more likely to develop disabilities throughout their lives due to reduced health access and environmental risks/hazards[8]. This paints a picture of an unfortunate cycle that reinforces disability and poverty. So, while health insurance can help address part of this issue, reducing the development of disabilities among the poor is also evidently a necessary undertaking.

In our increasingly work-centric society, the most effective means to avoid poverty is often through securing steady employment. As such, we must place an emphasis on the role of basic necessities in increasing access to labor markets. Goods like transit and education surely play an important role in improving well-being and living standards and increasing participation in society. But, their main poverty-reducing mechanism stems from their ability to increase earnings and job access. Access to transportation has been shown to expand the geographic area within which the poor are able to search for jobs and reduce commute times[9]. Public transit is often most effective in urban areas because it can connect people to dense economic centers where it is more cost-efficient than personal vehicles.

Education similarly expands one's job opportunities, but does so largely by providing people with qualifications and skills that increase their human capital and job-readiness. More education both improves the chances that people will work, and also

[8] Minkler et al (2006)
[9] World Bank (2002); Sanchez (1998); Macek et al (2001)

increases their earnings potential throughout their lifetime. This process occurs at various times throughout one's educational career; Amos (2008) shows how dropping out of high school increases the likelihood of experiencing poverty while Baum et al (2013) finds that a college education increases both short and long-term incomes and significantly reduces poverty rates. Thus, we can see how basic needs that people value intrinsically also play a significant role in poverty-reduction through the labor market.

With the economic research that there is a strong mechanism between the provision of these basic goods and reducing the incidence of poverty, it may seem that we have a relatively simple answer. So long as we continue working to provide as many people with their basic needs as possible, we will likely see a reduction in Black poverty rates across the board. But, while this may be one effective method, the question remains of what is the *most* effective method. To better understand this problem, it is worth taking the time to understand the historical link of racial discrimination and inequality in the provision of these basic necessities in the US.

Section IV: Why Race Matters

While I am evaluating the relationship between basic needs, opportunity, and poverty, I am also specifically looking at how Black Americans experience this relationship. And that begs the question of why I am focusing on a specific racial group. Surely I should simply research how to lower poverty rates for all members of our society.

However, I would argue that race does matter and that we can reasonably justify why we should exert some effort to expand opportunities and raise standards of living for Black Americans specifically. Perhaps we think that race should not matter. And in an ideal world, hopefully it would not. But, we do not live in an ideal society and when we look at poverty rates for Black Americans, it is clear that one's race does have an effect on what opportunities one has available to them. Race affects our access to housing, education, healthcare, and transportation and this connection is not tenuous. There is a long history of discrimination in basic needs access that continues on today and still has strong effects on the lives of Black Americans. And understanding these mechanisms of discrimination and inequality showcases the relevance of both race and basic needs in trying to explain disproportionately high poverty rates among Black Americans.

The Federal Housing Administration explicitly allowed redlining, a practice in which banks could legally approve mortgages and guarantee loans only in majority-white neighborhoods[10]. This practice made home-owning more expensive for Black families, segregated neighborhoods, and reduced the stability and investments available for Black Americans[11]. And as shown in Roscigno et al (2009), racial discrimination still exists in most aspects of the housing system, from landlords preferring not to rent units to Black individuals to neighbors harassing Black residents out of their homes, a practice apparently not left in 1950's Levittown[12]. Perhaps most significant is the fact that Black

[10] "1934–1968: FHA Mortgage Insurance Requirements Utilize Redlining," The Fair Housing Center of Greater Boston, accessed April 20, 2017.
[11] Madrigal (2014)
[12] McCrary (1997)

mortgage applicants are still denied at higher rates and charged significantly higher rates even when approved, as shown in Cheng et al (2015).

A similar process has occurred in the auto insurance industry, reducing access to personal vehicles for Black Americans. Insurance companies charge similar drivers at all levels significantly higher rates when they determine that they live and drive in zip codes with higher proportions of Black residents[13]. While this does affect drivers of all races in these areas, it certainly has the largest effect on the rates for Black drivers, which can be more than seventy percent higher than for drivers in White zip codes. This reduced access to personal vehicles is especially important when we consider that the segregatory effects of mortgage redlining also reduced access to public transit for Black Americans. Parks (2014) discusses how historical residential discrimination has caused a spatial mismatch between public transit and Black residents that has significantly lengthened their commutes in comparison to White residents in the same region.

This history of inequity is not overlooked in the healthcare realm either. Black Americans have always been significantly more likely to be un- and underinsured and so often go without needed care in order to avoid the expenses[14]. While health care expansions have certainly helped reduce uninsured rates among Black Americans, they have also exacerbated some of these inequalities. Wiltz (2015) describes how the Medicaid Expansion facet of the Affordable Care Act being made optional led to many Black Americans falling into a “health coverage gap” as they would not receive Medicaid

[13] Feltner and Heller (2015)
[14] Hayes et al (2015).

but also could not receive federal aid to purchase health insurance. The states that chose to enable this gap were more likely to have larger Black populations causing a national imbalance in which Americans received increase access to health care. But even when Black Americans do receive insurance, the legacy of race discrimination throughout the history of medical research has caused them to place significantly less trust than White Americans in both their healthcare providers and their insurance plans[15].

This inequity in health coverage is particularly striking when we consider that data shows us that Black Americans are significantly more likely than White Americans to report a disability throughout their entire lives[16]. The historical lack of access to health care certainly played a role in this gap, as do levels of access to nutritious food and health education. This gap also does not seem to be decreasing with natural progress. Many of the lower-income neighborhoods that Black Americans live in (often as a result of redlining) have excessively high levels of lead, which can cause significant health issues in children. And according to a report by the National Center for Healthy Housing, the higher rates of lead poisoning that Black children face has led to a greater likelihood of their developing learning disabilities and achieving worse educational outcomes. The higher rates of mental and physical disabilities have been particularly harmful because of the discrimination present in the disability benefits system. The New York Times reported in 1992 that Black Americans were significantly more likely to be

[15] Boulware et al (2003)
[16] Nuru-Jeter et al (2011)

rejected when applying for Social Security benefits due to serious ailments. So, even as we work to reduce disabilities and their high prevalence among Black Americans, we certainly have to be conscious of how we provide for individuals who are unable to participate in the labor force.

Educational inequity has long been a problem in America, and *Brown v Board of Education* did not eradicate this issue. Even though schools can no longer be segregated by law, the housing policies described above have still caused sufficient residential segregation such that schools are de facto still quite racially separate. And as Spatig-Amerikaner (2012) describes, loopholes have been written into federal law that allow school districts to provide unequal funding to various schools. Though these federal funds are designed to supplement funds for schools in low-income communities, the law doesn't consider teacher salaries, allowing school districts to place more qualified and experienced (and thus expensive) teachers in lower-poverty schools without impacting federal funding levels. This both creates funding disparities between mostly black schools and mostly white schools in the same district and also pushes more experienced teachers to the already better performing schools.

Condron and Roscigno (2003) also uncover these race-based funding inequalities, and argue that they are linked to school circumstances that hinder educational achievement. While we are still discovering the direct effects of more spending per pupil, they find that spending does allow for smaller class sizes and better qualified teachers, aspects of schools that are often linked to greater educational achievement. So, we cannot afford to evaluate the education system as a homogeneous

institution, but have to understand the role that racial inequity has played in lowering graduation rates for Black students and how we have to address the issue from a variety of perspectives.

I have not described this series of research and history to suggest that we can somehow reverse all of these policies, practices, and effects. On the other hand, I believe that this provides evidence that race has mattered and does still matter in America. More specifically, race has affected the distribution and provision of basic needs, and as I am evaluating a mechanism through which basic needs provide people the opportunity to escape poverty, race is particularly relevant. Essentially, as Black Americans have a significantly higher poverty rate and institutional policies have specifically limited their access to basic needs, we must consider race in order to understand how to lower poverty rates for this specific portion of the population.

Section V: Empirical Strategy

Having established that the high Black poverty rate is an important issue and that basic needs are an effective way of avoiding poverty, we are left with the question of how best to address this problem. On the surface, it may appear quite simple. We simply have to work to provide access to these basic needs to a larger proportion of Black Americans to expand their opportunities to raise their incomes. And while that may be the case, we do not know whether the Black poverty rate depends only on these circumstances, or whether there are spillover effects from the majority White

population based on their basic needs access. Their circumstances may spillover and affect the Black poverty rate largely due to competition within the labor market. White populations that are doing better at meeting their basic needs may have more opportunities in the labor market and thus crowd out Black workers. This seems particularly possible due to the racial discrimination that researchers observe in the labor market that generally favors White applicants[17]. Thus, to know how best to lower Black poverty rates, we need to understand whether policy should focus solely on helping more Black Americans meet their basic necessities, or whether policymakers need to equalize the basic needs provided to White and Black Americans in order to more effectively reduce Black poverty.

To further our knowledge regarding this difference, I have carried out an empirical test of what has more explanatory power for Black poverty rates, the levels of basic needs met for Black Americans or the gap between their living standards and those of White Americans. Ideally, I would use individual-level data describing the access that Black and White Americans have to basic needs, whether they seek them out, and what their outcomes are. However, as data on individuals is unavailable, I will be using MSA-level data on the proportion of the whole Black and White populations who have met the different needs and what the poverty rates are for these groups. This broader analysis does mean that we miss the long-term impact of basic needs on a person's life, but it better allows us to measure the spillover effects of White Americans' living circumstances on their Black neighbors.

[17] Bertrand and Mullainathan (2003)

Additionally, this group analysis may in fact be more beneficial to policymakers. Public policy is not implemented at the individual level, but in relation to groups of residents and how they will benefit. Race is one of the characteristics through which we can construct these groups, and this analysis can hopefully show how group benefits can translate to widespread positive impacts. To lower the poverty rate for a certain racial group, it makes sense to understand what that group is experiencing as a whole and how their circumstances affect them. It also gives us an opportunity to potentially understand how these effects vary based on the region. Obviously job markets and other socioeconomic conditions are different throughout the US, and looking at a wider variety of data can help understand the role they may play. In addition to providing a large enough sample of data, using individual MSAs is effective because we can gather data from what essentially function as commuting zones. The relatively independent job markets within MSAs thus allow us to understand how different local conditions and levels of basic needs provision affect access to employment and poverty outcomes. Essentially, MSAs are both logically and econometrically the appropriate level of data collection.

Before I get into the data and the empirical regressions, I quickly want to provide an overview of my hypotheses surrounding this issue. I believe that we will see that the spillover effects of White Americans' circumstances will be greatest for the basic needs like education and transit (and perhaps disability) that are the most connected to the job market. I do believe that they will still be present for the others, but that they will have a smaller magnitude due to the weaker relationship to job prospects. The

competitive nature of the job market within MSAs suggests that one's position in relation to those around them is of particular importance. On the other hand, for issues of wellbeing and reduced personal expenses linked to health care and housing, we can focus on basic needs for underserved groups with less consideration for their relative positions.

Section VI: Data

To gather MSA-level data, I used the results of the 2015 American Community Survey (ACS), as presented by the Census Bureau's American FactFinder. The ACS collects data from 381 different MSAs, but there are only 264 that have poverty rates broken down by race. Most socioeconomic variables are broken down by race for these MSAs, but transportation use is an exception. And because my empirical analysis includes transit type, I am only able to use data from 186 different MSAs. In order to determine how much I can extrapolate my results from these 186 MSAs to the other ones, I conducted t-tests on different variables in order to determine whether there are significant differences between the MSAs that had data for Black Poverty and the other basic needs rates and those that did not. The MSAs that I used had significantly larger populations that were proportionally more White and less Black. They had slightly higher Labor Force Participation rates, but also higher Unemployment rates. However, they did not have significantly different GDP Growth rates or Overall Poverty rates. For the most part therefore, the results of my analysis are more applicable to larger regions

(with correspondingly larger job markets) that have greater Black populations that actually play a significant role in the labor market.

The outcome variable that I am measuring is the poverty rate for Black individuals within an MSA, which is defined by the federal government as the proportion of individuals living in households with an income less than three times the cost of a minimum food diet. Regarding explanatory variables, there are two main groupings of variables that I use. The first set is composed of the variables that measure whether basic needs are met. For housing, I use homeownership rates for different races as a gauge for stable shelter. This is partly because homeless statistics are so sparse, but also because this allows me to test whether the benefits of homeownership described previously have poverty-alleviating effects. I use both health insurance rates and disability rates to evaluate healthcare among Black residents, as I can thus measure the effects of access to healthcare as well as one's long-term state of health. I evaluate the effects of education through high school and college graduation rates, so as to determine whether one is a stronger basic needs threshold in terms of reducing poverty. Lastly, for transportation I use the proportion of the Black population that commutes using a car, or using public transit. I can thus evaluate the basic question of whether access to a car reduces poverty and whether public transportation lifts residents out of poverty or is just used more by the poor.

The second group of variables that I use in my empirical analysis is a set of controls. These variables will ideally allow me to isolate the effects of the basic needs on the poverty rates. First, I use total MSA population and the percentages of the

population that are Black and White in order to control for size and racial demographics. To control for economic conditions, I use GDP growth, as well as Labor Force Participation and Unemployment Rates for the whole MSA population. Lastly, to account for differences in the economic quality of jobs, I include data on Labor Force Participation and Unemployment specifically for those living in poverty.

Figure 1: Summary Statistics for All Variables

Variable	Median	Standard Deviation
Black Poverty	.2855	0.0708
Population	548346	2227316
Log (Population)	13.2147	1.088
White Proportion	.7536	.118
Black Proportion	.1391	.1144
Log (Black Proportion)	-1.973	.748
Unemployment	.084	.019
Labor Force Participation	.6365	.043
GDP Growth	1.7	2.07
Unemployment Below Poverty	.2885	.053
LFP Below Poverty	.5305	.042
White Homeownership	.706	.062
Black Homeownership	.3817	.085
White Health Insurance	.92	.035
Black Health Insurance	.893	.0424
White Disability	.1315	.024
Black Disability	.146	.0263
White HS	.906	.038
Black HS	.85	.052
White College	.3045	.082
Black College	.177	.053
White Car Access	.828	.049
Black Car Access	.7665	.08
White Public Transit	.0084	.027
Black Public Transit	.0416	.063

Section VII: Regression Description

In order to actually understand what this data reveals, I have run a linear regression composed of control and basic needs variables. The format for this regression is reproduced here:

$$\textit{Black Poverty} = a + b_1(\textit{LogPopulation}_i) + b_2(\textit{White Percent}_i) + b_3(\textit{Log Black Percent}_i) + b_4(\textit{LFP}_i) + b_5(\textit{Unemp}_i) + b_6(\textit{GDP Growth}_i) + b_7(\textit{LFP Below Poverty}_i) + b_8(\textit{Unemp Below Poverty}_i) + b_9(\textit{White Homeowner}_i) + b_{10}(\textit{Black Homeowner}_i) + b_{11}(\textit{White Insured}_i) + b_{12}(\textit{Black Insured}_i) + b_{13}(\textit{White Disabled}_i) + b_{14}(\textit{Black Disabled}_i) + b_{15}(\textit{White HS}_i) + b_{16}(\textit{Black HS}_i) + b_{17}(\textit{White College}_i) + b_{18}(\textit{Black College}_i) + b_{19}(\textit{White Car}_i) + b_{20}(\textit{Black Car}_i) + b_{21}(\textit{White Public Transit}_i) + b_{22}(\textit{Black Public Transit}_i) + e_i$$

This regression includes the dependent variable, Black Poverty, a series of control variables with b_n coefficients, a constant *a*, and an error term *e*. The regression then also includes all the explanatory variables we really care about, namely specific basic needs provision rates for the White and Black populations. As described in the previous section, these variables include homeownership, health insurance coverage, disability prevalence, high school graduation rates, college graduation rates, car access, and public transit use. Lastly I should note that I use a ninety-five percent confidence level when evaluating whether the regression results are statistically significant.

Section VIII: Empirical Results

Figure 2: Regression Results for Initial Linear Regression

Source	SS	df	MS	Number of obs	=	186
				F(22, 163)	=	16.14
Model	.634884613	22	.028858392	Prob > F	=	0.0000
Residual	.291408381	163	.001787781	R-squared	=	0.6854
				Adj R-squared	=	0.6429
Total	.926292995	185	.005006989	Root MSE	=	.04228

BlackPoverty	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
LogPopulation	.004275	.0048106	0.89	0.376	-.0052243	.0137742
WhitePopulation	.122038	.0626671	1.95	0.053	-.001706	.245782
BlackPopulation	.1511199	.0756677	2.00	0.047	.0017047	.3005351
LFP	-.3723402	.1375295	-2.71	0.008	-.6439094	-.100771
LFPBelowPoverty	.03229	.1060415	0.30	0.761	-.1771022	.2416823
UNEMP	1.493036	.3822073	3.91	0.000	.7383196	2.247752
UNEMPBelowPoverty	-.5652853	.1258884	-4.49	0.000	-.8138676	-.3167031
GDPGrowth	-.0048062	.0018265	-2.63	0.009	-.0084128	-.0011997
WhiteOwner	.1332738	.0973723	1.37	0.173	-.0589998	.3255475
BlackOwner	-.3191979	.0561196	-5.69	0.000	-.430013	-.2083828
WhiteInsured	.0669668	.190546	0.35	0.726	-.3092901	.4432237
BlackInsured	-.0647701	.1265189	-0.51	0.609	-.3145975	.1850572
WhiteHS	.5621217	.1532035	3.67	0.000	.2596022	.8646411
WhiteBac	-.1382443	.0975465	-1.42	0.158	-.330862	.0543734
BlackHS	-.1855796	.0882408	-2.10	0.037	-.359822	-.0113372
BlackBac	-.1987337	.1035906	-1.92	0.057	-.4032863	.0058189
WhiteDisabled	-.4722676	.2782742	-1.70	0.092	-1.021755	.0772195
BlackDisabled	.6458228	.1608873	4.01	0.000	.3281309	.9635148
WhiteCar	.3629667	.1593831	2.28	0.024	.0482449	.6776885
WhitePublic	.3801474	.2594945	1.46	0.145	-.1322568	.8925516
BlackCar	-.1180513	.0743536	-1.59	0.114	-.2648718	.0287692
BlackPublic	-.120573	.1081794	-1.11	0.267	-.3341868	.0930408
_cons	-.1079955	.1956285	-0.55	0.582	-.4942883	.2782974

With regards to housing, the regression results suggest that housing is an important basic need, but not one that has racial spillover effects. A ten percentage point increase in Black Homeownership rates is correlated with a more than three

percentage point reduction in Black Poverty rates, but there is no statistically significant relationship between White Homeownership rates and Black Poverty. The effects of Black Homeownership do make sense within my model; homeownership provides not only shelter but also a stable living situation. This stability, combined with a sense of financial independence, does seem to have poverty-alleviating effects, possibly because homeownership allows one to put more effort in the job market, both in finding a job and in being a more productive employee. Similarly, I did predict the statistically neutral effects of White Homeownership, as it does not seem to provide a large advantage in the job market.

Surprisingly, the level of Black Health Insurance has no significant effect on Black Poverty rates. This is possibly due to the fact that while implementation of the Affordable Care Act did reduce uninsured rates for Black Americans across the board[18], that access to healthcare did not significantly impact poverty because of high premiums/co-pays and a lack of knowledge of how to use health insurance[19]. So, perhaps healthcare coverage in its ideal form could reduce poverty, but only when it is used properly. And if Black Americans have coverage, but are not using it effectively, they may not see the health benefits that could improve labor market outcomes. It is also possible that the effects of health insurance occur on a longer-term basis, and so we have not yet seen the benefits of the increases in insured rates from the ACA.

[18] Austin (2015)
[19] Mangan (2015); Pear (2015)

Perhaps due to similar reasons, there is also no statistically significant relationship between White Health Insurance rates and Black Poverty.

As predicted, Black Disability rates do have a statistically significant relationship with Black Poverty rates. A ten percentage point increase in the rate of Disabled Black residents is correlated with a more than six percentage point increase in the Black Poverty rate, likely due to reduced access to the job market as a result of one's disability. White disability rates, however, are not significantly correlated with Black Poverty. This is surprising because we would expect that higher White disability rates probably reduce labor market competition and increase job prospects for Black residents. . And in fact, the relationship is significant with a large co-efficient if we use a ninety percent confidence level. Thus, it is possible that in some MSAs, the higher White Disability rates are associated with poor environmental and health factors that would similarly affect Black residents of the region, leading to higher poverty rates overall.

Higher rates of high school graduation for both Black and White residents also have statistically significant (if opposite) relationships with Black Poverty rates, as expected. A ten percentage point increase in Black High School Graduation rates is correlated with a two percentage point reduction in Black Poverty rates, while the same increase in White HS Graduation rates is correlated with a five-and-a-half percentage point increase in Black Poverty rates. Thus, it seems likely that education fills an important role in increasing Black access to the labor market, but that White education rates can have negative spillover effects by crowding out the labor market and reducing slack for Black workers. In fact, the larger magnitude of the White spillover effects

suggests that disparity in secondary education outcomes is the source of much of the labor market competition between White and Black workers.

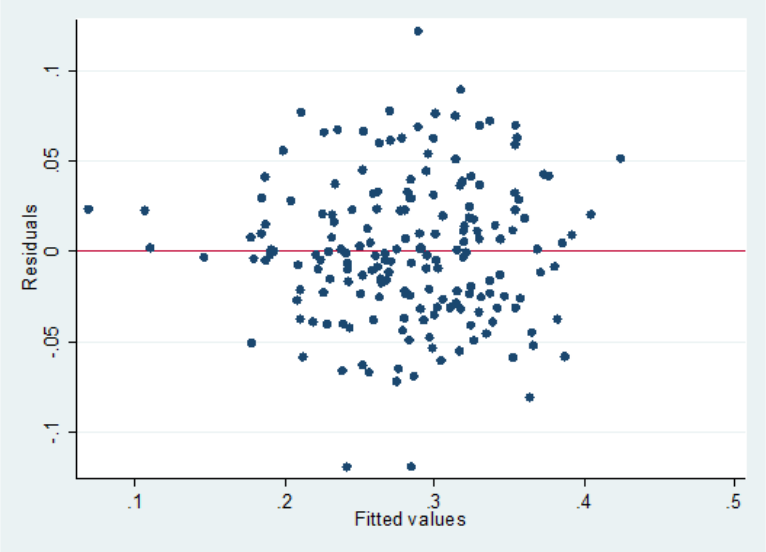
On the other hand, we see no statistically significant relationships between Black College Graduation rates or White College Graduation rates and Black Poverty rates. This lack of an effect suggests that most Black college graduates who participate in the labor market are not escaping poverty, but simply increasing their incomes above the outcomes for high school graduates. However, the relationship is significant at the ninety-percent confidence level, suggesting that there is a very possible poverty-reducing effect of Black College Education as well. On the other hand, the results suggest fairly clearly that White college graduates are not the labor market competition for the entry level jobs that help reduce poverty.

When looking at transportation access, we see the continuation of an interesting trend in that the spillover effects are more prevalent than the direct poverty-reducing effects of providing basic needs. Increasing the proportion of Black residents who have access to a car has no statistically significant effect on Black Poverty, while a ten percentage point increase for White Workers is correlated with an almost four percentage point increase in Black Poverty. This signifies that cars may be an important form of transportation that improve people's ability to access a wide range of employment that provides sufficient earnings, but that car access has not been enough for Black residents to attain these benefits. However, the visibly large spillover effect from White car use confirms that varying levels of transportation access do contribute to poverty rate disparities, likely because of labor market crowding out.

As a separate type of transportation, public transit use has no significant relationships with Black Poverty rates. This lack of a relationship, from both White and Black Public Transit usage, is a bit confounding when we consider how public transit can similarly provide access to more employment opportunities. It does, however, make more sense when we consider that there is a large amount of variation among public transit systems in US MSAs[20]. The most complete public transit systems, those that might actually constitute the provision of a basic need, are only truly available in the largest metro areas. Thus, we are not able to actually evaluate the relationship between public transit and job access because this relationship only exists in a few MSAs.

Lastly, I just want to note that when plotting the residuals against the fitted values, there does not appear to be any heteroskedasticity or nonlinearity that would indicate poor fit for this particular regression.

Figure 3: Residuals v Fitted Values Plot



[20] Perk and Kamp (2004)

Section VII.I: Split Sample Regressions

In addition to the initial regression, I also ran two regressions with split samples based on population size. Because city size likely impacts the competition within labor markets as well as the mechanisms through which basic needs impact labor market access, it seems appropriate to consider how exactly my conclusions should differ based on the population of an MSA.

After splitting the samples, I ran a series of t-tests to check what was significantly different between small and big MSAs: The smaller ones were poorer (overall and for the Black Population), had proportionally larger Black Populations, lower LFPs, higher Unemployment rates, smaller GDP growth rates, more White Ownership, lower Health Insurance and lower College graduation rates for both White and Black Populations, lower Black HS grad rates, higher disability rates for both groups, more Car Access for White residents, and less public transit for everyone

With these differences in mind, we can evaluate the split-sample regression results in order to understand how basic needs affect poverty in smaller and larger MSAs, because evidently the mechanisms are not homogeneous in all MSAs.

Figure 4: Regression Results when Restricted to MSAs with a Population Less than the Median

Source	SS	df	MS		
Model	.268991525	22	.012226888	Number of obs	= 93
Residual	.138569055	70	.001979558	F(22, 70)	= 6.18
				Prob > F	= 0.0000
Total	.407560581	92	.004430006	R-squared	= 0.6600
				Adj R-squared	= 0.5531
				Root MSE	= .04449

BlackPoverty	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
LogPopulation	.0021438	.0134538	0.16	0.874	-.0246891	.0289766
WhitePopulation	.5374489	.1514851	3.55	0.001	.2353213	.8395764
BlackPopulation	.5529637	.1630628	3.39	0.001	.2277452	.8781823
LFP	-.2873159	.1966701	-1.46	0.149	-.6795621	.1049302
LFPBelowPoverty	-.0328869	.1369063	-0.24	0.811	-.3059379	.2401641
UNEMP	1.51659	.5188123	2.92	0.005	.4818511	2.551328
UNEMPBelowPoverty	-.5296378	.1765264	-3.00	0.004	-.8817086	-.1775669
GDPGrowth	-.0039686	.0024224	-1.64	0.106	-.0088	.0008628
WhiteOwner	.2198824	.1366439	1.61	0.112	-.0526452	.49241
BlackOwner	-.3101294	.0725656	-4.27	0.000	-.454857	-.1654018
WhiteInsured	-.4601058	.2661391	-1.73	0.088	-.9909035	.0706918
BlackInsured	.236578	.1715828	1.38	0.172	-.1056331	.5787892
WhiteHS	.7892731	.2298461	3.43	0.001	.3308595	1.247687
WhiteBac	-.1055155	.1378251	-0.77	0.447	-.380399	.169368
BlackHS	-.1346272	.1178516	-1.14	0.257	-.3696747	.1004204
BlackBac	-.3127135	.1538483	-2.03	0.046	-.6195543	-.0058726
WhiteDisabled	-.6525657	.3558477	-1.83	0.071	-1.362281	.0571501
BlackDisabled	.4419871	.2214047	2.00	0.050	.0004093	.8835648
WhiteCar	.3130873	.2150949	1.46	0.150	-.1159059	.7420805
WhitePublic	.5772898	.7516487	0.77	0.445	-.9218263	2.076406
BlackCar	-.227158	.1017873	-2.23	0.029	-.4301663	-.0241497
BlackPublic	-.3007483	.1676255	-1.79	0.077	-.6350667	.0335702
_cons	-.3933827	.3393708	-1.16	0.250	-1.070236	.283471

Figure 5: Regression Results when Restricted to MSAs with a Population Greater than the Median

Source	SS	df	MS	Number of obs	=	93
				F(22, 70)	=	12.55
Model	.322331288	22	.014651422	Prob > F	=	0.0000
Residual	.081695959	70	.001167085	R-squared	=	0.7978
				Adj R-squared	=	0.7342
Total	.404027247	92	.004391601	Root MSE	=	.03416

BlackPoverty	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
LogPopulation	.0003225	.0076148	0.04	0.966	-.0148647	.0155097
WhitePopulation	.0559477	.0782518	0.71	0.477	-.1001205	.212016
BlackPopulation	.1502332	.1162526	1.29	0.201	-.0816252	.3820917
LFP	-.3628442	.2346809	-1.55	0.127	-.8309005	.1052122
LFPBelowPoverty	.3103053	.1929176	1.61	0.112	-.0744568	.6950673
UNEMP	.3394686	.7074366	0.48	0.633	-1.071469	1.750406
UNEMPBelowPoverty	-.2287906	.2165501	-1.06	0.294	-.6606861	.203105
GDPGrowth	-.0067356	.0027999	-2.41	0.019	-.0123198	-.0011513
WhiteOwner	-.0567229	.1554623	-0.36	0.716	-.3667827	.2533368
BlackOwner	-.2975263	.1134428	-2.62	0.011	-.5237808	-.0712718
WhiteInsured	.6335728	.2813822	2.25	0.027	.0723738	1.194772
BlackInsured	-.4852234	.1997623	-2.43	0.018	-.8836368	-.0868101
WhiteHS	.2245634	.2237273	1.00	0.319	-.2216466	.6707734
WhiteBac	-.2793055	.1496724	-1.87	0.066	-.5778177	.0192066
BlackHS	-.4255726	.1512845	-2.81	0.006	-.7272999	-.1238452
BlackBac	.0858167	.1677388	0.51	0.611	-.2487277	.4203611
WhiteDisabled	-.4035199	.5724915	-0.70	0.483	-1.545318	.7382784
BlackDisabled	1.303334	.2644356	4.93	0.000	.7759339	1.830734
WhiteCar	.0520113	.2651953	0.20	0.845	-.476904	.5809266
WhitePublic	-.0759287	.3425751	-0.22	0.825	-.7591731	.6073158
BlackCar	-.0924774	.1381541	-0.67	0.505	-.368017	.1830623
BlackPublic	-.0130738	.1538871	-0.08	0.933	-.3199919	.2938444
_cons	.4605998	.3654837	1.26	0.212	-.2683344	1.189534

Black Home Ownership still has a significant poverty-reducing effect in larger metropolitan regions, but less so than in smaller regions. This is possibly due to larger rental markets that allow renters more stability than they would have in smaller regions. Additionally, Health Insurance coverage has highly significant effects in larger MSAs,

both in terms of Black Health Insurance rates reducing Black Poverty but also with spillovers from increased White Health Coverage increasing Black Poverty. I do not have a solid hypothesis as to why this effect is present only in the larger MSAs, but it is possible that these larger regions have more competitive markets for health insurance and health care provision such that residents have access to cheaper health coverage and a greater ability to use effective health care services that improve their standing in the labor market.

Regarding education, we also see a split in that White High School graduation rates had significant spillover effects in smaller MSAs, but not in larger ones. On the other hand, Black High School graduation rates had significant poverty-reducing effects in larger regions, but not in smaller ones. I believe that this phenomenon occurs due to larger labor markets in the large MSAs. They provide more opportunities for Black workers to access poverty-alleviating jobs and lower the possibility for White workers to crowd out Black workers in the less competitive job market. And the higher unemployment rates in the smaller MSAs do seem to support this hypothesis.

Additionally, while Black Disability rates are significantly associated with increased Black Poverty rates in both samples of MSAs, the effect is three times as large in the larger regions. This result is difficult to explain, but it is possibly because in larger regions with vast labor markets, one's disability status provides the biggest hindrance to being able to equally access the labor market. Thus, all else equal a disability will be the biggest significant explanatory factor for why an individual in a larger labor market experiences poverty.

We can also see that neither type of transit has any significant effects on Black Poverty rates within the larger MSAs. The prevalence of jobs in these larger cities likely means that all workers have equal transit access to the types of poverty-alleviating jobs with which I am generally concerned. On the other hand, Black Car Access is significantly associated with reducing Black poverty in smaller MSAs, probably because jobs are more spatially spread out and workers require cars in order to be able to fully participate in the labor markets.

Lastly, when plotting the residuals against the fitted values for these split-sample regressions, there also does not appear to be any heteroskedasticity or nonlinearity.

Section IX: Conclusion

The fact that fifteen percent of Americans live in poverty is a tragedy. The fact that twenty-seven percent of Black Americans live in poverty is a compounding of that tragedy, and a reminder that we cannot ignore race when evaluating socioeconomic issues. Through my analysis, I sought to understand why exactly Black poverty rates are so high with a specific focus on the role of basic needs in poverty reduction. The Capability Approach finds that basic needs are important because they allow people to engage in certain fundamental actions like movement or voting. I extended this argument to include basic needs that contribute to economic freedom by improving people's access to labor markets. And when looking at the Black population in particular, I also argue that there are spillover effects from White populations who met

their basic needs and thus provide more competition in various job markets. In order to prove this mechanism quantitatively, I then ran a series of regressions in order to understand the relationship between basic needs and poverty in US Metropolitan regions. This empirical approach thus allowed me to evaluate the direct benefits of increasing basic needs for Black residents as well as the spillover effects of White basic needs access on Black poverty rates.

Through the regression results, we can see how some basic needs are clearly more relevant for poverty reduction efforts than others. With regards to Black Americans, increasing rates of homeownership, high school graduation, and car access as well as decreasing rates of disability are all significantly associated with lower poverty rates. However, we cannot evaluate these results in a vacuum as there are also spillover effects from White residents of the same region. In particular, higher rates of high school graduation and car access for White populations are associated with higher rates of Black poverty, likely because these White workers crowd out Black individuals from the labor market. Additionally, running split-sample regressions allowed me to determine how these relationships vary between less populated and more populated Metropolitan regions. For example, homeownership has a larger effect in less populous regions that likely have less stable rental markets, while both car and public transit access have insignificant effects in larger regions, possibly due to more comprehensive transit systems combined with larger and more easily accessible job markets. However, further research on the individual-level relationships between basic needs access and poverty would be beneficial, and could perhaps utilize longer-term data sets like the

National Longitudinal Surveys to more specifically gauge the impact of basic needs over a lifetime.

However, for this not to have been a purely academic exercise, we must consider what the implications of these findings are for policymakers interested in reducing Black poverty rates. Research has shown the links between labor market participation and poverty reduction, as employment is still the most effective way to avoid poverty in the US. But, my analysis has now revealed specifically which economic basic needs improve people's ability to participate in the labor market and lower their chances of living in poverty. Based on the results that were significant, there are several options for policymakers. The government can work to spur homeownership by regulating mortgage loan practices to ensure access to mortgage markets, and they can also equalize educational spending among different regions and further raise high school graduation rates by providing more support to students who are at risk of dropping out. Politicians could also focus on expanding public transit systems to reduce the necessity for car access, while regulating car insurance premiums to expand car access in the meantime. Additionally, governments could place an emphasis on removing lead paint and reducing dangerous labor conditions, two leading causes of disabilities that contribute greatly to high levels of poverty.

At the same time, the presence of spillover effects suggests that policymakers should be careful in how they target their programs. While universal policies designed to help the whole population may be more politically feasible, if these policies are applied in the educational or transit systems, we may not see the desired benefits. Sometimes,

policies must specifically focus on the Black population in order to actually improve their access to labor markets. As such, further research would be beneficial to analyze the effectiveness of universal policies versus those that specifically targeted certain populations.

Another specific implication is the eternal lesson of Friedrich Hayek, that local knowledge matters. Clearly, basic needs provision can have different effects depending on the characteristics of a specific Metropolitan region and its labor market. Thus, national policymakers must create programs that allow localities the flexibility to pursue the policy routes that most benefit their populations. At the same time, local policymakers must be aware that what reduces poverty in another region may not have the same results for them, and so they must consider their community's specific conditions before crafting policy solutions. In the end, this paper has shown the impact that providing basic needs can have on reducing Black poverty rates in the US. It remains to be seen, however, whether the government can effectively craft policy that supports these mechanisms and actually achieves the intended goal of reducing the impact that race has on the likelihood of a household experiencing poverty.

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