Hidden Hardship: Three Essays on Material Well-Being and Poverty in the United States

by

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Dedication

For Liz

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Outside of the academy, friends and family, both here in Ann Arbor and across the globe have been constant sources of encouragement and support. More than anything, the actual work of this dissertation was shaped by the rhythms of family life. My first son, Nathaniel, was born as this project began in earnest. As a result, the writing of this dissertation will always be mixed with memories of learning to be a parent, and all of the joys and challenges that go with it. Through it all, Nathaniel's boundless curiosity and wonder about the world around him has served as an inspiration. My second son, Gregory, was born about a day after the final

substantive revisions were accepted by my co-chairs, which seems a fitting way to usher in both a new phase of my life and my career.

Finally, but by no means least, I lovingly dedicate this dissertation to my wife, Liz. Her tireless devotion to the most vulnerable throughout her own social work career has been a constant source of inspiration. She has stood by my side at every step in this process, and I am deeply grateful for her in every way.

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Abstract

Who is poor? For decades, the Official Poverty Measure largely answered this question. Using measures of material hardship in the Survey of Income and Program Participation, it is clear that concrete material hardships extend far above the federal poverty line. 18% of all households experience this hidden material hardship above the poverty line, largely ignored by policy makers, ineligible for social assistance programs, and obscured by conventional poverty measures themselves. The duration of spells of material hardship indicate that a far larger proportion of the population is at risk of hardship than is commonly thought. Over a third of households experience either chronic or episodic hardship, compared the fifth of households in chronic or episodic poverty.

Racial disparities in the experience of material hardship are stark. Even when taking other demographic factors and wealth into account, the risk of experiencing material hardship for a white household earning $50,000 a year is similar to a black household that earns $125,000. A white household with a head who has a high school diploma has the same predicted probability of experiencing material hardship as a black household with head who has a bachelor's degree. The events and shocks that trigger entry into, and exit from, a spell of hardship display similar racial disparities.

The main implication of these findings is that the current social safety net does not address the vast majority of households in material hardship, nor is it capable of doing so in its current configuration.

Chapter 1 Introduction

Sociology and social work grew out of a similar set of intellectual and practical concerns about human welfare in the face of rapid urbanization and industrialization in 19th century Europe and North America. Early social scientists and social reformers engaged in studies of the material conditions under which the new urban working classes lived (e.g. Du Bois 1899; Engels 1845; Kellogg 1909; Residents of Hull House 1895) in order to both understand the social world in and of itself and to provide an empirical basis for efforts aimed at ameliorating these social problems.

This approach of using the tools of social science to understand the world as it is in the service of both social science for its own sake and as a basis for evidence-based social reform continued on into the middle 20th century, albeit with some important shifts in methods and assumptions that continue to influence contemporary poverty scholarship[1]. Since the 1960s, federal money has been used to fund research centers inside the government, in academia, and in the non-profit sector. These efforts to understand the causes and consequences of poverty share a few key features that continue to influence the course of poverty research today. Alice O'Connor (2001) argues that it was in this moment that an "analytical" turn in poverty research took place, a turn that emphasized quantitative methods over qualitative methods, that assumed the inherent capability of markets to produce optimal outcomes, that understood poverty primarily as a matter of income, and saw individual human capital as the key to solving the problem of poverty.

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[1] In many ways, this shift is not dissimilar to the one experienced by American sociology as a whole in the wake of the Second World War (Steinmetz 2005)

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Poverty knowledge was, in short, dominated by a utilitarian perspective that emphasized atomistic rational actors, placed economists and survey researchers at the center of poverty research, and pushed sociologists, anthropologists, and social workers to the periphery. All of this came at the expense of understandings of poverty that investigated the roles of communities, political economy, or other structural forces. The consequence of this form of poverty knowledge, O'Connor argues, was a body of seemingly objective and empirical ways of assessing the social world that proved open to radical reinterpretation by conservative foes of the welfare state like Charles Murray. By treating poverty as merely a matter of income, by understanding individual level behavior as the ultimate source of and solution to poverty, by theoretically isolating poverty from larger issues of political economy, mid to late 20th century poverty knowledge had created the intellectual field necessary to begin attacking and dismantling the welfare state. By the 1980s and 1990s, the primary concern in this area of research was welfare dependency, not fighting poverty.

What is needed now in the field of poverty research is an approach that rejects some of the misleading assumptions embedded in mid-late 20th century poverty research, and that begins to connect research on the micro level and the level of political economy. This dissertation is a step in this direction.

The first empirical chapter examines an alternative measure of poverty—material hardship—and contrasts it with the conventional measure of income poverty. Material hardship measures reveal that a far larger segment of the population, about a quarter of all households, experiences some type of material hardship. The majority, 73%, of households in material hardship, approximately 18% of all households, experience material hardship above the poverty

line, and have thus been largely invisible to social scientists and ineligible for social assistance programs.

The second empirical chapter takes advantage of the only repeated measures of material hardship in a nationally representative survey to measure the temporal depth of material hardship. These data reveal that a significant portion of the population, roughly 45%, move into or out of material hardship or income poverty over a two year period of time. In other words, only slightly over half of American households are economically secure over a short length of time.

The third empirical chapter uses these repeated measures of material hardship to assess the impact of events and unexpected household shocks such as unemployment, additional children, unstable incomes, and moves or relocations on the experience of material hardship. The role of various forms of social assistance, such as increased social assistance or informal support from friends and family are also examined for their role in helping households transition out of a spell of material hardship.

Across all three empirical chapters, a consistent theme emerges. First, sizable and durable racial disparities mark the risk of experiencing material hardship across the income ladder. Institutions may be shifting risk onto households (Hacker 2006), the welfare state may be increasingly targeting married, working, households with children (Moffitt, R. 2014), extreme poverty and disconnection from both work and welfare may be emerging social problems (Danziger 2010; Shaefer and Edin 2013), expanded access to consumer credit may be a substitute for greater redistribution (Krippner 2011; Prasad 2012), but the end result is society that dramatically distributes the risk of material hardship along racial lines.

Karl Polanyi (Block and Somers 2014; Polanyi 2001) provides a theoretical framework for what happens when a society attempts to fully commodify the fictitious commodities of land, labor, and money. Through the increasing shift of risk and responsibility away from institutions and on to households, the transformation of the welfare state into the workfare state, increased stratification, the results are human lives increasingly lived according to the vagaries of the market. The fear lurking in the background of this dissertation is that Polanyi is right, that the utopian project of neoliberalism will end in tears before too long. Indeed, there is some anecdotal evidence that the "center cannot hold", that this society is coming apart at the seams. Even if we avoid the worst, we will need clear-eyed, empirical sociology and social work to guide us as we rebuild and adapt.

Chapter 2 Hidden Hardship in the United States

Introduction

The question of who should be counted as poor and who not is an unavoidable and recurrent question in poverty research. At some point, any empirical investigation is forced to clearly define poverty (Smeeding 2016). This question of categorizing people as poor or non-poor has occupied the attention of social scientists, state officials, and their predecessors dating back at least to the 17th century Elizabethan Poor Laws (Katz 2013). Michael Harrington (1962: 176-177) acknowledges that "in such a discussion it is inevitable that one gets mixed up with dry, graceless technical matters." Despite this seemingly arid terrain, the scholarly and practical stakes for any such definition are high. Harrington continued on to note that this "should not conceal the crucial fact that these numbers represent people."

Every fall the U.S. Census Bureau releases a report based on the Current Population Survey in which the new poverty rate is announced. Headlines indicate if the rate went up or down, and pundits dust off their talking points about poverty. Rarely does this coverage get into the dry and graceless technical matters of poverty measurement and definition. Instead, the way poverty is talked about in the United States is almost invariably through the lens of one particular understanding of poverty: income poverty.

Despite often being reduced to a measure of income, poverty is a complex, multidimensional social phenomenon. Proponents of multidimensional approaches of conceptualizing and measuring poverty (e.g. Dhongde and Haveman 2015) often point to the

capabilities approach of Amartya Sen which understands poverty not just as low income, but as the deprivation of the capabilities one needs in order to "lead the kind of lives they value" (1999:18). Poverty then is a social problem because it deprives people of the capabilities necessary for some minimum level of human freedom. This shift in the conception of poverty away from income—which is only instrumentally but not intrinsically important— opens up the possibility of factors beyond income determining poverty, and suggests that the relationship between poverty and low income is not as direct as often thought and may vary over time and space.

This understanding of poverty as not just an arbitrary line in the sand, but as a condition or situation in which one is not free to live the kind of life one values is not confined to late 20th century academic scholarship, rather it can be found in American popular political discourse. The tension between poverty and actual existing freedom in daily life was a central line of thinking in New Deal political theory (Stipelman 2012). President Roosevelt argued that, "[w]e have come to a clear realization of the fact that true individual freedom cannot exist without economic security and independence. 'Necessitous men are not free men.' People who are hungry and out of a job are the stuff of which dictatorships are made" (Roosevelt 1944). Roosevelt then goes even farther than Sen in understanding poverty as not just a problem for the individual or the household, but a social problem that threatened to destabilize the political system as a whole. If Sen and Roosevelt are right, then the conception of poverty adopted by social scientists, social workers, and the government should be about more than just income, it should be an attempt to assess who has the material conditions necessary to live a free and meaningful life.

Measures of material hardship provide the most direct approach to measuring the concept at the core of poverty research: deprivation. This paper considers common measures of poverty, such as the Official Poverty Measure (the federal "poverty line"), and compares them to measures of material hardship. Instead of two groups, the poor and non-poor, I find four: 1) economically secure households that avoid both poverty and material hardship, 2) households in hardship above the poverty line, 3) households that despite being below the poverty line manage to get by without experiencing material hardship, and 4) down-and-out households that report both hardship and income poverty. This chapter focuses on households in hardship above the poverty line. I refer this category of hardship as hidden hardship because it is invisible using conventional income measures of poverty and therefore largely excluded from key social safety net programs. I describe this group in hidden hardship in terms of of their demographic characteristics, income, wealth, and debt. Stark disparities by race and education that persist even when income and wealth are taken into account in multivariate regression models.

Measuring Poverty

In the middle of the 20th century, the US government devised a measure of poverty, the Official Poverty Measure (OPM), which has profoundly shaped the social scientific understanding of poverty in America, and in turn social policy responses to the problem of poverty. For both social scientists and in every day speech, to speak of poverty in the United States is nearly always to speak of income poverty as defined by the poverty line (O'Connor 2001).

Despite the criticisms of the OPM, it remains an important and relevant measure because it is related to the Department of Health and Human Services Poverty Thresholds. The HHS Poverty Thresholds are essentially equivalent to the poverty line but are rounded to convenient

dollar amounts and serve as the eligibility guidelines for numerous safety net programs. Thirty-one safety net programs use the HHS Poverty Guidelines[2], or multiples thereof, to determine eligibility whereas only six means tested programs do not use the poverty guidelines[3]. Finding oneself on one side of this arbitrary line can mean the difference between receiving food stamps, heating subsidies, and health insurance, or not (US Department of Health & Human Services n.d.).

The disadvantages of this measure are well known: it is based on pre-tax income and thus ignores the effects of key antipoverty policies; adjustments for inflation since 1963 may not be sufficient to fully reflect changes in the standard of living; essential costs such as transportation, child care, and medical expenses are ignored; geographical disparities are not addressed; and family size adjustments do not reflect the complexity of contemporary household arrangements (e.g. cohabiting non-married couples, child support obligations, etc.) (Citro and Michael 1995). As a result, some sociologists have called for researchers to abandon absolute measures such as the OPM in favor of relative measures of poverty in which a specific point in the income distribution is chosen as the poverty threshold (Brady 2003; Townsend 1979). In the United

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[2] Programs that do use the HHS poverty guidelines: Community Services Block Grant, Head Start, Low-Income Home Energy Assistance Program (LIHEAP), some elements of Medicaid, Hill-Burton Uncompensated Services Program, AIDS Drug Assistance Program, Children's Health Insurance Program, Medicare – Prescription Drug Coverage (subsidized portion only), Community Health Centers, Migrant Health Centers, Family Planning Services, Health Professions Student Loans — Loans for Disadvantaged Students, Health Careers Opportunity Program, Scholarships for Health Professions Students from Disadvantaged Backgrounds, Job Opportunities for Low-Income Individuals, Assets for Independence Demonstration Program, Supplemental Nutrition Assistance Program (SNAP) (formerly Food Stamp Program), Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)National School Lunch Program (for free and reduced-price meals only),School Breakfast Program (for free and reduced-price meals only), Child and Adult Care Food Program (for free and reduced-price meals only), Expanded Food and Nutrition Education Program, Weatherization Assistance for Low-Income Persons, Job Corps, National Farmworker Jobs Program, Senior Community Service Employment Program, Workforce Investment Act Youth Activities, Low-Income Taxpayer Clinics, Foster Grandparent Program, Senior Companion Program, Legal Services for the Poor.

[3] The means tested programs that do not use the HHS Poverty Guidelines are Supplemental Security Income (SSI), Earned Income Tax Credit (EITC), state/local-funded general assistance (in most cases), some parts of Medicaid, Section 8 low-income housing assistance, and low-rent public housing.

Kingdom, for example, the poverty line is often defined as 60% of median income (Townsend and Kennedy 2004) and the OECD often defines poverty as half of the median income (OECD 2014).

In contrast to absolute measures of income poverty in which there is a clear poverty line that may move to keep pace with inflation, relative poverty lines function more like measures of inequality than poverty. At their core, relative income measures of poverty acknowledge that full participation in a given society is dependent upon one's ability to purchase the goods and services necessary to partake in mainstream social experiences. This concern over being able to fully participate in society has led to the concept of social exclusion taking center stage in many European studies of poverty (Atkinson and Davoudi 2000). Recently, the Census Bureau has developed a new quasi-relative measure, the Supplemental Poverty Measure (SMP), which addresses these concerns while combining some of the strengths of both the absolute and relative measures of income poverty (Johnson and Smeeding 2012).

The OPM and the SPM, as well as the relative measures of poverty favored by Brady and most European social scientists, are all measures of *income poverty*. All measures of income poverty set some sort of income cutoff below which an individual or household is considered poor. Recently, some economists have called for an increased focus on consumption measures of poverty, a perspective that leads to lower estimates of poverty compared to income-based measures of poverty (Meyer and Sullivan 2012). The idea behind these consumption measures is that material well-being is quantified through detailed reporting of consumption rather than attempting to have respondents report income. While conceptually interesting, the available data are limited due to their reliance on one relatively small survey that was not designed with this task in mind (the Consumer Expenditure Survey). Furthermore, the consumption literature does

not appear to have any way of establishing what a sufficient level of consumption (and thus, by implication, income) might be other than referring back to the OPM. It also doesn't account for the role of debt in propping up consumption. Finally, trends in the consumption measure of poverty as put into practice by Meyer and Sullivan do not match trends in either material hardship or income poverty measures. While other measures of poverty show increases over the past two decades, especially during the Great Recession era, Meyer and Sullivan-style consumption poverty measures largely falls during this time period (Shaefer and Rivera 2017).

One possible way to move past the debate between relative and absolute measures of income poverty, and between income poverty and consumption poverty, is to directly investigate the material consequences of poverty (Ouellette et al. 2004). Consider the most sophisticated measure of poverty devised by the Census Bureau, the Supplemental Poverty Measure (SPM). This measure establishes an income cutoff adjusted for household composition and geographic area that is based on a rolling average of the cost of food, clothing, shelter, utilities, and medical expenses (the measure then adds an extra 20% to this figure to account for unexpected expenses). The implicit assumption behind the SPM is that an inability to afford food, clothing, shelter, basic utilities, medical care, and other essential life expenses is at the heart of contemporary concerns over poverty. The core concern is not income per se, but these material necessities. Income in and of itself is thus a proxy for a household's ability to acquire these goods and services. But why stick with a proxy if it is possible to measure material hardship directly? Why not measure directly whether households are able to meet expenses considered fundamental to human flourishing such as food, shelter, utilities, and medical care?

Material Hardship as a Poverty Measure

Despite extensive scholarly research related to poverty, particularly since the War on Poverty in the 1960s, the question of material hardship was not raised directly until the late 1980s. As part of her dissertation research, Susan Mayer (1986) fielded a survey of Chicago area residents to understand how income was related to material hardship. In this survey, she created measures of material hardship that were clear and easy to recall by survey respondents. These measures included questions about the inability to secure enough food, to pay rent, to afford needed medical care, etc. She found that the link between material hardship and income poverty was surprisingly weak. At best, income poverty could explain 14% of the variance in material hardship (Mayer and Jencks 1989). A family's place respective of the official poverty line and their experiences of concrete material deprivation such as hunger and housing instability had a surprisingly small overlap.

Measures of material hardship have only been used by a handful of scholars, such as Kurt Bauman (Bauman 1999, 2002; Carle, Bauman, and Short 2009), Sondra Beverly (Beverly 1999, 2000, 2001), Sandra Danziger (Danziger et al. 2000), Colleen Heflin (Heflin 2006), John Iceland (Iceland and Bauman 2007), Gesimia Nelson (Nelson 2011) and Luke Shaefer (Shaefer, Edin, and Talbert 2015; Shaefer and Gutierrez 2013; Shaefer and Ybarra 2012). Matthew Desmond has repeatedly addressed one form of material hardship, eviction (Desmond 2012, 2016; Desmond and Kimbro 2015). Compared to income-based measures of poverty, material hardship has remained a niche measure in part due to data limitations. Material hardship questions in the vein of Mayer and Jencks (1989) do not appear regularly on any national survey. They do appear sporadically as special topical modules to the Survey of Income and Program Participation (SIPP) and have appeared in targeted surveys such as the Women's Employment Survey

(Danziger, Sandra K. et al. 2000; Sullivan, Turner, and Danziger 2008) and in qualitative work (e.g. Edin and Lein 1997). Measures of food insecurity, despite being developed in the 1990s as well, have spawned a much larger literature (e.g. Coleman-Jensen et al. 2015, Gundersen and Ziliak 2015).

There are a number of advantages to using measures of material hardship. First, as demonstrated in the goods used to estimate the poverty line in the SPM, the idea of material hardship gets to the core of what most people mean by poverty. Rather than relying on income as a proxy for the ability to eat, live indoors, and enjoy basic utilities like electricity, heat, and water, it is possible to directly inquire about these matters. Secondly, material hardship matches closely to the preferred form of safety net delivery in the United States. Rather than giving cash directly to the non-elderly poor, the US social safety net is dominated by in-kind assistance like Medicaid or near-cash transfers such as food stamps, housing subsidies, and subsidies for heating. This is to say nothing of the anti-poverty spending funneled through non-profit entities which provide direct services, or the social spending hidden in the tax code (Allard 2009; Howard 1997). The United States has a fractured and locally variable safety net aimed at delivering goods and services to poor households, not cash. Perhaps then, in addition to measures of income poverty, we should attempt to assess the well-being of the population in the very terms by which it is conceived of by policy makers: material well-being.

Data and Measures

Data

This chapter relies on the Survey of Income and Program Participation (SIPP). The SIPP is a longitudinal survey representative of the non-institutionalized civilian population of the

United States. Conducted by the US Census Bureau, the data are freely available to the public through the Census Bureau or the National Bureau of Economic Research. Unlike the Panel Survey of Income Dynamics (PSID), which shares many of these attributes, the SIPP does not follow the same sample over the long term but rather has a series of longitudinal panels of varying lengths. Rather than interviewing subjects annually or every two years as in the case of the PSID, the SIPP interviews respondents every four months thus enabling researchers to investigate sub annual income dynamics. The SIPP was created in the 1970s out of concerns that the federal government did not have sufficient data on who used social welfare programs after the ramp up in social spending in the 1960s. The SIPP is deliberately designed to capture the experiences of lower income Americans and is used extensively in poverty research, often producing estimates of poverty, unemployment and the like that are more conservative or lower than other nationally representative surveys (Czajka and Denmead 2008). Consequently, the analysis in this project should, if anything, underestimate the prevalence of material hardship compared to other national surveys.

The SIPP data used in this chapter and throughout this dissertation is restricted to household heads because material hardship is measured at the household level. This is justifiable because many types of hardship effect all member of a household simultaneously, such as utility shut offs. Households are, by definition, a resource sharing unit (Census Bureau 2014:3-1). Even one of the most ardent proponents of the atomistic, rational actor view of humanity, Margaret Thatcher, was forced concede this point. Her famous quote about there being no such thing as society is often misremembered. The full quote is "There is no such thing [as society]! There are individual men and women and there are families[…]"(Thatcher 1987). Individual men and women are, according to Thatcher, embedded in resource sharing units.

Measuring Material Hardship

This chapter relies on a pooled sample of all Adult Well-being Topical Modules from the 1996 Panel to the present. This topical module was fielded five times, in 1998, 2003, 2005, 2010, and 2011. The sample is restricted to household heads yielding a sample of N=160,253. All analyses are weighted using the appropriate household weight.

In the past, the sporadic addition of the material hardship questions (usually a component of the Adult Well-being Topical Module) limited the type of work that could be done to a few cross-sections. Over time, these topical modules have added up and the public now has access to seven topical modules between 1992 and 2011, covering both the pre and post-welfare reform era as well as two economic downturns (early 2000s recession and the Great Recession).[4]

Because material hardship is inherently a multidimensional issue, researchers have struggled to find consensus on how best to communicate and summarize the various dimensions of material hardship. Three approaches have been used: indexes, scales, and subjective evaluation of individual criteria. Indexes are often a simple summation of a set of measured material hardships. This approach is widespread but risks ignoring or improperly weighting the severity of any particular form of hardship (e.g. the experience of being evicted is likely more impactful than having your phone disconnected). To construct scales, some approaches such as cluster analysis, correspondence analysis, latent class analysis and factor analysis have also been used to identify underlying associations between measures of material hardship. The most notable approach to examining an underlying structure of material hardship has been pursued by Heflin, Sandberg, and Rafail (2009). These approaches do not entirely eliminate the subjective role of the researcher in selecting the criteria used to construct the scale (Ouellette et al. 2004).

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[4] Longitudinal data on material hardship is available in the 2008 panel of the SIPP and is utilized in the second and third papers of the dissertation.

The way in which I summarize these measures is in the tradition of Mayer and Jencks (1989)

with a simple, nonweighted index. This approach is fully transparent in that it does not involve

any subjective judgment calls by the researcher as to which hardships are more impactful and it

is easily interpretable (eg 0= no hardships, 1=one hardship, 2=two hardships etc).

There are 9 components to this material hardship index. These components, including the text of

the questions from the SIPP questionnaire, are listed below[5].

1) Meeting essential expenses
   "During the past 12 months, has there been a time when you did not meet all of
   your essential expenses?"
2) Paying the full rent or mortgage
   "Was there any time in the past 12 months when you did not pay the full amount
   of the rent or mortgage?"
3) Eviction
   "In the past 12 months were you evicted from your home or apartment for not
   paying the rent or mortgage?"
4) Inability to pay gas, oil, or electricity bills
   "How about not paying the full amount of the gas, oil, or electricity bills? Was
   there a time in the past 12 months when that happened to you?"
5) Gas, oil, or electric utility shutoffs
   "In the past 12 months did the gas or electric company turn off service, or the oil
   company not deliver oil?"
6) Telephone disconnection due to nonpayment
   "How about the telephone company disconnecting service because payments were
   not made?"
7) Unmet medical need
   "In the past 12 months was there a time you needed to see a doctor or go to the
   hospital but did not go?"
8) Unmet dental need
   "In the past 12 months was there a time you needed to see a dentist but did not
   go?"

The final item in the material hardship index is food insecurity. Food security is measured via

this set of five questions:

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[5] The SIPP questionnaire includes some language in each question that can vary by respondent, such as name, or
verb conjugation for singular or plural subjects. For the sake of clarity, I have changed all of these to "you" or
similar.

I'm going to read you some statements that people have made about their food situation. For these statements, please tell me whether it was OFTEN TRUE, SOMETIMES TRUE, or NEVER TRUE for you in the last four months.

1. "The food that I bought just didn't last and I didn't have money to get more."
Was that often, sometimes or never true for you in the last four months?
(1) Often true
(2) Sometimes true
(3) Never true

2. The next statement is: "You couldn't afford to eat balanced meals."
Was that often, sometimes or never true for you in the last four months?
(1) Often true
(2) Sometimes true
(3) Never true

3. The next questions refer to adults in the household. In the past four months did you ever cut the size of your meals or skip meals because there wasn't enough money for food?
(1) Yes
(2) No

4. In the past four months, did you ever eat less than you felt you should because there wasn't enough money to buy food?
(1) Yes
(2) No

5. In the past four months, did you ever not eat for a whole day because there wasn't enough money for food?
(1) Yes
(2) No

Food insecurity measures have been developed by the US Dept. of Agriculture and are in use

across a number of major surveys, including the CPS, ACS, and PSID (Coleman-Jensen et al.

2015). The food insecurity measures in the SIPP are similar to the USDA standardized survey

questions and have been used to estimate food insecurity (see eg Shaefer and Gutierrez 2013).

The SIPP food insecurity questions are a shortened version of the full USDA food security

measures. A household is coded as experiencing food insecurity if two or more questions are answered affirmatively.

There is some disagreement in the literature on whether or not to include measures of fiscal hardship, such as missed bills, in with measures of material hardship. Nelson (2011), for example, does not include fiscal hardship arguing that a missed bill is not an actual material hardship such as a utility shutoff. In light of recent scholarship examining the consequences of living with too little cash (Edin and Shaefer 2015), I do include measures of fiscal hardship. If a household is unable to pay rent or utility bills, there is clearly a greater demand for resources than the household can meet, and there may be other types of hardship or social isolation not captured in the SIPP hardship measures. Furthermore, such inadequate levels of cash puts households at risk of falling into debt traps the kind of which have been likened to a new sharecropping system (Seefeldt 2017). Even the logic behind the construction of the SPM argues that some cash not directly tied to material necessities such as food, clothing, shelter, and utilities is necessary. To be unable to pay essential bills shows that not only is a household unable to afford food, clothing, shelter, utilities, or some other necessity (such as daycare), but also that the twenty percent in unaccounted for cash the SPM factors in is likely long gone as well.

There are limitations to these measures of material hardship. Some perceive these measures as less objective than income measures, that instead of measuring something quantifiable like dollars, they are attempting to capture a fundamentally subjective and relative understanding of well-being, perhaps even straying so far as to make normative claims about the social world. As for the normative claims issue, the entire field of poverty research seems to contain an implicit or explicit claim that poverty is, at best, suboptimal. Even Robert Rector, a long time critic of anti-poverty efforts, presents an analysis of the standard of living for

Americans below the federal poverty line and concludes that the poor are "not living in the lap of luxury" (Rector and Sheffield 2011). Normative concerns over human welfare helped animate the first sociologists and social workers, and continue to do so today, but this project sets aside this normative concern briefly in order to answer an empirical question: who gets what?

As for the precision of these measures, the SIPP does present three difficulties. First, as Nelson (2011) notes, the types of material hardship measured by the SIPP often impact the entire household, not individuals. It is not possible to know how the burden of material hardships is distributed within households. Second, the SIPP is limited to the civilian, non-institutionalized population thus making any analysis of the material well-being of the institutionalized population impossible. This is particularly worrisome given the current policies of mass incarceration. Third, while the SIPP deliberately oversamples the poor, the most unstably housed are difficult to keep in the sample thus resulting low estimates of some forms of hardship, such as eviction.

Additional Measures

A variety of demographic measures are used in this study. Race and ethnicity variables from the SIPP are recoded into 5 categories: non-Hispanic White, non-Hispanic Black, non-Hispanic Asian, non-Hispanic Other, and Hispanic. The Hispanic group includes respondents from any race. The Other group includes multiracial individuals, Native Americans, and any others that did not clearly fall into one of the other four categories. Education is broken down into less than a high school diploma (including GED), a high school diploma, some college (including associate's degrees), a bachelor's degree, and more than a bachelors degree (masters, professional degrees, or doctorates). All dollar figures have been adjusted to 2017 dollars using the Consumer Price Index.

Results

This section 1) explores the relationship between poverty and material hardship in order to understand how much overlap there is in these populations, and then extends the analysis to, 2) basic demographics, 3) available resources of income, wealth, credit, and the welfare state and concludes with 4) a multinomial logistic regression analysis to explore the independent relationships between demographic factors, household resources, and material hardship.

Poverty and Material Hardship

Who is poor and who experiences material hardship? These data show that, as suggested by earlier work with non-nationally representative samples, there is a difference between income poverty and material hardship. Table 2.1 categorizes the pooled sample by OPM poverty status and material hardship. As the row and column totals respectively indicate, 14% of the pooled sample is poor and the hardship rate, defined as experiencing any the material hardship, is 24%. Clearly the hardship rate is higher than the poverty rate, but to what extent do these populations overlap? Only about two thirds of households appear to be economically secure, experiencing neither OPM poverty nor material hardship. About seven percent of households are poor and do not experience hardship and about seven percent of household are poor and do experience hardship. Most strikingly, nearly 18% of households experience some form of material hardship but are not counted as poor by the OPM – i.e. close to one fifth of the population lives in what I call hidden hardship. This is larger than the 13% of households defined as poor by the OPM. For every household categorized as poor by the government, an additional 1.29 households experience some form of material hardship.

Households in hidden hardship differ from both economically secure households and poor households in a variety of ways. Tables 2.2 and 2.3 show poverty and material hardship

with column and row totals respectively. The vast majority of those who do not experience hardship are also not poor, over 90%, while 10% of households that avoid material hardship are income poor. The vast majority of households, 73%, that experience material hardship are also not poor. Households that experience material hardship are overwhelmingly in the hidden hardship category. Poor households are roughly split evenly between hardship and non-hardship. About 20% of non-poor households experience some hardship. Put another way, the hardship rate amongst *non-poor* households (20%) is higher than the official poverty rate (13%), to say nothing of the 50% hardship rate among the poor. Only 6.6% of households are both poor and experience material hardship. As has been shown in non-nationally representative samples, the income poverty and material hardship have some overlap, but not much (Heflin 2006; Mayer and Jencks 1989). The populations identified by the poverty line and material hardship measures are largely distinct.

One reasonable response to these findings is that the OPM threshold may simply be set too low. Many social safety net programs recognize this issue and use some multiplier of the OPM as an eligibility guideline. For example, to be eligible for the Supplemental Nutrition Assistance Program, a household generally has to be under 130% of the poverty line (Center for Budget and Policy Priorities 2016). Table 2.4 shows hardship rates by various fractions of the poverty line. Below the poverty line (100% of the poverty line), hardship rates hover near 50%. As income rises, hardship rates decline. It is not until the 400%+ category that the hardship rates falls below the OPM poverty rate. This is quite high up the income ladder. In 2016, the poverty

line for a family of four (two adults and two children) was $24,339 making 400% of the poverty line $97,356.[6]

How can it be that any household earning nearly six figures struggles to make ends meet? Mayer (1993) proposes a simple theoretical model to explain material hardship: when material demands exceed available resources, hardship occurs. The SIPP contains data on available resources, but the material demands on a household are not directly measured. Since the late 20th century, American households are increasingly bearing the brunt of risk as other institutions, such as employers and the state, shift risk on to them (Hacker 2006). Perhaps as a consequence demands on household resources are more varied than previously imagined.

It is possible that only examining hardship through a dichotomous variable might be obscuring some substantive differences in the type of material or depth of hardship. Table 2.7 examines both the type and number of hardships reported by households. Of the quarter of households that report some hardship, only 35% report one hardship whereas 65% report multiple hardships. Of households with only one type of hardship, 75% experience something other than difficulty making ends meet, including nearly 30% that report food insecurity.

Perhaps the "softest" measure of hardship is difficulty meeting essential expenses. One could imagine an affluent household understanding a country club membership or housecleaner as an "essential expense." However, households that experience only difficulty meeting essential expenses are rare. Of households with material hardship, only 8% report this type of hardship alone, whereas 92% report either other hardships or difficulty meeting essential expenses in addition to other hardships. What one gains in using a dichotomous variable of hardship is the

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[6]Of these relatively high income households that experience material hardship, half of them (5% of total) report difficulty meeting essential expenses, compared to 60% of all households with any hardship (14.75% of total). The other half of these high income households experience other forms of material hardship.

breadth of the population effected at the expense of an understanding of the depth of hardship experienced by so many American households.

The OPM is of particular interest because it is the only poverty measure that actually determines one's eligibility for social safety net programs. Other income-based measures of poverty exist, primarily relative measures, and ought to be considered as well. The UK has a measure of income poverty set at 60% of the median household income. Table 2.5 shows this UK-style poverty threshold cross-tabbed with material hardship. The overall poverty rate with this relative measure more than doubled to 30%, but even this more generous definition of poverty fails to capture the entire proportion of the population that experiences hardship. With the UK-style relative poverty measure, 13% of households still report material hardship but are not counted as poor.

Table 2.6 pushes this logic even further and examines median income. Even using median income as a definition of income poverty (to be clear, I am not suggesting that median income is a realistic measure of income poverty, this is merely a thought experiment), 7.6% of households still fall into the "non-poor" yet experiencing material hardship category. The hardship rate above the median is 15%, about on part with the OPM poverty rate for the nation as a whole, whereas the hardship rate below the median is 34%. Households above median income account for approximately 31% of all households reporting material hardship.

In Table 2.6, I push the income poverty line far higher than is reasonable because it reveals something significant. If it can be agreed that when people think of poverty, they are actually concerned with the material well-being of people, that is to say whether or not they can afford food, shelter, utilities, medical care, and other necessities, and that social scientists and bureaucrats have used income measures as a proxy for these things, then the results in Table 2.6

show income is a poor proxy for what is actually meant by the word "poverty." The problem with the OPM is not that it is an imperfect measure of income poverty, the problem is using income alone as a proxy for poverty.

Demography of Poverty and Hardship

There are substantive differences across racial/ethnic groups as seen in Table 2.8. Households with Black, Hispanic or Other household heads have hidden hardship rates of about 25% compared to about 15% for White and Asian households. For Whites and Asians, a majority of poor households do not experience hardship whereas for Black, Hispanic, and Other households a majority of poor households experience some form of material hardship. While the absolute numbers are worse for non-Whites and Asians, the ratio of non-poor households with material hardship to OPM poor is more lopsided in White and Asian headed households. For every white household in OPM poverty, 1.51 experience hardship above the poverty line. This ratio is lower in Black households (.99) and Hispanic households (1.05). If hardship is what we really mean by poverty, the OPM appears to do a marginally better job of capturing poverty in Black, Hispanic, and Other households than White or Asian households.

In general, as education increases, poverty and hardship decrease. Table 2.9 shows that the highest poverty and hardship rates are found in household heads with the lowest education. Rates of non-poor hardship are nearly double for those with high school diplomas or less compared to those with a BA or higher. The proportion of the poor with and without hardship is fairly even until educational attainment reaches the BA and BA+ categories at which point hardship becomes a minority experience even amongst the poor. As with racial and ethnic differences, the ratio of non-poor with material hardship to OPM poor is higher in categories generally thought of as more well off. There are 0.7 households in hardship above the poverty

line for every household below the poverty line amongst householders with less than a high school degree compared to 1.84 for households headed by someone with a bachelor's degree. While the overall rates of hardship and poverty are lower amongst households with greater educational attainment, there is ultimately more hidden hardship in these households too.

Other household characteristics follow this general pattern, such as sex of the household head, the presence of children in the household, and senior status, as seen in Table 2.10. In general, households with female heads are less economically well off than those with male heads. The poverty rate for male-headed households is 10% compared to 17% for female-headed households. The hardship rate for male-headed households is also higher, at 21% compared to 28% for female-headed households. The presence of children under 18 appears to be related with reduced levels of economic well-being. Approximately 20% of households with children experience hardship but are not categorized as poor, compared to 16% for households without children. The overall hardship rate for households with children is 32% (20% poverty rate) compared to 21% for households without children (12% poverty rate). Households headed by seniors report non-poor hardship rates ten percentage points lower than younger household heads. Strikingly, amongst poor households with seniors only a quarter report hardship compared to half of poor households with younger household heads. Of all households reporting hardship, only 11% are headed by seniors. The generally low hardship rates amongst seniors may be due to the presence of strong universal social safety net programs (a guaranteed income in the form of Social Security and single payer health insurance in the form of Medicare), and the accumulation of wealth over the lifecourse.

While measures of the overall poverty and hardship rates are basically as one would expect, the ratio of households with hardship above the poverty line to households in poverty for

these categories again shows that there is more hidden hardship in traditionally well to do categories. The ratio of hidden hardship is higher in male-headed households than female ones, higher in households without children than those with children, and higher in households under 65 than senior headed households. There are two moving parts that can explain this pattern. First, is the income poverty rate of these households (generally higher for female headed households) and, second, the demands on resources faced by these households (higher for households with children, possibly also for prime working age households in general).

Income, Wealth, Credit, and Other Sources of Support

If material hardship occurs when the demand for resources exceed the available resources of a given household, then it is likely that hardship varies with the main resources household have to meet such demands: income, wealth, credit, and the welfare state. While income measures of poverty may not be able to explain all of the variance in material hardship rates, they are certainly a key factor. Table 2.11 reports total income, earned income, the coefficient of variation for both total and earned income, average welfare transfers, and a decommodification measure.

Total income is highest for the economically secure households that avoid both income poverty and hardship and lowest for households in poverty. Between the two, but much closer to the economically secure, are households above the poverty line but that do experience material hardship, bringing in on average about $59 thousand per year. Earned income, which is to say labor market income, is similarly distributed between the four groups.

Income volatility as measured by the coefficient of variance (see definition and discussion in appendix A) differs wildly between the groups. It is lowest amongst the economically secure, and highest amongst the poor, particularly the poor who experience

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hardship. Key mechanisms for mitigating income instability found in the labor market are welfare state transfers. The largest average transfers are found amongst the poor who experience hardship, as fits with the overall approach of the US welfare state to target those at the bottom.

The decommodification measure in this table is a measure of the percentage of household income that is derived from sources other than labor, such as welfare transfers and returns from capital. This way of measuring welfare state strength and exposure to the vagaries of the labor market is common in comparative welfare state research (see e.g. Esping-Andersen 1990). In general, the poor have the highest decommodification levels, followed by the economically secure. The lowest levels of decommodification can be found amongst household in hidden hardship. This sense that others to the left of them and to the right are somehow getting more help from the government is, on the whole, not entirely inaccurate.

In addition to support from labor markets and the welfare state, two major resources for households are wealth and credit. Table 12 presents poverty and hardship by net worth, total debt, unsecured debt, and various debt to income ratios. All dollar figures have been adjusted to 2017 dollars using the Consumer Price Index. When considering the net worth of households, it is most striking that poor households without hardship have a higher average net worth than households above the poverty line that experience hardship, about $128,000 to $104,000 respectively. On average, households in hidden poverty are less wealthy than poor households that manage to avoid material hardship. Households in poverty with material hardship have much lower average net worth of only $40,000 while economically secure households have an average net worth of over $305,000. Wealth, or lack thereof, and hardship go hand in hand. Perhaps wealth provides an internal, private social safety net (Pfeffer and Haellsten 2012).

As the mid twentieth century post-war economic boom ended in the 1970s, policy makers increasingly turned to expanded access to consumer credit to make up for stagnant wages and to push off, as far as possible, a political crisis that would accompany a distributional crisis of capitalism (Krippner 2011). Poor households have debt to income loads over 100 times that of non-poor households ($140 in debt for every dollar of income compared to $1.24). Poor households also carry higher levels of unsecured debt, such as credit card debt, as a proportion of their total debt load. While the total debt loads of households in hidden hardship resemble economically secure households more than poor households, the proportion of unsecured debt to the total debt load is similar to poor households. In short, those who are not economically secure appear to be using the plastic safety net of consumer credit to avoid, or attempt to avoid, material hardship.

Access to credit is an essential resource for any household. Measuring debt is a way of assessing which households have had both access to and the need to access credit in the past. Total debt, while interesting, captures "good debt" such as a home mortgage loan. Unsecured debt, such as credit card debt, is more likely to be used in consumption smoothing aimed at avoiding material hardship. Poor households in general have lower amounts of unsecured debt, but much higher unsecured debt to income ratios.

Regression Results

Multinomial logistic regressions for the 4 categorical outcomes of interest 1) hidden hardship 2) poverty and hardship 3) poverty without hardship 4) no poverty, no hardship are used to understand the relationship between demographic factors, income, wealth, and credit. In all regressions, the economically secure group serves – those without poverty or hardship – as the base category. Table 2.13 reports the comparison between the economically secure and those in

hidden hardship (above the poverty line but experiencing hardship) over 4 models. The first

model considers only demographic factors, the second model only income measures, the third

model wealth and debt measures, and the fourth model is a full model including demographics,

income, and wealth together.

Because odds and log odds coefficients do not allow comparisons across models (Mood

2010) , all coefficients reported are average marginal effects (Williams 2012). This section will

discuss the interpretation of these marginal effects and conclude with an illustrative story to aid

interpretation.

The interpretation of average marginal effects for categorical variables is straightforward.

For example, in model 1, the marginal effect of being Black (compared to White as the reference

category) when all other demographic factors are controlled for, is .066. That is, holding all other

demographic covariates constant, black headed households are 6.6 percentage points more likely

than white headed households to be in the hidden hardship category compared to the

economically secure category. Interpreting a continuous variable is similar. For example, the

marginal effect of age in model 1 is .005. This is often casually interpreted as a one unit increase

in age (in this case, one unit one year) being associated with a .5 percentage point increase the

predicted chance of being in the hidden hardship group, compared to the economically secure

group. A more precise interpretation of this marginal effect would be that the probability of

being in hidden hardship increases with age at a rate such that, if the rate were constant, the

probability of hidden hardship would increase by 0.5 percentage points if age increased by 1

year.

Imagine two families, the Jacksons and the Sullivans, the former black and the later

white. Based on race alone, the Jacksons have a 22% predicted probability of falling into the

hidden hardship group compared to 17% for the white Sullivans . If the Sullivan household head went beyond a high school diploma and finished a BA, the chances drops from 18% to 14%. With only a high school diploma, the Jacksons would have a 23% chance of entering hidden hardship, and a bachelor's degree would only reduce their predicted probability to 18%--the same as the white Sullivan family with only a high school diploma (Figure 2.1). Whatever advantage a household can gain by having a household head who finished college is erased by race.

The gap cannot easily be closed by greater income either. If earning only $30 thousand a year, the Sullivans have 24% chance of experiencing hidden hardship. At the same income, the Jacksons have a 30% chance. Moving up to a $90,000 per year—no small feat by any means—would reduce the Sullivans' chance to 18%. The same income gain with the Jacksons would drop their probability to 24%, the same as the Sullivans at $30,000 (Figure 2.2).

Income instability reveals a similar gap (Figure 2.3). I use the coefficient of variation (CV) as a measure of income instability. The CV is the standard deviation divided by the mean. For example, a household with completely steady income has a CV of zero. A household with some substantial variability might have a CV of .5 and a household with extreme variability of income might have a CV of 1. For example, a household earning $5000, $0, and $2500 over a given three month period would have a CV of 1. With a CV of 1, the Jacksons have a probability of experiencing hidden hardship of 32% whereas the Sullivans have only 25%. At a CV of .5, the chances drop to .25 and .19 respectively. At a CV of 0—perfectly consistent income—the chances drop to .19 and .14 respectively. The racial gap does not close.

Can wealth explain away some of the racial gap (Figure 2.4)? At a net worth of $100,000, the Sullivans have a probability of experiencing hidden hardship of .18 whereas for the Jacksons

it is .24. For the Sullivans to have a similar probability, they would need a net worth of negative $100,000 (net debt). Such a net debt would simultaneously give the Jacksons a probability of .31.

Discussion

The phenomenon of hidden hardship in the United States suggests a number of next steps for future research. First, is a closer examination of the geography of hidden hardship is needed. Given the spatially concentrated nature of the social safety net (Allard 2009) and the broad shift towards suburban rather than urban poverty (Kneebone and Garr 2010), trying to better understand where households in hidden hardship live is a necessary step in determining how best to meet the needs of this population.

Next steps in a spatial direction also invite questions about the political implications of hidden hardship. Does the experience of material hardship lead to any particular type of political engagement or non-engagement? Given how geographically sensitive the US political system is, is it possible that even a weak relationship between hidden hardship and political engagement could have outsized consequences?

At least one major unresolved question arises from this finding: how much money is enough? The problem of high-income material hardship is an open question in need of further study. The notion that households with incomes in the hundreds of thousands of dollars could still be facing material hardship the same as those near, and below, the poverty line seems to lack a certain face validity. And yet, the survey responses to the material hardship questions are quite clear. Further research is needed on the type and duration of hardship faced by higher income households, and the ways in which consumptions patterns may intersect with material hardship for his subset of the population.

In order to address some of these next steps and unresolved questions, additional data may needed to be collected. The SIPP does not ask any questions related to political engagement. As a result, scholars may needed to find ways of assessing material hardship using fewer measures of hardship (such as food insecurity alone) on other datasets. Furthermore, nearly all of the qualitative study of material hardship takes place on samples drawn from explicitly income poor or recently income poor households. It is reasonable to suspect that some of the qualitative results for middle and upper middle class households may differ considerably.

Material hardship and income poverty provide different understandings of the well-being of US households. While only 14% of households are categorized as poor, 24% experience material hardship. Of those in material hardship, 73% are in hidden hardship, meaning their income is above the poverty line. Hidden hardship makes up almost 18% of households. The existence of this group presents a methodological problem, a policy challenge, and a theoretical puzzle.

Methodologically, the unidimensional measure of income poverty, while parsimonious, is not an adequate measure of poverty. If material hardship is truly at the heart of the concept of poverty, then researchers need to move towards a multidimensional approach to the measurement of poverty. While income is important, so too is the temporality of income, particularly in the form of income instability. The existence of hardship above the poverty line demonstrates the risk in relying on a unidimensional measure.

The policy challenge presented by hidden hardship strikes at the core logic of the US welfare state. As a liberal welfare state, the US has traditionally used targeted, means tested programs focused on poverty alleviation at the very bottom of the income ladder (Esping-Andersen 1990). Over time, anti-poverty efforts have increasingly become hidden in the tax code

(Howard 1997; Mettler 2011), and funneled through non-profit organizations (Allard 2009). Since 1996, the demise of cash welfare has resulted in the creation of a group of households disconnected from both the welfare state and labor market (Danziger 2010) resulting in the existence of extreme poverty in the United States (Shaefer and Edin 2013) all the while non-income based forms of welfare spending continue to rise (Kenworthy 2014).

The existence of hidden hardship calls into question the current, exclusive focus on the poorest Americans via targeted, means tested social assistance programs. While households below the poverty line do have high hardship rates (47%), the bulk of households with hardship live above the poverty line (73%). Means-tested programs that depend upon the poverty line as a cutoff point will, by definition, fail to assist households in hidden hardship. Furthermore, existing social safety net programs are difficult to access in a timely manner (Seefeldt 2017) thus making them of little relevance to households with inconsistent incomes that may occasionally fall below the poverty line for small periods of time.

The social policy problem is intertwined with a theoretical puzzle because poverty, broadly defined, is the result of the distribution of power in an advanced capitalist society (Brady 2009). If the existence of hidden hardship indicates the failure of the consumer-credit fueled attempt to avoid the distributional crisis of capitalism (Krippner 2011; Seefeldt 2017), we will be confronted with such a crisis again. There are already some qualitative indications of these questions surfacing via the politics of resentment and far right political movements (Hochschild 2016).

These questions about the distribution of power are ultimately questions of freedom. Which fictional family is better equipped to live the sort of lives they value, the Sullivans or the Jacksons?

Chapter 2 Tables and Figures

Table 2.1 Poverty and Material Hardship, Row Totals

OPM Poverty	Material hardship		
	No Hardship	*Hardship*	*Total*
Not poor	68.33	17.84	86.17
(SE)	(0.13)	(0.10)	(0.09)
Poor	7.24	6.59	13.83
(SE)	(0.07)	(0.07)	(0.09)
Total	75.57	24.43	100

Table 2.2 Poverty and Material Hardship, Column Totals

OPM Poverty	Material Hardship		
	No Hardship	*Any Hardship*	*Total*
Not Poor	90.42	73.03	86.17
(SE)	(0.09)	(0.25)	(0.09)
Poor	9.58	26.97	13.83
(SE)	(0.09)	(0.25)	(0.09)
Total %	100	100	100

Table 2.3 Poverty and Material Hardship, Row Totals

OPM Poverty	Material Hardship		
	No Hardship	*Any Hardship*	*Total*
Not Poor	79.30	20.70	100
(SE)	(0.12)	(0.12)	
Poor	52.37	47.63	100
(SE)	(0.37)	(0.37)	
Total %	75.57	24.43	100
(SE)	(0.12)	(0.12)	

Table 2.4 OPM Ratio and Hardship, Row Totals

OPM Ratio	Material Hardship		
	No Hardship	*Any hardship*	*Total*
Less than .5 %	51.32	48.68	100
(SE)	(0.58)	(0.58)	
.5-1 %	53.09	46.91	100
(SE)	(0.48)	(0.48)	
1-1.5 %	62.67	37.33	100
(SE)	(0.42)	(0.42)	
1.5-2 %	67.99	32.01	100
(SE)	(0.40)	(0.40)	
2-3 %	74.57	25.43	100
(SE)	(0.28)	(0.28)	
3-4 %	80.90	19.10	100
(SE)	(0.29)	(0.29)	
4+ %	89.12	10.88	100
(SE)	(0.15)	(0.15)	
Total %	75.57	24.43	100
(SE)	(0.12)	(0.12)	

Table 2.5 Relative Poverty and Material Hardship

Relative Poverty	Material Hardship		
	No Hardship	*Any Hardship*	*Total*
Not Poor	56.52	13.02	69.53
(SE)	(0.14)	(0.09)	(0.13)
Poor	19.06	11.41	30.47
(SE)	(0.11)	(0.09)	(0.13)
Total %	75.57	24.43	100
(SE)	(0.12)	(0.12)	

Table 2.6 Material Hardship and Median Income

Material Hardship		

	No Hardship	Any Hardship	Total
Above Median			
	42.40	7.60	50.01
SE			

	Hardship Count		

	No Hardship	Any Hardship	Total
Below Median	(0.13)	(0.07)	(0.14)
	33.17	16.82	49.99
SE			
Total	(0.13)	(0.10)	(0.14)
	75.57	24.43	100
SE			

Table 2.7 Hardship Count by Type of Material Hardship

	1	2	3	4	5	6	7	8	9
Hardship									
Total % of population	8.61	5.55	4.04	2.78	1.85	1.01	0.43	0.13	0.03
(SE)	(0.08)	(0.06)	(0.05)	(0.05)	(0.04)	(0.03)	(0.02)	(0.01)	0.00
If Any hardship	35.27	22.73	16.52	11.37	7.57	4.12	1.76	0.55	0.11
(SE)	(0.26)	(0.23)	(0.20)	(0.18)	(0.15)	(0.11)	(0.09)	(0.04)	(0.02)
Types of Hardship									
Difficulty Meeting Essential Expenses	24.75	60.58	82.41	92.64	96.62	98.22	98.80	98.95	100
(SE)	(0.40)	(0.57)	(0.51)	(0.43)	(0.37)	(0.37)	(0.49)	(0.68)	0.00
Missed rent or mortgage payment	3.41	19.34	34.91	48.82	61.67	78.71	92.28	100	100
(SE)	(0.18)	(0.46)	(0.65)	(0.83)	(0.97)	(1.09)	(1.06)	0.00	0.00
Evicted	0.00	0.10	0.89	1.81	3.62	6.26	14.17	28.39	100
(SE)	0.00	(0.03)	(0.13)	(0.22)	(0.38)	(0.64)	(1.69)	(3.57)	0.00
Missed utility bill	8.43	31.96	54.63	70.85	83.24	94.32	98.45	100	100
(SE)	(0.26)	(0.54)	(0.67)	(0.74)	(0.75)	(0.61)	(0.64)	0.00	0.00
Utilities cut off due to nonpayment	0.00	0.76	4.80	11.06	19.57	31.26	56.55	94.70	100
(SE)	0.00	(0.10)	(0.31)	(0.51)	(0.79)	(1.27)	(2.39)	(1.60)	0.00
Phone cut off due to nonpayment	3.40	7.30	15.88	27.70	40.71	54.77	83.07	92.52	100
(SE)	(0.17)	(0.30)	(0.49)	(0.74)	(0.99)	(1.35)	(1.60)	(1.96)	0.00
Unable to see a doctor	10.80	26.70	29.09	40.69	57.98	74.66	81.91	98.53	100
(SE)	(0.29)	(0.51)	(0.61)	(0.81)	(1.00)	(1.19)	(2.79)	(0.93)	0.00
Unable to see a dentist	19.87	31.23	34.84	49.12	64.74	78.40	87.02	93.32	100
(SE)	(0.36)	(0.54)	(0.64)	(0.83)	(0.97)	(1.15)	(1.62)	(2.43)	0.00
Food Insecurity	29.34	22.03	42.56	57.32	71.85	83.39	87.75	93.58	100
(SE)	(0.42)	(0.47)	(0.67)	(0.82)	(0.90)	(1.00)	(1.46)	(2.03)	0.00

Table 2.8 Poverty and Hardship by Race and Ethnicity

	Race and Ethnicity					
Hardship and Poverty	**White**	**Black**	**Asian**	**Other**	**Hispanic (any race)**	**Total**
Hidden Hardship	15.72	25.13	13.08	26.11	23.89	17.84

(SE)	(0.11)	(0.35)	(0.52)	(0.79)	(0.39)	(0.10)
Down-and-Out	4.37	14.63	4.31	12.99	12.16	6.59
(SE)	(0.06)	(0.28)	(0.31)	(0.59)	(0.30)	(0.07)
Getting By	6.07	10.73	9.49	7.69	10.61	7.24
(SE)	(0.08)	(0.24)	(0.46)	(0.47)	(0.28)	(0.07)
Economically Secure	73.84	49.51	73.12	53.21	53.34	68.33
(SE)	(0.14)	(0.40)	(0.69)	(0.90)	(0.46)	(0.13)
Total %	100	100	100	100	100	100
Total poor	10.44	25.36	13.80	20.68	22.77	13.83
(SE)	(0.10)	(0.35)	(0.53)	(0.71)	(0.38)	(0.09)
Total any hardship	20.09	39.76	17.39	39.10	36.05	24.43
(SE)	(0.13)	(0.39)	(0.58)	(0.88)	(0.44)	(0.12)
Ratio of non-poor with material hardship to OPM poor:	1.51	0.99	0.95	1.26	1.05	1.29

Table 2.9 Poverty and Material Hardship by Education

	Education					
Hardship and Poverty	**Less than HS**	**HS**	**Some college**	**BA**	**BA+**	**Total**
Hidden Hardship	20.63	19.92	20.64	12.47	9.15	17.84
(SE)	(0.30)	(0.21)	(0.19)	(0.22)	(0.25)	(0.10)
Down-and-Out	14.57	7.79	6.44	2.23	1.30	6.59
(SE)	(0.26)	(0.14)	(0.12)	(0.10)	(0.11)	(0.07)
Getting By	14.74	7.78	6.31	4.54	3.95	7.24
(SE)	(0.26)	(0.14)	(0.12)	(0.14)	(0.17)	(0.07)
Economically Secure	50.06	64.52	66.61	80.75	85.60	68.33
(SE)	(0.37)	(0.26)	(0.23)	(0.26)	(0.31)	(0.13)
Total %	100	100	100	100	100	100
Total poor	29.31	15.56	12.75	6.77	5.25	13.83
(SE)	(0.33)	(0.19)	(0.16)	(0.17)	(0.20)	(0.09)
Total any hardship	35.20	27.71	27.08	14.71	10.45	24.43
(SE)	(0.35)	(0.24)	(0.21)	(0.23)	(0.27)	(0.12)
Ratio of non-poor with material hardship to OPM poor:	0.70	1.28	1.62	1.84	1.74	1.29

Table 2.10 Poverty, Hardship, and Household Characteristics

Hardship and Poverty	**Sex of Household Head**		**Children under 18 in Household**		**Age of Household Head**	
	Male	*Female*	*No*	*Children*	*Under 65*	*65+*

	Children					
Hidden Hardship	16.50	19.14	16.23	20.79	19.95	9.93
(SE)	(0.15)	(0.15)	(0.12)	(0.26)	(0.12)	(0.16)
Down-and-Out	4.67	8.47	5.18	11.23	7.58	2.87
(SE)	(0.08)	(0.11)	(0.07)	(0.20)	(0.08)	(0.09)
Getting By	5.67	8.78	7.13	8.39	6.98	8.22
(SE)	(0.09)	(0.11)	(0.08)	(0.18)	(0.08)	(0.15)
Economically Secure	73.16	63.61	71.46	59.58	65.48	78.98
(SE)	(0.18)	(0.18)	(0.15)	(0.31)	(0.15)	(0.22)
Total %	100	100	100	100	100	100
Total poor	10.34	17.24	12.31	19.63	14.56	11.09
(SE)	(0.12)	(0.14)	(0.11)	(0.25)	(0.11)	(0.17)
Total any hardship	21.17	27.61	21.41	32.02	27.54	12.80
(SE)	(0.16)	(0.17)	(0.13)	(0.30)	(0.14)	(0.18)
Ratio of non-poor with material hardship to OPM poor:	1.60	1.11	1.32	1.06	1.37	0.90

Table 2.11 Hardship, Poverty, and Household Resources

	Hidden Hardship	Down-and-Out	Getting By	Economically Secure

Total income	58849.24	10227.08	9320.61	84763.36
(SE)	(377.82)	(96.48)	(85.85)	(284.94)
Earned income	49030.92	5046.91	4200.60	69679.68
(SE)	(375.60)	(96.60)	(85.50)	(295.06)
CV of Total Income	0.29	0.53	0.50	0.22
(SE)	0.00	0.00	0.00	0.00
CV of Earned Income	0.41	0.87	0.82	0.32
(SE)	0.00	(0.01)	(0.01)	0.00
Welfare Transfers	6358.33	8038.97	6378.48	6826.01
(SE)	(76.99)	(106.64)	(93.09)	(40.81)
Decommodification	0.25	0.61	0.67	0.30
(SE)	0.00	(0.01)	(0.01)	0.00
Net Worth	$104,032.86	$41,552.42	$128,263.81	$307,608.88
	(3170.35)	(1641.49)	(3525.94)	(3993.89)
Total Debt	$76,610.92	$29,160.02	$40,599.90	$98,889.12
	(912.59)	(838.27)	(983.17)	(475.52)
Unsecured Debt	$12,484.52	$6,800.28	$5,311.88	$9,713.80
	(388.76)	(258.32)	(205.93)	(128.57)
Total Debt to Income Ratio	1.34	84.32	189.44	1.22
	(0.02)	(10.70)	(17.00)	(0.01)
Unsecured Debt to Income Ratio	0.24	20.11	33.19	0.13
	(0.01)	(2.50)	(7.45)	0.00
Unsecured Debt to Total Debt	0.39	0.56	0.41	0.28
	0.00	(0.01)	(0.01)	0.00

Table 2.12 Hardship, Poverty, and Life Events

Poverty and Hardship	**Gap in health insurance**	**Recent Divorce**	**Recent spell of Unemployment**

	coverage					
	No	Yes	No	Yes	No	Yes
Hidden Hardship	15.14	30.29	17.01	19.50	18.91	15.97
(SE)	(0.11)	(0.31)	(0.13)	(0.19)	(0.14)	(0.16)
Down-and-Out	4.23	17.48	5.74	8.29	3.66	11.70
(SE)	(0.06)	(0.25)	(0.08)	(0.13)	(0.06)	(0.14)
Getting By	6.07	12.65	6.74	8.25	4.31	12.36
(SE)	(0.07)	(0.22)	(0.08)	(0.13)	(0.07)	(0.15)
Economically Secure	74.55	39.58	70.51	63.96	73.12	59.97
(SE)	(0.13)	(0.33)	(0.15)	(0.22)	(0.15)	(0.22)
Total %	100	100	100	100	100	100
(SE)	(0.11)	(0.11)	(0.13)	(0.13)	(0.13)	(0.13)
Poor total	10.30	30.13	12.48	16.54	7.97	24.06
(SE)	(0.09)	(0.31)	(0.11)	(0.18)	(0.09)	(0.19)
Any Hardship	19.37	47.76	22.75	27.79	22.57	27.68
(SE)	(0.12)	(0.33)	(0.14)	(0.21)	(0.14)	(0.20)
Ratio of non-poor with material hardship to OPM poor:	1.47	1.01	1.36	1.18	2.37	0.66

Table 2.7 Selected Estimates from Multinomial Logistic Regressions

	Model 1	Model 2	Model 3	Model 4
	b/se	b/se	b/se	b/se

		(1)	(2)	(3)	(4)
Race	White	0			0
		.			.
	Black	0.066***			0.051***
		0.004			0.003
	Asian	-0.021***			-0.022***
		0.006			0.006
	Other	0.079***			0.070***
		0.008			0.007
	Hispanic	0.039***			0.020***
		0.004			0.004
Gender	Male	0			0
		.			.
	Female	0.026***			0.032***
		0.002			0.002
Education	Less than HS	0			0
		.			.
	HS	-0.019***			-0.024***
		0.004			0.004
	Some College	-0.023***			-0.021***
		0.004			0.004
	BA	-0.099***			-0.070***
		0.004			0.004
	BA+	-0.125***			-0.082***
		0.004			0.005
	Age	0.005***			0.010***
		0			0
Age	Age Squared	-0.000***			-0.000***
		0			0
	Number of Kids	-0.002*			-0.002
		0.001			0.001
Income	Welfare State Transfers		-0.001***		0.002***
			0		0
	Income		0.002***		0.003***
			0		0
	Income Instability		0.124***		0.104***
			0.004		0.004
Wealth	Net worth			-0.000***	-0.000***
				0	0
	Unsecured Debt			0.000***	0.000***
				0	0
	N	160253	156058	160253	156058

Figure 2.1 Predicted Probability of Experiencing Hidden Hardship by Race and Education

Predicted Probability by Race and Education
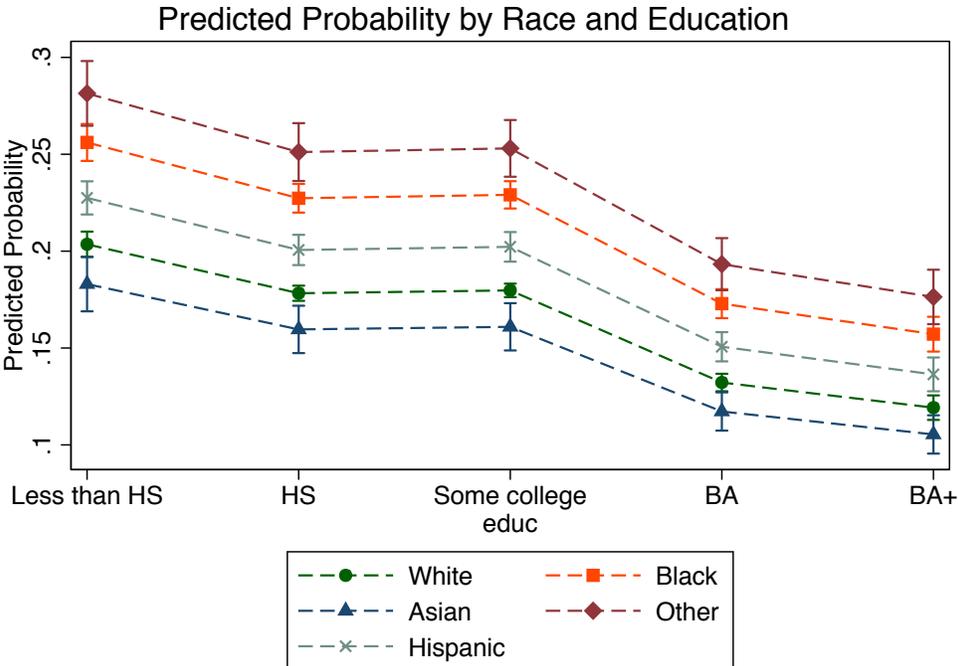
Figure 2.2 Predicted Probability of Experiencing Hidden Hardship by Race and Income

Hidden Hardship by Race and Income
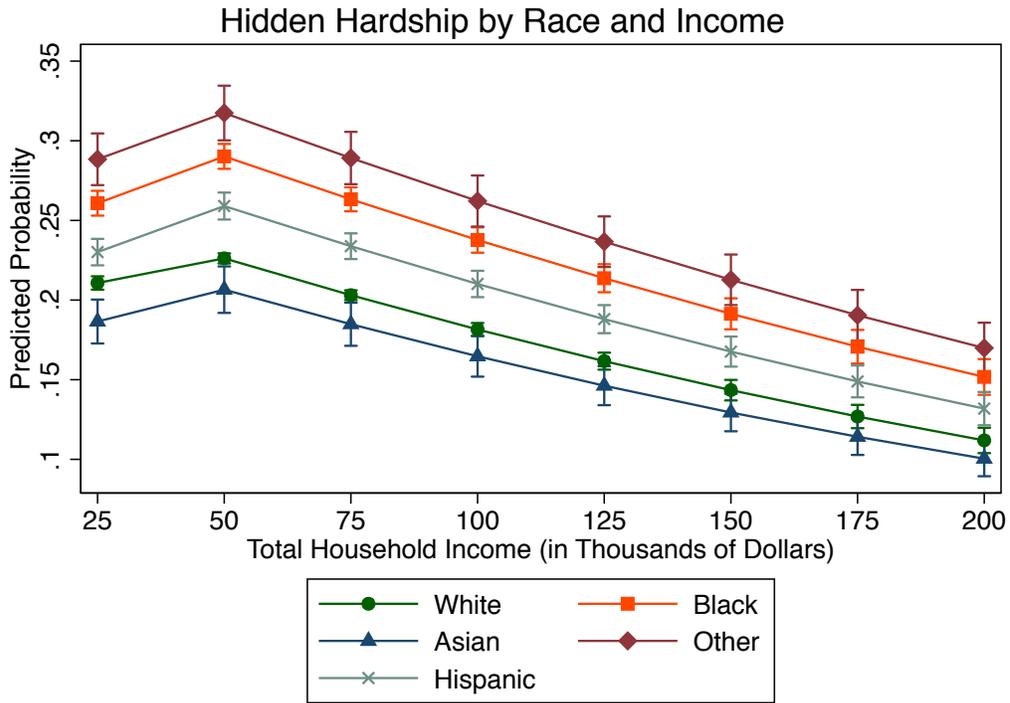
Figure 2.3 Predicted Probability of Hidden Hardship by Race and CV of Income

Predicted Probability by Race and CV of Income
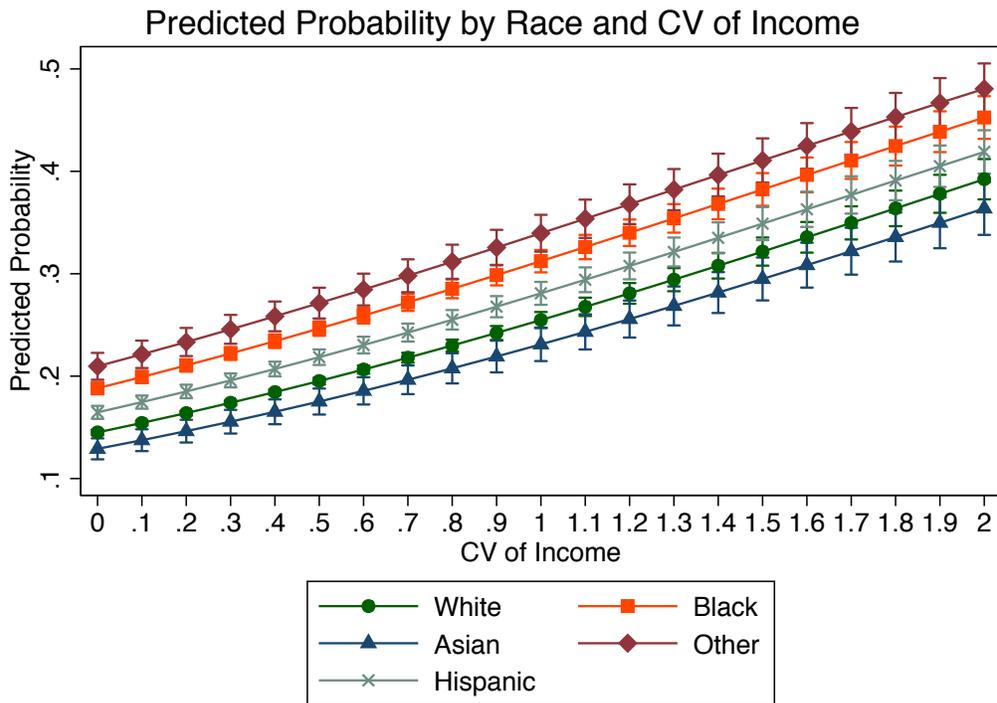
Figure 2.4 Predicted Probability of Hidden Hardship by Race and Wealth
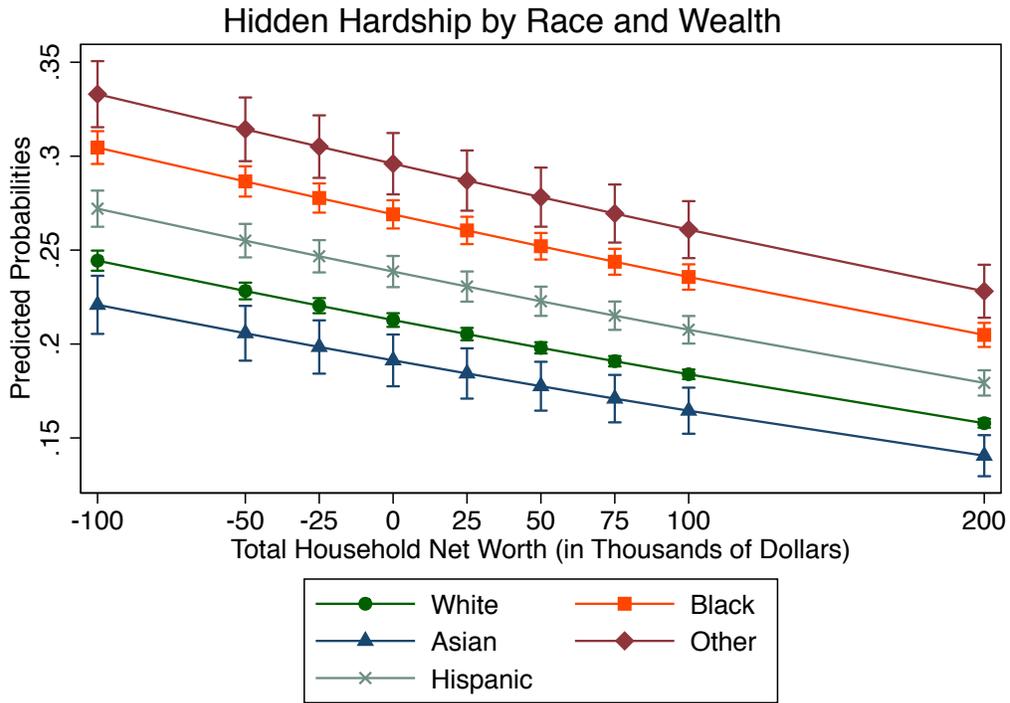
Chapter 3 How the Other Half Still Lives: Duration of Hardship

Introduction

Do households move in and out of a spell of material hardship, or is material hardship more of a chronic state? These questions are examined in this chapter using the only repeated measures of material hardship in the SIPP. I find that the duration of hardship is unevenly distributed across the population, with non-white households having much higher rates of hardship over time than white households. The risk of experiencing chronic hardship is likewise highly dependent upon race, such that (conditioned on income) white households with a net worth of $0 have the same risk of experiencing chronic hardship as a black household with a net worth of $150,000.

Previous Literature

Poverty research using longitudinal survey data has long revealed that poverty is not a static state, as often thought. Rather, households move in and out of poverty over time (Iceland 2003). The percent of households in persistent poverty, defined as incomes below the poverty line in 8 out of 10 years, is vanishingly small, less than two percent (Duncan 1984). Conversely, the percentage of individuals that experience income poverty at some point in the life course has been estimated to be as high as fifty percent (Rank 2005).

Income poverty and material hardship share an underlying logic. Income poverty occurs with a particular resource—income—falls below an arbitrary line. Material hardship occurs when all available resources to a household (income, wealth, transfers, credit, informal

assistance) fail to meet the demands on those resources (Mayer, 1993). Most of what is known about material hardship is based on cross section, point in time estimates (Bauman 1999; Beverly 2001; Iceland and Bauman 2007). Over time, Heflin (2017) shows that long term recent trends in material hardship, roughly 1993-2011, loosely map on to what is known about trends in poverty. After some improvement in material well-being circa 1998-2005, hardship rates increased again in the wake of the great recession and exceed their early 1990s high.

Until recently, non-nationally representative samples such as the Women's Employment Survey have been the only data available to examine movement in to and out of a spell of hardship. Research in this are has shown that poor women were more likely to experience chronic hardship than chronic income poverty (Heflin and Butler 2013). The only nationally representative sample to include multiple measures of material hardship is the 2008 panel of the SIPP. A recent paper examining the dynamics of hardship using the SIPP (Heflin 2017) examines spells of hardship across four domains of hardship (food hardship, housing hardship, medical hardship, and essential expense hardship. She finds that "experiences of material hardship are not concentrated among one group repeatedly but are highly dynamic and spread over the wider population" (p. 528) and as a result, cross sectional approaches underestimate the experience of material hardship. While she finds some statistically significant differences by race, the results presented here go into more detail and show that that the experience of material hardship is both widely distributed across the population and disproportionally borne by non-white households.

Data and Methods

This chapter uses data from the 2008 Panel of the Survey of Income and Program Participation (SIPP), a longitudinal survey conducted by the U.S. Census Bureau that is

nationally representative of the civilian, non-institutionalized population. Questions regarding material hardship are found on the Adult Well-being Topical Module (AWTM). Previous panels of the SIPP only fielded the AWTM once, limiting the amount of longitudinal work that could be done on material hardship. The 2008 Panel is the first, and to date only, nationally representative survey to include multiple measures of material hardship.

The AWTM was fielded in Wave 6 and Wave 9, during the summers of 2010 and 2011 respectively, approximately one year apart. Unlike Chapter 2 which averages across years, the results in this chapter are generated by data gathered in more specific period of time. In general, material hardship rates increased in 2010 and 2011 in aftermath of the Great Recession. See Appendix B for more detailed information about material hardship time trends.

In order examine the duration of hardship, I first use descriptive statistics to examine the duration of both hardship and poverty in the sample. Later, I use predicted probabilities to report the results of multinomial logistic regressions modeling the duration of material hardship and poverty. The model for these regressions includes 1) demographic factors including race, age, age squared, sex, marital status, number of children under 18 in the household,; 2) household resources including household income, net worth, and unsecured debt, income instability, and welfare state transfers. The outcome variables for these models are either 1) duration of poverty or 2) duration of material hardship.

Results

The previous chapter argues that income poverty and material hardship are distinct concepts with surprisingly little overlap in the population as a whole. Building on this insight, Table 3.1 is a cross tabulation of duration of hardship and duration of poverty. Hardship here

means reporting any of the nine types of hardship specified in Chapter 2. No hardship means no hardship at either time point, episodic hardship means hardship at one time point but not both, and chronic hardship is defined as hardship at both time points. Similarly, no poverty means no income poverty at either time points, episodic poverty means income poverty at one but not both points in time, and chronic poverty is defined as income poverty at both time points.

Hardship is more prevalent than income poverty. Only 64% of households avoid hardship compared to 80% of households that avoid income poverty. Over 21% of households report episodic hardship compared to 11% of households reporting episodic poverty, while 15% of households report chronic hardship compared to 9% of households that report chronic poverty. When length of spells are taken into account, it is clearer that hardship is almost a normative experience for American households.

It is maybe hard to shake one's assumptions about a close relationship between income poverty and material hardship. Empirically, this is not the case. In order to further illustrate this counterintuitive finding, two pie charts have been generated. Figure 3.1 examines duration of poverty and breaks out the proportion of households that experience some sort of hardship. 63% of households never experience income poverty while 16% of households never experience income poverty but do experience hardship at one or both time points. About half of households that experience either episodic poverty or chronic poverty report some sort of hardship. Figure 3.2 reports household by duration of hardship and the experience of any duration of income poverty. Households that report poverty appear to be roughly split nearly equal thirds of chronic, episodic, and no hardship. It is worth nothing that overall, about 80% of households reporting either chronic or episodic hardship are in hidden hardship. For the population as a whole, 18%

experience episodic hidden hardship and 8% experience chronic hidden hardship. To talk about the temporal depth of hardship is usually to be talking about hidden hardship.

Perhaps the most striking aspect of this figure is the proportion of households that report either hardship and/or poverty at one or both time points. Only 56% of households are economically secure across the entire two years. On the other extreme, only 3% of households report chronic hardship and concurrent chronic poverty. 41% of households then exist in an intermediate zone, either in hidden hardship or getting by, somewhere between economic security and being chronically down and out. This finding invites the return of an old question: how does the other half live? But first, who exactly is in this other half?

Hidden Hardship

The majority of households that experience hardship are in hidden hardship (Table 3.2). Of those in episodic hardship, 80% are in episodic hidden hardship. Of those households in chronic hardship, 60% are in chronic hidden hardship, 20% are in hidden hardship at least at one time point, and another 20% are below the poverty line at both points in time. Overall, 27% of all households are in either episodic material hardship or chronic hidden hardship.

Race and Ethnicity

There are notable differences in the duration of spells of hardship and poverty by race and ethnicity. Table 3.3 reports these findings with column totals while Table 3.4 reports them with row totals. Despite making up about 70% of households, white households account for 75% of non-poor households and 77% of non-hardship households (Table 3.3). 85% of white households avoid poverty while 69% avoid material hardship (Table 3.4). While whites are

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underrepresented both categories of poverty and hardship, they still make up the majority of households in either category of hardship of poverty. Among White households only, 9% experience episodic poverty while 6% experience chronic poverty, and 19% of white households report episodic hardship while 11% report chronic hardship. In other words, whites are 1.4 times more likely to experience episodic poverty than chronic poverty and 1.8 times more likely to experience episodic hardship than chronic hardship. On the whole, Asian-American households are very similar to White households, with 80% and 71% of households avoiding poverty or hardship respectively. In terms of the duration of poverty and hardship, episodic poverty is 1.2 times more common than chronic poverty and episodic hardship is 2.3 times more common than chronic hardship for Asian households. Both White households and Asian-American households enjoy relatively low rates of poverty or hardship, and are more likely to have episodic spells of poverty or hardship than chronic poverty or hardship.

Black households are in many ways a mirror image of White and Asian households. Despite being 12% of the population, Black households account for only 10% of households that avoid poverty and 9% of households that avoid hardship. In contrast, they make up 24% of households in chronic poverty and 20% of households in chronic hardship. Amongst Black households, 68% avoid poverty while only 47% avoid hardship. Chronic poverty is more common for these households than episodic poverty, and episodic hardship is only 1.3 times more likely than chronic hardship. Other households (largely Native American) report similar rates and duration of poverty and hardship as Black households. Hispanic households have rates of poverty and hardship nearly identical to Black households.

Education

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In general, the greater a household head's educational attainment the less likely the household is to experience material hardship or income poverty. Table 3.5 reports the duration of hardship and poverty with column totals, while Table 3.6 reports the same by row totals. Despite accounting for only 10% of households, those with less than a high school diploma make up 16% of those in episodic poverty, 28% of those in chronic poverty, 13% of those in episodic hardship, and 17% of those in chronic hardship. Only 60% of households with a head who has less than a high school diploma avoid poverty, and 49% avoid hardship. Chronic poverty is more likely than episodic poverty for this group while episodic hardship is more common than chronic hardship.

Households in which the head has a high school diploma fare better than households with a head who has less than a high school diploma. Rates and duration of poverty and hardship are all roughly similar to the proportion of such households in the population—24%. Amongst these households, 77% avoid poverty while only 58% avoid hardship. Episodic poverty and episodic hardship are more common than their chronic counterparts. Similar in many ways to this group are households headed by someone with some college education, but not a BA. This is the largest group of households by education—35% of all households—and also makes up the largest group in any of the poverty or hardship categories. Fully 40% of households in chronic poverty have a household head with only some college. Within this educational group, 80% avoid poverty while 60% avoid hardship. Episodic poverty or hardship is more common than the chronic counterparts.

Households with a head who has obtained a bachelor's degree do markedly better than the above households. Despite accounting for 19% of the population, these households make up only 8% of those in chronic poverty and 20% of those in chronic hardship. Amongst BA headed households, 89% do not experience poverty and 76% do not experience hardship. Only 7%

experience episodic poverty, and 17% experience episodic hardship, which chronic variations at 4% and 7% respectively. Households with a head who has more than a bachelor's degree are even less likely to experience poverty or hardship regardless of duration, but in general have rates that are slightly lower than BA only households. The relationship between education and the duration of poverty and hardship spells appears to form three clusters: less than high school, high school and some college, BA and more than a BA.

Household Type

Households can be thought of as existing in three distinct phases in the life cycle: 1) prime working age, defined as a household head between 18 and 65, with children under 18 in the home, 2) prime working age without children under 18 in the home, and 3) seniors, defined as having a household head over 65 years old, Tables 3.7 and 3.8 report the breakdown of duration of poverty and hardship by household type.

Seniors largely avoid hardship and poverty. 88% of seniors do not report poverty and 79% do not report hardship. 6 percent of seniors experience episodic poverty and another 6% experience chronic poverty. 16% report episodic hardship while only 6% report chronic hardship. Small poverty and hardship rates could largely be due to stable and secure incomes in the form of Old Age Insurance and private pensions, a lifetime of wealth accumulation, guaranteed health insurance via Medicare, and fewer expenses such as mortgages or childcare.

Household headed by someone in prime working age without kids fare noticeably worse than seniors. This type of household accounts for 48% of households, but 20% experience either episodic or chronic poverty. Only 62% avoid material hardship. Prime working age households with kids are in even more dire straits. Only 73% avoid poverty while 56% avoid material

hardship. Over a quarter report episodic hardship and 18% report chronic hardship. Prime working age households with children account for roughly half of all households in episodic poverty, episodic hardship, or chronic hardship.

Household Resources: Income, Wealth, and Credit

The relationship between income poverty and material hardship, and the resources available to a household differ in their underlying logic. A measure of income poverty such as the Official Poverty Measure only takes into account income while ignoring wealth, credit, and household expenses. The Supplemental Poverty Measures improves on this approach by indexing the poverty line to the cost of a one-size-fits-all basket of necessities and taking into account social safety net assistance. Material hardship measures ultimately look at the breaking point between available resources for a household and the demands on those resources. No assumptions are made about the demands on those resources or the resources themselves. The only assumptions made with the material hardship perspective are that things like eviction, food insecurity, and utility shut offs would be avoided if possible. In other words, the core assumption, and indeed this is very much an assumption, is that no reasonable person choses to live in material hardship. Even religious figures, such as monks, who take vows of poverty do not live in material hardship (Martin 2011).

Table 3.9 reports the mean levels of various types of household resources (averaged over two years) by duration of hardship and poverty. Households in poverty have, by definition, the lowest mean incomes. Households in episodic hardship have a mean income of $52,000 while those in chronic hardship have a mean income of $39,000. Both of these mean incomes are considerably above the OPM, over 200% of OPM and 160% of OPM (for a family of four),

respectively. Instability of income, as measured by the coefficient of variance, follows a similar pattern. Households that avoid poverty or hardship also have the most stable incomes. Household in poverty have the most income volatility while those with material hardship report moderate income volatility.

Wealth measures are perhaps a bit more comparable than income measures because the categories themselves are not defined by wealth. Households avoiding poverty and hardship have the highest net worth, at $248,000 and $274,000 respectively. Households in episodic poverty and episodic hardship have lower net worth at $104,000 and $59,148 respectively. Households in chronic poverty have a higher net worth, $59,000, than households in chronic hardship at $55,000.

Unsecured debt tells a different story than income or wealth. Households without poverty and hardship have relatively similar levels of unsecured debt, at $8,000 and $7,000 respectively. However, for households in some spell of poverty the unsecured debt level decreases. Households in episodic poverty have on average $8,000 of unsecured debt while those in chronic poverty have only $4,000. In contrast, households in hardship have greater levels of unsecured debt. Households with episodic hardship have on average $9,000 in unsecured debt while households in chronic hardship have $10,000—the highest of any group.

Decommodification rates measure the share of income that is not dependent upon household members commodifying their labor. The lower the decommodification rate, the more dependent a household income is on paid labor, and less on social safety net support, wealth, or other sources of income. Two figures are reported in Table 3.8: first, a figure with the entire population; and second, a figure restricting the observations to household heads under 65 years old. This is done because seniors, by virtue of low working rates, Social Security, and a lifetime

of accumulated wealth, have high decommodification rates. Decommodification rates for households with a head under 65 are about .15 for the non-poor and .17 for the non-hardship. Households in episodic poverty have a decommodifaction rate of about 0.37, and those in chronic poverty have a rate of .57. This signals that indeed, the means-tested welfare state does indeed target the income poor. In contrast, households in general experiencing episodic hardship have a decommodifcation rate of .24 and those in chronic hardship have a rate of .33. Household experiencing hardship are more dependent upon the labor market alone for their income.

Regression Results

In order to more fully understand the relationships between these variables, I employ multinomial logistic regressions. Model 1 uses the trivariate outcome of no hardship, episodic hardship, and chronic hardship. Model 2 uses the trivarite outcome of no poverty, episodic poverty, and chronic poverty. Models 1 and 2 have the same conditioning variables consisting of demographic measures (race, education, sex, age, age squared, number of children in the household, and marital status), income measures (total household income, welfare state transfers), and wealth (net worth, unsecured debt). For a fuller description of how these variables are constructed, see Chapter 2.

Education and Race

Similar to the findings in Chapter 2 the most dramatic findings have to do with race. Figure 3.3 reports the predicted probabilities of the duration of hardship and poverty spells by race. To be clear, these predicted probabilities are based on Models 1 and 2 which control for key factors such as income and wealth. Similar to the descriptive statistics, the predicted probabilities of various forms of hardship and poverty are similar for White and Asian

households who do well, and Black, Other, and Hispanic households who face higher risks. The probability of episodic poverty, chronic poverty, and chronic hardship for white households is below anything experienced by Black, Other, and Hispanic households. White household probability of episodic hardship is similar to that of chronic hardship for the less advantaged households.

While the predicted probabilities of spells of poverty and hardship by education (see Figure 3.4) are similar to the descriptive statistics, the interaction of education and race reveals some additional differences (Figure 3.5). The probability of episodic hardship, episodic poverty, and chronic poverty for households with a White head who has less than a high school diploma are statistically indistinguishable from a household with a Black head who has a bachelor's degree. Chronic hardship is equivalent for White headed households with a high school diploma and Black headed households with a BA, controlling for other observables such as income. On the other hand, there is also no difference between White headed households with a BA and Black headed households with a BA in terms of episodic poverty, chronic hardship, and chronic poverty. The notable difference here is in episodic hardship.

Income

Income is a key, if not the key, resource households depend upon in order to meet their material needs. Income here is mean household income (from all sources) from wave 6 to wave 9. Figure 3.6 shows the predicted probability of experiencing material hardship or poverty by income. The probabilities of experiencing chronic poverty or episodic poverty quickly decline as income rises, eventually approaching zero just above $30,000 in household income for chronic

poverty and $100,000 for episodic poverty. Chronic hardship declines to about zero nearer to $200,000. Episodic hardship appears to be more resistant, and falls only slightly as income rises.

Looking at income in isolation conceals variation by race. Figures 3.7 and 3.8 report the predicted probabilities of hardship and poverty, respectively, by income over race (white and black only). Black chronic and episodic hardships are at much higher rates than whites at every point along the income ladder. As with the general population in Figure 3.6, the lines for episodic hardship decline only slightly as income increases. Chronic hardship, on the other hand, falls more rapidly as income increases. However, the predicted probabilities are so far apart for the two races that the predicted probability of chronic hardship for white households with zero income is about .17. To have the same predicted probability of chronic hardship, a black household needs to have a household income somewhere between $70,000 and $80,000. At no point below household incomes of $200,000 does black episodic hardship begin to resemble white episodic hardship. In contrast, predicted probabilities of the duration of a spell of poverty by income over race, seen in Figure 3.8, show no meaningful differences by race. This is expected because the outcome in question, income poverty, is measured by the key dependent variable itself—income.

Wealth, as measured in household net worth, is another key resource that households can rely on in order to meet their material needs. Spells of poverty appear to have little relationship to household income. Again, this is largely definitional. Income poverty is utterly agnostic to issue of wealth, debt, and credit. Hardship, on the other hand, is rather responsive to wealth. The predicted probabilities of chronic hardship decline rapidly as net worth increases. Episodic hardship, as with income, declines more modestly as household net worth increases.

As with income, significant racial disparities by wealth are masked when looking at the population as a whole. Figure 3.10 reports the predicted probabilities of chronic and episodic over net worth by White and Black households. Episodic hardship, as in the population as a whole, declines minimally for both races as wealth increases. Chronic hardship, on the other hand, declines more directly as net worth increases. However, the stark disparities by race means that the white household with a net worth of $0 has the same predicted probability of chronic material hardship as a black household with a net worth of $175,000. Figure 3.11 reports the same breakdown by race and wealth for durations of poverty, however there does not appear to be much relationship between wealth and poverty by race.

Discussion

There are some important limitations to these results. First, while the SIPP is a nationally representative sample, it is only representative of the non-institutionalized, civilian population. Policies of mass incarceration over the past several decades has lead to a situation in which a sizable percentage of the population is imprisoned and thus missed by the SIPP (Western 2006). It is not known how many prisoners or detainees experience material hardship. Similarly, the SIPP does not collect information about the material well-being of those in military service.

While the 2008 panel of the SIPP does contain the only repeated measures of material hardship in a longitudinal survey, the fact that hardship is only measured at two points in time introduces the problem of both left and right censoring. We simply do not know how long these spells of material hardship last, or if we are observing their beginning, end, or some middle fluctuation.

Next steps in research on the duration of material hardship require new data collection. Because the SIPP only measures material hardship repeatedly in the 2008 panel, and the SIPP is the only nationally representative survey that regularly fields the full suite of material hardship questions, there may not be much more that can be done directly on the question of the duration of material hardship as it currently stands. Perhaps some creative triangulation of existing survey data is in order.

The main unresolved questions that these findings present are temporal ones. To what extent does the fact that these data were collected in 2010 and 2011 make them less generalizable to the turn of the millennium United States as a whole? Given the problems of left and right censoring, just how much do these current estimates underestimate the experience of material hardship in the United States? If 36% of households experience material hardship over a two-year period, just how many may experience material hardship in a five-year period? What percentage of children experience material hardship before they turn 18?

Cross sectional approaches to material hardship have masked the true extent of this social problem. Looking over two points in time, 36% of households experience material hardship at one or both points in time, far more than the 20% which experience income poverty at one or both points in time. Like income poverty, households appear to move in and out of material hardship with some frequency. In general, as the duration of material hardship increases, household income and wealth tends to decline, income instability and unsecured debt increase, and decommodification rates increase (albeit still far below the rates for those in chronic poverty).

The duration of material hardship has some distinctive racial patterns as well. Chronic and episodic hardship rates for Black, Hispanic, and Other households are far above those of

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White and Asian households. When education is considered as well, Black households with a BA head have similar chronic and episodic hardship rates as a White headed household with only a high school diploma even after controlling for income, wealth, and credit. White and Black households exist in different universes of risk when examined by income, which Black households often having to earn $70,000 to $100,000 more per year to match the same predicted probability of chronic hardship as White households.

Conclusion

Examining various domains of hardship (Heflin 2017) does advance our knowledge of hardship, however the domain of time clearly needs to be considered on its own as well. Households in hardship are not some static class at the bottom of the income ladder. Over 35 percent of households experienced some material hardship over a two year period of time. If poverty, only experienced by 20% of households over this period of time, is estimated to be nearly a normative experience for Americans at some point over their lives (Rank 2005), it is possible, perhaps even likely, that the proportion of Americans that experience material hardship over the course of their lives is considerably higher. However, we currently lack the necessary longitudinal data to conduct such an analysis. If the incidence of material hardship across one lifetime could be measured, perhaps it would then be possible to examine the intergenerational transmission of hardship much like current research into the intergenerational transmission of income poverty.

The duration of material hardship is not evenly distributed across the population. The question of why Black households consistently have higher rates of material hardship regardless of the resources measured or the demographic and household-level factors requires further

research. On one hand, the answer is obvious. Why *would* any reasonable social scientist expect a population that was enslaved for centuries, endured generations of dispossession, political repression, and terroristic violence, that only gained the right to vote in living memory, to have similar levels of material hardship even when their pay checks resemble their white neighbors? The next step in this research agenda is to measure the precise mechanisms by which this racial gap in material hardship is reproduced and sustained over time.

Some researchers argue that research into material hardship can "help policymakers create more targeted and effective interventions that help all Americans make ends meet" (Heflin 2017). Such an approach may not fully embrace how decoupled material hardship and income are. First, the assumption that policies aimed at supporting the material well-being of American households needs to be "targeted" is flawed. The U.S. social policy has emphasized a targeted, means tested safety net since the War on Poverty. This approach has resulted in a way of conceptualizing poverty, the OPM, and a welfare state that completely misses the vast majority of households that experience material hardship. Perhaps it is time for a less sophisticated approach.

Table 3.1 Duration of Hardship and Poverty

	No Poverty	Episodic Poverty	Chronic Poverty	Total
No Hardship	55.71	4.49	3.29	63.49
SE	(0.32)	(0.13)	(0.11)	(0.31)
Episodic Hardship	15.38	3.21	2.55	21.14
SE	(0.23)	(0.12)	(0.10)	(0.27)
Chronic Hardship	9.08	3.16	3.13	15.37
SE	(0.19)	(0.11)	(0.11)	(0.23)
Total %	80.17	10.87	8.96	100

Table 3.2 Duration of Hidden Hardship and Hardship, Row Totals

	No hidden hardship	Episodic hidden hardship	Chronic hidden hardship	Total
No Hardship	100	0	0	100
SE	0	0	0	
Episodic Hardship	20.17	79.83	0	100
SE	(0.58)	(0.58)	0	
Chronic Hardship	20.38	20.55	59.07	100
SE	(0.67)	(0.67)	(0.82)	
Total	73.15	18.47	8.37	100
SE	(0.28)	(0.24)	(0.17)	

Figure 3.1 Duration of Poverty with Hardship

Duration of Poverty with Hardship

Legend:
- No Poverty
- No Poverty, Hardship
- Episodic Poverty
- Episodic Poverty, Hardship
- Chronic Poverty
- Chronic Poverty, Hardship

Values: 63.6%, 16.57%, 6.01%, 4.86%, 4.5%, 4.46%
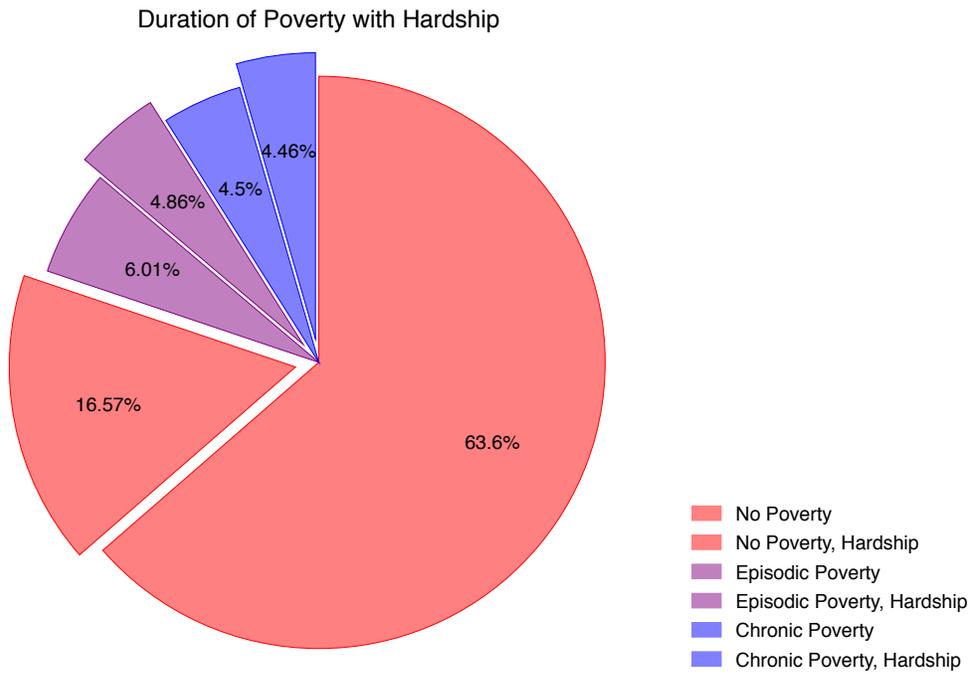
Figure 3.2 Duration of Hardship with Poverty

Duration of Hardship including Poverty

Legend:
- No Hardship
- No Hardship, poor
- Episodic Hardship
- Episodic Hardship, poor
- Chronic Hardship
- Chronic Hardship, poor

Values: 57.6%, 6.25%, 17.48%, 5.04%, 9.43%, 4.21%
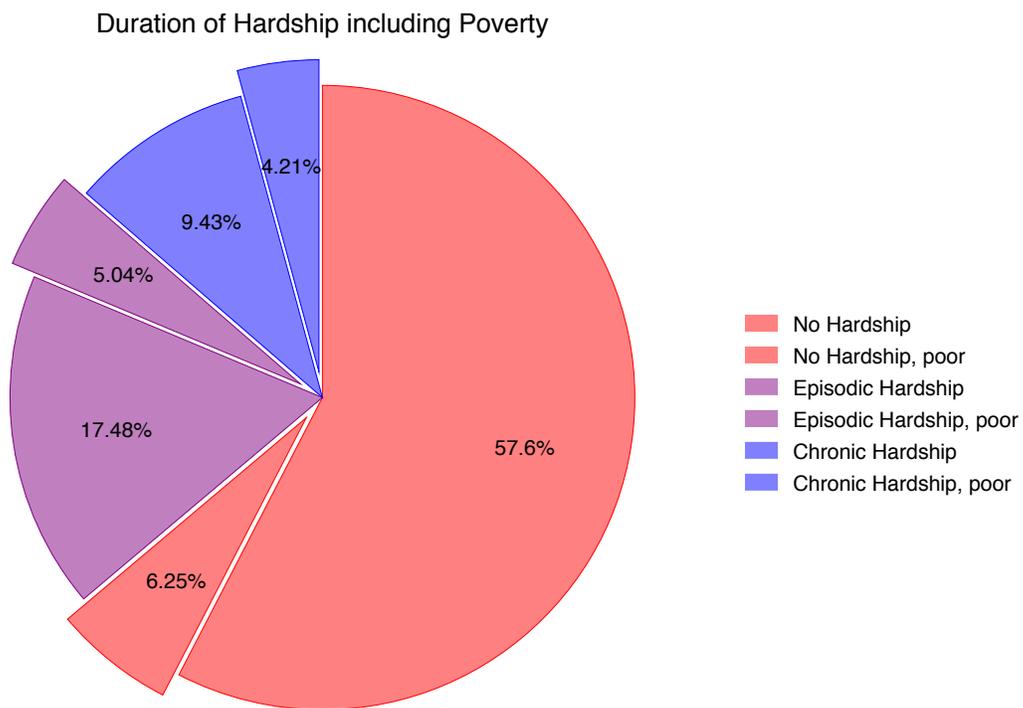
Table 3.3 Duration of Hardship and Poverty by Race, Column Totals

	Poverty			Hardship			
	None	*Episodic*	*Chronic*	*None*	*Episodic*	*Chronic*	*Total*
White	74.63	59.10	50.25	76.51	61.26	55.89	70.26
SE	(0.33)	(0.99)	(1.08)	(0.34)	(0.64)	(0.83)	(0.29)
Black	10.12	16.11	23.29	8.83	16.59	19.99	12.10
SE	(0.22)	(0.75)	(0.91)	(0.22)	(0.49)	(0.68)	(0.20)
Asian	3.21	3.35	3.31	3.64	2.88	2.07	3.25
SE	(0.12)	(0.34)	(0.37)	(0.14)	(0.20)	(0.22)	(0.10)
Other	2.26	3.21	3.27	2.00	3.08	4.15	2.54
SE	(0.10)	(0.32)	(0.35)	(0.10)	(0.20)	(0.31)	(0.09)
Hispanic	9.78	18.24	19.89	9.02	16.20	17.91	11.85
SE	(0.24)	(0.84)	(0.93)	(0.25)	(0.53)	(0.68)	(0.22)
Total	100	100	100	100	100	100	100

Table 3.4 Duration of Hardship and Poverty by Race, Row Totals

	Poverty				Hardship			
	None	*Episodic*	*Chronic*	*Sub-Total*	*None*	*Episodic*	*Chronic*	*Sub-Total*
White	84.56	9.08	6.37	100	69.52	19.63	10.85	100
SE	(0.27)	(0.21)	(0.18)		(0.32)	(0.28)	(0.22)	
Black	67.90	14.64	17.46	100	46.60	30.87	22.53	100
SE	(0.90)	(0.69)	(0.71)		(0.91)	(0.84)	(0.76)	
Asian	79.57	11.25	9.17	100	71.37	19.97	8.66	100
SE	(1.38)	(1.08)	(0.98)		(1.44)	(1.27)	(0.89)	
Other	73.83	14.23	11.95	100	50.37	27.34	22.29	100
SE	(1.67)	(1.32)	(1.23)		(1.79)	(1.57)	(1.48)	
Hispanic	67.57	17.07	15.35	100	48.61	30.78	20.61	100
SE	(1.00)	(0.81)	(0.76)		(1.00)	(0.93)	(0.80)	
Total	80.17	10.87	8.96	100	63.84	22.52	13.64	100

Table 3.5 Duration of Hardship and Poverty by Education, Column Totals

	Poverty			Hardship			
	None	*Episodic*	*Chronic*	*None*	*Episodic*	*Chronic*	Total
Less than HS	7.79	16.43	27.77	7.85	13.26	16.65	10.27
SE	(0.19)	(0.72)	(0.96)	(0.20)	(0.43)	(0.61)	(0.18)
High School	22.66	28.33	27.30	22.24	27.63	29.03	24.38
SE	(0.30)	(0.89)	(0.95)	(0.31)	(0.58)	(0.76)	(0.26)
Some college	34.85	35.16	32.85	32.70	37.74	40.19	34.86
SE	(0.34)	(0.95)	(1.03)	(0.36)	(0.63)	(0.81)	(0.29)
BA	21.48	13.28	8.70	22.84	14.47	10.55	19.28
SE	(0.30)	(0.67)	(0.67)	(0.32)	(0.47)	(0.51)	(0.24)
BA+	13.22	6.81	3.39	14.37	6.90	3.56	11.21
SE	(0.24)	(0.51)	(0.39)	(0.27)	(0.33)	(0.31)	(0.19)
Total	100	100	100	100	100	100	100

Table 3.6 Duration of Hardship and Poverty by Education, Row Totals

	Poverty				Hardship			
	None	*Episodic*	*Chronic*	Total	*None*	*Episodic*	*Chronic*	Total
Less than HS	59.38	16.97	23.65	100	48.82	29.07	22.12	100
SE	(0.96)	(0.74)	(0.83)		(0.92)	(0.85)	(0.78)	
HS	76.68	12.99	10.32	100	58.23	25.52	16.24	100
SE	(0.56)	(0.45)	(0.39)		(0.60)	(0.54)	(0.46)	
Some college	80.51	11.01	8.48	100	59.89	24.38	15.73	100
SE	(0.44)	(0.35)	(0.31)		(0.51)	(0.45)	(0.38)	
BA	88.57	7.42	4.01	100	75.63	16.90	7.46	100
SE	(0.48)	(0.38)	(0.32)		(0.61)	(0.54)	(0.36)	
BA+	91.04	6.36	2.61	100	81.80	13.86	4.34	100
SE	(0.56)	(0.48)	(0.30)		(0.70)	(0.63)	(0.37)	
Total	80.17	10.87	8.96	100	63.84	22.52	13.64	100

Table 3.7 Duration of Hardship and Poverty by Household Type, Column Totals

	Poverty			Hardship			
	None	*Episodic*	*Chronic*	*None*	*Episodic*	*Chronic*	Total
Senior	25.32	12.58	16.29	27.09	15.32	9.25	22.00
SE	(0.30)	(0.60)	(0.74)	(0.32)	(0.43)	(0.43)	(0.24)
Prime kids	26.98	38.40	41.58	26.03	35.37	38.27	29.81
SE	(0.32)	(0.97)	(1.09)	(0.34)	(0.63)	(0.81)	(0.28)
Prime no kids	47.70	49.03	42.13	46.88	49.31	52.48	48.19
SE	(0.36)	(0.99)	(1.07)	(0.38)	(0.65)	(0.83)	(0.30)
Total %	100	100	100	100	100	100	100

Table 3.8 Duration of Hardship and Poverty by Household Type, Row Totals

	Poverty				Hardship			
	None	*Episodic*	*Chronic*	Total	*None*	*Episodic*	*Chronic*	Total
Senior	87.78	5.91	6.31	100	78.59	15.68	5.73	100
SE	(0.40)	(0.29)	(0.30)		(0.48)	(0.43)	(0.27)	
Prime kids	73.25	14.13	12.62	100	55.76	26.72	17.51	100
SE	(0.55)	(0.43)	(0.42)		(0.57)	(0.51)	(0.44)	
Prime no kids	80.77	11.25	7.98	100	62.10	23.04	14.85	100
SE	(0.37)	(0.30)	(0.25)		(0.43)	(0.38)	(0.31)	
Total	80.17	10.87	8.96	100	63.84	22.52	13.64	100
SE	(0.26)	(0.20)	(0.19)		(0.29)	(0.26)	(0.21)	

Table 3.9 Mean Household Resource Measures by Hardship and Poverty Duration

	Poverty			Hardship			
	None	*Episodic*	*Chronic*	*None*	*Episodic*	*Chronic*	Total
Income	$79,550	$27,907	$9,449	$77,505	$51,930	$39,345	$66,552
SE	(499.88)	(695.49)	(162.71)	(571.41)	(652.18)	(695.47)	(415.01)
Wealth	$248,651	$104,452	$59,148	$274,292	$114,866	$55,243	$208,672
SE	(2608.33)	(4599.59)	(3337.76)	(2917.24)	(2859.34)	(2578.59)	(2071.89)
Unsecured Debt	$8,577	$7,743	$4,397	$7,374	$9,203	$10,079	$8,147
SE	(169.00)	(465.75)	(340.29)	(166.37)	(330.86)	(381.01)	(139.64)
CV of Income	0.16	0.55	0.49	0.21	0.32	0.34	0.25
SE	0.00	(0.01)	(0.01)	0.00	0.00	(0.01)	0.00
Decommod-ification	0.33	0.44	0.64	0.36	0.33	0.38	0.36
SE	0.00	(0.01)	(0.01)	0.00	(0.01)	(0.01)	0.00
Decommodification under 65 only	.1501012	.3748897	.5670071	.1680973	.2383626	.325857	.2096571
SE	.002407	.0098861	.012512	.0028836	.0053963	.0074305	.0024926

Table 3.10 Type of Hardship and Duration of Hardship

	Episodic Hardship	Chronic Hardship	All
Difficulty meeting expenses %	32.9	66.21	16.1
Missed rent/mortgage %	15.41	34.41	7.98
Evicted %	0.84	2.05	0.46
Missed utility payment %	19.02	47.23	10.48
Utilities cut %	2.74	8.64	1.75
Phone cut off %	6.63	16.8	3.7
Unable to afford doctor %	15.22	34.26	7.92
Unable to afford dentist %	19.14	41.42	9.75
Food insecure %	22.94	46	11.2
Mean hardship count	1.35	2.97	0.69

Table 3.11 Types of Hardship by Duration, Row Totals

	Episodic Hardship	Chronic Hardship	Total
Difficulty meeting expenses %	46.24	53.76	100
Missed rent/mortgage %	43.66	56.34	100
Evicted %	41.4	58.6	100
Missed utility payment %	41.07	58.93	100
Utilities cut %	35.43	64.57	100
Phone cut off %	40.58	59.42	100
Unable to afford doctor %	43.47	56.53	100
Unable to afford dentist %	44.44	55.56	100
Food insecure %	46.33	53.67	100

Figure 3.3 Predicted Probability of Duration of Hardship and Poverty by Race
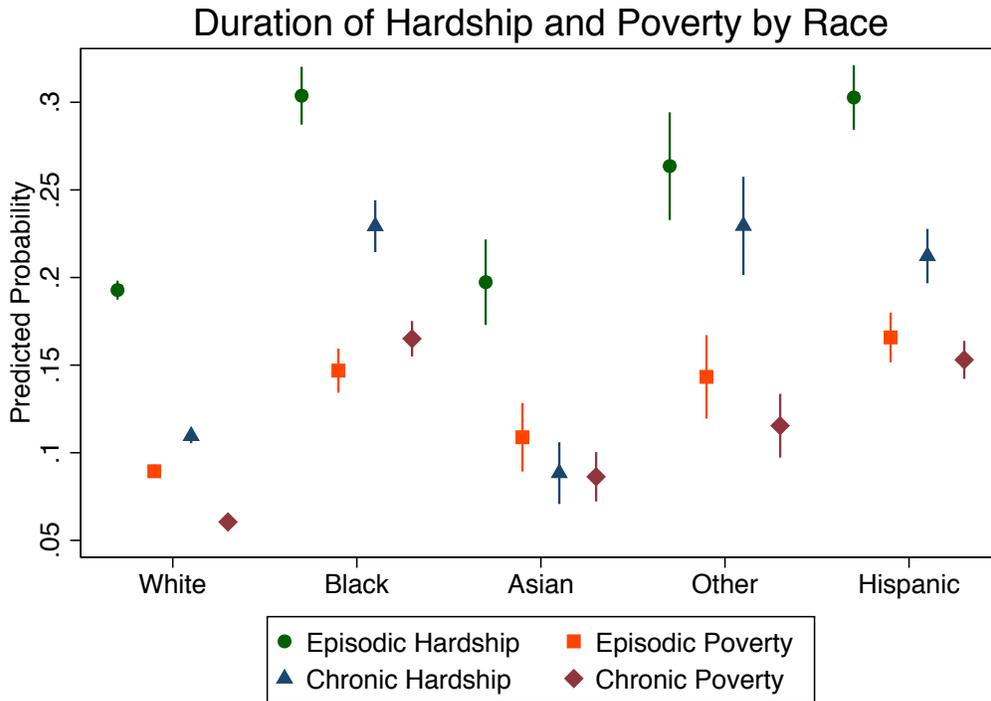
Figure 3.4 Predicted Probability of Duration of Hardship and Poverty by Education
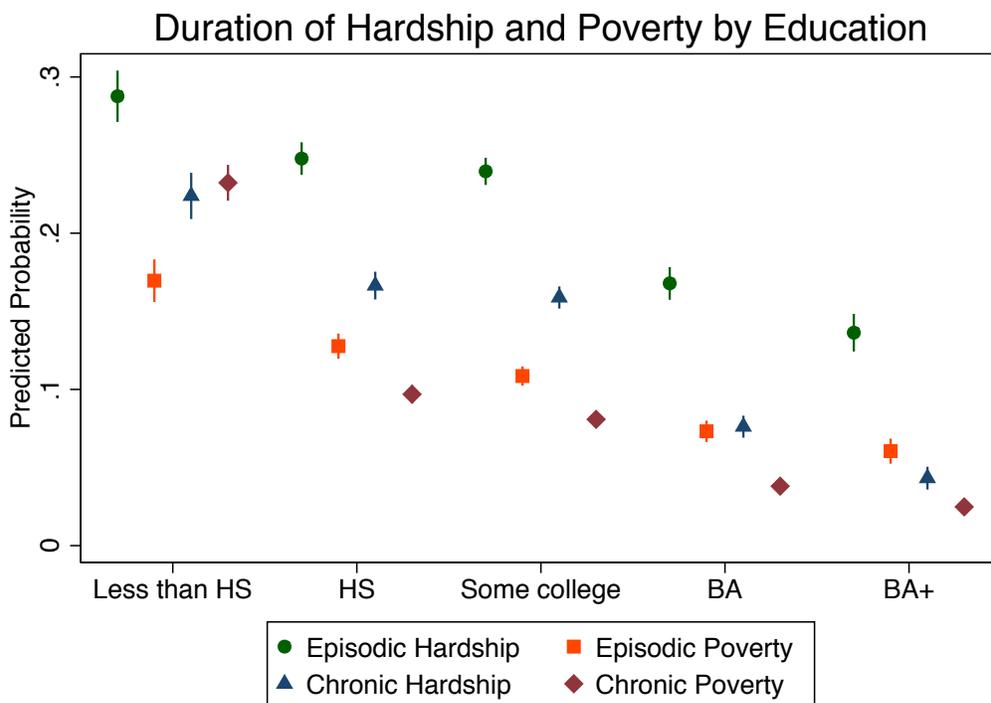
Figure 3.5 Predicted Probability of the Duration of Hardship and Poverty by Education and Race

Duration of Hardship and Poverty by Education and Race
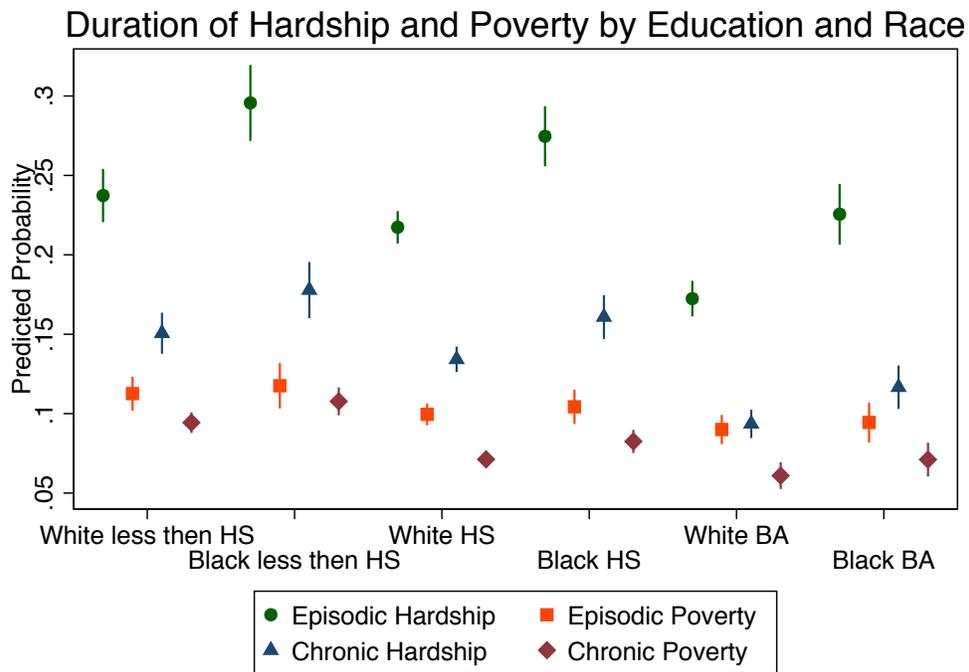
Figure 3.6 Predicted Probability of Duration of Hardship and Poverty by Income

Duration of Hardship and Poverty by Income
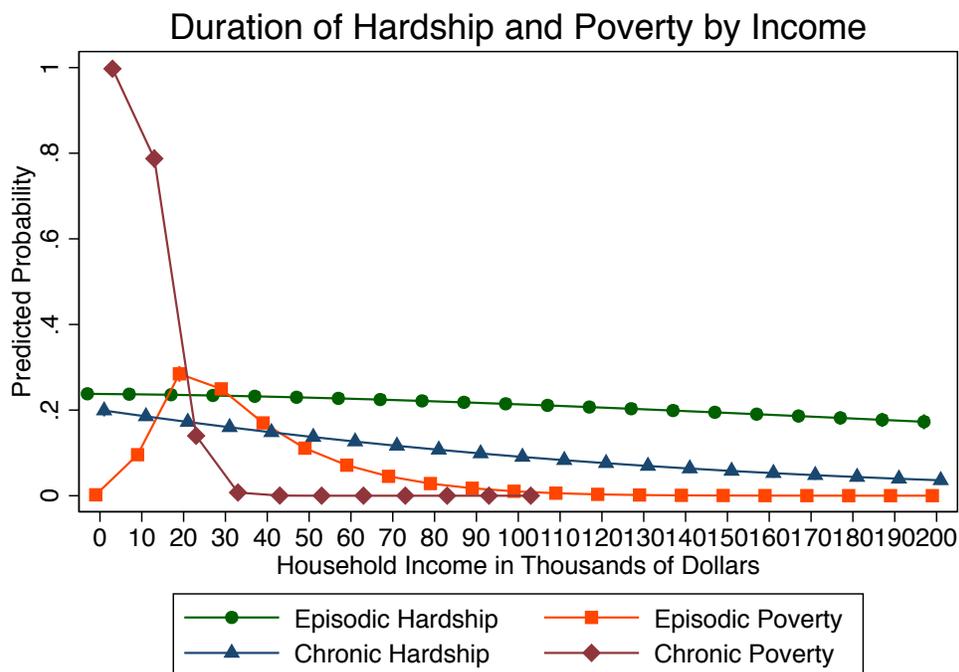
Figure 3.7 Predicted Probability of the Duration of Hardship by Race and Income
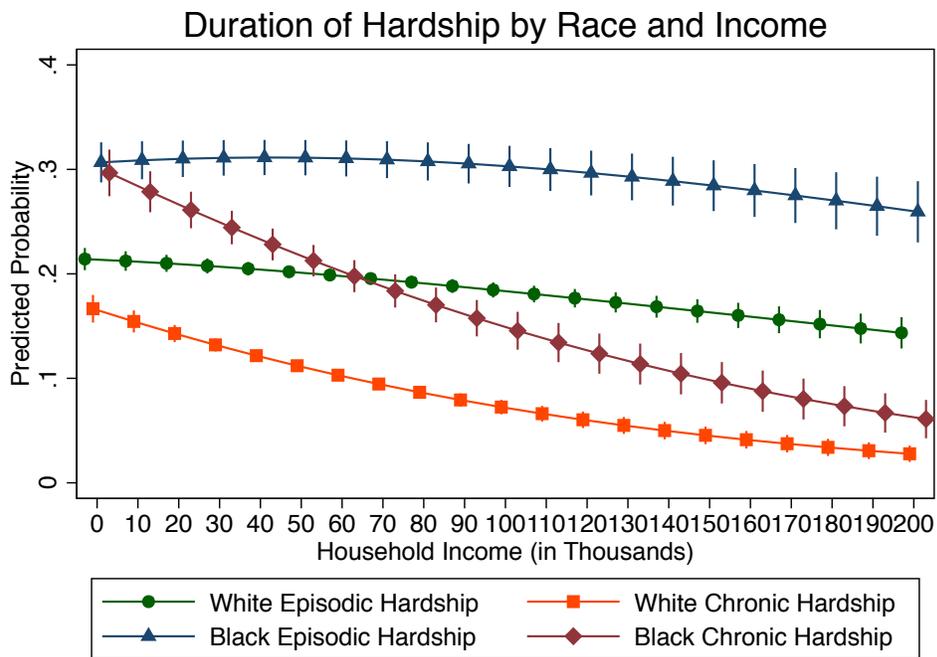
Figure 3.8 Predicted Probability of the Duration of Poverty by Race and Income
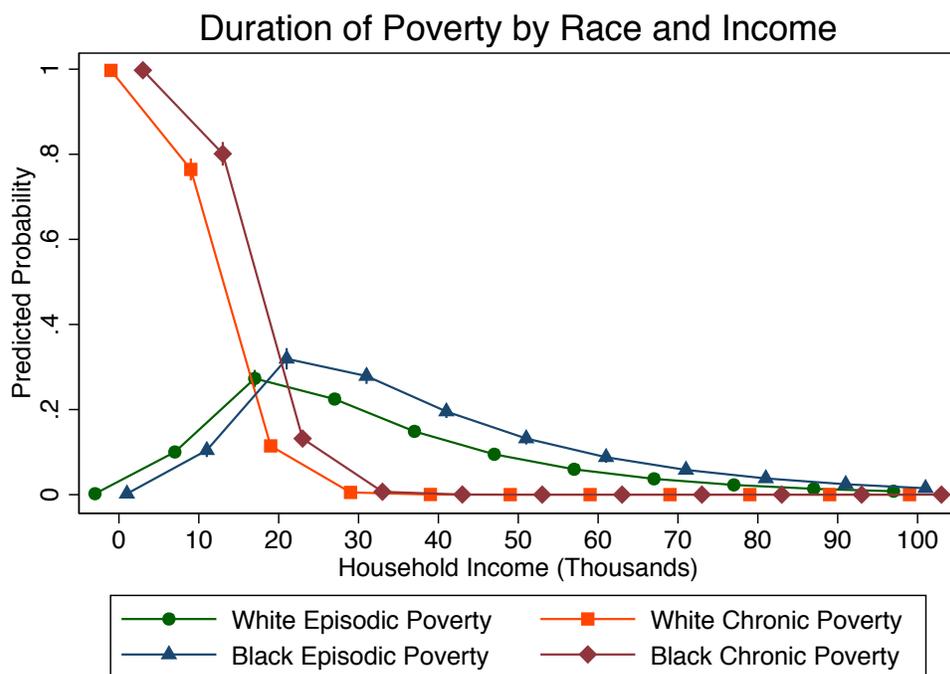
Figure 3.9 Predicted Probability of the Duration of Hardship and Poverty by Wealth
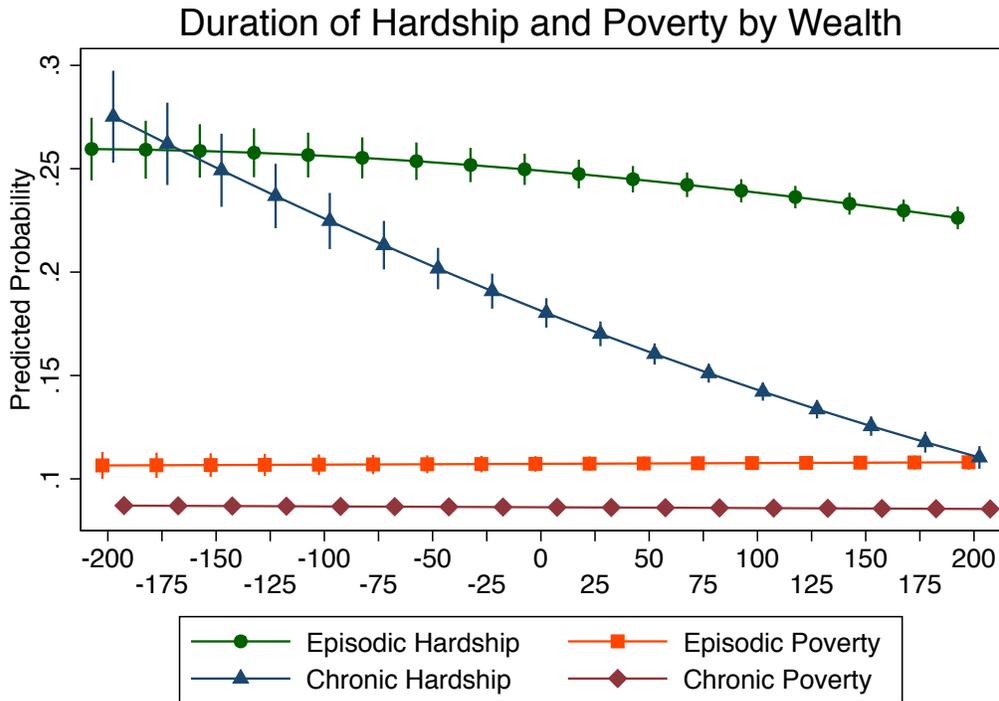
Figure 3.10 Predicted Probability of the Duration of Hardship by Wealth and Race
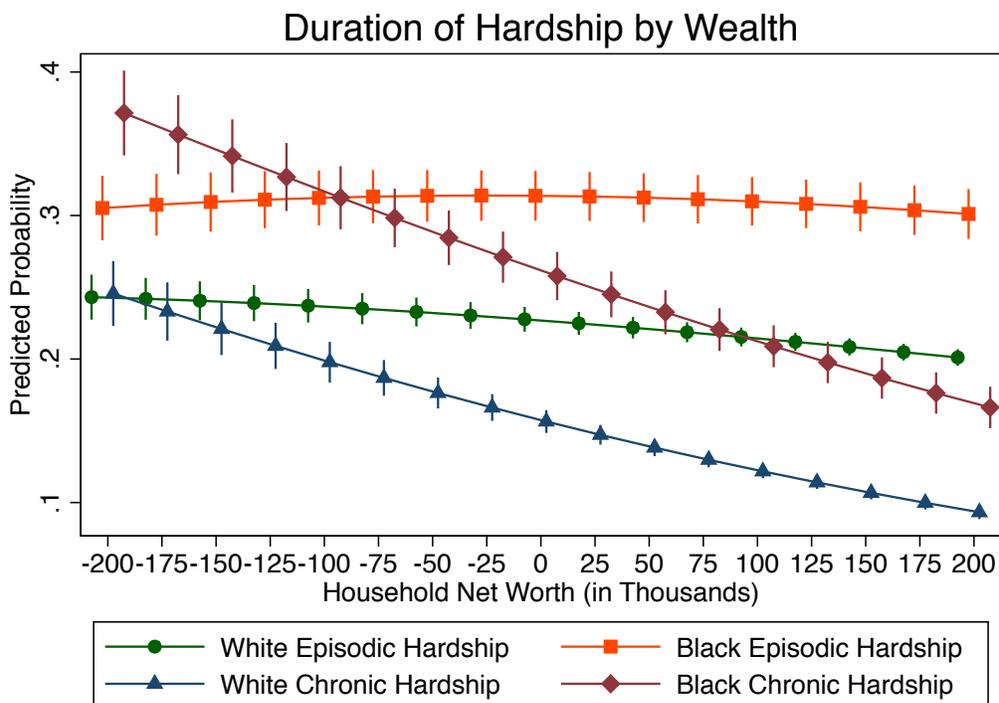
Chapter 4 Bad Luck and Good Luck: Entering and Exiting a Spell of Material Hardship

Introduction

Researchers who examine spells of poverty have sought to identify specific events, such as unemployment or divorce, that may lead to a household entering a spell of poverty (McKernan and Ratcliffe 2005; Seefeldt 2017). After ample descriptive evidence on the distribution (chapter 2) and dynamics (chapter 3) of material hardship, I turn to the question of *why* material hardship occurs and *how* families leave it behind. That is, what sort of events lead to entry into, or exit from, a spell of material hardship?

Previous Literature

A recent paper by Colleen Heflin (Heflin 2016) assesses entry into, but not exits from, spells of hardship. Heflin's approach is aimed at examining different types of hardship (medical hardship, food insecurity, housing hardship, and essential expense hardship) and their relationship to various external shocks (employment shock, income shocks, disability shocks, and household composition changes). While the types of shocks examined in this paper are informed by Heflin's approach, the concern with the shock is ultimately different. This paper builds on the work of Heflin to examine stratification in response to shocks. Finally, there are some minor methodological differences. Whereas Heflin uses a linear probability model with lagged dependent variables, I use multinomial logistic regressions.

Data

This chapter uses the 2008 panel of the Survey of Income and Program Participation, specifically waves 6-9. The 2008 panel of the SIPP is the only panel of any nationally representative longitudinal survey to repeatedly measure material hardship and thus affords a unique opportunity to measure and understand spells of material hardship. Wave 6 was fielded in 2010, and wave 9 followed up with respondents a year later in 2011. While responses were collected throughout 2010 and 2011, the SIPP rotation groups are staggered such that 12 months pass between wave 6 and wave 9 for each household. For further information on trends in material hardship, see Appendix B.

As in chapters 2 and 3, material hardship is defined as experiencing any 1 or more of the following:

1) Difficulty meeting essential expenses
2) Missed rent or mortgage payment
3) Eviction
4) Missed utility payment
5) Utility shutoffs
6) Telephone disconnection due to nonpayment
7) Inability to see a doctor
8) Inability to see a dentist
9) Food insecurity

Unless otherwise noted, poverty means income poverty as defined by the Official Poverty Measure.

While the sample is restricted to household heads, a number of measures of household events draw upon information from other members of the household. Events considered for entry into a spell of hardship include 1) anyone in the household becoming unemployed in waves 6

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through 9; 2) anyone in the household experiencing a disability in waves 6 through 9; 3) additional children under 18 added to the household in waves 6 through 9; 4) an income spike, defined as income reported at a wave that is 25% above or below the mean household income for the period wave 6 through wave 9 (this is consistent with the definition of income instability used in Morduch and Schneider (2017)); 5) divorce at any point in waves 6 through 9; 6) any moves or relocations in waves 6 through 9.

The events measured for both entry into and exit from a spell of hardship are often used in poverty research. For example, McKernan and Ratcliffe (2005) examine birth of child, changes in marital status, changes in employment status, changes in disability or health status, changes in educational attainment, and changes in economic conditions in relation to entry and exit from a spell of income poverty. Heflin (2016) considers employment shocks, household formation shocks, residential changes, income changes, household size changes, and disability shocks in relation to spells of material hardship in the SIPP, and maternal health, household composition, and income changes in other surveys (Heflin and Butler 2013). For a full review of the study of shocks and events as they relate to entry and exit from a spell of income poverty, see Reigg Cellini, McKernan, and Ratcliffe (2008). For events that may predict exit from a spell of hardship or poverty I examine 1) job gains for anyone in the household; 2) assistance from family, friends, social services, and non-profits; 3) an increase in income; 4) an increase in debt; 5) an increase in transfers; 6) getting married.

Descriptive statistics are used to provide initial understanding of the dynamics of spells of hardship and poverty. When assessing the events in question, I use logistic regressions with the following control variables

1) Demographic variables

a. Race and ethnicity: five categories including white (non-Hispanic), black (non-Hispanic), Asian-American (non-Hispanic), other (non-Hispanic), and Hispanic (of any race).

b. Education: a categorical variable for the household head reporting less than high school, high school, some college, a bachelor's degree, or more than a bachelor's degree.

c. Gender: a categorical measure of the household head's reported gender, either male or female.

d. Age: a continuous measure of the age of the household head

e. Number of children in the household: a continuous measure of the number of children under the age of 18 in the household

f. Marital status: a categorical measure of marital status including married with spouse present, married with spouse absent, separated, divorced, widowed, and never married.

2) Income

a. Total household income from all sources

b. Welfare transfers: the total of both cash transfers and near-cash transfers from all government programs such as SNAP, UI, WIC, Section 8, SSI, SSDI, Social Security, TANF, etc.

c. A measure of income instability (see chapter 1 for a full description of income instability

3) Wealth

a. Total household net worth

b. Total household unsecured debt

4) Events

a. Additional children in the household

b. Income spikes

c. Change in disability status

d. Divorce

e. Unemployment

f. Relocation

g. Marriage

h. Assistance from friends and family

i. Assistance from non-profits or social services

j. Start of employment

Results

Descriptive Results

Even during the aftermath of the Great Recession (2010-2011), 64% of households avoid material hardship. Approximately 13% entered a spell of hardship, 9% exited a spell of hardship, and 13% remained in hardship at both time points (see Table 4.1). By entering hardship I mean a

household did not experience any hardship in 2010 but did in 2011. By exiting hardship I mean a household that experienced any hardship in 2010 but not in 2011. Always hardship here means households that experience hardship in both 2010 and 2011.

As established in Chapter 2 poverty and material hardship are distinct phenomena and concepts with some, but far from complete, overlap in the population. Chapter 3 examines the dynamics of hardship and income poverty. While 63% of households avoided hardship at both time points, when income poverty is also measured, only slightly more than half of households—56%—remained economically secure over the span of one year. This is important information because most nationally representative surveys do not measure material hardship, are not longitudinal, or involve measurements across time at intervals greater than one year. At the other extreme, only 3% of households remain in both poverty and some type of material hardship at both points in time.

Between these two extremes of constant economic security and constant and concurrent poverty and material hardship lies the 41% of households that move between some form of hardship and/or poverty in a given year. This chapter explores the events and shocks that can drive a household into, or out of, a spell of material hardship.

Figures about material hardship at the aggregate level obscure important trends, particularly trends by race. Table 4.3 shows that racial/ethnic groups form two clusters: White (non-Hispanic) and Asian doing relatively well, and Black, Hispanic (any race) and Other facing higher rates of material hardship. Approximately 70% of White and Asian households avoid material hardship entirely while about half or less of all other households avoid material hardship.

Hidden hardship trends by race resemble overall hardship trends (Table 4.4). Nationally, 73% of households avoid material hardship in 2010 and 2011 while 8% of households experience hidden hardship over both years. Hidden hardship rates are highest for Black, Hispanic, and Other, around 36%, compared to less than 25% for Whites and Asians. Despite lower rates of hardship, poverty, and hidden hardship, Whites make up a majority of households in any combination of hardship or poverty at any time point.

Events Predicting Spells of Poverty and Hardship

What life events are associated with entry into, or exit from, a spell of material hardship? The previous literature on spells of poverty indicates that changes in household composition such as divorce or additional children, or external shocks to the household unit such as unemployment or moving, are associated with entering into or exiting from spells of poverty. This section expands this approach to the question of material hardship.

Table 4.5 examines six household events in relation to changes in hardship status: additional children under 18 added to the household, income spikes of 25% above or below mean income, additional disability status for any member of the household, divorce for any member of the household, unemployment for any member of the household, and the number of household moves during the period under consideration. To be clear, all of these are changes in the household at some point in 2010 and 2011. For example, a household that added a child in wave 2 is not considered to have added a child (since this would have occurred years ago and is thus not a new event taking place between the repeated measures of material hardship) whereas a household that adds a child under 18 in wave 7 would be counted as adding a child.

Across all six events, households that manage to avoid these events, shocks, or changes to the household structure avoid hardship at both time points at similar rates to the population as a whole, around 63%. Across all six events, households that experience these shocks are more likely to experience hardship at one or both time points. Households that add children are 31% more likely to enter hardship than those that do not add children. Households with income spikes are 46% more likely to enter hardship than those with stable incomes. The onset of a disability makes a household 39% more likely to enter hardship. Households with divorce are 106% more likely to enter hardship than households that remain married. Unemployment—of anyone in the household, not just the household head—makes a household 87% more likely to enter hardship than all others (employed and not in labor force are combined here). Households that relocate are 63 percent more likely to enter hardship. Clearly, these events are associated with increased chances of entering a spell of material hardship.

The next column in Table 4.5 shows the percentage of households that exit a spell of hardship, that is to say households that experienced some hardship in 2010 but not in 2011. These rates are also higher for households that experience these 6 events. In other words, these households that are *going* to experience a major disruptive event in the future already experience higher rates of hardship in the past. Something about these households already sets them apart from the households that do not experience these disruptive shocks.

Table 4.6 reports cross tabulations of events related to exiting a spell of hardship. There does not appear to be much difference in exiting hardship for household heads who remain unmarried and those who become married between waves 6 and 9. Households in which someone gains a job are slightly more likely to exit material hardship than those that do not gain

a job. Finally, households that receive some sort of assistance from either family or friends, or

from social services or non-profits, are much more likely to exit material hardship.

Regression Results

I use logistic regressions to learn about the independent associations between events and

spells of hardship. Two dependent variables are used: one which categorizes households as never

experiencing hardship or entering into a spell of material hardship and a second which

categorizes households as experiencing constant material hardship or exiting a spell of material

hardship. Each dichotomous outcome variable is modeled in five ways:

1. A baseline model with the event in question (e.g. divorce, unemployment) as the only independent variable
2. Model 1 expands on the baseline model to include race.
3. Model 2 includes a full set of demographic variables: race, education, gender, age, age squared, number of children under 18 in the household, marital status.
4. Model 3 expands upon Model 2 to include household income, welfare state transfers, and income instability
5. Model 4 expands upon Model 3 to include net worth and unsecured debt

The first set of charts display the predicted probability of entering a spell of hardship. The

reference category is set to households that never experience hardship. The second set of charts

displays the predicted probability of exiting a spell of hardship. Accordingly, the reference

category is set to households that are in material hardship at both timepoints.

Entering a Spell of Hardship

Divorce

Households that experience divorce have a predicted probability of entering into a spell

of material hardship of .26 in comparison to the stably married who have a predicted probability

of .12. Figure 4.1 reports that white married households have similar predicted probabilities, but

white households that experience divorce have a predicted probability of entry into hardship of only .13 in Model 4 which is equivalent to that for black, stably married households (the point estimate is slightly higher for black households, but the standards errors overlap making the difference non-significant). The predicted probability of black households entering material hardship after experiencing divorce is higher, about .20 in Model 4. Note that for examining divorce, the usual control variable for marital status is omitted.

Disability

Households in which a household member becomes disabled have a predicted probability of entering a spell of material hardship of .29 compared to .15 for households in which there are no new reported disabilities (there may be household members with disabilities that pre-date the period of the study) (Figure 4.2). White households without new disabilities have the lowest predicted probabilities of experiencing material hardship, around .14, while White households that experience a new disability have a predicted probability of .18 for entering material hardship. This is the same predicted probability a Black household without any new disabilities has of entering a spell of material hardship. Black households with a disability have higher predicted probabilities, approximately .24. As with divorce, White households experiencing the unpredictable shock of a newfound disability have the same predicted probability of entering material hardship as a Black household that avoids such a shock.

Unemployment

Similar to divorce and disability, households in which any member becomes unemployed experience higher predicted probabilities of material hardship compared to households in which no member becomes unemployed (Figure 4.3). Note that this binary variable of unemployment is deliberately constructed to produce conservative estimates of the impact of unemployment. The

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"no unemployment" category includes workers, individuals not in the labor force such as the

aged or disabled, so-called "discouraged workers" who are no longer looking for work, and

unemployed workers who became unemployed prior to the period of the study. A worker in a

household is categorized as unemployed only if they became newly unemployed at some point in

waves 6-9. This construction of the unemployment variable enables us to capture the immediate

shock of unemployment on the household. Households in which there is no new unemployment

have a predicted probability of entering hardship of .15 compared to households in which there is

a newly unemployed worker that has a predicted probability of .36. Again, white households

have the lowest predicted probability, about .14 regardless of model, and black households with

a new unemployed worker have predicted probabilities of .26. White households with a newly

unemployed worker strongly resemble black households without a newly unemployed worker.

Even after including income and wealth measures, the predicted probabilities are around .19 for

both segments of the population.

Additional children

It is conceivable that the additional cost of raising children and possible disruptions to

work schedules and opportunities could be associated with increased predicted probabilities of

entering material hardship (Figure 4.4). Indeed, these data show this to be the case. Households

without any additional children have a predicted probability of entering material hardship of .16

compared to households that add a child of any age under 18 which have a predicted probability

of .23. Note that households without additional children may have children of their own already

(the average number of children in a household in this group is just under .5) but they did not add

any additional children to the household between waves 6 and 9. Unlike divorce and

unemployment, white households that experience the shock of an additional child in the household have lower predicted probabilities of entering material hardship (.15) than black households that do not add an additional child (.19).

Moving

Moving a household, whether due to eviction or pursuing a job opportunity, is a costly and time-consuming event. Households without any reported moves have a predicted probability of entering material hardship of .16 whereas households that do have any move (of any distance, or even multiple moves) have a predicted probability of entering hardship of .27 (Figure 4.5). The pattern by race is, by now, familiar: white households without a move have the lowest predicted probability of entering hardship (.14), black households with a move have the highest (.23), and there is virtually no difference in the predicted probabilities for white households with a move compared to black households without a move (.17 and .19).

Income Spikes

The final event measured in relation to entering a spell of material hardship is income spikes. Following the work of Morduch and Schneider (2017), I define an income spike as any month in which reported income is 25% below the mean household income for waves 6-9. In order to account for the problem of seam bias in the SIPP, only the reference month is kept which means that these reports of monthly income occur every 4 months. Given the volatility of income found in Morduch's *Financial Diaries* project, this approach likely results in an underestimate of downward income spikes experienced in the sample during this time frame.

Households that report stable incomes have a predicted probability of entering into a spell of hardship of .12 whereas households with a downward income spike have a predicted probability of .24 (Figure 4.6). By race, white households with stable incomes have low

predicted probabilities of entering hardship (.14) whereas black households with income spikes have predicted probabilities between of .22. White households with income spikes resemble black households with stable incomes.

Exiting a Spell of Hardship

While some events may augur entry into a spell of material hardship, it is also important to consider the ways in which households might exit a spell of material hardship. This section explores marriage, job gains, help from family or friends, and help from social services and non-profits, and positive income shocks as possible predictors of exiting a spell of material hardship. As above, this section reports predicted probabilities based on logistic regressions. In contrast to the above, the outcome of interest is households that move out of material hardship between wave 6 and wave 9.

Job Gain

Perhaps the most obvious way to increase the immediate resources available to a household is to get a job. In comparing households in which some member becomes employed who was previously unemployed to households in which no such similar job gain occurs (this category then includes households that are stably employed, unemployed, lose a job, or are not in the labor force), a somewhat counterintuitive predicted probability is returned. Households where a member gains a job have a .36 predicted probability of exiting material hardship compared to ..42 for those households where no one gains a job (Figure 4.7). This could be due to a number of factors. First, by including households that are both in material hardship at wave 6 and stably employed in the baseline group, the probability of exiting material hardship becomes somewhat inflated. Second, it is possible that the initial period of starting a new job comes with more expenses—such as the cost of uniforms, child care, transportation, increased

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food consumption—than are offset by the increase in income. There are no statistically significant differences by race for job gains.

Marriage

Marriage is often presented as a social institution that results in resource sharing and thus contributes to lower rates of poverty. When comparing household heads who marry and household heads that do not marry (they may be stably unmarried or married, but not newly married), the predicted probability of exiting material hardship is .37 for the unmarried and .47 for those who marry. (Figure 4.8). There is no statistically significant difference by race or event in model 4, which suggests that this observed difference in exiting hardship by marriage is largely an artifact of increased household income, and potentially decreased living expenses.

Help from family and friends

After almost all hardship questions, there is a series of follow up questions about whether or not the household received assistance from family, friends, social services, non-profits, or other sources. The only form of hardship that this is not asked about is food insecurity. Figure 4.9 combines assistance from family and friends into one category and compares it to households that did not report any assistance from family, friends, social services, or non-profits. The predicted probability of exiting hardship for households with no assistance is .42 in contrast to households that receive assistance from family or friends at .27 (Figure 4.9). Broken down by race, the results are similar, with no significant differences by race. Why are households that receive help less likely to exit material hardship? I suspect that households that eventually ask for and receive informal assistance from family and friends are households that are doing worse off than those who do not request or receive such assistance. Households that receive assistance have a mean hardship count of 2.6 compared to 1.6 for households that do not receive assistance.

By the time a household actually gets help, they are so deep in hardship that the assistance is quite literally too little, too late.

Help from social services and non-profits

In addition to families and friends, follow up questions after hardship ask about assistance from institutional sources such as social services and non-profits, which have been combined into one category. Households without any assistance have a .42 predicted probability of exiting material hardship compared to the .23 predicted probability for those that receive assistance from social services and non-profits (Figure 4.10). White and black households have similar patterns and there are no statistically significant differences between racial groups. Much like informal assistance from family and friends, households that receive assistance have higher mean hardship counts (2.6) than those that do not receive assistance (1.7). The more formal safety net also seems to deliver assistance only when a household is in a deep spell of hardship, and then in insufficient quantity or duration to lift the household out of hardship.

Upward Income Spikes

Households that experience an upward income spike, that is to say a month in which household income is 25% above the mean for the 2010-2011 period, do not report any statistically significant increase in the probability of exiting material hardship, nor is there any discernable difference by race. This suggests that one time infusions of cash are less likely to provide financial and material stability to a household than long term, dependable income.

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Poverty research has, since at least the 1980s, understood that income poverty is not a static state, that households move in and out of spells of poverty. Chronic poverty is the exception, rather than the rule. Prior to the 2008 panel of the SIPP, no nationally representative survey asked the Mayer-style material hardship measures repeatedly. At best, all researchers could do is provide cross sectional estimates. This chapter reports findings about who experiences spells of hardship, and what events precede entry into and exit from a spell of hardship.

The data in the 2008 panel of the SIPP reveals that spells of material hardship are common, indeed more common than spells of income poverty. More than a third of households experienced material hardship at one or both time points. When income poverty is also included, only 55% of households manage to be economically secure at both time points, but only 3.13% are in both poverty and material hardship at both points in time. While this 3.13 percent represents a small percentage of the population, its still means that several million people, including children, experienced chronic material hardship and poverty.

Overshadowing this segment of the population in chronic hardship and poverty is the over 35% of households that move into or out of hardship between 2010 and 2011, compared to the 20% that move in and out of income poverty.

The theoretical model offered by Mayer (1993) suggests that material hardship occurs when the demands on a household's resources exceed the available supply of resources. Hefflin (2016), building on research regarding spells of poverty (Iceland and Bauman 2007; McKernan and Ratcliffe 2005), suggests that shocks to the household unit may be associated with entering a

spell of material hardship. Such shocks then cause a household's resources to fall, increase the demand on resources, or both.

The next steps for this line of research fall into two tracks. First, further research is needed to refine our understanding of the mechanisms that lead to household entry into, and exit form, a spell of material hardship. Specifically, we need qualitative work that can provide further context for racial disparities in how these mechanisms function. Second, a line of research on the interaction between types of material hardship may be beneficial. It is entirely possible that there are patterns various hardships within a spell of hardship that, if properly understood, may enable effective and efficient interventions.

The information in this chapter is largely concurrent with Hefflin's findings. However, I also show that in terms of the risk of entering into a spell of material hardship, or exiting a spell of material hardship, there are large and durable racial gaps that cannot be explained away by income or wealth. In general, when it comes to entering a spell of material hardship, black households that avoid a given shock strongly resemble white households that experience a shock.

The sociological implication of these findings is that the material well-being of households by racial and ethnic groups in the United States is not reducible to income or wealth. While high levels of racial stratification by income and wealth are well known, it is clear here that these proxies for material well-being still underestimate the extent to which different racial groups live in different material worlds in the United States.

The implications of these findings for social work and public policy are multifaceted. On one hand, the purpose of the welfare state is to buffer people from external shocks and the vagaries of life in a market society. This chapter shows how wildly different the impact of these events, these shocks, can be on households. To design a policy that buffers households from such

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shocks without taking into account the underlying probability of such shocks, or the baseline

material well-being of households prior to such shocks, runs the risk of creating a social safety

net the reinforces preexisting racial hierarchies in material well-being. Indeed, this has been a

feature of the US social safety net since its beginning (Rodems and Shaefer 2016).

Chapter 4 Tables and Figures

Table 4.1 Spells of Hardship

Category	*Percent of Households*
No hardship	63.84
SE	(0.29)
Entered hardship	13.10
SE	(0.21)
Exited hardship	9.42
SE	(0.18)
Always hardship	13.64
SE	(0.21)
Total	100.00

Table 4.2 Spells of Poverty and Hardship

	No hardship	**Entered hardship**	**Exited hardship**	**Always hardship**	**Total**
No poverty %	55.71	7.50	7.88	9.08	80.17
SE	(0.32)	(0.17)	(0.17)	(0.19)	(0.26)
Entered poverty %	2.30	0.93	0.72	1.61	5.56
SE	(0.10)	(0.07)	(0.06)	(0.08)	(0.15)
Exited poverty %	2.19	0.77	0.79	1.54	5.30
SE	(0.09)	(0.06)	(0.06)	(0.08)	(0.15)
Always poor %	3.29	1.33	1.22	3.13	8.96
SE	(0.11)	(0.08)	(0.07)	(0.11)	(0.19)
Total %	63.49	10.52	10.62	15.37	100.00
No poverty %	(0.31)	(0.20)	(0.20)	(0.23)	

Table 4.3 Hardship Spell by Race, Column Totals

	White	Black	Asian	Other	Hispanic	Total
No hardship %	69.52	46.60	71.37	50.37	48.61	63.84
SE	(0.32)	(0.91)	(1.44)	(1.79)	(1.00)	(0.29)
Entered hardship %	11.21	18.75	12.09	17.10	17.96	13.10
SE	(0.22)	(0.72)	(1.05)	(1.32)	(0.76)	(0.21)
Exited hardship %	8.43	12.12	7.88	10.23	12.82	9.42
SE	(0.20)	(0.57)	(0.84)	(1.06)	(0.69)	(0.18)
Always hardship %	10.85	22.53	8.66	22.29	20.61	13.64
SE	(0.22)	(0.76)	(0.89)	(1.48)	(0.80)	(0.21)
Total %	100.00	100.00	100.00	100.00	100.00	100.00

Table 4.4 Hidden Hardship Spells by Race, Column Totals

	White	Black	Asian	Other	Hispanic	Total
No hidden hardship	76.29	63.50	78.94	63.98	64.26	73.15
SE	(0.30)	(0.90)	(1.31)	(1.77)	(0.99)	(0.28)
Entered hidden hardship	8.01	12.41	8.19	11.45	11.71	9.05
SE	(0.19)	(0.62)	(0.89)	(1.15)	(0.65)	(0.18)
Exited Hidden hardship	8.56	11.93	6.37	11.27	12.59	9.42
SE	(0.20)	(0.60)	(0.77)	(1.17)	(0.69)	(0.18)
Constant hidden hardship	7.15	12.16	6.50	13.30	11.43	8.37
SE	(0.18)	(0.62)	(0.79)	(1.25)	(0.65)	(0.17)
Total	100.00	100.00	100.00	100.00	100.00	100.00

Table 4.5 Spells of Hardship by Events, Row Totals

	No hardship	Entered hardship	Exited hardship	Always hardship	Total
Additional Children					
No	64.74	12.67	9.14	13.45	100
SE	(0.31)	(0.22)	(0.19)	(0.22)	
Yes	56.46	16.61	11.72	15.21	100
SE	(0.95)	(0.71)	(0.63)	(0.68)	
Income Spike					
No	67.53	11.61	8.87	12.00	100
SE	(0.34)	(0.23)	(0.20)	(0.23)	
Yes	54.46	16.90	10.83	17.82	100
SE	(0.58)	(0.44)	(0.37)	(0.44)	
Disability					
No	67.88	12.37	8.99	10.76	100
SE	(0.31)	(0.22)	(0.19)	(0.21)	
Yes	41.82	17.06	11.78	29.35	100
SE	(0.74)	(0.57)	(0.48)	(0.68)	
Marital Change					
Always married	69.64	9.49	9.61	11.25	100
SE	(0.42)	(0.27)	(0.27)	(0.29)	
Became divorced	59.26	20.61	8.25	11.88	100
SE	(1.89)	(1.61)	(1.07)	(1.18)	
Unemployment					
No	66.78	11.98	9.20	12.04	100
SE	(0.30)	(0.21)	(0.19)	(0.21)	
Yes	39.92	22.21	11.21	26.67	100
SE	(0.95)	(0.81)	(0.63)	(0.84)	
Moves					
No move	65.38	12.13	9.28	13.20	100
SE	(0.31)	(0.21)	(0.19)	(0.22)	
Any move	53.46	19.60	10.35	16.59	100
SE	(0.88)	(0.70)	(0.54)	(0.66)	

Table 4.6 Spells of Hardship by Events, Column Totals

	No hardship	Entered hardship	Exited hardship	Always hardship	Total
Marital status					
Remained Unmarried %	58.30	14.99	9.78	16.92	100.00
SE	(0.45)	(0.32)	(0.27)	(0.34)	
Got married %	67.58	18.22	6.72	7.48	100.00
SE	(1.00)	(0.82)	(0.54)	(0.58)	
Help from family and friends					
No	65.21	11.64	9.83	13.32	100.00
SE	(0.31)	(0.21)	(0.19)	(0.22)	
Yes	0.00	0.00	26.75	73.25	100.00
SE	0.00	0.00	(1.77)	(1.77)	
Help from Social Services or Non-Profits					
No	64.69	11.55	10.04	13.72	100.00
SE	(0.31)	(0.21)	(0.19)	(0.22)	
Yes	0.00	0.00	22.73	77.27	100.00
SE	0.00	0.00	(2.00)	(2.00)	
Job Gain					
No	66.04	12.31	9.09	12.56	100.00
SE	(0.31)	(0.22)	(0.19)	(0.22)	
Yes	50.50	17.89	11.42	20.18	100.00
SE	(0.84)	(0.65)	(0.54)	(0.68)	

Figure 4.1 Predicted Probability of Entering Hardship by Divorce
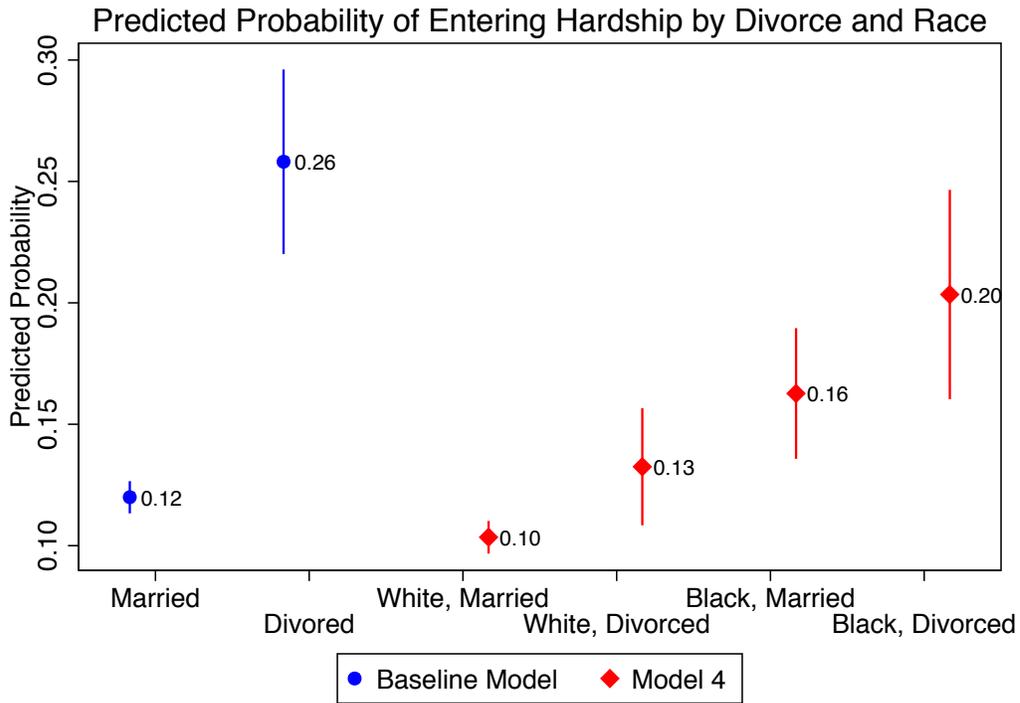
Figure 4.2 Predicted Probability of Entering Hardship by Disability
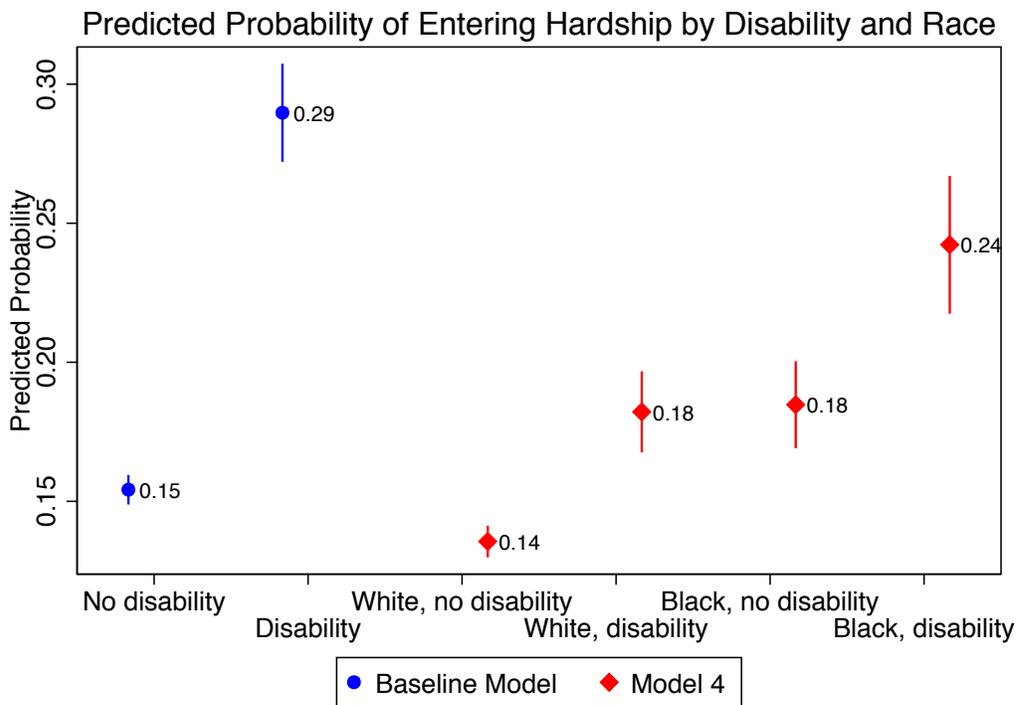
Figure 4.3 Predicted Probability of Entering Hardship by Unemployment

Predicted Probability of Entering Hardship by Unemployment and Race
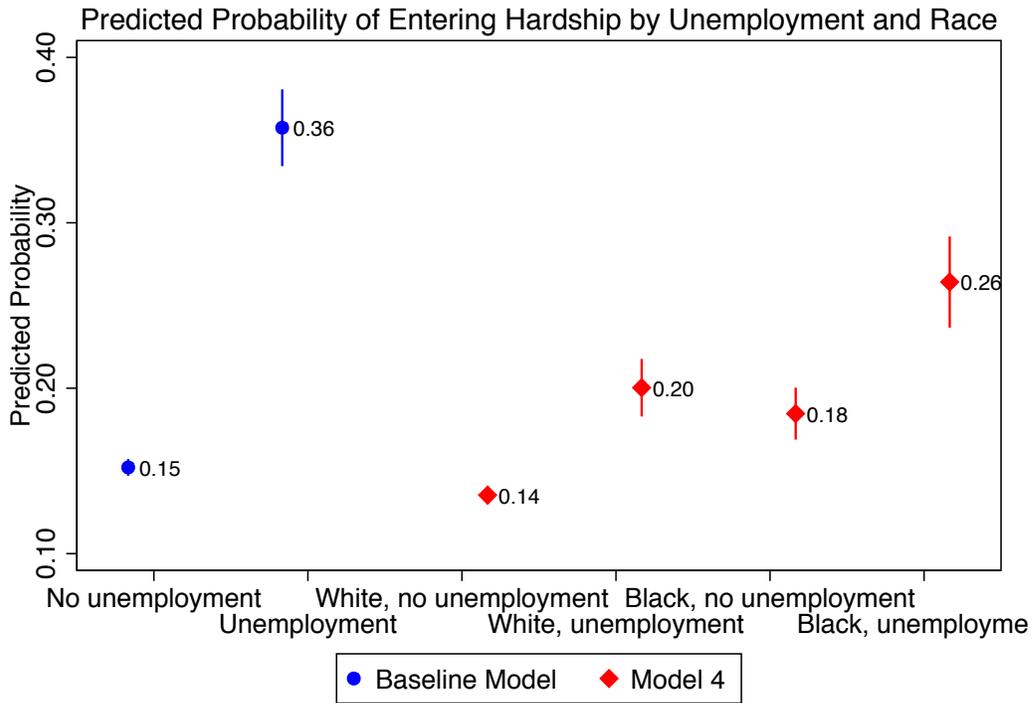
Figure 4.4 Predicted Probability of Entering Hardship by Additional Children

Predicted Probability of Entering Hardship by Additional Children and Race
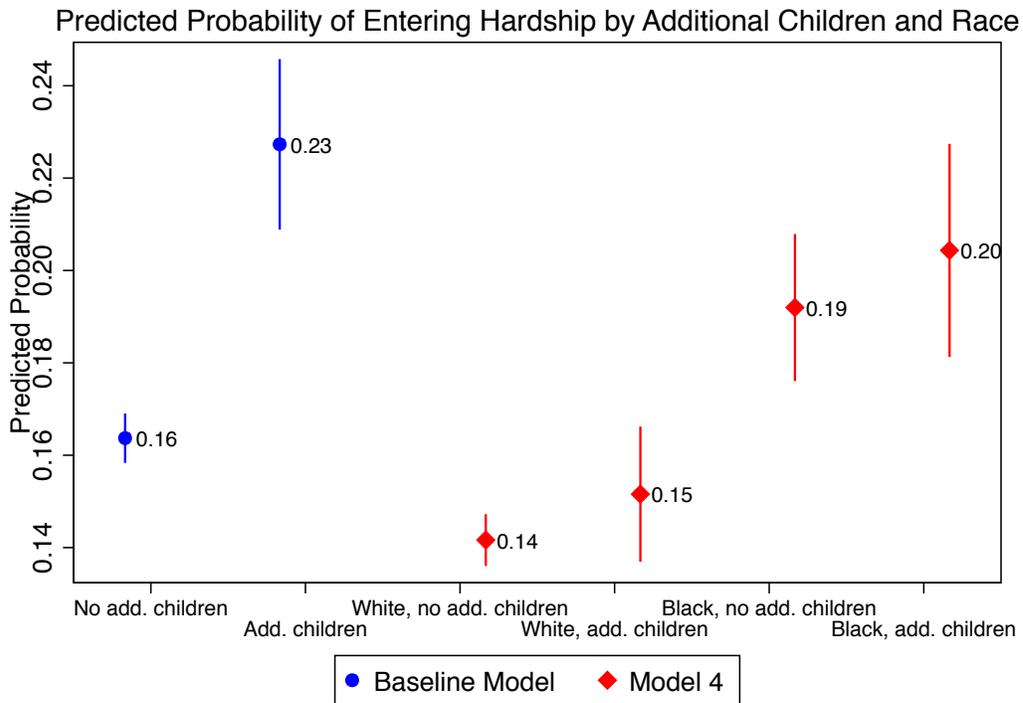
Figure 4.5 Predicted Probability of Entering Hardship by Moving
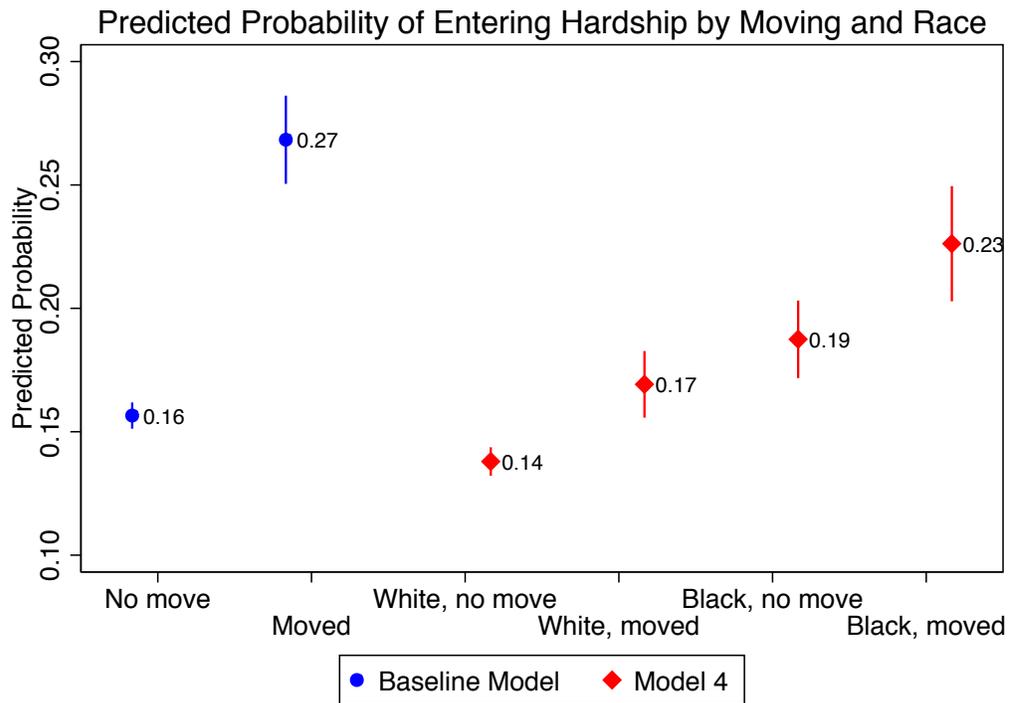
Figure 4.6 Predicted Probability of Entering Hardship by Income Spike
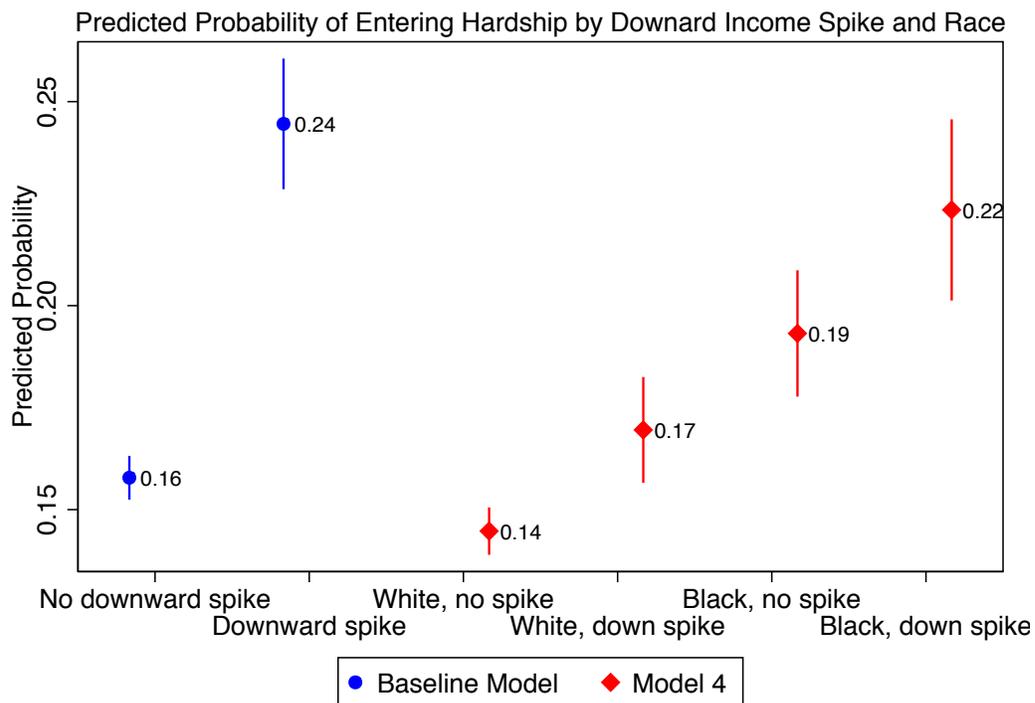
Figure 4.7 Predicted Probability of Exiting Hardship by Job Gain

Predicted Probability of Exiting Hardship by Job Gains and Race
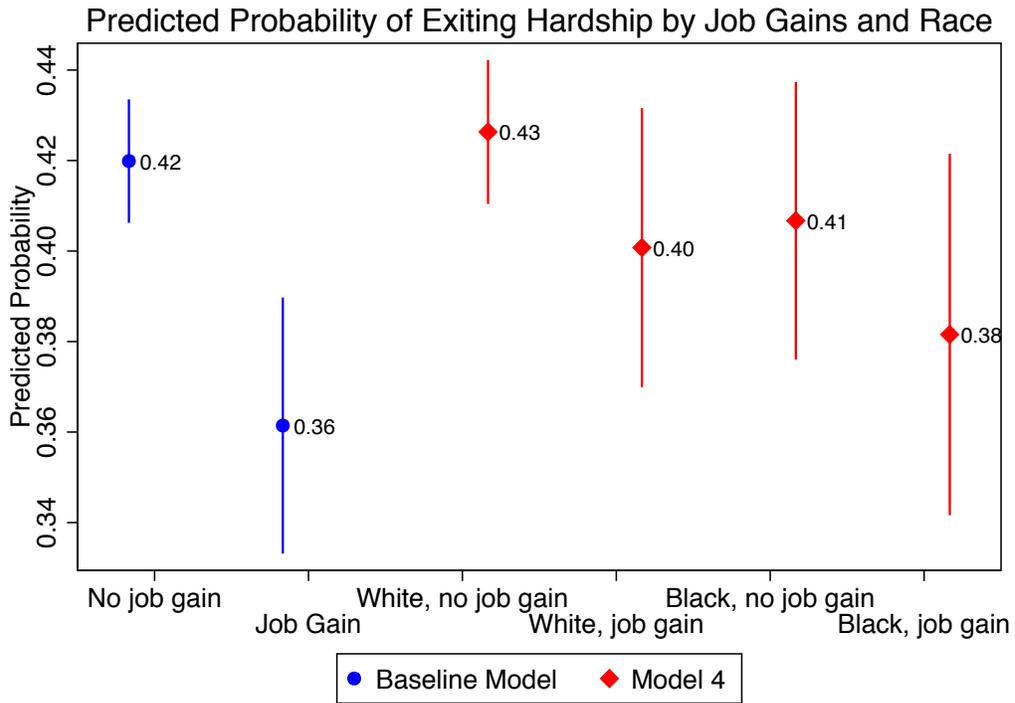
Figure 4.8 Predicted Probability of Exiting Hardship by Marriage

Predicted Probability of Exiting Hardship by Marriage and Race
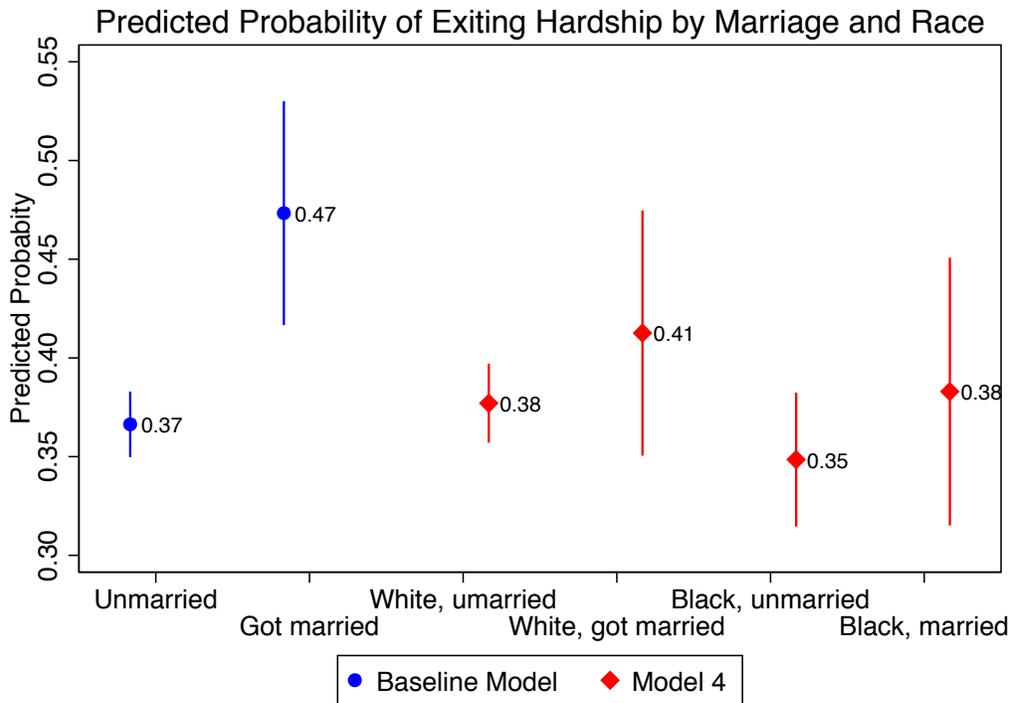
Figure 4.9 Predicted Probability of Exiting Hardship with Informal Assistance

Predicted Probability of Exiting Hardship with Help from Family and Friends
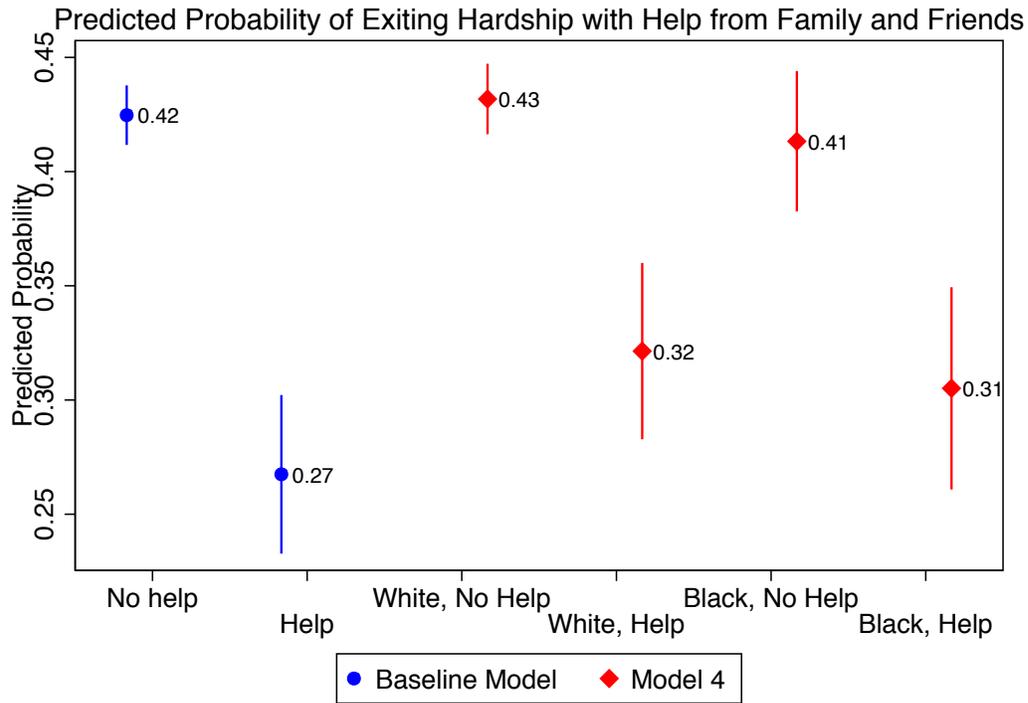
Figure 4.10 Predicted Probability of Exiting Hardship with Formal Assistance

Predicted Probability of Exiting Hardship by Help from Social Services and Non-Profits, by Race
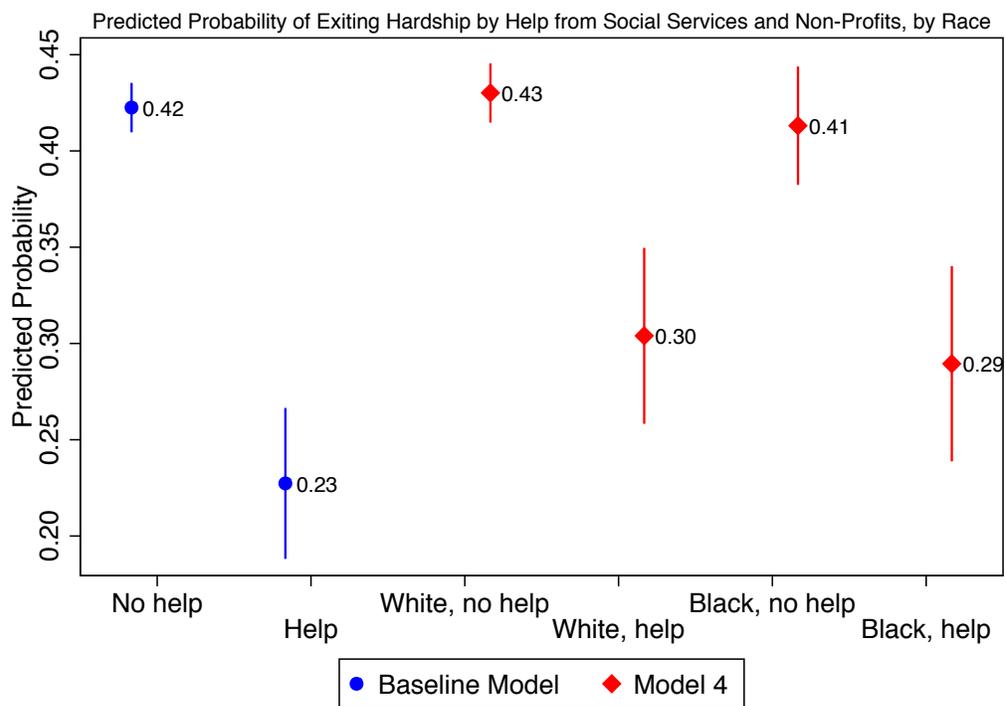
Figure 4.11Predicted Probability of Exiting Hardship by Upward Income Spike and Race
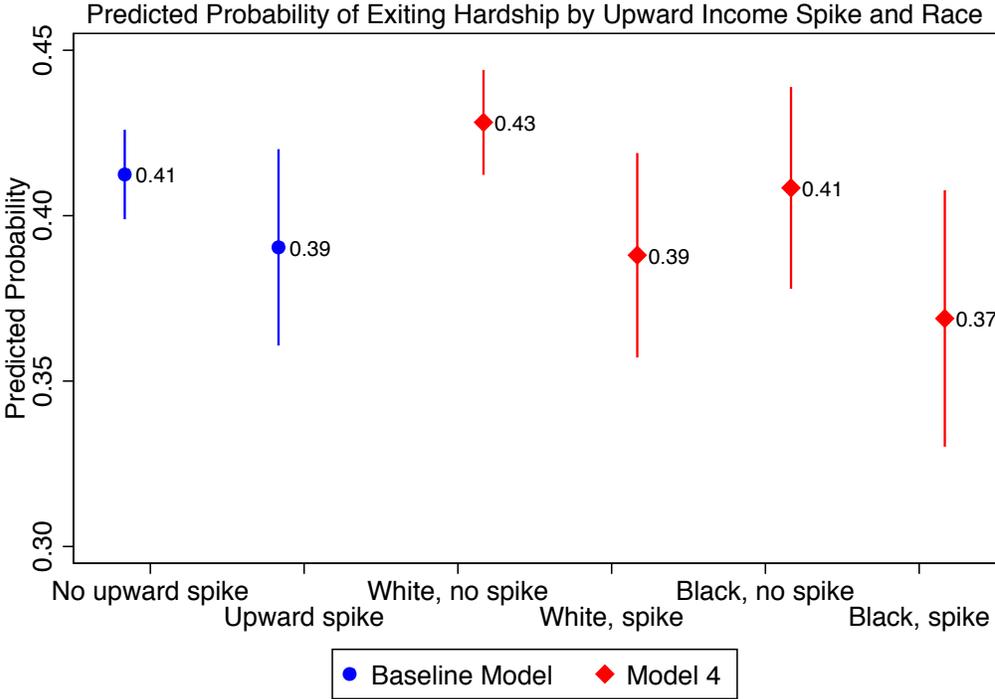
Chapter 5 Conclusion

The analysis presented in this dissertation lays out a different conception of poverty than is often used in the literature. The advantages of using material hardship measures are twofold: they avoid unnecessary and arbitrary income cutoffs, and they correspond to the types of assistance provided by the US welfare state. We now know that material hardship is far more widespread than previously thought, that fewer American households are economically secure, that our most common measure of poverty obscures more than it illuminates, and that deep racial disparities exist in the probability of experiencing material hardship. Hidden hardship haunts non-poor Americans, and non-white Americans compete in this market society at a distinct material disadvantage.

The path recently charted by Heflin (Heflin 2016; Heflin et al. 2009) of breaking down material hardship into types of hardship will be useful for future work on the mechanisms that cause material hardship, but they do run the risk of obscuring the full extent of this social problem. Understanding the mechanisms that cause a household to enter into a spell of specific type or category of hardship, and to exit from them, is an important next step, but one that also runs the risk of re-creating social policy silos that are incapable of considering household well-being as a whole.

Specific attention is needed to differences in mechanisms by race. Given the strong racial disparities in the experience of material hardship, the precise mechanisms may differ as well. For example, just as the experiences of white and black job seekers are different (Pager 2003), it is

possible that the costs of daily life for non-whites are just higher (e.g. higher interest rates). It is also possible that the social networks in which households are embedded differ in their makeup and in the reciprocal social demands placed on them. In addition to research on mechanisms, a better understanding of income flows and spending over the short term is needed. The *Financial Diaries Project* (Morduch and Schneider 2017) is a step in this direction.

The material well-being of American households has implications for American politics. Through the rise of right-wing populism, it is clear that material, economic matters and issues of identity intersect and interact in ways that are not yet fully understood (Hochschild 2016). Even basic questions about how households experiencing material hardship engage in politics remain unexplored.

Little is known about geographic disparities in material hardship. Questions about state-level policies or regional distributions of non-profits remain largely unexplored. Lurking in the background of these questions remain issues of international comparison. Do households in other wealthy democracies encounter the same level of material hardship as American households?

There are a number of limitations to this dissertation. First, the collection of nationally representative statistics on various forms of material hardship appears to be entering an uncertain phase. The full-scale revision of the SIPP, starting with the 2014 panel, has eliminated the material hardship questions, thus making it difficult to extend this line of research going forward. Save for food insecurity measures, no nationally representative survey currently has material hardship measures.

While I argue throughout this dissertation that material hardship measures should, at a minimum, be used in conjunction with income poverty measures, there are some conceptual limitations to this approach. Hardship measures do not capture the overall quality of life for a

household. They are agnostic as to the physical and mental health of the people in the household, do not measure the quality of the housing, food, or other resources enjoyed by members of the household, and do not speak to wider social conditions in which households are situated such as neighborhood quality, access to transportation, to recreation opportunities, and the like.

It is also possible that shared norms around the experience of material hardship may differ so widely by context that they are difficult to use in such a highly stratified society. For example, what one household considers an insufficient amount of food could be another's feast. Likewise, an essential expense for one household could be considered a luxury in another. These measures were developed approximately ten years into the current inequality crisis, and may need to be re-evaluated in the context of increased stratification at the bottom of the income ladder. While material hardship measures are more individually targeted measures of well-being than the averaged costs of food, clothing, shelter, and utilities used by the SPM, hardship measures still contain within them some level of subjectivity that is difficult to eradicate. Could two theoretical households living under the same exact material conditions answer some of the material hardship questions in divergent ways? Yes, but this is a risk inherent in any empirical project that depends upon the self-reports of research subjects.

While this dissertation reports strong and persistent racial disparities in the experience of material hardship even when accounting for income, wealth, and education, the causes of these racial gaps remain obscure. Because the analysis used in this dissertation relies entirely on observed characteristics, there are a number of unobserved characteristics that could contribute to these findings. First, the SIPP does not directly measure the social ties of respondents. Network analysts in economic sociology have repeatedly shown the power of social networks in economic life (e.g. Granovetter 1983), including work on the intersection of social networks and

race (Royster 2003; Smith 2005). It is possible that the social ties in which black and white households are embedded transmit different mixtures of advantage and disadvantage (Park, Weimers, and Seltzer 2018) resulting in different material outcomes.

Second, it is likely that the underlying risk of experiencing negative shocks and events that drive households into a spell of material hardship are not evenly distributed across the population. If non-white households are more likely to be exposed to the shocks that drive a household into material hardship, even if the shocks effected households the same way, households of color would still exhibit higher rates of material hardship.

Per chapter 4, we know that events do not result in such outcomes. Similar to Devah Pager's (2003) resume audit study that finds black job seekers have the same chances of receiving an interview as white job seekers with a criminal record, I find that black households compete for material resources as if they were a white household experiencing unemployment, income shocks, additional children, a move, a divorce, or other disruptive events. A combination of network ties, underlying propensity to experience negative shocks, and disparate outcomes to those shocks could explain the racial disparities in material hardship. Finally, the long legacy of income and wealth destruction of black communities means these populations are simply not starting on an even playing field (Katznelson 2005; Sugrue 2005).

The findings in this dissertation contain a number of implications for social work practice. First, interpersonal practice social workers may need to re-think how sliding scales are set. Instead of income alone, income volatility, the relatively fixed costs of larger expenses such as housing and debt, and measures of material hardship could be used as guidelines in setting up a sliding scale for clients and patients that takes into account more than just income.

The second key implication of social work practice is in how we evaluate our interventions. Social workers generally rely on a threefold biopsychosocial approach in understanding the wellbeing of those they work with. While much social scientific research needs to be done on the causes of material hardship, social workers practitioners may be uniquely situated to understand the biopsychosocial consequences of material hardship.

The findings of this dissertation also have a number of implications for social policy. First, is a need to reconsider the needs-based, means-tested social policy approach that is the hallmark of the US welfare state. One implication of my findings is that "needs-based" and "means-tested", while often used together, really need to be considered separately. If we as a society care about assisting those without means, specifically income, then our safety net works relatively well. If, on the other hand, we care about making sure the material needs of people are met, the safety net clearly fails in this regard.

Perhaps it is time to move way from the targeted, liberal (in the Esping-Ansdersen sense) welfare state and towards a more universal, social democratic mode. The experiment in single payer health insurance and guaranteed incomes for senior citizens (Medicare and Social Security) has already shown that universal programs have a perhaps unique ability to reduce material hardship across the population.

Third, we need to recognize that social policy is also a system of stratification—a way of determining who gets what and when. Without explicitly taking race, a durable and stratifying social structure, into account, it is unclear how our social policy efforts to eliminate material hardship will do anything other than reinforce existing racial hierarchies or at best fail to sufficiently reduce the existing, large racial gaps in material well-being shown here. The idea of

a race-based social policy may be discomforting, but it is one that we already have in practice (Lieberman 1998; Poole 2006; Schram et al. 2009).

If poverty research were to move more towards an approach centered on material hardship, it may open up the possibility of fruitful dialogue between the political economy tradition of economic sociology and more traditional stratification research. Initially centered around questions about the role of social networks and organizations in economic life, economic sociology has broadened to include questions of political economy (Swedberg 2003). Recently some economic sociologists have moved further towards political sociology as they investigate the relationship between the state and the economy, particularly the ways in which the state manages consumer access to credit.

Some of the ways in which economic sociology has moved towards questions of political economy have begun to address the issue of poverty. For example, Monica Prasad's *The Land of Too Much: American Abundance and the Paradox of Poverty* (2012) seeks to explain why the US has higher poverty rates than European societies. A key component of her answer has to do with the ways in which policy makers have seen expanded consumer credit as an alternative to expanded direct social welfare provision. This political economic approach to questions of poverty is in line with Alice O'Connor's call for new poverty knowledge, knowledge that embraces questions of political economy rather than narrower issues of welfare dependency, a poverty knowledge that, although she does not use the term, places the embedded nature of economic life at the center of analysis.

Political sociologists have also been asking questions pertinent to poverty research, questions that dovetail with economic sociology's newfound emphasis on political economy. For example, David Brady (2009) uses the Luxemburg Income Study to assess the relationship

between poverty and politics in wealthy democracies and argues that, fundamentally, poverty rates are a function of welfare state generosity. Lane Kenworthy's extensive work (e.g. 2014) in the realm of comparative welfare states concurs with this conclusion. Institutional political scientist Jacob Hacker (2006) identified a number of policy changes that shift various forms of risk from the institutional level (governments, employers) to the household level. Fundamentally Brady, Kenworthy, and Hacker, like many economic sociologists, view concerns over the distribution of goods, resources, and risk through the lens of political economy.

There is one quality of these political economy oriented works that should give scholars of the American welfare and poverty researchers pause: their tendency to approach issues of structural change from a national level. Historians, sociologists, and social workers have long pointed out the ways in which the American welfare state functions differently along the lines of race, gender, and class (see eg Danziger 2010; Fraser and Gordon 1994; Katz 2013; Katznelson 2005). Esping-Andersen, makes a similar point in *Three Worlds of Welfare Capitalism* (1990) when he emphasizes that welfare states are not just means of redistribution, but are themselves systems of stratification. Perhaps nowhere is this more true that in the fragmented, disciplinary, half-hidden American welfare state. It is precisely this uneven distribution of welfare state support that drives many emerging trends within poverty research (Moffitt 2014). To understand changes in political economy at the macro level without investigating how they redistribute goods, resources, and risk within society is to miss at least half of the story.

What does it mean to be poor in an affluent society? In the US today, to be poor means, for 18% of households, to be unable to meet your material needs but still not be seen or counted as poor. Rather, these households are hidden from the social safety net, from scholars, and from public discussion. What is at stake here is more than just who has the lights turned off, and who

is able to pay their bills. Per Sen and Roosevelt, material deprivation is about human freedom, about the ability to live the kind of life one values. Perhaps, if nearly half of households experience either material hardship, income poverty, or both, we should think of America as the land of the semi-free. To be hidden is to be invisible, and ultimately disposable (Block and Somers 2014).

Polanyi's *The Great Transformation* concludes with a meditation on freedom in a complex society. To understand freedom in a complex society, Polanyi argues, one must fully reckon with the reality of society. The freedom of classical liberals, the freedom of *homo economicus*, is a false freedom in a modern, complex society. In 2018, after a nearly forty year experiment with market fundamentalism, it is clear that for far too many Americans this type of freedom has produced material insecurity, invisibility, and possibly disposability. In other words, it has produced no freedom at all. Instead, a vision of freedom founded on social rights, such as a right to a job, would afford even the most non-conformist individual a niche in which to live without material hardship.

It is my hope that this project can inform the work of social scientists, social workers, policy makers, and citizens as they engage in the long-term work of securing the material basis necessary for households to experience another new birth of freedom.

Appendices

Appendix A: Measuring Income Volatility

Income volatility is an important factor in considering the economic well-being of a household. From the 1970s to the present, there have been broad trends indicating an increase in various forms of economic insecurity (Western et al. 2012) and precarity for workers (Schram 2015; Standing 2014). For large segments of the population, the day-to-day reality of these trends is marked by income instability. There is an extensive literature in economics regarding the proper way to measure income volatility. The literature breaks down into three main approaches: 1) autoregressive, 2) non-parametric, and 3) descriptive. Each approach has advantages and disadvantages. The literature is, on the whole, inconclusive regarding the existence of increased income volatility since the 1970s. Part of this may be due to the assumptions used in formal models, the top and bottom coding of data, and issues with common data sources.

The literature on income volatility begins with Gottschalk and Moffitt (1994; 2009; 2002). Addressing concepts proposed by Milton Friedman, Gottschalk and Moffitt decompose income into permanent income and transitory income. The idea behind this distinction is that there is some relatively stable "permanent" income that an individual earns over the long term. For example, this might be reflected in someone's base wage or salary. Transitory income then would include any temporary fluctuation in income such as bonuses. Gottschalk and Moffitt's primary goal in their papers is to create a formal model of income volatility that distinguished between permanent income and transitory income in order to investigate the broader and much

noted trend towards increasing income inequality nationally. To do so they have used two approaches, an autoregressive moving average model and a less complex approach in which the difference between actual log income is subtracted from mean log income over repeated same length time periods. Both approaches reveal a similar trend: increasing income volatility in the 1970s and 1980s, a stable trend of high income volatility in the 1990s, and increasing volatility yet again in the 2000s. Gottschalk and Moffitt, along with nearly all other papers in this literature, use the PSID as their data source.

Another approach to this problem has been developed by statisticians Jensen and Shore (2011). They develop a semiparametric Baysian approach they term a Markovian hierarchical Dirichlet process to model income volatility. As with Gottschalk and Moffitt, their motivation is to create a formal model of income volatility. Their main criticism of the autoregressive approach of Gottschalk and Moffitt is that their models assume that all individuals with the same demographic factors have the same volatility parameters and that there is no correlation between permanent income volatility and transitory income volatility. These criticisms of Gottshalk and Moffitt are intriguing and point towards the potential benefits of simpler approaches.

Researchers working at the CBO (2008), Federal Reserve (2015), in think tanks (Dynan, Elmendorf, and Sichel 2013), and some economists tend to prefer simpler, less complex approaches to measuring income volatility. Shin and Solon (2008) argue that the findings of more complex parametric models are extremely sensitive to model specification, thus calling in to doubt the rising trend of income volatility. In general, the less complex approaches tend to measure things like standard deviation in percentage change of income, fractions of households experiencing various percentage drops in income, and variation in income around average income (see tables 3a and 3b in Dynan et al 2012).

The US Financial Diaries Project headed by Jonathan Morduch (Morduch and Schneider 2017) is a monthly survey of a non-nationally representative sample of low and moderate-income households. The goal of this survey is to understand the dynamics of income instability in greater detail than is possible existing national surveys (often annual, or at best once every 4 months). The Financial Diaries Projects reports the coefficient of variation (standard deviation of monthly household earnings divided by the mean of household earnings) to measure income instability and also examine spikes (monthly income above 125% of average income) and dips (monthly income below 75% of average). Their initial findings suggest that income instability is weakly correlated with low income, that there is a great deal of volatility in middle-income households as well. Most intriguingly, they find that non-labor income exhibits much higher variation than labor income. Presuming that this non-labor income is composed mainly of state transfers for the low to moderate-income population, this hints at the possibility that the current welfare state may increase income volatility. Their findings also indicate that, after attempting to deal with the issue of seam bias, the SIPP may produce overly conservative and low estimates of income instability.

I use a less formal definition of income instability. I avoid the Gottschalk and Moffitt style decomposition of income into permanent and transitory earnings because the goal of this project is not to create a formal model of income dynamics but rather understand how unstable a given household's income is prior to the measure of material hardship. There is another reason to avoid this approach, a rather practical reason. Papers that distinguish between permanent and transitory earnings tend to focus on shocks to transitory earnings as the expense of shocks to permanent earnings. At the household level, it is doubtful that such shocks are distinguishable by people attempting to pay their rent or utility bills. Income instability, whether due to changes in

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"permanent" or "transitory" income is still income instability—a dollar is a dollar. Many papers

in this literature also exclude respondents with zero earnings, an approach I do not follow

because it would by definition exclude the population of greatest interest. I use the coefficient of

variation favored by Morduch and the Financial Diaries Project because it is straightforward,

corrects for average income, and is more interpretable than logged income.

Data on material hardship are available for the years 1998, 2003, 2005, 2010, and 2011 in

the SIPP. In general, all measures of material hardship follow a "U" shaped pattern in which

hardship levels drop from 1998 to 2003, return to 1998 levels by 2005, and increase dramatically

in 2010 and 2011. In general, 2003 is the year with the lowest rates of material hardship while

2011 is the highest. 1998 and 2005 are somehwere in between them and 2010 is nearly identitcal

to 2011. These time trends in material hardship are also explored in Heflin (2017).

Table B.1 Hardship and Poverty Over Time

	1998	**2003**	**2005**	**2010**	**2011**	**Percent Change 2003–2011**
Hidden Hardship	17.46	15.75	17.16	19.43	19.20	21.90
SE	(0.23)	(0.24)	(0.22)	(0.23)	(0.24)	
Down and Out	5.94	5.87	6.32	7.10	7.57	28.96
SE	(0.15)	(0.15)	(0.14)	(0.15)	(0.16)	
Getting by	6.48	7.18	6.54	7.91	7.98	11.14
SE	(0.15)	(0.17)	(0.14)	(0.16)	(0.17)	
Economically Secure	70.13	71.19	69.98	65.57	65.25	-8.34
SE	(0.28)	(0.30)	(0.27)	(0.28)	(0.29)	
Total	100	100	100	100	100	

Table B.1 shows hardship and poverty status by year, and the percent change between

2003 and 2011. The economically secure group the only one to shrink while the down and out

and hidden hardship groups both grew by more than 20% between 2003 and 2011.

Table B.2 Type of Hardship Over Time

	1998	2003	2005	2010	2011	Percent Change 2003-2011
Difficulty Meeting Essential Expenses	14.02	12.93	14.41	16.14	16.07	24.28
SE	(0.22)	(0.23)	(0.20)	(0.22)	(0.23)	
Missed rent or mortgage payment	5.36	5.48	6.05	7.91	8.06	47.08
SE	(0.15)	(0.16)	(0.14)	(0.16)	(0.17)	
Evicted	0.26	0.29	0.25	0.41	0.51	75.86
SE	(0.03)	(0.04)	(0.03)	(0.04)	(0.05)	
Missed utility bills	9.14	8.66	9.83	10.41	10.54	21.71
SE	(0.18)	(0.19)	(0.17)	(0.18)	(0.19)	
Utility cut offs	1.32	1.52	1.71	1.76	1.74	14.47
SE	(0.07)	(0.10)	(0.07)	(0.08)	(0.08)	
Phone cut off	3.85	4.15	4.23	3.58	3.81	-8.19
SE	(0.12)	(0.14)	(0.12)	(0.11)	(0.12)	
Unable to see doctor	6.12	6.32	6.80	7.92	7.93	25.47
SE	(0.15)	(0.16)	(0.14)	(0.16)	(0.17)	
Unable to see dentist	7.90	7.56	8.51	9.60	9.89	30.82
SE	(0.16)	(0.18)	(0.16)	(0.17)	(0.18)	
Food insecure	9.05	8.14	8.99	10.94	11.47	40.91
SE	(0.18)	(0.19)	(0.16)	(0.18)	(0.20)	

All types of material hardship save for phone cut offs increased between 2003 and 2011. Missed housing payments, evictions, and food insecurity were the hardships with the greatest percentage change. These trends are consistent with the basic theoretical model of material hardship put forward by Mayer (1993)—that hardship occurs when demands exceed household resources. The greatest increases occur in types of hardship that are most sensitive to a cash squese, such as a missed housing payment, eviction, and food insecrity.

Table B.3 Mean Hardship Count by Year

	1998	2003	2005	2010	2011	Percent Change 2003-2011
Hidden Hardship	2.32	2.41	2.44	2.46	2.48	2.90
SE	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	
Down and Out	2.78	2.90	2.99	2.95	2.95	1.72
SE	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)	
No Poverty	0.46	0.44	0.48	0.56	0.56	27.27
SE	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	
Poor	1.33	1.30	1.47	1.40	1.44	10.77
SE	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	
Total	0.57	0.55	0.61	0.69	0.70	27.27
SE	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	2.90

The mean number of hardships reported by households has increased fairly steadily for thouseholds in hidden hardship, up from 2.32 to 2.48. While mean hardship counts are higher for the down and out, the increase is smaller. The perent change mean hardship count for all households above the poverty line increased at a rate nearly tripple that of the increase for poor households.

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Figure B.1 Predicted Probability of Hidden Hardship by Race and Year over Income

Predicted Probability of Hidden Hardship by Race and Year over Income
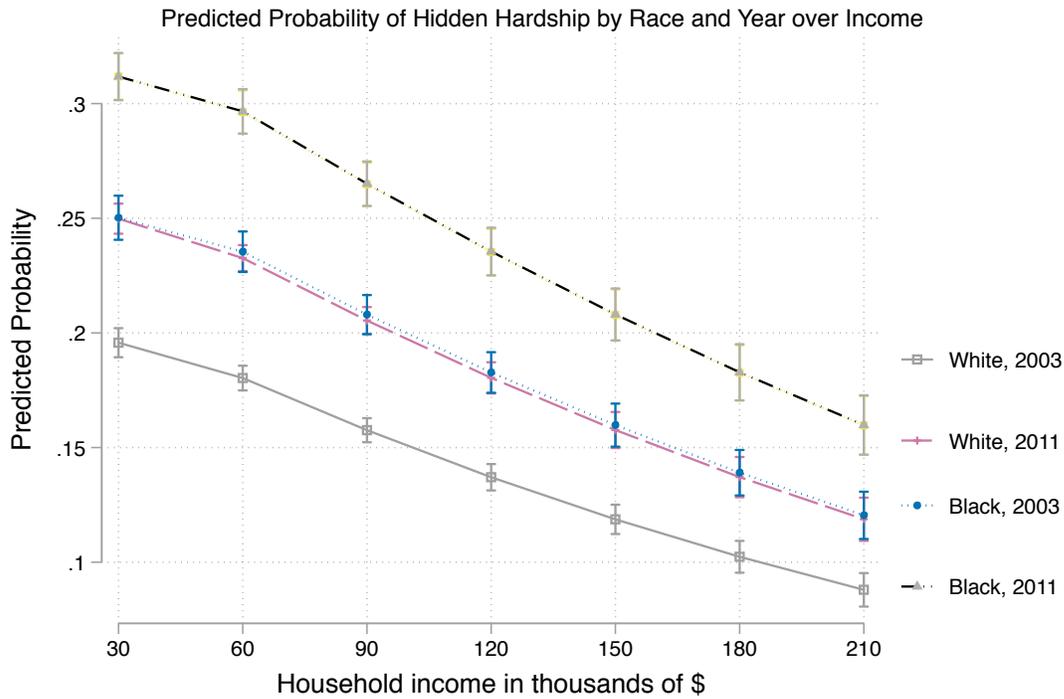
Figure 1 shows the predicted probability of hidden hardship by year and race. With year

comparisons consistently show racial disparities, but looking over time reveals that predicted

probabilities by race differ considerably across years while maintaining the same relative

disparities over time. While white households have lower predicted probababilities of material

hardship than black households in both 2003 and 2011, black households in 2003 have

essentially the same predicted probability of material hardship up and down the income ladder as

white households in 2011.

Appendix C: Regression Tables for Chapter 4

This appendix contains selected regression tables for the logistic regressions in Chapter 4.

Table C.1 Logistic Regression Estimates For Household Unemployment

		Model 1	Model 2	Model 3	Model 4	Model 5
		b/se	b/se	b/se	b/se	b/se
Unemployment		1.132***	1.073***	0.834***	0.544***	0.515***
			0.055	0.057	0.059	0.064	0.065
Race	White	Ref category				
			.	.	.	.
	Black		0.872***	0.552***	0.517***	0.404***
			0.056	0.06	0.063	0.064
	Asian		0.023	0.137	0.108	0.083
			0.103	0.108	0.112	0.113
	Other		0.703***	0.568***	0.490***	0.403***
			0.103	0.104	0.11	0.11
	Hispanic		0.788***	0.373***	0.340***	0.252***
			0.061	0.067	0.071	0.07
Education	Less than HS			Ref category		
				.	.	.
	High school			-0.273***	-0.240***	-0.188**
				0.068	0.071	0.071
	Some College			-0.430***	-0.315***	-0.232***
				0.067	0.07	0.07
	BA			-1.124***	-0.846***	-0.696***
				0.081	0.085	0.086
	BA +			-1.343***	-0.969***	-0.797***

Category	Variable	(1)	(2)	(3)
		0.094	0.1	0.101
Gender	Male		Ref category	
		.	.	.
	Female	0.165***	0.127**	0.127**
		0.04	0.042	0.042
	Age	0.033***	0.058***	0.073***
		0.008	0.008	0.008
	Age squared	-0.000***	-0.001***	-0.001***
		0	0	0
	Number of children	0.102***	0.098***	0.106***
		0.022	0.023	0.023
Marital Status	Married, spouse present (Ref category)	0	0	0
		.	.	.
	Married, spouse absent	0.418**	0.171	0.085
		0.156	0.164	0.163
	Widowed	0.360***	0.220**	0.101
		0.08	0.081	0.082
	Divorced	0.520***	0.301***	0.179**
		0.056	0.06	0.062
	Separated	0.726***	0.465***	0.349**
		0.113	0.121	0.119
	Never married	0.488***	0.206**	0.143*
		0.059	0.064	0.064
	Welfare state transfers	0.012***	0.013***	
		0.002	0.002	
	Household income	-0.006***	-0.004***	
		0.001	0.001	
	CV of Income		0.656***	0.737***

		Model 1	Model 2	Model 3	Model 4	Model 5
					0.066	0.066
Net Worth						-0.002***
						0
Unsecured Debt					0.002***	
					0	
Constant		-1.718***	-1.939***	-1.939***	-2.313***	-2.782***
		0.02	0.024	0.21	0.223	0.227
		24969	24969	24969	23973	23973

Table C.2 Logistic Regression Estimates For Divorce[7]

		Model 1	Model 2	Model 3	Model 4	Model 5
		b/se	b/se	b/se	b/se	b/se
		0	0	0	0	0
Divorce	No divorce	.	.	.	.	.
	Divorce	0.937***	0.872***	0.775***	0.434***	0.302*
		0.106	0.111	0.111	0.118	0.12
Race	White		0	0	0	0
	Black		0.953***	0.777***	0.707***	0.564***
			0.108	0.109	0.114	0.116
	Asian		0.221	0.324*	0.246	0.2
			0.15	0.154	0.156	0.157
	Other		0.557**	0.435*	0.378*	0.261
			0.186	0.19	0.192	0.19
	Hispanic		1.078***	0.580***	0.515***	0.422***
			0.089	0.102	0.106	0.105

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[7] Unlike other regressions in this series, regressions on divorce exclude a measure of marital status because the event in question—divorce—already measures marital status, albeit in a more truncated fashion.

		(1)	(2)	(3)
Education	Less than HS	0	0	0
	High school	-0.363**	-0.226*	-0.172
		0.111	0.114	0.113
	Some College	-0.545***	-0.330**	-0.240*
		0.108	0.11	0.11
	BA	-1.202***	-0.828***	-0.648***
		0.13	0.132	0.134
	BA +	-1.409***	-0.898***	-0.676***
		0.149	0.155	0.155
Gender	Male	0	0	0
	Female	0.160*	0.117	0.138*
		0.063	0.064	0.065
	Age	0.028*	0.065***	0.085***
		0.014	0.016	0.016
	Age squared	-0.000***	-0.001***	-0.001***
		0	0	0
	Number of children	0.067*	0.061	0.072*
		0.032	0.032	0.032
	Welfare state transfers		0.015***	0.015***
			0.003	0.003
	Household income		-0.006***	-0.004***
			0.001	0.001
	CV of Income		0.796***	0.909***
			0.114	0.115
	Net Worth			-0.002***
				0
	Unsecured Debt			0.002***
				0

Constant	-1.993***	-2.242***	-1.781***	-2.465***	-3.162***
	0.032	0.038	0.381	0.397	0.406
	11553	11553	11553	11506	11506

Table C.3 Logistic Regression Estimates For Disability

		Model 1	Model 2	Model 3	Model 4	Model 5
		b/se	b/se	b/se	b/se	b/se
	No disability	0	0	0	0	0
Disability		.	.	.	.	.
	Disability	0.806***	0.760***	0.642***	0.448***	0.385***
		0.048	0.05	0.053	0.059	0.06
Race	White		0	0	0	0
			.	.	.	.
	Black		0.869***	0.544***	0.514***	0.404***
			0.056	0.06	0.063	0.064
	Asian		0.096	0.183	0.134	0.106
			0.103	0.107	0.112	0.113
	Other		0.694***	0.550***	0.481***	0.402***
			0.101	0.103	0.11	0.11
	Hispanic		0.830***	0.400***	0.364***	0.275***
			0.06	0.067	0.07	0.07
Education	Less than HS			0	0	0
				.	.	.
	High school			-0.211**	-0.199**	-0.155*
				0.069	0.072	0.072
	Some College			-0.357***	-0.265***	-0.192**
				0.067	0.07	0.07

		Model 1	Model 2	Model 3
	BA	-1.022***	-0.779***	-0.643***
		0.082	0.086	0.086
	BA +	-1.247***	-0.905***	-0.747***
		0.096	0.1	0.101
Gender	Male	0	0	0
		.	.	.
	Female	0.149***	0.118**	0.118**
		0.04	0.042	0.042
	Age	0.01	0.041***	0.058***
		0.008	0.009	0.009
	Age squared	-0.000***	-0.001***	-0.001***
		0	0	0
	Number of children	0.120***	0.113***	0.120***
		0.022	0.023	0.023
Marital Status	Married, spouse present	0	0	0
		.	.	.
	Married, spouse absent	0.418**	0.167	0.081
		0.153	0.163	0.162
	Widowed	0.352***	0.204*	0.089
		0.08	0.081	0.083
	Divorced	0.518***	0.293***	0.176**
		0.056	0.06	0.061
	Separated	0.733***	0.459***	0.346**
		0.111	0.119	0.118
	Never married	0.481***	0.191**	0.132*
		0.059	0.064	0.063
	Welfare state transfers		0.010***	0.011***
			0.002	0.002

Household income				-0.006***	-0.004***
				0.001	0.001
CV of Income				0.765***	0.840***
				0.063	0.064
Net Worth					-0.002***
					0
Unsecured Debt					0.002***
					0
Constant	-1.702***	-1.931***	-1.398***	-1.960***	-2.459***
	0.021	0.024	0.208	0.223	0.227
N	24969	24969	24969	23973	23973

Table C.4 Logistic Regression Estimates For Income Spikes

		Model 1	Model 2	Model 3	Model 4	Model 5
		b/se	b/se	b/se	b/se	b/se
Income Spikes	No income spike	0	0	0	0	0
		.	.	.	.	.
	Income spike	0.547***	0.526***	0.398***	0.114*	0.204***
		0.049	0.05	0.051	0.055	0.056
Race	White		0	0	0	0
			.	.	.	.
	Black		0.907***	0.566***	0.479***	0.380***
			0.056	0.06	0.06	0.061
	Asian		0.033	0.141	0.119	0.091
			0.103	0.107	0.108	0.109
	Other		0.750***	0.598***	0.525***	0.450***
			0.102	0.103	0.105	0.105
	Hispanic		0.814***	0.373***	0.311***	0.229***
			0.06	0.067	0.067	0.067
Education	Less than HS			0	0	0
				.	.	.
	High school			-0.276***	-0.198**	-0.161*
				0.068	0.069	0.069
	Some College			-0.432***	-0.287***	-0.220**
				0.067	0.067	0.068
	BA			-1.144***	-0.826***	-0.705***
				0.081	0.083	0.084
	BA +			-1.375***	-0.923***	-0.784***

		Model 1	Model 2	Model 3
		0.094	0.098	0.099
Gender	Male	0	0	0
		.	.	.
	Female	0.158***	0.123**	0.121**
		0.04	0.04	0.04
	Age	0.030***	0.053***	0.067***
		0.008	0.008	0.008
	Age squared	-0.000***	-0.001***	-0.001***
		0	0	0
	Number of children	0.108***	0.098***	0.109***
		0.022	0.022	0.022
Marital Status	Married, spouse present	0	0	0
		.	.	.
	Married, spouse absent	0.366*	0.164	0.068
		0.152	0.154	0.153
	Widowed	0.353***	0.208**	0.103
		0.08	0.079	0.081
	Divorced	0.533***	0.311***	0.202***
		0.056	0.059	0.06
	Separated	0.735***	0.465***	0.355**
		0.111	0.112	0.112
	Never married	0.511***	0.266***	0.211***
		0.059	0.061	0.061
	Welfare state transfers		0.013***	0.013***
			0.002	0.002
	Household income		-0.008***	-0.006***
			0.001	0.001
	Net Worth			-0.002***

					0
Unsecured Debt					0.002***
					0
Constant	-1.675***	-1.909***	-1.814***	-1.739***	-2.220***
	0.021	0.025	0.207	0.209	0.213
N	24969	24969	24969	24946	24946

Table C.5 Logistic Regression Estimates For Additional Children

		Model 1	Model 2	Model 3	Model 4	Model 5
		b/se	b/se	b/se	b/se	b/se
Event	No additional kids	0	0	0	0	0
		.	.	.	.	.
	Additional kids	0.407***	0.353***	0.206***	0.137*	0.087
		0.057	0.058	0.061	0.066	0.066
Race	White		0	0	0	0
			.	.	.	.
	Black		0.904***	0.560***	0.517***	0.404***
			0.056	0.059	0.063	0.063
	Asian		0.041	0.152	0.113	0.085
			0.102	0.107	0.112	0.113
	Other		0.742***	0.591***	0.500***	0.413***
			0.102	0.103	0.109	0.11
	Hispanic		0.813***	0.372***	0.340***	0.251***
			0.06	0.067	0.07	0.07
Education	Less than HS			0	0	0
				.	.	.
	High school			-0.288***	-0.243***	-0.190**
				0.068	0.071	0.071
	Some College			-0.445***	-0.315***	-0.231***
				0.067	0.07	0.07
	BA			-1.157***	-0.845***	-0.695***
				0.081	0.085	0.086
	BA +			-1.389***	-0.972***	-0.798***

Category	Variable			
		0.094	0.1	0.101
Gender	Male	0	0	0
		.	.	.
	Female	0.162***	0.121**	0.121**
		0.04	0.042	0.042
	Age	0.029***	0.057***	0.072***
		0.008	0.008	0.008
	Age squared	-0.000***	-0.001***	-0.001***
		0	0	0
	Number of children	0.099***	0.095***	0.105***
		0.022	0.023	0.023
Marital Status	Married, spouse present	0	0	0
		.	.	.
	Married, spouse absent	0.398**	0.148	0.065
		0.154	0.163	0.162
	Widowed	0.356***	0.218**	0.096
		0.08	0.081	0.082
	Divorced	0.547***	0.312***	0.188**
		0.056	0.06	0.061
	Separated	0.771***	0.475***	0.356**
		0.11	0.118	0.118
	Never married	0.533***	0.219***	0.152*
		0.059	0.064	0.063
	Welfare state transfers	0.014***	0.015***	
		0.002	0.002	
	Household income	-0.007***	-0.005***	

	(1)	(2)	(3)	(4)	(5)
				0.001	0.001
CV of Income				0.767***	0.849***
				0.064	0.064
Net Worth					-0.002***
					0
Unsecured Debt				0.002***	
					0
Constant	-1.631***	-1.862***	-1.716***	-2.223***	-2.688***
	0.02	0.024	0.208	0.222	0.226
N	24969	24969	24969	23973	23973

Table C.6 Logistic Regression Estimates For Moving

		Model 1	Model 2	Model 3	Model 4	Model 5
		b/se	b/se	b/se	b/se	b/se
Moving	No moving	0	0	0	0	0
		.	.	.	.	.
	Moved	0.681***	0.629***	0.384***	0.323***	0.265***
		0.051	0.052	0.056	0.059	0.059
Race	White		0	0	0	0
			.	.	.	.
	Black		0.885***	0.558***	0.515***	0.403***
			0.056	0.059	0.063	0.063
	Asian		0.036	0.155	0.116	0.087
			0.103	0.107	0.112	0.113
	Other		0.698***	0.572***	0.485***	0.402***
			0.102	0.103	0.109	0.11
	Hispanic		0.812***	0.381***	0.348***	0.259***
			0.06	0.066	0.07	0.07
Education	Less than HS			0	0	0
				.	.	.
	High school			-0.274***	-0.235**	-0.185**
				0.068	0.071	0.071
	Some College			-0.442***	-0.312***	-0.232***
				0.067	0.07	0.07
	BA			-1.157***	-0.847***	-0.700***
				0.081	0.085	0.086
	BA +			-1.376***	-0.965***	-0.794***

		0.095	0.1	0.101
Gender	Male	0	0	0
		.	.	.
	Female	0.158***	0.118**	0.118**
		0.04	0.042	0.042
	Age	0.038***	0.066***	0.078***
		0.008	0.009	0.009
	Age squared	-0.001***	-0.001***	-0.001***
		0	0	0
	Number of children	0.113***	0.107***	0.114***
		0.022	0.023	0.023
Marital Status	Married, spouse present	0	0	0
		.	.	.
	Married, spouse absent	0.364*	0.124	0.045
		0.155	0.164	0.163
	Widowed	0.355***	0.220**	0.1
		0.08	0.08	0.082
	Divorced	0.516***	0.288***	0.170**
		0.056	0.06	0.061
	Separated	0.726***	0.441***	0.330**
		0.11	0.118	0.117
	Never married	0.512***	0.207**	0.144*
		0.059	0.064	0.063
	Welfare state transfers	0.014***	0.014***	
		0.002	0.002	
	Household income	-0.006***	-0.005***	
		0.001	0.001	
	CV of Income	0.755***	0.835***	

				0.064	0.064
Net Worth					-0.002***
					0
Unsecured Debt				0.002***	
					0
Constant	-1.684***	-1.910***	-2.002***	-2.498***	-2.909***
	0.02	0.024	0.215	0.23	0.233
N	24969	24969	24969	23973	23973

Table C.7 Logistic Regression Estimates For Marriage

		Model 1	Model 2	Model 3	Model 4	Model 5
		b/se	b/se	b/se	b/se	b/se
Marriage	No change	0	0	0	0	0
		.	.	.	.	.
	Got marriaged	0.441***	0.411***	0.465***	0.198	0.163
		0.122	0.123	0.129	0.144	0.147
Race	White		0	0	0	0
		.	.	.	.	
	Black		-0.338***	-0.229*	-0.191*	-0.135
			0.086	0.091	0.095	0.095
	Asian		0.404	0.344	0.358	0.412
			0.271	0.278	0.302	0.297
	Other		-0.227	-0.144	-0.098	-0.044
			0.168	0.176	0.18	0.18
	Hispanic		-0.031	0.19	0.144	0.18
			0.117	0.121	0.126	0.128
Education	Less than HS			0	0	0
				.	.	.
	High school			0.177	0.108	0.083
				0.117	0.12	0.121
	Some College			0.257*	0.148	0.115
				0.113	0.116	0.117
	BA			0.668***	0.390*	0.319*
				0.144	0.159	0.161
	BA +			1.219***	0.844***	0.742***

		(1)	(2)	(3)	(4)	(5)
				0.185	0.202	0.208
Gender	Male			0	0	0
				.	.	.
	Female			-0.166*	-0.146	-0.126
				0.077	0.079	0.08
	Age			-0.092***	-0.100***	-0.103***
				0.013	0.014	0.014
	Age squared			0.001***	0.001***	0.001***
				0	0	0
	Number of children			-0.101*	-0.101*	-0.109*
				0.046	0.048	0.049
	Welfare state transfers				-0.004	-0.004
					0.004	0.004
	Household income				0.010***	0.008***
					0.002	0.002
	CV of Income				-0.246*	-0.310**
					0.113	0.116
	Net Worth					0.002***
						0
	Unsecured Debt					-0.001
						0.001
	Constant	-0.548***	-0.461***	1.173***	1.231***	1.373***
		0.036	0.045	0.348	0.364	0.365
	N	4449	4449	4449	4308	4308

Table C.8 Logistic Regression Estimates For Assistance from Family and Friends

		Model 1	Model 2	Model 3	Model 4	Model 5
		b/se	b/se	b/se	b/se	b/se
Help from Family and Friends	No help	0	0	0	0	0
		.	.	.	.	.
	Help	-0.704***	-0.693***	-0.595***	-0.533***	-0.518***
		0.094	0.095	0.097	0.1	0.1
Race	White		0	0	0	0
			.	.	.	.
	Black		-0.350***	-0.194*	-0.151	-0.083
			0.072	0.076	0.079	0.079
	Asian		0.214	0.031	0.047	0.093
			0.156	0.165	0.175	0.181
	Other		-0.505***	-0.437**	-0.391**	-0.340*
			0.136	0.142	0.146	0.145
	Hispanic		-0.218**	-0.026	-0.011	0.028
			0.079	0.086	0.087	0.088
Education	Less than HS			0	0	0
				.	.	.
	High school			0.214*	0.14	0.109
				0.088	0.09	0.09
	Some College			0.263**	0.151	0.105
				0.086	0.088	0.089
	BA			0.779***	0.506***	0.415***
				0.107	0.115	0.116
	BA +			1.079***	0.706***	0.597***

Category	Variable			
		0.139	0.148	0.152
Gender	Male	0	0	0
		.	.	.
	Female	-0.146**	-0.127*	-0.118*
		0.056	0.057	0.057
	Age	-0.077***	-0.091***	-0.096***
		0.011	0.012	0.012
	Age squared	0.001***	0.001***	0.001***
		0	0	0
	Number of children	-0.064*	-0.063*	-0.068*
		0.03	0.031	0.031
Marital Status	Married, spouse present	0	0	0
		.	.	.
	Married, spouse absent	-0.454*	-0.3	-0.23
		0.221	0.23	0.228
	Widowed	-0.171	-0.054	0.004
		0.114	0.119	0.12
	Divorced	-0.459***	-0.263**	-0.204*
		0.075	0.08	0.081
	Separated	-0.797***	-0.579***	-0.513***
		0.152	0.157	0.156
	Never married	-0.393***	-0.190*	-0.163
		0.078	0.085	0.086
	Welfare state transfers	-0.008**	-0.007*	
		0.003	0.003	
	Household income	0.007***	0.006***	
		0.001	0.001	
	CV of Income	-0.199*	-0.263**	

				0.091	0.093
Net Worth					0.001***
					0
Unsecured Debt				-0.001	
					0.001
Constant	-0.304***	-0.193***	1.386***	1.421***	1.614***
	0.027	0.033	0.312	0.324	0.325
N	7482	7482	7482	7325	7325

Table C.9 Logistic Regression Estimates For Assistance from Social Services and Non-Profits

		Model 1	Model 2	Model 3	Model 4	Model 5
		b/se	b/se	b/se	b/se	b/se
Help from social services and non-profits	No help	0	0	0	0	0
		.	.	.	.	.
	Help	-0.911***	-0.886***	-0.768***	-0.626***	-0.600***
		0.117	0.118	0.12	0.123	0.123
Race	White		0	0	0	0
			.	.	.	.
	Black		-0.332***	-0.180*	-0.144	-0.076
			0.072	0.076	0.079	0.079
	Asian		0.133	-0.041	-0.017	0.03
			0.158	0.168	0.178	0.183
	Other		-0.528***	-0.458**	-0.409**	-0.358*
			0.137	0.143	0.146	0.146
	Hispanic		-0.231**	-0.045	-0.026	0.013
			0.08	0.087	0.088	0.089
Education	Less than HS			0	0	0
				.	.	.
	High school			0.191*	0.123	0.093
				0.089	0.091	0.091
	Some College			0.254**	0.146	0.101
				0.087	0.089	0.089
	BA			0.767***	0.503***	0.413***

		(1)	(2)	(3)
	BA +	0.107	0.115	0.117
		1.064***	0.707***	0.598***
Gender	Male	0.139	0.149	0.152
		0	0	0
	Female	.	.	.
		-0.141*	-0.127*	-0.118*
	Age	0.056	0.057	0.057
		-0.075***	-0.089***	-0.094***
	Age squared	0.011	0.012	0.012
		0.001***	0.001***	0.001***
	Number of children	0	0	0
		-0.052	-0.054	-0.06
Marital Status	Married, spouse present	0.03	0.031	0.031
		0	0	0
	Married, spouse absent	.	.	.
		-0.472*	-0.31	-0.24
	Widowed	0.223	0.233	0.23
		-0.188	-0.062	-0.004
	Divorced	0.115	0.12	0.121
		-0.465***	-0.267***	-0.207*
	Separated	0.074	0.08	0.081
		-0.804***	-0.585***	-0.519***
	Never married	0.151	0.156	0.156
		-0.398***	-0.193*	-0.166

	(1)	(2)	(3)	(4)	(5)
Welfare state transfers			-0.007*	-0.006*	
			0.079	0.086	0.086
Household income			0.007***	0.006***	
				0.003	0.003
CV of Income			-0.222*	-0.285**	
				0.001	0.001
Net Worth				0.001***	
				0.09	0.092
Unsecured Debt				-0.001	
					0
Constant	-0.312***	-0.201***	1.323***	1.367***	1.561***
	0.027	0.033	0.313	0.326	0.326
N	7482	7482	7482	7325	7325

Table C.10 Logistic Regression Estimates For Job Gain

		Model 1	Model 2	Model 3	Model 4	Model 5
		b/se	b/se	b/se	b/se	b/se
Job Gain	No gain	0	0	0	0	0
		.	.	.	.	.
	Gain	-0.246***	-0.227***	-0.168*	-0.123	-0.116
		0.069	0.069	0.071	0.076	0.076
Race	White		0	0	0	0
			.	.	.	.
	Black		-0.358***	-0.196**	-0.158*	-0.089
			0.071	0.076	0.078	0.079
	Asian		0.162	-0.024	-0.001	0.046
			0.158	0.168	0.178	0.183
	Other		-0.514***	-0.444**	-0.398**	-0.346*
			0.135	0.142	0.146	0.146
	Hispanic		-0.214**	-0.024	-0.01	0.03
			0.079	0.086	0.087	0.088
Education	Less than HS			0	0	0
				.	.	.
	High school			0.216*	0.141	0.109
				0.088	0.09	0.091
	Some College			0.273**	0.157	0.11
				0.086	0.089	0.089
	BA			0.800***	0.520***	0.428***
				0.107	0.115	0.116
	BA +			1.112***	0.732***	0.620***

		0.139	0.149	0.152
Gender	Male	0	0	0
		.	.	.
	Female	-0.156**	-0.137*	-0.128*
		0.056	0.057	0.057
	Age	-0.076***	-0.090***	-0.095***
		0.011	0.012	0.012
	Age squared	0.001***	0.001***	0.001***
		0	0	0
	Number of children	-0.062*	-0.062*	-0.067*
		0.03	0.031	0.031
Marital Status	Married, spouse present	0	0	0
		.	.	.
	Married, spouse absent	-0.492*	-0.328	-0.257
		0.222	0.231	0.229
	Widowed	-0.202	-0.074	-0.014
		0.114	0.119	0.12
	Divorced	-0.482***	-0.280***	-0.218**
		0.074	0.08	0.081
	Separated	-0.816***	-0.589***	-0.521***
		0.151	0.156	0.155
	Never married	-0.408***	-0.199*	-0.171*
		0.078	0.085	0.086
	Welfare state transfers		-0.008**	-0.007*
			0.003	0.003
	Household income		0.007***	0.006***
			0.001	0.001
	CV of Income		-0.203*	-0.269**

				0.091	0.093
Net Worth					0.001***
					0
Unsecured Debt					-0.001
					0.001
Constant	-0.323***	-0.213***	1.336***	1.367***	1.563***
	0.029	0.034	0.311	0.323	0.324
N	7482	7482	7482	7325	7325

Table C.11 Logistic Regression Estimates For Upward Income Spikes

		Model 1	Model 2	Model 3	Model 4	Model 5
		b/se	b/se	b/se	b/se	b/se
Income Spikes	No income spike	0	0	0	0	0
		.	.	.	.	.
	Income spike	-0.092	-0.094	-0.048	-0.197*	-0.183*
		0.07	0.07	0.071	0.077	0.078
Race	White		0	0	0	0
			.	.	.	.
	Black		-0.368***	-0.203**	-0.153*	-0.089
			0.071	0.076	0.077	0.078
	Asian		0.16	-0.027	-0.038	0.001
			0.157	0.168	0.176	0.18
	Other		-0.526***	-0.453**	-0.390**	-0.344*
			0.136	0.142	0.144	0.144
	Hispanic		-0.220**	-0.026	0.011	0.049
			0.079	0.086	0.087	0.088
Education	Less than HS			0	0	0
				.	.	.
	High school			0.211*	0.14	0.112
				0.089	0.09	0.09
	Some College			0.268**	0.158	0.119
				0.086	0.088	0.089
	BA			0.801***	0.511***	0.427***
				0.107	0.115	0.116
	BA +			1.103***	0.733***	0.638***

		0.138	0.148	0.152
Gender	Male	0	0	0
		.	.	.
	Female	-0.156**	-0.119*	-0.108
		0.056	0.056	0.057
	Age	-0.075***	-0.091***	-0.096***
		0.011	0.012	0.012
	Age squared	0.001***	0.001***	0.001***
		0	0	0
	Number of children	-0.063*	-0.060*	-0.065*
		0.03	0.03	0.03
Marital Status	Married, spouse present	0	0	0
		.	.	.
	Married, spouse absent	-0.492*	-0.281	-0.213
		0.221	0.224	0.222
	Widowed	-0.197	-0.042	0.01
		0.114	0.118	0.119
	Divorced	-0.481***	-0.281***	-0.230**
		0.074	0.08	0.081
	Separated	-0.816***	-0.562***	-0.505**
		0.151	0.154	0.154
	Never married	-0.411***	-0.174*	-0.156
		0.078	0.084	0.085
	Welfare state transfers		-0.008**	-0.007*
			0.003	0.003
	Household income		0.008***	0.007***
			0.001	0.001
	Net Worth			0.001***

					0
Unsecured Debt					-0.001**
					0
Constant	-0.354***	-0.237***	1.292***	1.263***	1.419***
	0.028	0.035	0.312	0.318	0.319
N	7482	7482	7482	7463	7463

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