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PRELIMINARY DRAFT

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Abstract

Among consumers who file for bankruptcy, African Americans file Chapter 13 petitions at substantially higher rates than other racial groups. Some have hypothesized that the difference is attributable to discrimination by attorneys. We show that the difference may be attributable, in substantial part, to a selection effect: Among distressed consumers, African Americans have longer commutes to work, rely more heavily on cars for the commute, and therefore have greater demand for a bankruptcy process (Chapter 13) that allows them to retain their cars. We begin by showing that African Americans tend to have longer commuting times than other consumers and, when they do have longer commuting times, they also have relatively high Chapter 13 filing rates. We show this using data from Atlanta, Chicago, and Memphis, each of which has been identified as a location with over-representation of African Americans in Chapter 13. We then test our hypothesis that African Americans’ reliance on automobiles is a cause of their substantially higher use of Chapter 13. We do this using data from Chicago, where the city recently implemented an aggressive program to collect parking debts by seizing the cars and suspending the licenses of consumers with large debts. We show that this city-wide program disproportionately affected African Americans and, as a result, their share of Chapter 13 filings increased substantially. Although we do not disprove the possibility of discrimination by attorneys, our data show that selection effects are potentially as important in explaining patterns in Chapter 13 cases.

JEL classification: D14, D12, G33, K35, R20
Keywords: Bankruptcy, Race, Chapter 13, Household Financial Fragility

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I Introduction

African Americans account for a disproportionate share of Chapter 13 consumer bankruptcy cases: Among those who file for bankruptcy, African Americans are substantially more likely to select Chapter 13 over Chapter 7 than white debtors. This has been documented in prior scholarship by Braucher, Cohen and Lawless (2012), and recently been the focus of widespread media coverage in the New York Times, ProPublica, and elsewhere. The apparent “racial sorting” into Chapter 13 is worrisome because a Chapter 13 filing is substantially more costly, more time consuming, and less likely to discharge debts than a Chapter 7 filing. Attorney fees are over twice as expensive ($2,600 instead of $1,000), payments to unsecured creditors are substantially larger (because Chapter 13 trustees demand minimum recoveries to these creditors), a Chapter 13 plan takes three to five years to complete (Chapter 7 cases complete within about 4 months), and around two-thirds of Chapter 13 cases terminate without a discharge of debts (this happens in less than four percent of Chapter 7 cases). The commonly-cited reason for using Chapter 13, instead of Chapter 7, is to shelter assets that would otherwise be liquidated in Chapter 7. Chapter 13 allows a consumer to discharge debt by giving up future income (all disposable income earned over a three to five year period); Chapter 7 allows the consumer to discharge debt by giving up assets, such as cars and houses. Chapter 13 is, therefore, often described as a device for “saving your home,” as argued by White and Zhu (2010). Yet this commonly-cited explanation for preferring Chapter 13 seem implausible for the vast majority of filings by African Americans, most of whom have few or no assets vulnerable to liquidation in Chapter 7. A more plausible explanation for these patterns is racial discrimination by bankruptcy attorneys, who may be more likely to “steer” African Americans into Chapter 13 than their white counterparts. Braucher, Cohen and Lawless (2012) present experimental evidence consistent with this hypothesis.

This paper explores an alternative hypothesis: Financially distressed African Americans may be more likely to benefit from Chapter 13 than other consumers. Chapter 13 allows a debtor to regain possession of property that has been seized by creditors (or maintain possession of property that will be seized). This property includes traditional assets,
such as automobiles, as well as driver’s licenses and other permits that have been suspended by a government agency due to nonpayment of debts. If financially distressed African American debtors are more dependent upon automobiles for commuting to work or accessing amenities such as supermarkets, as the spatial mismatch literature suggests (see, e.g., Andersson et al. (2017)), they will perceive a higher benefit from a Chapter 13 filing when their automobiles are (or may be) seized by creditors. Similarly, if African Americans are more likely to have their licenses seized by government agencies (due to unpaid traffic debts), they will for the same reason perceive a higher benefit from Chapter 13 than similarly distressed non-African American debtors.

African Americans, in other words, may display a stronger preference for Chapter 13 than other similarly distressed debtors because they differ from other debtors in ways that are relevant to the bankruptcy filing decision. In this paper, we explore this hypothesis in two ways. We start by documenting strong correlations between race, distance to work or amenities such as supermarkets (“distance”), and the propensity to choose Chapter 13 over Chapter 7. We document these correlations for several cities—Atlanta, Chicago, Memphis—that have been identified in prior work, such as Braucher, Cohen and Lawless (2012), as areas where racial sorting is particularly apparent.

We turn next to demonstrating a causal relationship between distance and the propensity to select Chapter 13. If distance matters more for financially distressed African Americans than for other distressed consumers, African Americans should be more likely to choose Chapter 13 in response to a government policy that seizes the vehicles or driver’s licenses of distressed consumers. A policy like this was implemented by Chicago beginning in 2011. That year, immediately after Rahm Emanuel became Mayor, the City announced that it would take steps to seize the vehicles and suspend the licenses of individuals with outstanding parking and traffic debts. Although the policy increased vehicle seizures and license suspensions by the same percentage in all zip codes (suggesting a race-neutral policy), it disproportionately impacted African Americans, who are poorer and more likely to live in neighborhoods with long commutes to work or amenities such as supermarkets.

We first document the effect of this “Emanuel policy” using individual-level data from Cook County and applying a difference-in-difference strategy, comparing African Ameri-
cans to non-African Americans. We then turn to a zip-level dataset that compares Cook County zips to propensity-matched zips throughout the country. This triple-difference strategy compares comparing African Americans to non-African Americans, in and outside Cook County. Both approaches yield the same conclusion: The Emanuel policy induced about a ten percent increase in Chapter 13’s share of bankruptcy filings among African American debtors, relative to other debtors. We interpret this as evidence that African Americans differ from other consumers along a dimension—distance—that is highly relevant to the Chapter 13 filing decision.

We explore this interpretation by subsetting on a group of debtors who are highly unlikely to benefit from filing for Chapter 13 due to their low asset values and annual income. Among these “low benefit” debtors, Chapter 13’s share of bankruptcy filings increased sharply after the Emanuel policy, with much larger increases among African Americans (Chapter 13’s share increases from about 30 percent to over 60 percent). Still subsetting on this “low benefit” group, we single out debtors who are highly likely to see a benefit from Chapter 13 after the Emanuel policy. Specifically, we identify debtors who list the word “driver” in their occupations. We compare these “drivers” to other low-benefit debtors and find a substantially larger increase in Chapter 13’s share among drivers than among the other debtors. Importantly, we do not observe a difference between African American drivers and other drivers, consistent with our hypothesis that access to transportation may explain why we see racial differences in Chapter 13 filing propensities. Once we condition on debtors with plausibly similar needs for access to transportation, racial differences attenuate.

We obtain further evidence consistent with this interpretation when we subset on consumers who file for bankruptcy without legal representation. These consumers are not well-informed about the differences between Chapters 7 and 13. Consistent with this lack of information, we observe an equally large post-Emanuel spike in both Chapter 13 and Chapter 7 filings in this group. Unlike consumers who are represented by attorneys, “pro se” debtors—regardless of race—are not more likely to choose Chapter 13 instead of Chapter 7 in response to the change in city policy. We view this as evidence that the city policy induced an increase in Chapter 13 filings because it increased the cost of commuting to
work or supermarkets, not simply because it increased total debt. Consumer with better information (those represented by lawyers) were more likely to choose Chapter 13.

This paper is organized as follows. Section II presents background on bankruptcy law and prior research on the relationship between distance and race. We describe our data in Section III and present preliminary correlations in Section IV. The next sections describe the natural experiment presented by the Emanuel policy (Section V), specify our empirical strategy for identifying the effect of this policy on the propensity to file for Chapter 13 (Section VI), and present our findings (Section VII). Section VIII concludes.

II  Background: Bankruptcy, Race, and Distance

II.A  Bankruptcy

The United States Bankruptcy Code offers two primary options for distressed consumers seeking to discharge their debts. One is Chapter 7, which offers the consumer a discharge of most debts if the consumer agrees to liquidate “non-exempt” assets and distribute the proceeds to creditors. Every state “exempts” certain assets, which the consumer can keep even after debts are discharged. In Illinois, for example, an unmarried consumer can exempt up to $15,000 of home equity, $2,400 of the value of a motor vehicle, and $4,000 of any personal property (exemption limits double for married couples who file a joint bankruptcy petition). The latter amount can be applied to the motor vehicle, allowing the consumer to exempt up to $6,400 of the vehicle. Thus, if the consumer owns a car that is worth less than $6,400 (“exemption limit”), and there is no lien on the car, the consumer can keep the vehicle even after her debts are discharged in Chapter 7. If the car is worth more than the exemption limit, it will be sold and the exempt value distributed to the consumer. If the car has a lien on it, it will be sold, the proceeds paid to the secured creditor, and any excess paid to the consumer, up to the exemption limit.

The other primary option for a distressed consumer is Chapter 13, which offers a discharge if the consumer distributes all of her disposable income to creditors for five years (three years if the consumer has sufficiently low income). The Chapter 13 discharge is
broader than the one offered by Chapter 7. The most important difference, for purposes of
this paper, is that Chapter 13 discharges civil fines, such as traffic and parking debts, some-
thing not possible in Chapter 7. A consumer who files for Chapter 13 can also retain all of
her assets. If a creditor (including a government agency) has seized an asset, the consumer
can demand its return. Although all assets—exempt or non-exempt— are retained, it still
matters whether the assets exempt. The value of non-exempt assets determines the mini-
mum payoff that the consumer must distribute to creditors during the five-year repayment
period.¹

The principal advantage of Chapter 13 is, therefore, the ability to retain assets. Prior
scholarship, such as White and Zhu (2010), has focused on the ability to retain a home,
but retaining a vehicle may be just as important. Additionally, a consumer can retain non-
conventional “property” such as a drivers license, if it was seized on account of unpaid
debts. Thus, for a car owner, Chapter 13 has three distinct advantages relative to Chapter
7: (i) retention of the vehicle, (ii) recovery of a suspended license, and (iii) discharge of
debts arising from parking and traffic fines.²

The principal disadvantages of Chapter 13 are its cost and success rate. Relative to
Chapter 7, it is substantially more expensive, as discussed in Morrison (2016). Attorney
fees average about $1,000 in Chapter 7 but $2,600 in Chapter 13 (with a very large standard
deviation). Additionally, consumers often must pay substantially more to creditors (over
the course of a five-year repayment period) in Chapter 13 than in Chapter 7. Although it
costs more than Chapter 7, Chapter 13 is less likely to yield a discharge of debt. Around
two-thirds of Chapter 13 cases terminate prior to discharge, as reported in Sullivan, Warren
and Westbrook (2001), something true in a small percent of Chapter 7 cases. For a car
owner, then, Chapter 13 is a relatively high-cost, low-expected-success style of bankruptcy.

¹More background on Chapter 13, and ways it differs from Chapter 7, is available in Morrison and
Uettwiller (2017).
²Technically, it may be possible to recover a suspended driver’s license by filing for Chapter 7, which
would discharge other debts, thereby freeing up cash to pay parking and traffic fines. This strategy would
be feasible only for debtors with sufficient cash flow to pay the fines. Because the average debt owed to the City
of Chicago is over $1,000 among Chapter 13 filers and about 40% of these filers have income below 150% of
the poverty line, this strategy seems infeasible for a large proportion of Chapter 13 filers. Additionally, only
X% of Chapter 7 filers have debts to the City of Chicago, suggesting that the strategy is rarely employed by
these filers. [CHECK THIS]
II.B Distance and Race

A large literature in sociology and (to a lesser extent) in economics has explored the extent to which distance to work or other amenities (such as supermarkets) is greater for the poor, especially African Americans. A persistent theme in this “spatial mismatch” literature is that African American households face substantial disadvantages in commuting to work. As summarized in O’Regan and Quigley (1999) and Kneebone and Holmes (2015), employment rates depend on commuting time: People living in long-commute neighborhoods are more likely to be unemployed, and African Americans are substantially more likely to live in long-commute neighborhoods. Additionally, a recently unemployed consumer is more likely to find new employment if she lives closer to available jobs, and the effect is substantially larger for African Americans and those living in high-poverty area, as reported in Andersson et al. (2017).

III Data

We gather bankruptcy data from two sources. Nationwide data are available from the Federal Judicial Center (FJC) “Integrated Database”, which provides information about the consumer’s address (zip code), basic information about her capital structure (the values of real and personal property and secured and unsecured debt), and case characteristics, such as filing date and outcome. The FJC data cover the period 2008 through 2016. We obtain additional information about bankruptcy cases filed in the Northern District of Illinois (NDIL), which encompasses Cook County and several nearby counties. We downloaded and scraped every petition for every bankruptcy case from 2008 to present. For Chapter 13 cases, we also downloaded and scraped the docket sheet, proofs of claim filed by the City of Chicago, BNC Certificates of Notice (providing a list of creditors), proposed repayment plans. Using these NDIL data, we can identify the name and address of each debtor, the debtor’s occupation and work address, and whether any debt was owed to the City of Chicago and whether the City took steps to seize the debtor’s car or suspend her license.
We link the bankruptcy data to Census data on racial composition and commuting times by census tract and zip code tabulation area (ZCTA) and Food and Drug Administration (FDA) data on food deserts, defined as census tracts in which at least a third of the tract’s population resides more than a half-mile from a supermarket or large grocery store.\(^3\)

We also link our bankruptcy data to monthly, zip-level data on traffic and parking enforcement in Chicago. Through a series of FOIA requests, we obtained data on the number of parking and automated enforcement violations by month by zip from January 2008 through mid-2016. Automated enforcement violations are triggered when a driver fails to stop for a red light, or speeds, and the violation is caught by a camera. We also obtained the number of towed vehicles, aggregate outstanding debt related to traffic and parking violations, number of notices of automobile seizure, and number of notices of license suspension by zip by month for the same period.

Finally, we assembled several databases to impute the race of bankruptcy filers based on their name and address. Data on race by surname is available from the 2000 census; race by first name is available from a database assembled by the OCC using lending records from a large number of financial institutions; and race by census tract is available from the 2010 census. We combine these sources, applying the same algorithm recommended by the Consumer Financial Protection Bureau (2014), to estimate the probability that a person in our data is African American. We identify a person as African American if our algorithm predicts a probability greater than seventy percent (our results do not change if we use a higher cutoff).\(^4\)

**IV Preliminary Evidence**

We begin by documenting the correlation between distance, race, and bankruptcy filing rates in cities that have been identified previously as areas where African Americans

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\(^3\)The FDA provides an alternate definition, which identifies tracts in which over a third of the population resides more than a mile from a supermarket or large grocery store. These definitions apply only to non-rural tracts. For rural tracts, which are not relevant to this paper, the FDA uses a longer travel time (e.g., 10 miles) to identify food deserts.

\(^4\)Our results are similar, but weaker and less precisely estimated, when we impute race based solely on first and last name.
account for a disproportionate share of Chapter 13 filings, relative to Chapter 7. Tables I, II, and III present statistics for the Northern District of Georgia (Atlanta), Northern District of Illinois (Chicago), and Western District of Tennessee (Memphis). The first two cities are identified by Braucher, Cohen and Lawless (2012); the last is identified in a recent Propublica report. These tables draw on a linkage between FJC bankruptcy data, Census zip-level data, and FDA food desert data. Within each table, we stratify zips by distance from work and supermarkets. Distance from work is defined as the percentage of zip residents who travel more than 45 minutes to work. Distance from supermarkets (“Food Desert”) is defined as the percentage of residents who live at least one mile from a supermarket. We rank zip codes by the percentage of residents who either travel at least 45 minutes to work or live in a food desert. Each table reports means for each quintile of this “Distance” ranking.

In all judicial districts, Chapter 13’s share of bankruptcy filings (“% Chapter 13”) increases nearly monotonically as we move from the first to fifth quintile, consistent with the hypothesis that Chapter 13 tends to be more attractive to financially distressed consumers when they live in places where cars are likely an important means of accessing work and amenities. The three tables also show that African Americans are much more likely to live in zips have high Distance rankings. In the Northern District of Georgia, for example, African Americans account for less than five percent of zips in the first quintile but over fifty percent of zips in the fifth. Similarly large racial differences can be seen in Tables II and III. This is consistent with the hypothesis that African Americans are (a) more likely to live in zips where cars are likely an important means of transportation and, as a result, (b) more likely to file for Chapter 13 when they become financially distressed.

These correlations are meant to illustrate a phenomenon—the correlation of distance, race, and Chapter 13 filing rates—that is apparent in multiple jurisdictions. We turn now to testing whether this correlation reflects a causal relationship between distance and Chapter 13 filing rates among financially distressed households.

V A NATURAL EXPERIMENT FROM CHICAGO

Rahm Emanuel became Chicago’s Mayor in May 2011. In October of that year, he issued a press release announcing that “his administration will implement a new aggressive
approach to improve collections owed to the city, including millions of dollars in unpaid parking tickets, unpaid fees, fines and penalties. The reforms are anticipated to bring in up to an additional $33 million in collections in 2012.” Emanuel (2011a). The press release explained that, in the past, billing and collection was fragmented across several city departments. The new policy would, among other things, “improve collections by consolidating debt types for individuals who owe for more than one type. He will also call for contracted collection agencies to increase rates to recover $5 million in debts. For example, there is one Chicagoan who owes $87,000 in parking tickets on four different license plates that go back to 2005, $70,000 on one plate alone. This case is now in the hands of a city law firm.”

The process for enforcing parking and traffic debt in Chicago has several stages. A driver first receives a notice of violation after the City detects a parking or traffic violation. If the driver does not contest the violation within 21 days, she receives a “notice of determination,” which represents a debt to the City. If the debt is not paid within the time specified, the debt is doubled and the drivers is sent a “notice of final determination,” which may add additional fines and penalties to the original debt. If a driver accumulates three or more “final determinations” (or if two determinations are at least a year old), the city will send a “notice of seizure” (SEIZ), which alerts the driver that the City will boot and impound her car if she does not pay the debt within 21 days. The car will be impounded by the City until it receives payment of the outstanding debt, plus towing and daily storage fees. If the vehicle is not redeemed within 15 days, the City can sell or destroy it. If a driver accumulates final determinations for at least ten parking tickets or five automated camera violations, the City will send a “notice of impending driver’s license suspension” (DLS). If the driver does not pay outstanding debts, the City will alert the State of Illinois that it should suspend the driver’s license. The license remains suspended until the City alerts the State that the outstanding debt has been paid.

There are, therefore, two principal tools by which the City enforces parking and traffic debt: vehicle seizures (SEIZ) and license suspensions (DLS). Figure IA presents number of SEIZ and DLS issued by Chicago, by quarter, from 2008 through 2016. There is a sharp change in trend for DLS, which had been declining prior to 2011. SEIZ remain relatively
It appears, then, that the City’s policy primarily operated along the dimension of license suspensions. The trend in DLS is mirrored in total debt (DEBT) in Panel A of Figure I, which shows a sharp increase after 2011. This increase is not attributable to an increase in parking or traffic tickets, as Panel B shows (our data here, however, only begin in 2010). It appears instead that the City is increasingly recognizing long-overdue debts. One puzzling feature of Figure IA is that the increase in DLS and DEBT begins in the month when Mayor Emanuel took office (May 2011), not when he announced his change in policy (October 2011), suggesting that enforcement escalated in advance of the announcement.

The post-Emanuel policy change had a much larger impact on African Americans than other races. Figure IIA plots the difference between per capita DLS in African American zip codes and per capita DLS in other zip codes. African American zips are defined as those where at least seventy percent of residents are African American according to the 2010 Census. Figure IIA also plots the same per capita difference for SEIZ and DEBT. The pattern is similar here, but shows that the post-Emanuel increase in DLS was substantially larger for African Americans. These patterns are not attributable to differential enforcement in the Chicago policy, as Figure IIB shows: We observe the same quarterly percentage increase in DLS in both African American and non-African American zips. The Chicago policy, in other words, was facially neutral but had a much larger effect on the driver’s licenses of African Americans than other Chicago residents. We therefore view the policy as a natural experiment, causing a plausibly-exogenous increase in the probability that an African American resident loses the ability to commute by car.

VI Empirical Strategy

We employ two difference-in-difference strategies for estimating the effect of the Chicago policy—a cross-sectional regression at the individual level and a panel regression at the zip level. At the individual level, we estimate the probability that a consumer chooses Chapter 13, conditional upon filing for bankruptcy. That is, we subset on consumers who filed for bankruptcy and estimate the probability that the consumer choose Chapter 13 instead of Chapter 7. Our treatment group consists of consumers identified as African American.
(“AA”); our control group includes all other consumers. Because we are testing the effect of a change in policy, we define the treatment period as the months beginning when Rahm Emanuel assumed the office of Mayor (“Post-Emanuel”). Although Emanuel assumed office in May 2011, but formally announced a policy change in October 2011, the FOIA data show a sudden increase in license suspensions beginning in May (we obtain comparable results if we drop all of 2011 from the analysis). Our baseline DD specification is therefore:

$$B_i = AA_i + Post-Emanuel + AA_i \cdot Post-Emanuel + \epsilon_i$$ \hspace{1cm} (1)

where $B$ is equal to 1 if the consumer filed a Chapter 13 petition and 0 if she filed for Chapter 7. In regressions reported below, we explore the robustness of our results to the inclusion of individual-level covariates and zip and year fixed effects.

An alternative strategy is to estimate, at the zip level, Chapter 13’s share of bankruptcy filings during the months before and after Emanuel took the office of Mayor. The advantage of this approach is that it allows us to use data from other counties as a control group (we do not have individual-level data for counties outside Cook). We can, in other words, run a triple-difference regression that estimates the change in Chapter 13’s share (i) after Mayor Emanuel took office (ii) among African American zip codes relative to non-African American zip codes (iii) in Cook County zips relative to zips in counties unaffected by the change in Mayor Emanuel’s policy (“Control Zips”). This specification is estimated by the following equation:

$$O_{zq} = AA_z + Post-Emanuel_q + Cook_z + AA_z \cdot Cook_z + AA_z \cdot Post-Emanuel_q + Post-Emanuel_q \cdot Cook_z + AA_z \cdot Post-Emanuel_q \cdot Cook_z + \epsilon_{zq}$$ \hspace{1cm} (2)

where $O_{zq}$ is Chapter 13’s share of bankruptcy filings in zip $z$ during quarter $q$; $AA_z$ indicates whether the zip code is predominantly African American; $Cook_z$ identifies zips in Cook County; and $Post-Emanuel_q$ identifies quarters after Mayor Emanuel took office. We define a zip code as “African American” if African Americans account for at least seventy percent of zip population.
We select Control Zips using nearest-neighbor matching: For each Cook County zip, we use propensity-score matching to select three zips outside Cook County ("nearest neighbor") that are most similar in 2010 (the year before Mayor Emanuel took office) along the following dimensions: Chapter 13’s share of bankruptcy filings, per capita Chapter 13 filing rate, percent of residents who commute more than 45 minutes to work, percent of residents living within a food desert, percent African American, percent Hispanic, median household income, and percent of population with income less than $15,000 per year (an approximation for the poverty line).

VII Results

We hypothesize that Mayor Emanuel’s policy induced an increase in the Chapter 13 filing rate of distressed African Americans, relative to non-African Americans, in Cook County. This hypothesis seems to find modest support in the raw data, displayed in Figure IIIA, which plots Chapter 13’s share of bankruptcy filings among African Americans and other races from 2008 through 2017. Although the difference between African American and other debtors widens after 2010, the change is small. The difficulty here is that we are plotting a ratio, and both the numerator (Chapter 13) and denominator (total bankruptcies, including Chapter 7) are moving. In particular, as Figure IIIB shows, Chapter 7 filings are falling steadily as the economy recovers from the Great Recession: Chapter 7 filings begin to decline after first quarter of 2010, which is when the Illinois unemployment rate peaked, as discussed in Illinois Department of Employment Security (2017). Thus, while we seek to identify an effect on Chapter 13’s share of filings beginning in 2011, we face a confound in the form of a secular trend in our data, affecting Chapter 7 filings beginning in 2010. Additionally, this secular trend is much more pronounced for non-African American consumers, as Figure IV illustrates.

One simple way to handle this secular trend is to regress the probability of filing for Chapter 13, conditional upon filing for bankruptcy, on a time trend centered on first quarter of 2010, which is when the Illinois unemployment rate peaked, as discussed in Illinois Department of Employment Security (2017). Thus, while we seek to identify an effect on Chapter 13’s share of filings beginning in 2011, we face a confound in the form of a secular trend in our data, affecting Chapter 7 filings beginning in 2010. Additionally, this secular trend is much more pronounced for non-African American consumers, as Figure IV illustrates.

5We have verified that our results are virtually the same (but less precise) when we limit the Control Zips to one nearest-neighbor for each Cook County zip. Our results are also the same when we exclude Cook County zips with propensity scores that fall outside the maximum and minimum of the Control Zip propensity scores.
2010 (i.e., for subsequent quarters, the time trend is counting up; for previous quarters, it is counting down). The residuals from this regression represent a “detrended” measure of Chapter 13’s share of bankruptcy filings. We plot these in Figure V, which shows an upside-down “U” shape for Chapter 13’s share of African American filings, increasing in 2011 and gradually returning to 2010 levels by late 2017. Among other races, we see a small increase followed by decrease during the same period. We view these plots as evidence consistent with our hypothesis, which we now test more formally.

VII.A Individual-Level Regressions

Table IV estimates our baseline model in equation 1. We begin in Column (1) with a model that includes only a control for the debtor’s race, confirming the well-documented phenomenon that African Americans are substantially more likely than other bankruptcy filers to select Chapter 13. Specifically, among those who file for bankruptcy, African Americans are 27 percentage points more likely to file for Chapter 13. To put this into perspective, it may be helpful to note that, in 2010, Chapter 13 cases accounted for 47 percent of bankruptcy filings by African Americans and 22 percent of filings by other races.

Column (2) estimates equation 1 without any other controls. The coefficient of interest, Post-Emanuel x African American, is the difference-in-difference (DD) estimator and indicates that the propensity of African Americans to file for Chapter 13, relative to other racial groups, increased by four percentage points after Mayor Emanuel implemented the new policy (an 8.5 percent increase relative to the mean Chapter 13 filing rate among African Americans in 2010). We add a battery of case controls in Column (3), including (log) current and average monthly income, real and personal property, and secured and unsecured debt as well as a time trend centered on the first quarter of 2010 (the peak of unemployment in Illinois). We see attenuation in the magnitude of the coefficient for African American but the DD coefficient remains virtually unchanged.

Columns (4) and (5) add zip and year fixed effects. Zip fixed effects—INCLUDED in Column (4)—account for persistent geographic-based differences, including travel time to work and living in a food desert. Once we account for these differences, there is a small and
marginally insignificant difference between the Chapter 13 filing rates of African Americans and other races (the coefficient falls from 0.19 in Column 2 to 0.033 in Column 4). This suggests that at least some of the racial difference in Chapter 13 filing rates is due to geography. Of course, geography is highly correlated with race, especially in Chicago, where a number of zip codes have African American populations that account for over 90% of the population. The inclusion of fixed effects, however, yields a larger and more precisely estimated DD effect, showing that Chapter 13 filing rates increased about five percent, relative to other racial groups, after the Emanuel Policy (a 10.6 percent increase relative to the 2010 filing rate). When we add year fixed effects in Column (5), we are identifying the effect of the Policy using intra-year variation (across quarters). Nonetheless, the DD interaction is largely unaffected.

VII.B Zip-Level Regressions

Our individual-level data come exclusively from Cook County. We therefore cannot rule out the possibility that our results reflect a general trend, occurring throughout the country, independent of the Emanuel Policy. We address this possibility using zip-level data on bankruptcy filings, which is available from the FJC for all courts throughout the country. As discussed above, we compare Cook County to a synthetic county consisting of zips—located throughout the country—that are “nearest neighbors” of Cook County zips.

Figure VI presents the raw statistics, plotting the share of Chapter 13 for Cook County (“treatment”) and Control Zips (“control”). Treatment and control track each other closely through 2010, but then diverge, with an increase in Cook County relative to Control Zips.

Table V implements the model in equation 2. We once again begin with simple models that account only for race, geography (Cook County versus other locations), and a time trend centered on the end of the recession. Column (1) confirms that, across all zip codes, Chapter 13 accounts for a substantially larger share of bankruptcy filings (21 percentage points larger) in African American zips than in other zip codes. Column (2) shows that Chapter 13’s share is larger (by about 8.8 percentage points) for African Americans living in Cook County than African Americans living elsewhere. To put this into perspective,
Chapter 13’s share of bankruptcies in Cook County during 2010 was 44 percent in African American zips and 19 percent in other zips; outside Cook County, Chapter 13 accounted for 40 percent of filings in African American zips and 19 percent in other zips.

Column (3) estimates our main specification, equation 2, where the coefficient of interest is the triple-interaction, African American x Post-Emanuel x Cook. This is our difference-in-difference-in-difference (DDD) estimator. Although Chapter 13’s share during the Post-Emanuel period is declining on average across all zips (Post-Emanuel), it is increasing in Cook County relative to zips outside the county, consistent with the hypothesis that the Emanuel policy elevated Chapter 13 filings in Cook County. The triple interaction indicates that the policy caused a 4.4 percentage point increase in Chapter 13’s share of bankruptcies in African American zips relative to other zips in Cook County, relative to the same difference in other counties. This is a ten percent increase relative to Chapter 13’s share of filings in Cook County African American zip codes during 2010.

Columns (4) and (5) add zip and year fixed effects. Zip fixed effects account for heterogeneity across zips, which may be particularly important in this setting, where the Control zips are drawn from different counties. In both columns, the DDD estimates decline slightly (to about 3.5 percent), but still represent about an eight percent increase relative to Chapter 13’s share in 2010.

VII.C Heterogeneity in Policy Impact

If the Emanuel policy caused the observed increase in Chapter 13 filings, we should observe particularly strong effects among distressed consumers who (a) saw little benefit to bankruptcy prior to the policy change but (b) obtained large benefit afterward. A potential proxy for (a) is income and assets. Bankruptcy is a device for protecting income (in Chapter 7) and assets (in Chapter 13) from creditor collection efforts. Consumers with meager income and assets (“low benefit debtors”) derive less benefit from bankruptcy, which is in part why Sullivan, Warren and Westbrook (2001), among others, have called bankruptcy a “middle class phenomenon.” A potential proxy for (b) is occupation: Consumers with jobs that require a license or a car (e.g., taxi drivers) are much more likely to benefit from Chapter 13 if these assets are seized through the Emanuel Policy.
Figure VIIIA implements our proxy for (a). Here, we define “low benefit debtors” as those who are not homeowners, have no secured debt, have no non-exempt property, and have annual income is below 150% of the poverty line. By limiting the sample to non-homeowners, we exclude one of the principal reasons for using Chapter 13 (to save your home), as discussed in White and Zhu (2010). Similarly, by excluding consumers with secured debt, we rule out another common reason for using Chapter 13: To protect assets from foreclosure. Non-exempt property consists of assets that would be liquidated in Chapter 7 (every state allows consumers to retain certain assets—“exempt property”—even if they file for Chapter 7; the remaining assets are called “non-exempt.”). If a consumer has no non-exempt property, she has no assets that are at risk of liquidation in Chapter 7. Equivalently, she has no assets that can be protected through a Chapter 13 filing. Finally, by focusing on debtors with low incomes, we limit our sample to consumers who have relatively small incentive to use any form of bankruptcy, because they are unlikely to be subject to creditor collection efforts if they are sufficiently poor.

Figure VIIIA shows that the Emanuel policy had a strong effect on “low benefit” consumers, with a sharp post-Emanuel increase among both African Americans and other races. The effect, however, is stronger for African Americans, as Figure VIIIB shows by plotting the difference between the proportions shown in Figure VIIIB.

Figure IX implements our proxy for (b), i.e., consumers who saw a large benefit from Chapter 13 after the advent of the Emanuel policy. Here we subset on all “low benefit debtors”, but compare “drivers” to other debtors. We define a consumer as a “driver” if the bankruptcy petition listed an occupation with the word “driver” in it. We view this as a proxy for debtors who are highly likely to see a benefit in filing for Chapter 13 if their cars or licenses are seized.

Figure IX confirms that, prior to the Emanuel policy, Chapter 13 accounted for a relatively small share (around 20 percent) of bankruptcy filings by low-benefit debtors, and among these debtors, drivers were about as likely to file for Chapter 13 as other filers. After the advent of the Emanuel policy, we observe a sharp separation between drivers and other low-benefit debtors. This separation, however, does not appear to be larger for
African Americans than other races. Our sample is too small to permit strong inferences, but this (tentative) finding is consistent with our hypothesis that racial differences in the propensity to file for Chapter 13 reflect differences in the value placed on transportation. Once we condition on a group of debtors who equally value transportation (drivers), racial differences attenuate.

VII.D Confounds

A potential confound is the possibility that our results are driven by an increase in debt, not in the suspension of licenses and seizure of cars. As Figures I and II show, the Emanuel Policy operated along two dimensions: Suspending licenses and increasing debt to the City. Perhaps the increase in debt—not licenses suspensions—is the cause of the increase Chapter 13’s share of bankruptcy filings, especially among African Americans. This is plausible if we think that African Americans are more likely than non-African Americans to file a Chapter 13 case in response to an increase in debt.

There are several reasons to believe that the result in our paper are driven by an increase in suspensions and seizures, not debt. First, it appears that licenses were rarely (if ever) suspended during the years prior to Mayor Emanuel taking office, due in part to lack of coordination across different ticket-issuing agencies.6

Second, although IA shows a large increase in debt after 2010, we see no increase in activities (tickets) that generate this debt in II until 2014. We think the increase in debt is likely to reflect better accounting of outstanding debt as the City consolidated its collection and enforcement efforts, an ambition identified by Mayor Emanuel during his first 100 days in office, as discussed in Emanuel (2011b)

One potential way to explore this confound further is to study the post-Emanuel behavior of consumers who filed for bankruptcy without attorney representation (“Pro Se Cases”). If these consumers are just as likely to file a Chapter 13 case as consumers with

---

6Ryan and Pyke (2009) ("Millions more tickets have been issued in other suburbs and in Chicago, which has had scores of cameras since 2003. And as many as a quarter of all tickets go unpaid, according to a Daily Herald analysis. But not once - not once - has a driver’s license been suspended for accumulating five unpaid tickets, the penalty laid out by Illinois law, officials say. That could be because no single entity is allowed to actually keep track of how many tickets go unpaid across different suburbs and camera systems.")
attorney representation ("Lawyered Cases"), then our results may indeed be picking up a general preference for Chapter 13 among African Americans when their debt burdens increase. Table VI reruns our baseline specification, but subsets on Pro Se Cases. These cases are similar to Lawyered Cases in that Chapter 13’s share (i) increases in the post-Emanuel period and (ii) is larger among African Americans. But there is no evidence that Chapter 13’s share increases faster among African Americans during the post-Emanuel period. In contrast to Lawyered Cases, the coefficient for $\text{AfricanAmerican} \times \text{PostEmanuel}$ is close to zero and statistically insignificant.

The interaction’s substantive and statistical insignificance is due, we believe, to the fact that the typical Pro Se filer does not understand that Chapter 7 is not a viable strategy for regaining a suspended license and discharging outstanding debt to the City. This is confirmed by two facts. First, Figure VII plots the percent of Chapter 7 and Chapter 13 bankruptcy filings in which the debtor had outstanding debt to Chicago. Panel A subsets on Pro Se Cases; Panel B subsets on the remaining (lawyered) cases. Among lawyered cases, we see a steep rise in Chicago debt among Chapter 13 cases, but only small increase in Chapter 7 cases. Among Pro Se Cases, we see an identical increase for both styles of bankruptcy, suggesting that these debtors (wrongly) treated Chapters 7 and 13 as interchangeable. Secondly, we examined a random sample of Chapter 7 filings in the Post-Emanuel period and found that most had outstanding parking debt, seized vehicles, and/or suspended licenses. The contrast between Pro Se Cases and Lawyered Cases suggests that attorneys, not simply outstanding debt, play a key role in how consumers respond to the Emanuel Policy.

**VIII Discussion and Conclusion**

It is well-understood that Chapter 13 is most valuable to distressed consumers hoping to retain assets (homes, cars) they would lose in Chapter 7 (or outside of bankruptcy). Chicago’s post-Emanuel debt enforcement policy provides an illustration of this phenomenon: As the city increased the rate at which it seized driver’s licenses, residents increased the rate at which they filed for Chapter 13, which allows immediate recovery of the license as
well as the option to discharge the city debt (provided the consumer completes a three to five year repayment plan).

That well-understood phenomenon provides a (partial) explanation for racial disparities in bankruptcy. Among those who file, African Americans are more likely than other debtors to select Chapter 13. This preference is due, at least in part, to systematic differences by race in the value of cars and driver licenses. African Americans tend to live in neighborhoods that are poorly served by public transportation and supermarkets, and they are more likely to live substantial distances from their workplaces. They are therefore more likely to prefer Chapter 13 when they suffer financial distress.

We document this pattern using simple correlations, as we show by comparing Atlanta, Chicago, and Memphis. We also study a debt enforcement policy, in Chicago, that reduced the transportation options of distressed consumers. We show that this policy had a substantially larger impact on African Americans than other debtors. We observe a sizable increase in Chapter 13’s share of bankruptcy filings among African Americans, relative to other debtors, consistent with the hypothesis that African Americans file for Chapter 13 at a higher rate because they place a higher value on transportation options, particularly their cars and licenses.

Our findings suggest that Chapter 13 plays an important role in allowing the working poor to retain access to transportation, yet applies the same rules to both poor and non-poor debtors. For example, bankruptcy courts often require debtors to pay a minimum recovery to unsecured creditors (e.g., ten percent of outstanding debt). A requirement like this renders Chapter 13 infeasible or unsuccessful for many poor debtors, as shown by Morrison and Uettwiller (2017). Courts might consider relaxing these rules for the working poor.

Our findings also suggest that Chapter 13 may function as the only avenue of relief for working poor faced with collection efforts (e.g., the Emanuel policy) that threaten their transportation options. Bankruptcy attorneys, therefore, have strong bargaining power and are able to charge substantial fees for routine cases. Although Cook County is served by

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7Technically, this requirement is imposed by Chapter 13 trustees, with court consent, as discussed by Morrison and Uettwiller (2017).
a large number of bankruptcy attorneys, it appears that most poor debtors are unaware of their options, or cannot afford to shop around, because eighty percent of African American debtors are represented by two law firms. These attorneys can be assured of payment, even though the vast majority of Chapter 13 cases are dismissed before the debtor completes the repayment plan, because attorney fees are paid first as the debtor submits payments pursuant to the plan. Poor debtors, therefore, have weak bargaining power, agree to large fees, but typically receive no discharge because their cases are dismissed. Bankruptcy courts might consider limiting Chapter 13 attorney fees, which would help mitigate the effects of the disparity in bargaining power.
REFERENCES


FIGURE I: Chicago Enforcement Policy, 2008–2016

Panel A: License Suspensions, Vehicle Seizures, and Total Debt

Panel B: Parking Tickets and Automated Enforcement
FIGURE II: Chicago Enforcement Policy by Race and Zip

Panel A: Relative Enforcement Policy in African American Zips

Panel B: Percentage Change in Enforcement, By Zip
FIGURE III: Bankruptcy Filings Before and After Emanuel

Panel A: Chapter 13’s Share of Bankruptcy Filings, by Race

Panel B: Number of Chapter 7 and Chapter 13 Filings

Electronic copy available at: https://ssrn.com/abstract=3137112
FIGURE IV: Bankruptcy Filings Before and After Emanuel

Panel A: Filings in Non-African American Zips

Panel B: Filings in African American Zips
FIGURE V: Chapter 13’s Share of Filings, Detrended

Average Residuals, by Quarter of Filing

Detrended by Linear Regression

Non-African American
African American

reg type_13 time, cluster(zip)

FIGURE VI: Chapter 13’s Share of Filings:
Cook County vs. Control Zips

Chapter 13’s Share of Filings

Cook County
Control Zips

Electronic copy available at: https://ssrn.com/abstract=3137112
FIGURE VII: Whether Debt is Owed to the City of Chicago, by Bankruptcy Chapter and Pro Se Status

Panel A: Pro-Se Cases

Panel B: Cases with Attorneys
FIGURE VIII: Proportion of Chapter 13 Filings Involving “Low Benefit” Debtors

Panel A: Proportion, by Race

Panel B: Difference Between Proportions for African American and Other Races
FIGURE IX: Chapter 13’s Share of Bankruptcy Filings Among “Low Benefit” Debtors

Chapter 13’s Share of Filings Among "Low Benefit" Debtors

Drivers
Non-Drivers
TABLE I: Northern District of Georgia

<table>
<thead>
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<th>Quintile</th>
<th>% Travel &gt; 45 min.</th>
<th>% Travel &gt; 45 min.</th>
<th>% Food Desert</th>
<th>% African American</th>
<th>% Chapter 13 Filings per Thousand</th>
<th>Median Income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Travel &gt; 45 min.</td>
<td>% Food Desert</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>(1.56)</td>
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</tr>
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<td>(6.84)</td>
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<td>(27.03)</td>
<td>(9.07)</td>
<td>(1.91)</td>
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<td>145</td>
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<td>% Travel &gt; 45 min.</td>
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<td>% African American</td>
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<td>13.10</td>
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<td>(20.57)</td>
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| Obs.     | 212                              | 212               | 212            | 212               | 212                             | 212           | 212           |
TABLE III: Western District of Tennessee

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<th>% Food Desert</th>
<th>% African American</th>
<th>% Chapter 13 Filings per Thousand</th>
<th>Median Income</th>
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Electronic copy available at: https://ssrn.com/abstract=3137112
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<td>(1.76)</td>
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<td>-0.0064</td>
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<tr>
<td>× African American</td>
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<td>No</td>
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Marginal effects; t statistics in parentheses
* p < 0.05, ** p < 0.01
Pro Se cases excluded
Case Controls include time trend
### TABLE V: Baseline Regression (zip-level data)

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<td>(16.70)</td>
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<td>(0.09)</td>
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<tr>
<td>× African American Zip</td>
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<td>0.060**</td>
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<td>(3.63)</td>
<td>(2.59)</td>
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<td>× Cook County</td>
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<td>0.057**</td>
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<td>(7.73)</td>
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</tr>
<tr>
<td>Observations</td>
<td>19,348</td>
<td>19,348</td>
<td>19,348</td>
<td>19,348</td>
<td>19,348</td>
</tr>
</tbody>
</table>

Marginal effects; * t statistics in parentheses

* * p < 0.05, ** p < 0.01
Post Emanuel defined as all quarters after 2011q2
African American Zips defined as more than 70% population are African American
Pro Se cases excluded

### TABLE VI: Pro Se Cases

<table>
<thead>
<tr>
<th>Chapter 13 Dummy</th>
<th>Full Sample</th>
<th>Poor Zips</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>African American</td>
<td>-0.035**</td>
<td>-0.033*</td>
</tr>
<tr>
<td></td>
<td>(-2.71)</td>
<td>(-2.52)</td>
</tr>
<tr>
<td>Post-Emanuel</td>
<td>-0.15**</td>
<td>-0.12**</td>
</tr>
<tr>
<td></td>
<td>(-6.27)</td>
<td>(-4.40)</td>
</tr>
<tr>
<td>× African American</td>
<td>-0.054*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(-2.34)</td>
<td></td>
</tr>
<tr>
<td>Time Trend</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Marginal effects; * t statistics in parentheses

* * p < 0.05, ** p < 0.01
Race imputed based on zips, first name and last name of the first debtor
Log(o) is replaced with log(1)
Post Emanuel defined as all quarters after 2011q2
Poor zips have median household income below State Mean Test $47,536