Urban Fiscal Crisis and Local Emergency Management: Tracking the Color Line in Michigan

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ABSTRACT

The usage of emergency management by United States' state-level governments to resolve troubled municipal finances increased dramatically over the past three decades. Layoffs, school closings, pension renegotiations, and sale of public assets are the product of such policies, and these policies unevenly affect black residents. Recent legal decisions argue this is an innocent byproduct of black concentration in fiscally distressed cities. Thus, targeted emergency intervention is colorblind in its application, and any race-bias is mere statistical discrimination among fiscally-challenged areas. We investigate this assertion, asking if racially inequitable outcomes signal differential impact on, or differential treatment of black people. We investigate Michigan, the site of the country's most intensive emergency management deployments. Using all politically incorporated units in Michigan, 2007-2013, we develop a counterfactual test using the state's own fiscal distress scale and adjusting for percentage black and median household income of each unit. We find a net effect of the percentage of black residents on the likelihood of emergency management after adjusting for fiscal distress. If correctly specified, our model gives evidence that racial bias was a factor in the application of emergency management – that units in Michigan with similar fiscal distress levels were more likely to get emergency management if they had higher black populations, all else equal. We cannot identify the specific micro-mechanisms at play, meaning we cannot conclude if any actors in the process had race-biased intentions, and we discuss the meaning of our findings in light of this.

Since the 1980s, an increasingly popular governance technique in the United States is emergency management (EM) of local municipal fiscal affairs by state governments. In these scenarios, a state assumes control of all or part of a local government, usually a city. The state appoints a receiver to take over city leadership, at least in all fiscal matters. As there are very few fiscal decisions without widespread social implications, emergency managers wield exorbitant powers. These leadership takeovers are predominantly applied to cities as opposed to smaller political units such as townships. As historical processes led to the demographic and geographic concentration of African Americans in urban centers, EM disproportionately falls on black communities. The open question we address in this paper is whether this disproportionality is merely an unfortunate byproduct of urban fiscal distress, or if race plays a causal role in the targeted application of emergency management. To do this we investigate the case of Michigan between 2007 and 2013, and attempt to test if race played a role in the application of EM law after taking into account the economic distress of potential EM targets.

We take the State of Michigan as a case study because it has the most instances of fiscal receivership in the United States. In Michigan, multiple governors from both parties enacted EM, and this case provides unambiguous examples of the damaging social effects of EM-enforced austerity, for example the deaths and severe illnesses resulting from the Flint Water Crisis, the loss of public pensions in Detroit and Benton Harbor, and the closure of schools and firing of teachers throughout the state. Important for investigation is the spectrum of municipalities placed under EM rule ranging from less than 20% black (Allen Park, Hamtramck and Three Oaks) to those around 40% black

(Ecorse, River Rouge and Pontiac) to cases upwards of 90% black (Benton Harbor and Highland Park). Moreover, from 2007 through 2013, roughly 10% of the Michigan population (~ 1 mil. persons) were subject to EM rule for at least one year, often for many years. A staggering 51% of this group was black, despite the population of Michigan itself being only 14.1% black (see Table 1).

This case demands the attention of social science to adjudicate if what was obvious to the participants of myriad social movements in Michigan is borne out empirically: namely that EM was racially-biased. That EM disproportionately impacted black Michigan residents is indisputable. Table 1 presents the proportion of residents that were under EM imposed governance at some point between 2007 and 2013 by race.

Table 1. Emergency Political Intervention in Michigan by Race between 2007-2013

	All		White		Black		Other	
Total Population (in thousands, 2012)	9,872	7,805	79.1%	1,396	14.1%	672	6.8%	
Emergency Management (any 2007-2013) ^a	1,003	206	20.5%	730	72.8%	68	6.8%	
Percent Affected	10.2%	2.6%		52.3%		10.1%		

^aUsually under an emergency manager, occasionally as a consent agreement where local authorities are forced to emergency manage. Of Michigan's 1,515 cities, townships and villages; 12 had emergency management during this period, some for several years, sometimes on and off across the years.

The question we address herein is whether the fact that 14.1% of Michigan's total population (who are black) having a 52.3% rate of EM at least once during 2007-2013 is a case of statistical discrimination amidst otherwise colorblind legal processes; or if race played a role in the application of the law. Michigan cities placed under EM certainly had

fiscal problems warranting serious attention during this period. Like many formerly industrial centers spanning the Midwest to the East Coast, the shift from manufacturing to services, to overseas and Sun Belt production, and the mass outmigration of middle class whites to the suburbs (“white flight”) left behind broken and battered cities across the U.S. Rust Belt. These historical factors starkly affected the incomes and socio-spatial mobility of urban blacks (Sugrue 2014; Pager and Shepherd 2008; Parcel 1979; Sloan 1969). This could provide a practical explanation for the racially inequitable distribution of EM, a happenstance event stemming from historical factors leading black people to live in fiscally worse-off locations (e.g. Hill 1974). If so, the EM law would be colorblind. However, if racial factors explain the biased distribution of EM outcomes beyond fiscal factors, then the situation in Michigan is not merely an unfortunate historical artifact, but a form of institutional and legal-discrimination.

Many scholars and members of the public point to race as a key element in the emergency control of local affairs (Fasenfest and Pride 2016; Lee et al. 2016; Massey and Denton 1988; Sands 2013; Urahn et al. 2013). A House Judiciary Committee in 2012 reviewed EM in Michigan and concluded that there were Constitutional violations; in particular regarding race (HJC 2012). In *Philipps, et al. versus Snyder, et al.*, the prosecution alleged that the Michigan governor violated the equal protections clause of the U.S. Constitution through the application of EM law. However, on September 12, 2016, the U.S. District Court for the Eastern District of Michigan ruled that there was no suppression of equal voting protection, either by race or by wealth. Judge Rogers wrote the majority opinion, finding that:

Plaintiffs cite no case law that brings their facts anywhere near the prohibitions of the

Thirteenth Amendment. The state’s remedy for financially endangered communities—passed by state-elected bodies for which African-Americans have a constitutionally protected equal right to vote, and facially entirely neutral with respect to race—are far removed from being a “badge” of the extraordinary evil of slavery (15-2394:18).¹

This “badge” is a reference to a precedent set in *City of Memphis v. Greene* that allows a given policymaking action to have unintended racially inequitable outcomes; “[A] regulation’s adverse impact on a particular neighborhood will often have a disparate effect on an identifiable ethnic or racial group’ due to urban neighborhoods’ being often ‘characterized by a common ethnic or racial heritage,’” and this was what happened in the Michigan case ruled the court (Ibid.; with inside quotation referencing *City of Memphis v. Greene*). While the court’s decision acknowledges the racially biased distribution of EM outcomes, it categorically rejects the claim that race played a causal role in the law’s origin or applications.

Although the deployment of EM measures across Michigan communities thus far withstood judicial scrutiny, we put the case up to counterfactual statistical tests. According to its legal and political advocates, whether or not EM measures are implemented is a determination made *solely* in terms of the objective fiscal distress of a given city; race should only be indirectly related to the EM process via the long-term demographic and socio-spatial trends that create the conditions for racially disparate outcomes. We conclude, therefore, that adjusting for fiscal distress, if race has a measurably significant effect on the likelihood of emergency management then *racial bias is a causal factor* in the deployment of emergency management measures in

¹ Accesible via Oosting, Jonathan, “Appeals court upholds Mich. emergency manager law” *The Detroit News*, 9/12/2016, <http://www.detroitnews.com/story/news/local/michigan/2016/09/12/appeals-court-upholds-michigan-emergency-manager-law/90279788/>

Michigan. On the other hand, the absence of any measurable impact indicates instead that *racial disparity is simply a side effect* of the fair and objective application of the law in an imperfect world. We use the word “causal” here in reference to total causal effects, something we will return to discuss more in the conclusion; however, the point that cannot be overstated in this particular research design is that *we cannot say whose decisions were motivated by race* because we do not observe decision-making, and many different persons and groups take part in the decisions and implementations involved in pacing a municipality under emergency management.

Implementing Emergency Management

Legally speaking, the governor of Michigan alone has the power to declare EM and appoint an emergency receiver of any local government unit (city, county, township) or school district that exhibits fiscal distress; we refer to these diverse political entities as “cities” and the various receivers as “emergency managers”. None the less, the governor must follow a certain protocol to declare EM. This includes consulting with the State Department of Treasury, appointing a review board and, if deemed necessary, placing cities into a *consent agreement*. We consider the external implementation of force on a city – whether through direct take-overs or through what we will describe as coercive ‘consent’ agreements – as an instance of *emergency management* (again, “EM” throughout this paper).

The first instances of EM in Michigan occurred in 1986 in Ecorse and 1988 in Benton Harbor. State legislators passed PA 101 in 1988 to give a legal form to this new phenomenon of state-level intervention into city-level fiscal affairs. A revision in 1990,

resulting in the “Local Government Fiscal Responsibility Act” (PA 72), extended the legal reach of EM to include school districts and increased the emergency authority of the State Government (Citizens Research Council 2010). Signed into law by a Democratic governor, PA 72 solidified the legal basis for fiscal crisis management. Further amendments occurred in 1992, 2002, 2003 and 2009. During this time, the duties of the emergency manager were largely confined to fiscal and financial matters.

In 2011, the State Government passed another iteration of the law (PA 4, later re-written as PA 436), which expanded the scope of EM to include political, administrative, and curricular matters. These expanded powers included several “martial” provisions allowing an emergency manager to “assume complete control over local governments” (Mahler 2011). Emergency managers gained the power to modify and nullify public union contracts, ban new collective bargaining, negotiate new binding contracts on behalf of the city, dispose of (sell, lease, or give away) municipal assets, and in general, to “exercise any power... of any officer, employee, department, board, commission, or other similar entity of the local government, whether elected or appointed” (Ibid.; see also Wilde-Anderson 2016).

Although the scope of EM powers grew markedly in 2011, the underlying process whereby a governor implements EM did not radically change since 1990. The first step in the process is to place a city under fiscal review. A formal written request is sufficient to trigger a state review, so long as the governor decides it has merit. This request can come from a local government administrator, a creditor, a petition signed by 5% of the total votes cast (it was 10% before 2011), or *any notification* that the local government failed to behave in a fiscally responsible manner with respect to salaries, benefits, pension fund

contributions, or outstanding debt payments.² In 2011, a falling credit rating and an ill-defined clause referencing “other circumstances” worthy of review joined the list of possible triggers (Citizens Research Council 2011). By 2011, state officials have full discretion in determining which cities are subjected to state review and which are left to their own fiscal and political devices.³

A fiscal review necessitates the formation of a governor-appointed review team including the treasurer.⁴ The law grants the city an initial ‘choice’ over its fate. This choice is a *consent agreement* – an imposed, binding contract with local officials that mandates local governments or school districts to punctually meet predetermined austerity goals. This can either take the form of a continuing operations plan (drafted by local officials) or a recovery plan (drafted by state officials); both are legally binding agreements that entail reporting and oversight. Consent agreements give local officials powers similar to EMs, such as dissolving contracts, firing city employees and privatizing public assets. The local government must formally agree to the consent agreement, as failure to do so automatically results in EM assignment. Essentially, local officials must

² Any state house or senate representative can call for review; ending a fiscal year in deficit or failing to meet other budgetary and accounting criteria is also grounds, as is any known violation of state law.

³ “How a Financial Emergency Works” http://www.michigan.gov/treasury/0,1607,7-121-1751_51556-198770--,00.html Michigan Department of Treasury. Given the plethora of internet resources cited herein and the instability of web addresses, the authors have copies of all websites from the time they were accessed (12/10/2016 in all cases) [planned to be marked ‘available upon request’ in the final manuscript].

⁴ After 2011, the review team consists of local representatives, State officials, and private firms. The review has four possible outcomes: (1) no/mild financial stress, no action needed; (2) severe stress, a consent agreement is adopted; (3) severe stress, no consent agreement is adopted; and (4) financial emergency, no plan for recovery. If the review finds either of the latter two outcomes (3 or 4), the state will impose an emergency manager, but of course the state intervenes in outcome (2) because they make the consent agreement binding.

‘choose’ to voluntarily implement EM, or it will be implemented for them meaning any ‘choice’ is illusory (PA 436: Step 11).

Once the governor makes the decision that EM is necessary, the Emergency Loan Board of Michigan takes over much of the process of hiring an emergency manager. This Board is an ex officio group of the Governor’s appointed cabinet members including the treasurer and the directors of the various executive offices. Critically, the Loan Board also decides when the crisis is over and EM is no longer necessary, a decision that can take place at any point (or in the case of school districts, at the end of a one-year term). Ultimately, the deployment of EM measures is subject to oversight by the governor who is the boss of the members on the Loan Board. At any moment, the governor has the power to enact EM, do nothing, or push for EM removal.⁵ Suffice to say that the governor is a crucial actor in the implementation of EM, but state officials, the acting treasurer and possibly any special interest groups with close ties to any of these people could be involved or even leading the process to get a city under EM.

Explaining Emergency Management Outcomes

Given what we know about EM law and the decision-making processes associated with its implementation, we first consider what should be the *only cause* of EM deployment: the objective fiscal need for it. The purpose of EM written into law is to, “safeguard and assure the financial accountability of local units of government and

⁵ See for example legal briefing and legal discussions from lawyers Mika Meyers <https://www.mikameyers.com/news/article/expansion-of-state-emergency-loan-powers> 01/07/2013 and Alec Gibbs <http://markmaynard.com/2014/07/everything-you-ever-wanted-to-know-about-the-emergency-manager-takeover-of-michigan-and-how-we-allowed-it-to-happen/> 07/29/2014.

school districts” (PA 436,1st para.). The most recent EM law (PA 436) asserts that the governor’s decision to implement EM is uncontestable in Michigan courts, unless the decision is, “Arbitrary, capricious, or clearly an abuse or unwarranted exercise of discretion” (PA 436,3b). Given the legal framework of both the Michigan Constitution and the U.S. Constitution, the deployment of EM measures based on the racial characteristics of local communities would amount to just such an abuse of discretion. The legal and sociopolitical legitimacy of EM measures rests on their colorblind application as per the Michigan Constitution Article 26.

Due in part to the increasingly complex and arcane nature of city budgets, the Michigan Department of Treasury contracted the Institute for Public Policy and Social Research at Michigan State University to develop a standardized fiscal assessment metric. The resulting instrument, the Fiscal Indicator Score (FIS), accurately identified fiscally distressed cities while simultaneously increasing the transparency of the EM process (Kloha, Weissert, and Kleine 2005). Until 2010, FIS scores for all Michigan cities were published on the Treasury website, ostensibly providing evidence of the objective, colorblind nature of the EM system.⁶ After all, none of the indicators built into the score included a reference to race. Following this colorblind indicator, if African Americans happen to be disproportionately impacted by the EM system, it is only due to the fact that they are disproportionately concentrated in large, fiscally distressed cities.

In order to test causal claims, we must not only identify what should be the cause of EM, but also any confounding factors. One such confounder could be that conservative

⁶ After 2010 the scores were removed for reasons still unknown.

Republican politicians representing lower-density parts of the state shaped the EM system to emphasize the perceived need for emergency measures in urban centers while deemphasizing their perceived need in suburban, exurban, and rural areas. This type of partisan-politics explains other policies with racially disparate outcomes, as in the area of criminal justice and incarceration (Yates and Fording 2005); however, the case of Michigan does not appear to follow this logic. As noted, both Democratic and Republican governors utilized the EM system throughout its history. The first cases came under James Blanchard, a Democrat elected between 1983 and 1991; several more occurred during Republican John Engler's term from 1991 to 2003, and a majority of cases subsequently occurred during the Democrat Jennifer Granholm (2003-2011) and Republican Rick Snyder's (2011-) terms in office.⁷ The governor largely controls the EM system, but given the regular rotation of political parties in power in Michigan, there is no compelling reason to emphasize partisanship in our causal explanations of racial disparities in the deployment of emergency measures. For instance, the EM system is deeply unpopular with the urban base of the Democratic Party, yet this does not appear to have been an important consideration for Democrat Jennifer Granholm when she placed the Detroit Public Schools (majority black) and the city of Benton Harbor (majority black) under EM control.

An alternative explanation is that the voters of Michigan caused governors to implement race-biased EM through public opinion. The voters might want to

⁷ Snyder was a bit more aggressive, deploying more EM than any previous governor. He signed into law PA 4 –making EM easier and making emergency managers far more powerful, and he reinstated a new version of PA 4 immediately after voters overturned it, but testing this Snyder-bias is beyond the scope of this paper.

systematically punish large, majority-black cities that are seen as profligate, undisciplined, and corrupt; something akin to race-bias in white policy attitudes (Gilens 1996). In this view, austerity minded state legislatures who support the state take-over of fiscally distressed cities are merely reflecting the will of the people. Recent history suggests that the majority of Michigan residents do not share this vision. In fact, after seeing the destructive results of EM measures, the Michigan voters overturned PA 4 in 2012 via voter referendum.⁸ The results were clear: 2.37 million Michigan citizens (53%) voted to repeal the law, while 2.13 million (47%) voted to keep it; only eight of the state's 83 counties voted to retain PA 4 on the whole (Kirkpatrick 2015a).

In contrast to the democratically expressed will of the public, Michigan's governor and legislature were vocal advocates of the EM law. They were so enthusiastic in fact that within 37 days of its public repeal, the law had been rewritten, this time in a manner designed to better withstand electoral and legal challenges. Then only 13 days later a new and improved EM bill was signed into law (PA 436), along with a sibling bill (PA 284) further restricting the public's ability to revise and reform the EM system.⁹ Therefore, we see no direct evidence for the proposition that the electorate has a causal role in determining the inequitable distribution of EM outcomes; if anything; state actors took measures against public will which was in the majority opposed to the law. This

⁸ See Jonathan Oosting, "Michigan Emergency Manager Law: What's next after Public Act 4 repeal?" *MLive.com* 11/11/2012

http://www.mlive.com/politics/index.ssf/2012/11/michigan_emergency_manager_law.html.

⁹ In Michigan, neither voter initiative nor citizen referendum processes can challenge legislation passed with annual "built in" appropriations. Chris Savage, "A comprehensive look at Michigan's new(est) Emergency Manager Law, Now with STABILITY and CHOICE." *Electablog*. 02/21/2013

<http://www.electablog.com/2013/02/a-comprehensive-look-at-michigans-newest-emergency-manager-law-now-with-stability-choice.html>.

logic is codified in the eventual cessation of EM usage after Michigan residents died or became fatally ill in the Flint Water Crisis as a direct fault of poor EM decisions resulting in intense social movements and a National State of Emergency. Safe to say that public opinion became overwhelmingly against EM and eventually won out.

Ultimately, as the PA 4 repeal episode demonstrates, the governor plays a pivotal role in maintaining and orchestrating the state's EM system. Emergency managers put in place under PA 4 were removed following its repeal and then immediately reinstated by the governor under the auspices of a previous EM law (PA 72) from 1990.¹⁰ The governor and his office were able to keep the basic structure and outcomes of the law in place, despite the fact that it was democratically overturned. Moreover, the governor's role as key arbiter of emergency intervention was protected and enhanced in the newly reestablished EM system.

Testing the Causes of Emergency Management in Michigan

Based on the preceding discussion we draw a causal model of EM application in Figure 1. This model relies on the fact that there are no confounding unobserved causes of EM, note that this diagram models theoretically causal processes. We ruled out partisan politics, and popular opinion and voting, but what about something that correlates with the distribution of race among cities that also causes EM application? For one, EM application should only be fiscal, so this 'thing' must therefore be fiscal in nature. Of course, the FIS score is just an indicator and therefore comes with error;

¹⁰ "Emergency Financial Manager/Emergency Manager Appointment History"
http://www.michigan.gov/documents/treasury/EM-EFM_Appointment_History_2-12-16_514604_7.pdf Michigan Department of Treasury 02/12/2016.

however, if the error of the indicator is biased by something that *causes* race distribution it would be a misspecification to add it to the causal model, this would be known as controlling on a confounder. The reason being that it might suppress or hide the effect of race. If it causes the distribution of race, it is inherently race-based and therefore part of race-bias. This is what makes tests of race as a (causal) factor in social phenomena so difficult, because race is deeply embedded in legal, social, cultural, political and normative institutions of the United States (Charles and Guryan 2011; VanderWeele and Robinson 2014). We are unaware of something that causes fiscal distress that does not cause the distribution of race in cities but correlates highly with it, again a call for humility in our efforts but a reminder that we should not underestimate race as a potential cause given its breadth in social phenomena. We present a model that should counterfactually identify if race is or is not a factor in the implementation of emergency management.

Figure 1. Theoretical Model to Test the Role of Race in Emergency Management

In Figure 1, Emergency Management is the primary outcome variable. As observed, the governor alone has the final say in EM implementation. Therefore, we assume this outcome variable represents the existence of EM *and* the persons-involved' decisions to institute EM (in particular the governor); these are coterminous measures as an observed variable. Fiscal Distress should be the only cause of EM. Therefore, path **A** should be the entire story behind EM application. However, given that fiscal distress is difficult to measure we expect there to be some degree of measurement error represented by e1, in what should otherwise be a one-to-one causal relationship. This represents the gap between a statistical models' accuracy in predicting Emergency Management using the intervening role of Fiscal Distress. We know theoretically that e1 should not be correlated with Black Population because the measure contains no race-based indicators, or cannot be somehow biased by something that causes the urban distribution of race. Path **B** is, therefore, purely a theoretically expected statistical association. It in no way suggests that

black populations are themselves the cause of urban fiscal problems, this is likely a result of the racial history of the United States.

In this case we assume all of the things that might have led to Fiscal Distress also caused a racial geographic population distribution and therefore can be left out of the model because they will be subsumed in effect **B**. This decision helps us to avoid a problem of confounding because it means Fiscal Distress plays the role of measuring all these historical factors at once without a need for further elaboration (see also Frey 1979, 1980). In order to conclude that the governors of Michigan and the actors involved engaged in a colorblind application of EM law there should be no direct effect of Black Population on Emergency Management, in other words path **C** must equal zero, or not be significantly different from zero, after accounting for paths **B** and **A** and within a reasonable range of measurement error allowed in e_1 and e_2 .

A final consideration of our theoretical model in Figure 1 is the economic resources of individuals in a given city. Cities with higher income households have a larger tax base to alleviate fiscal distress, and local voters may have greater political capital, thus acting as a political defense against the likelihood of state takeover. We know that black people have lower household incomes than white people on average (Maroto 2016); therefore, the known pattern of EM being concentrated in cities with large black populations might be explained by path **D**. Thus, controlling for causal path **D** in the model is essential because the racial and socioeconomic composition of units carry many common causes, as race and class are intricately linked in the lives of individuals (Collins 2007). It is entirely possible that there is a direct effect of Household

Income on Emergency Management (not shown in Figure 1), and we would not be surprised if communities with higher income households enjoyed a higher likelihood of political autonomy, though that is not the purpose of our analysis. The test for an effect of race, i.e., whether path **C** is or is not equal to zero, is unaffected by inclusion or exclusion of a Household Income direct effect, so long as an effect of Household Income is in the model on a causal pathway to the outcome (Elwert 2013).¹¹

Our model qualifies as a causal if there is no legitimate unobserved confounder of the effect of race. A legitimate confounder would be anything that correlates with race and causes fiscal distress, but does not cause race. For example, if fiscal distress was a product of black people having lower education and labor market skills on average, thus leading to lower levels of economic productivity, suggesting education and skills might be potential unobserved confounders. But to be a confounder the reasons for black people having lower education and skill levels than white people on average *must not be a product of race-bias*, therefore they are not at all appropriate candidates to be unobserved confounders because their addition to the model would simply add another way to measure race-bias. This leaves us with a very simple model because anything that causes racial distribution among cities is probably a result of race-bias.

The concentration of African Americans in certain neighborhoods in Northern U.S. cities is a result of migration from the terrorization of black communities under the Southern States' Race Codes and 'separate but equal' and a result of racist reception in the northern part of the U.S. Again, both of these historical factors are driven by race-

¹¹ The size of the effect could be biased by collinearity nonetheless, so we include a model with the direct effect of Household Income as a sensitivity check.

bias, and if we introduce any variables that measure them such as housing segregation or reasons for family resettlement, we would suppress our attempts to observe race-bias. Naturally, as social scientists we consider the possibility of biologically determined traits of individuals as variables. Here again we encounter a similar problem. Studies in social genomics make it crystal clear that race is not genetic or biologically determined, it is a socially constructed set of institutions and mores that developed in response to genes. Therefore, a genetic marker would also potentially ‘explain away’ an effect of race (for a poignant and highly scientific position on this see Munater, Nieto and O’Campo 1996).

Thus, adding any more variables to the model to account for fiscal distress will inevitably introduce endogeneity problems, what some refer to as multicollinearity, into the model. Already with income in the model we risking this due to the close association of race and class in the U.S.; however, race and class are important sociological frames of analysis and we use income to attempt to adjudicate between them. Thus, it is possible that EM is more likely to be applied to poorer neighborhoods regardless of race after adjusting for fiscal distress and we want to try and account for this.

Data and Methods

Unit of Analysis

Our unit of analysis is any politically incorporated area in Michigan subject to EM law including cities, townships, villages, and school districts, what we label “cities”. Following the U.S. Census, Michigan defines these units as sub-county divisions (level

060 in Census coding).¹² Despite varying degrees of legal entitlement to local home rule in the Michigan Constitution, all units are equal in the eyes of the EM laws, and thus similarly vulnerable to emergency take-over. We restrict our focus to all cities with over 1,500 residents, predominantly townships and cities. Smaller sized units are often villages or rural townships and no city under this size has ever been subject to EM. As these small units are predominantly white in their populations, this only increases the conservativeness of our test, because standard errors go down when increasing the sample size without adding any new outcomes.

Dependent Variable

We take institution of an emergency manager or a consent agreement as instances of emergency political intervention into local governmental affairs; i.e., occurrence of the governor's decision to implement Emergency Management. Thus the format is a binary variable where the value '1' indicates presence of emergency management. We lag our independent variables one year behind to account for fiscal review and political decision-making following a chronological causal ordering. We stop in 2013 because the Flint Water Crisis changed everything about emergency management in Michigan. As it led to deaths, protests and the emergency manager was found guilty of criminal acts the theoretical model of what leads to EM likely breaks down at this point. In fact, the de facto practice of emergency management of entities other than school districts ended in 2015; although the law remains on the books. In total there are 46 cases of EM in 12 units

¹² Cities are independent of townships and annex areas within township lines, whereas villages exist within or across townships and school districts exist as semi-autonomous within cities/townships. Many townships incorporate further by becoming chartered, granting them authorities of home rule similar to that of cities.

observed between 2007-2013, out of a total 995 units and 6,935 unit-years, after removing missing, non-interpolable data (<1%). No new instances of emergency management have taken place since the 2014 Flint Water Crisis.

Independent Variables

Fiscal Indicator Score (FIS) data provides a scale measure of Fiscal Distress for each unit. The Michigan Department of Treasury (MDT) originally tracked 30 conditions (per PA 72, 1990), but the accounting was so detailed that consistent monitoring was overly cumbersome. Experts subsequently revised the scoring system, simplifying and standardizing the fiscal review process. These researchers came up with ten key indicators of fiscal stress that could be combined into a single score (Kloha, Weissert, and Kleine 2005). In 2006, the MDT formalized these criteria as the “objective, measurable, and straightforward” basis of fiscal review and potential emergency management (MDT 2007).¹³ Thus we use FIS scores from 2006-2012, based on their availability.

In order to investigate the role of race vis-à-vis emergency intervention, we compile Census data for 2000 and 2010 covering percentage of the population that is black and white in local units (Black Population and White Population). We interpolate the years in between the decennial census using data from the American Community Survey (ACS) for Michigan’s largest municipalities, and linear predictions across the decennial

¹³ The ten indicators utilized by the MDT are: population growth; decrease in taxable value; general fund (GF) expenditures; GF expenses divided by taxable value; GF operating deficit; GF operating deficit (previous year); GF operating deficit from 2 years prior; size of GF balance as a percentage of revenues; GF deficits in current or previous year; and general long-term debt as a percentage of taxable value. The FIS data were originally available on the MDT website but are no longer there. However, Munetrix LLC, a Michigan-based public benchmarking agency, compiles the data (which we purchased in 2013.)

Census for the smaller units (American Community Survey 2011). We use Census data to measure the median Household Income of each unit, again using ACS data and linear interpolation to connect the years between 2006-2012, and we take the natural log of income to allow income to have the largest impact at the lower end of the distribution providing more variance to predict EM.¹⁴ This allows for further tests of an independent effect of race, as opposed to socioeconomic status or class. Race and income variables are extremely stable across 5-10 year periods, suggesting that our interpolations are accurate.

Method

We use structural equation modeling to test our theoretical path model from Figure 1 against our observed data. We estimate regression coefficients representing the theoretically causal effects running from Black Population in a given city to the likelihood of Emergency Management. This causal process should run entirely through Fiscal Distress. Again, we are testing whether path **D** from Figure 1 is or is not entirely explained by paths **C** and **A**. This is a method of path decomposition and estimating total, direct and indirect effects (Bollen 1987; Wright 1934). We estimate the likelihood of EM using a logistic regression because EM is either 1 or 0, but nothing in between. To account for the rarity of EM occurring in only 0.07% of all units, we face a problem of biased estimation due to the many 0's in the dependent variable and the estimation of thresholds along the logit-link (Muthén 1984). The choice of estimator might play a significant role in the model; however, the jury is out on the best estimation option. Therefore, we take

¹⁴ Sensitivity test of *Household Income* in dollars leads to the same results and is a worse explanatory variable of both *Fiscal Distress* and *Emergency Management*.

the normally least biased option of maximum likelihood (ML) as our starting point. As a robustness check we incorporate robust weighted least squares (WLSM/-V) and Bayesian estimators leading to similar findings.¹⁵

In order to estimate the model we use *Mplus* 7 statistical software after working up the data in *Stata*.¹⁶ The models are straightforward path models with total, direct and indirect effects as shown in Figure 1, with one exception. The logit-link defies the standard procedure for path decomposition. Thus we use a method incorporating odds ratios (i.e., probability differences) following VanderWeele and Vansteelandt (2010), and Muthén and Asparouhov (2015); this is the default for this type of model in *Mplus*.

We observe 995 units in Michigan using 7 years of data. This means that the observations are hierarchical with unit-years nested in units. In many cases such a structure calls for a multilevel or longitudinal modeling strategy. Considering that each year is a new opportunity for the governor and the governor's appointed officers in the Treasury and on the Loan Board to instill, remove or continue EM, our cases are in fact independent with regard to the dependent variable, i.e. with regard to a governor's yearly, or even more frequently occurring, will. When the FIS score reaches a lower level, the EM should be removed as the purpose of having one has also been removed. Moreover, FIS varies substantially across years with an intra-class correlation coefficient of 0.573, suggesting that 57.3% of FIS variation occurs between units and 42.7 across years within units. This again points to the independence of fiscal years within units because there is

¹⁵ Bengt Muthén comment 10/04/2016

<http://www.statmodel.com/discussion/messages/23/12169.html?1475616788>, see also Kline (2011:179–81), Muthén (2010), and Lei (2007).

¹⁶ Code and replication materials available at https://github.com/nbreznau/michigan_em.

meaningful variation within units that could prompt a governor's decision to instill or remove EM at any time, if conditions warrant (i.e., conditional on the fiscal distress).

A longitudinal model such as a fixed-effects model assumes there is path dependency, that a city will be more likely to get EM as it moves further away from the mean of EM within that city over time. Modeling in this way would violate the causal process written into the laws, which call for EM when the city is in fiscal emergency, and not otherwise. It is purely an ongoing fiscal calculation: Can the city meet its fiscal operating expenses or not? Will the city face penalties in the next fiscal year that could damage its residents or credit rating? Moreover, the ICC demonstrates that 99.5% of the variation for Black Population and 98.9% for Household Income occurs between units. Therefore, race and class cannot possibly predict within-city EM rendering a hierarchical model useless for our test.

Results

Table 2 in the appendix provides the descriptive statistics for all variables. Note that we mean-centered all independent variables in order to make the baseline odds (threshold) directly interpretable as the likelihood of EM in an 'average' city. Table 3 and Table 4 in the appendix provide coefficients, p-statistics, odds-ratios and model fit statistics for the structural equation models. Figure 2 provides the structural estimates from Table 3.

Figure 2. Structural Equation Estimates along Path Models of Emergency Management in Michigan, 2007-2013.

(Model 1) Without a direct effect of race

(Model 2) With a direct effect of race^a

^a Equal fit test favors Model 2, and exact fit test suggest that Model 2 fits the data well, see Tables 2 and 3.

In both models in Figure 2, e^b are odds-ratios, β are standardized coefficients, η is the latent mean of fiscal distress after centering, τ are thresholds representing the value of the underlying latent variable that distinguishes predictions of $0 < \tau < 1$, and θ are residual variances for the latent variables.¹⁷ In both models, all e^b and β attached to solid black arrows are significant at $p < .001$.

¹⁷ Error variance of the underlying continuous latent variable plus that of the logistic distribution; technically the arrow effect of e2 is the logistic distribution variance 3.29 but this is included in the error variance calculation (McKelvey and Zavoina 1975).

Figure 2, Model 1 demonstrates that a one percentage-point increase in black population increases the odds of fiscal distress by five percent, and this is a moderate to large sized effect with a yx-standardized coefficient of 0.36. All effects placed along arrows in Figure 2 may be interpreted in a similar manner. Again, this black population effect is not interpreted as a direct causal effect of ‘blackness’ on fiscal distress. We could also say that an increase in fiscal distress by 1-point increases the likelihood of 1% more of the population being black in a given city. The point is that they share common historical causes and this is controlled for by allowing an effect of black population on fiscal distress in the model. This modeled covariance of race and fiscal distress and the controlling of household income allow Model 2 to test whether implementation – presumably undertaken in a complex policy-making arena - is race-biased. In other words, that something about race was a causal factor in this bias, because something race-related above and beyond the racial demography of municipalities and their level of fiscal distress played a critical role in this implementation.

The results of Model 2 may be summarized in two parts. The first is that there is a significant effect of black population on fiscal distress and it is noteworthy with a standardized effect of 0.25. The second is that Model 2 fits the data much better than Model 1, and that Model 2 is indistinguishable from the saturated model in its goodness of fit suggesting that Model 2 is a good fitting model. Model 1 meanwhile is unrealistic because the causal arrow associated with race is necessary in Model 2 to make it a plausible theoretical approximation of reality given these data. We present these fit tests in Table 2. We also run models with alternative estimators to account for the skewed distribution and arrive at the same results, see appendix Table 3. Finally, we test a model

with a direct effect of household income on EM and the effect is not significantly different from zero, while all other effects remain roughly similar and all significant at $p < .001$; again, the fact that income and black population covary in Model 2 is sufficient for our test.

Table 2 also gives direct and indirect effects for black population. Model 2 suggests that *65% of the total effect of black population is direct*. That means that only 35% of the association between race and emergency management is accounted for by the actual fiscal distress of cities, and the remainder represents the race-biased application of EM law. This comes with a confidence interval. If we allow the direct effect to be 2 standard deviations lower than its estimate, 42% of the black population effect would remain direct, and this is already a highly improbable estimate of the ‘true’ effect given these data. Moreover, the coefficient for the direct effect of black population on EM has a standard error of 0.007 suggesting that it would take a difference of 7.5 standard errors before the estimate of the statistical effect crosses zero. We would call this essentially impossible given this model and these data (i.e., $p < .001$ for the indirect and direct effects of race).

We conclude that there is a direct effect of race on emergency management – i.e. that African Americans have been subjected to differential treatment because of the social construct of race – and this effect accounts for half or more of the total effect of race. The remainder of the total race effect is explained by the historical concentration of blacks in fiscally distressed urban centers, i.e. the indirect effect of race. The results of Model 2 in Table 2 may be put into perspective as predicted changes in odds, in terms of logistic regression results. The likelihood of emergency management is 50% greater where there

is a 10 percentage-point larger black population in a given city. We run the analyses with white population in place of black population as a robustness check and to follow the logic that race-bias is the simultaneous effect of prejudice against black in favor of white; as the identity and construct of race depends on both of these social constructed categories. The results for white population mirror the models in Figure 2 and appendix Table 4. The likelihood of emergency management is 57% lower for every 10 percentage point larger the white population according to one minus the odds-ratio 0.943 multiplied by 10, in Table 5.

Conclusion

Using a theory and structural equation modeling we find that race had a direct effect on the likelihood of the state imposing emergency management on Michigan municipalities.¹⁸ We conclude that, on average, the targeted implementation of local emergency measures between 2007 and 2013 were discriminatory in nature; it would not be linguistically false to label them “racist” but this may detract from our scientific goals, because of the connotation of this word.¹⁹ Roughly speaking, about half of the racial disproportionality in emergency management practices are a byproduct of the historical factors that put urban blacks in a position to be *differentially impacted* by EM measures (the indirect effect of race indicated in our results), while the other half is a result of the

¹⁸ We refer to the causal effect as “race” in general instead of “black” in particular, because the black population variable nearly perfectly measures white population from 2007-2013 (the correlation is -0.905).

¹⁹ According to the Oxford English Dictionary, “racist” includes: “Showing or feeling discrimination or prejudice against people of other races”

<https://en.oxforddictionaries.com/definition/racist>

differential treatment of blacks by Michigan’s current EM system (the direct effect of race found in our tests). Our research suggests that this direct effect reveals a contemporary form of institutional discrimination – carried out with active political and legal-juridical support – not merely a residual effect of historical oppression.

Our evidence points at total causal effect of race. This means that we cannot specify the exact mechanisms such as particular decisions by particular persons or procedural factors that would allow a biased application of emergency management practices in Michigan. It is “total” because it includes all of these micro-processes that would most likely require a view behind closed doors in policymaking processes to fully understand. We can only say that in total, all of these micro-process causes add up to what we observe. Readers are often uncomfortable with causal language, and we are careful not to overstate causality here. We had a causal theory whereby race should not play a role following the laws of Michigan and the explicit purpose of emergency management. We set up a model to test this counterfactually by examining if municipalities in Michigan with similar fiscal problems are not significantly more likely to be placed under emergency management as a function of the percentage of the population that self-report as black/African-American. Our test was negative with respect to the causal theory – we conclude that there is race bias. We therefore infer that race played a causal role.

For strict followers of causal inference, we should use the word “causal” only if our model is the correct specification of EM being caused by the need for EM. If that is true, then the question becomes one of unobserved confounding: *what correlates with fiscal distress and the racial composition of cities that might explain EM application*

instead? The distribution of race and the social construction of race is a result growing out of slavery, inter-continental slave trading, housing discrimination, labor market discrimination, educational segregation, and many more factors. To try and explain away the effect of race by introducing other covariates indicative of this history would be to hide or confound race-bias itself rather than produce a ‘better’ model. The hypothetical ‘thing’ that might explain away the effect of race itself must not be a cause of racial distribution; including things that cause errors in the construction of the fiscal distress indicator. *Otherwise it is simply part of the causal process being explained as race-biased and does not prove that race was not a factor.* We are aware of nothing that correlates with race that meets this exogeneity criteria, but we humbly assert and assume that further research and theoretical reasoning is necessary to further substantiate our conclusions (in the direction of Morning 2014).

Whether digressing into a debate about the denotation of “causal”, the non-colorblind application of the laws technically constitutes: “Arbitrary, capricious, or clearly... unwarranted exercise of discretion” on the part of the state of Michigan (PA 436). Thus far, however, no one challenged EM directly on these grounds. Our findings provide the first statistical evidence that the targeted implementation of emergency measures represents differential treatment of communities based on racial makeup. We can take the analogy of discrimination in hiring practices. If candidates are equally qualified for the job, a boss who systematically (read ‘statistically significantly’) takes the white candidate over the black candidate would be exercising discrimination regardless of the internal psychological mechanisms of the boss leading to the discriminatory decisions. Race is causing something about the decision process to lead to

a particular outcome beyond random chance, and that makes race part of the causal process. In our case, we do not know if persons in the government are or intended to be racist, but because equally fiscally distressed cities are more likely to get EM this is constitutes more than statistical discrimination.

To further this research agenda, we offer two speculations as to why EM might be applied differentially based on race. First, there is a certain political expediency to the practice of targeting poor, majority black cities for state takeover. Urban black communities are a structurally weakened political constituency; black people vote less on average than white people in Michigan (and elsewhere) for reasons both chronic (e.g. high levels of unemployment, low levels of education, etc.) and acute (disenfranchisement through incarceration, voter suppression, etc.) and are less likely to have successful candidates even when they do (Zoltan 2009). Whiter communities have more political networking resources at their disposal. Thus, they make difficult targets that can mobilize in response, while poor, majority black cities can be disenfranchised without the same level of political fallout (Flavin and Hartney 2017).

Our second consideration is *money*. The targeted suspension of local democracy gives rise to urban value extraction. Emergency managers sell off assets and pay off obligations at their sole discretion that are unimaginable under normal democratic conditions (Agamben 2005; Kirkpatrick 2015b; Peck 2014; Wong 1988). To begin, extending credit and lending to at-risk cities is big business and the profits to be made by investors are substantial. Detroit is a good example of this trend. Similar to the woes faced by many individuals as a result of predatory lending in the lead-up to the financial crisis, Detroit (and other cities) borrowed money in highly complicated, speculative, and

risky ways. These risks would eventually lead, in the wake of the crisis, to massive payoffs for the city's lenders. The loans designed to pay pensions and other budget shortfalls, ended up costing the city and many of its residents dearly (Peck and Whiteside 2016; Kirkpatrick 2016). For instance, penalties and interest rate hikes imposed after the city failed to perfectly meet all of the conditions of their bailout loans, combined with changes in the derivatives market, cost Detroit \$474 million in fees (paid to big banks and Wall Street firms) on top of their traditional bond debt (Preston and Christoff 2013). In Detroit, Wall Street debts were paid in part to protect the city's credit rating, but at the cost of human welfare, lives and local democracy.

There are no checks and balances in PA 436, (or previous iterations of the law) which allows emergency managers to amass enormous power over the affairs of cities. Emergency managers in Michigan – serving at the pleasure of the governor – use this power to prioritize municipal obligations to big banks and Wall Street firms over the needs of local residents. Emergency managers are structurally compelled to ensure that cities retain access to capital markets in order to pay for the things they need, which entails settling the city's financial debts by contracting public pensions, shedding municipal employees, decommissioning infrastructure networks, radically reducing the provision of social services, and generally shrinking the form and functions of municipal government.

In their attempts to placate the city's largest creditors, local officials turn to the large-scale sell-off of highly valued public assets. This not only allows the city to pay off investor-based obligations, it also creates new investor opportunities in the form of inexpensive acquisition of public lands, buildings, infrastructures, and services, which are

sold or leased, in part or in full, at the discretion of the emergency manager. Detroit is not anomalous in this regard. Opportunities for large-scale urban value extraction still tend to be concentrated in large urban centers, *even in the case of poor, majority black cities*. The once dominant industrial centers of the east and Midwest, contained densely clustered public assets, valuable infrastructural assemblages, and numerous other opportunities for fiscal and financial dispossession. Benton Harbor got a beautiful lake front private golf course, Harbor Shores, which investors sought after for over a decade until an emergency manager finally provided the missing authoritarian power to sell it to them.

At this point, claims concerning why African Americans receive differential treatment at the hands of Michigan's EM system – such as political expediency and urban value extraction – are speculative and exploratory. Scholars might ask 'what is qualitatively special about these 12 cities that led to various, repeated emergency interventions at different points in time?' But this is to cheat the question. To explain away these results through qualitative case descriptions would be to undermine the purpose of quantitative counterfactual analysis, and potentially undermine the meaning of race which correlates with many other things and exists independent of time and space in United States' institutions and organizations. We believe that our claims are defensible as causal and that the burden of disproving this should fall on future research.

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Appendix

Table 2. Descriptive Statistics for All Variables

variable	type	coding	mean	sd	min	max
Emergency Management	dependent variable	Receivership or consent agreement, municipality and/or school district = 1 ^a	0.01	0.08	0	1
Fiscal Distress	intervening variable	"Fiscal Indicator Score"	1.42	1.33	0	9
Black Population	test variable	percentage	3.61	9.89	0	100
Household Income	potential confounder	natural log of median, k\$	3.89	0.29	2.85	5.04
White Population	alternative test variable	percentage	91.78	11.37	0	100

Note: 6,935 observations from 985 units

^aAllen Park, Benton Harbor, Detroit, Ecorse, Flint, Hamtramck, Highland Park, Inkster, Muskegon Heights, Pontiac, River Rouge and Three Oaks were under emergency management for some or all years during the period 2007-2013.

Table 3. Structural Parameters and Fit Statistics for Causal Models of Emergency Management (EM) in Michigan.

	<u>M1</u>		<u>M2</u>	
	EM on	FIS on	EM on	FIS on
<i>Coefficients / Metric results</i>				
Fiscal Indicator Score (FIS)	1.081*	--	0.595*	--
% Black Population	--	0.049*	0.053*	0.049*
Median Household Income logged	--	-0.618*	--	-0.618*
Threshold (Y\$1)	7.031	--	6.870	--
Intercept	--	0.000	--	0.000
<i>Odds-ratios / Exponentiated results</i>				
Fiscal Indicator Score (FIS)	2.948	--	1.813	--
% Black Population	--	1.050	1.054	1.050
Median Household Income logged	--	0.539	--	0.539
<i>Standardized results</i>				
Fiscal Indicator Score (FIS)	0.622*	--	0.374*	
% Black Population	--	0.362*	0.245*	0.362*
Median Household Income logged	--	-0.133*		-0.133*
<i>Direct effects for % Black Population^a</i>				
Total	0.053*		0.082*	
Direct	--		0.053*	
Indirect	0.053*		0.029*	
% Direct	none		65%	
<i>Model fit^a</i>				
X ² - value	90.643		5.274	
X ² - df	2		1	
X ² - p-statistic	0.000		0.022	
CFI	0.972		0.999	
RMSEA	0.080		0.025	
RMSEA <= .05	0.000		0.969	
Difference test M2 v. M1 p-value =	0.000			

Note: *p<.001 and N=6,938 unit-years (e.g., cities, townships, school districts). Emergency Management includes periods of probation and overt political dispossession. All independent variables are mean-centered; mean(s.d.) are (FIS = 1.412(1.334), Black = 3.605(9.892), Med.H.Inc = 3.885(0.287)). Maximum likelihood estimation; see Online Appendix Table 3 (<https://sites.google.com/site/nbreznau/home>) for alternative estimators as the dependent variable is rare (0.07% of cases) and results may be biased by the number of zeroes in the data.

^aFor effects calculations see VanderWeele and Vansteelandt (2010), and Muthén and Asparouhov (2015). Fit statistics taken from WLS estimation, as ML does not allow chi-square for a categorical DV.

Table 4. Sensitivity Logistic Regression Models of Emergency Management (EM) with different Estimators.

Estimator:	ROBUST WLS (M) ^b				ROBUST WLS (MV) ^b				BAYESIAN ^c															
	M1		M2		M1		M2		M1		M2													
	EM on	FIS on	EM on	FIS on	EM on	FIS on	EM on	FIS on	EM on	FIS on	EM on	FIS on												
Coefficients / Metric results																								
Fiscal Indicator Score (FIS)	0.277	*	--	0.214	*	--	0.277	*	--	0.214	*	--	0.475	*	--	0.264	*	--						
% Black Population	--		0.049	*	0.022	*	0.049	*	--	0.049	*	0.022	*	0.049	*	--	0.027	*	0.049	*				
Med. Household Income logged	--		-0.623	*	--		-0.622	*	--		-0.623	*	--		-0.622	*	--		-0.619	*				
Threshold (Y\$1)	3.160		--		3.160		--		3.160		--		3.301		--		3.311		--					
Intercept	--		0.000		--		0.000		--		0.000		--		0.000		--		0.000					
Odds-ratios / Exponentiated results																								
Fiscal Indicator Score (FIS)	1.319		--		1.239		--		1.319		--		1.608		--		1.302		--					
% Black Population	--		1.050		1.022		1.050		--		1.050		1.022		1.050		--		1.027		1.050			
Med. Household Income logged	--		0.536		--		0.537		--		0.536		--		0.537		--		0.538		0.538			
Standardized results																								
Fiscal Indicator Score (FIS)	0.365	*	--		0.271	*	--		0.365	*	--		0.271	*	--		0.535	*	--		0.313	*	--	
% Black Population	--		0.365	*	0.207	*	0.362	*	--		0.365	*	0.207	*	0.362	*	--		0.362	*	0.234	*	0.362	*
Med. Household Income logged	--		-0.134	*	--		-0.134	*	--		-0.134	*	--		-0.134	*	--		-0.133	*	--		-0.134	*
Direct effects for % Black Population ^a																								
Total	0.014*		0.033*		0.014*		0.033*		0.023*		0.040*													
Direct	--		0.022*		--		0.022*		--		0.013*													
Indirect	0.014*		0.010*		0.014*		0.010*		0.023*		0.027*													
% Direct	none		67%		none		67%		none		33%													
Model fit ^a																								
X ² - value	32.453		5.273		27.146		5.273																	
X ² - df	2		1		2		1																	
X ² - p-statistic	0.000		.022		0.000		0.022																	
CFI	0.986		.998		0.987		0.998																	
RMSEA	0.047		.025		0.043		0.025																	
REMSEA <= .05	0.610		.969		0.779		0.969																	
Diff. test M2 v. M1 p-value	n/a				0.000																			
Posterior predictive p-value ^b									0.039				0.502											

Note: *p<.001 and N=6,938 unit-years (e.g., cities, townships, school districts). Emergency Management includes periods of probation and overt political dispossession. All independent variables are mean-centered.

^aFor effects calculations see VanderWeele and Vansteelandt (2010), and Muthén and Asparouhov (2015). Robust mean (M), and robust mean and variance estimations (MV). For model fit, see <http://www.statmodel.com/discussion/messages/23/76.html?1227544991>, chi-square value and df cannot be relied upon here, only the p-value. This is calculated in a different way using WLS-based estimators.

^bBayesian estimator with 12,400 iterations and thinning = /20 to achieve a stable scaling correction factor of approximately 1 and an autocorrelation below 0.1 (Muthén and Asparouhov 2012; Muthén 2010). Also, eyeing the posterior distributions reveals taht they are normal helping to explain why all three estimators used converge on nearly identical results. A p-value of 0.50 suggests that the structurally generated data are as likely to occur as the observed data indicating the best model fit (Zyphur and Oswald 2015).

Table 5. Logistic Regression Models of Emergency Management (EM) with White Population Variable as a Sensitivity Test

	<u>M1</u>		<u>M2</u>	
	EM on	FIS on	EM on	FIS on
<i>Coefficients / Metric results</i>				
Fiscal Indicator Score (FIS)	1.081 *	--	0.534 *	--
% White Population	--	-0.039 *	-0.059 *	-0.039 *
Median Household Income logged	--	-0.636 *	--	-0.636 *
Threshold (Y\$1)	7.031	--	7.009	--
Intercept	--	0.000	--	0.000
<i>Odds-ratios / Exponentiated results</i>				
Fiscal Indicator Score (FIS)	2.948	--	1.706	--
% White Population	--	0.962	0.943	0.962
Median Household Income logged	--	0.529	--	0.529
<i>Standardized results</i>				
Fiscal Indicator Score (FIS)	0.622 *	--	0.332 *	--
% White Population	--	-0.334 *	-0.312 *	-0.334 *
Median Household Income logged	--	-0.137 *	--	-0.137 *
<i>Direct effects for % White Population^a</i>				
Total	-0.042*		-0.080*	
Direct	--		-0.059*	
Indirect	-0.042*		-0.021*	
% Direct	none		74%	
<i>Model fit^a</i>				
X ² - value	25.071		2.299	
X ² - df	2		1	
X ² - p-statistic	0.000		0.130	
CFI	0.985		0.999	
RMSEA	0.041		0.014	
RMSEA <= .05	0.835		0.996	
Difference test M2 v. M1 p-value	0.000			

Note: *p<.001 and N=6,938 unit-years (e.g., cities, townships, school districts). Emergency Management includes periods of probation and overt political dispossession. All independent variables are mean-centered; mean(s.d.) are (FIS = 1.412(1.334), White = 91.786(11.364), Med.H.Inc = 3.885(0.287)). Maximum likelihood estimation.

^aFor effects calculations see VanderWeele and Vansteelandt (2010), and Muthén and Asparouhov (2015). Fit statistics taken from WLS estimation, as ML does not allow chi-square for a categorical DV.

Figure 3. Emergency Management of Michigan's Cities by Percent Black and Fiscal Distress

Note: jitter applied for ease of viewing; “cities” refers to all incorporated units and their school districts