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Residential segregation, discrimination, and African-American theater entry during Jim Crow☆

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A B S T R A C T

We examine the effect of residential segregation on the entry of movie theaters serving African-American customers in the 1950s, which provided an alternative to the segregated theaters of the Jim Crow era. Consistent with preference externalities in racial and ethnic enclaves, we find that greater residential segregation was associated with more African-American theater entry. Estimates from a model of firm entry indicate that residential segregation increased the variable profits of African-American movie theaters, reducing the market size required for theater entry by 13.3 percent for a one standard deviation increase in segregation. We also provide evidence that racial bias increased both variable profits and fixed costs, and on net reduced African-American theater entry. An interpretation consistent with this finding is that racial animus forced black customers toward segregated accommodations while also limiting access to key inputs for potential entrants.

1. Introduction

Residential segregation and racial discrimination have potentially profound implications for minority enterprise and consumption opportunities, among many other outcomes. In this paper we consider these issues in the context of segregated movie theaters in the early 1950s. Prior to the Civil Rights Act of 1964, segregation in public accommodation persisted in many parts of the U.S. Access to business and culture was significantly affected both by Jim Crow laws mandating racial segregation, as well as by the practices of business owners that either explicitly or implicitly excluded blacks. Despite the prominence of public accommodation segregation in African-American life during this time, its effects on access to business and culture are little studied in the economics literature, possibly due to data limitations from the era.

Businesses catering to African-American customers often entered the marketplace to fill the void resulting from the lack of equal access. In this paper, we estimate the effect of residential segregation on the entry of such businesses in Southern cities and counties, where segregated accommodations were the norm, utilizing a comprehensive annual census of African-American movie theaters in the years immediately following World War II. While often smaller and without the full range of modern amenities, theaters serving African-American customers provided an alternative to theaters for white audiences, where black patrons were frequently segregated into inferior seating or more commonly denied admission entirely. The entry of African-American theaters may have therefore expanded consumption opportunities for black patrons facing public accommodation segregation.

The theoretical effects of residential segregation on African-American theater entry are not clear, and mirror closely the modern implications of residential segregation for minority enterprise. On one hand, residential segregation may reduce access to key inputs such as credit for minority entrepreneurs, adversely affecting entry. On the other hand, residential segregation may result in preference externalities, since the fixed costs of opening and operating a movie theater likely leads to increasing returns to scale, analogous to the case of radio stations studied by Waldfogel (2003). Furthermore, residential segregation could protect minority businesses from competition by white-owned firms, as suggested by Cutler and Edward (1997); Glazer and Moynihan (1963), and Aldrich et al. (1985).

We begin by establishing the reduced form relationship between the number of African-American theaters in a location and the degree of residential segregation. We then estimate a structural model of theater entry to shed light on the mechanisms driving the reduced form relationships. Our main findings are that residential segregation lead to greater African-American theater entry. At the MSA level, a one standard deviation increase in the index of segregation across census tracts is associated with an increase in the African-American theater share of 3.3 percentage points, an increase of 19.4 percent compared to the average MSA. The estimated effects of residential segregation extend to non-MSA counties as well. Using the segregation of African-Americans across wards within

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a county, we find that greater residential segregation is also associated with more African-American theater entry outside of metro areas.

We also provide evidence describing the effect of racial bias on African-American theater entry. This complements the residential segregation results since the effects of racial bias will operate through similar channels. Racial bias among the white population lowers entry by reducing access to key inputs, but could increase the viability of African-American theaters by increasing their relative attractiveness to black customers. Analogously, Becker (1957) suggests that white owners of capital would require a higher rate of return if used with black factors of production, or presumably if selling to black customers. In equilibrium, this raises the rate of return of capital held by blacks, who are not similarly biased.

We use two measures of racial bias to examine its effect on African-American theater entry. First, we form a direct measure of racial bias using survey responses to questions related to race in public opinion polls conducted in the late 1940s and 1950s. Respondent-level data containing state of residence allow us to form a measure of racial bias that varies across states. We find that an increase in measured racial bias is associated with fewer African-American theaters. This effect is of similar magnitude to that of residential segregation. A one standard deviation increase in racial bias reduces the African-American theater share by 22.4 percent. Second, we utilize data on historical lynchings, and we find that MSAs experiencing greater lynchings from 1880 to 1920 had fewer African-American theaters.

We then employ the methodology of Bresnahan and Reiss (1990, 1991a, 1991b) to estimate a model of theater entry. This model allows us to separately identify the effect of covariates on the variable profits of theaters from their effect on the fixed costs of entry, as well as quantify their impact on the market size required for theater entry. Intuitively, this is accomplished by considering what market size is profitable for a single entrant, and then how further entry is induced by larger market sizes. These estimates can shed light on the mechanisms by which residential segregation and racial bias influence theater entry. We find that residential segregation leads to theater entry by increasing per-person variable profits, consistent with preference externalities. A one standard deviation increase in measured segregation from the average county reduces the size of the black population required to support one African-American theater by 1157 residents, or around 13.3 percent. We also find that greater racial bias by the white population has conflicting effects on entry by increasing both the fixed costs variable profits. A hypothesis consistent with this pattern of results is one where racial bias of whites forces black movie customers toward segregated accommodations, which increases variable profits for a market of a given size, while at the same time reducing potential entrants' access to key inputs, such as credit and access to building leases.

Our paper utilizes unique data to contribute to two broad areas of the literature. First, we provide new evidence on a largely unstudied aspect of economic history. Public accommodations segregation, and the businesses that entered in response to serve the excluded black populations, are important historical institutions that have received little attention in the economics literature. Second, we add to the literature on the effects of residential segregation, contributing empirical evidence to a dimension of this issue that has received relatively sparse attention, namely how residential segregation affects the entry of minority enterprise and consumption opportunities for minority residents. We draw on tools and insights from industrial organization, including the theoretical notion of preference externalities and empirical estimates from a structural entry model.

The prior literature on the effects of residential segregation points toward conflicting forces on minority outcomes.[1] Our results relate most closely to prior work considering the effects of residential segregation on minority entrepreneurship and consumption opportunities. The possibility that ethnic enclaves could foster minority enterprise has been cited as a factor that could countervail the negative impacts of residential segregation on minority access to quality jobs, mentors and peers, and public goods.[2] While we do not have information on the race of theater owners, it was not uncommon for African-American theaters to be black owned. As noted by Wright (2013), the exclusion of blacks from Southern businesses prior to the Civil Rights Act of 1964, combined with the residential segregation of the black population into urban clusters, were thought by some historians and black contemporaries to enhance business prospects for black entrepreneurs.

The relationship between segregation and minority entrepreneurship has been tested directly in a handful of studies. Fairchild (2008) finds that the clustering of minority residents is associated with greater rates of self-employment, though more interaction between races (a reduction in "exposure" segregation) also increases the likelihood of business ownership. Fischer and Massey (2000) relate a commonly used index of segregation to business ownership rates in the 1990 census, finding that residential segregation reduces the likelihood of minority business ownership, at least for higher levels of segregation.

Residential segregation may benefit the consumption opportunities of minority residents when when differentiated businesses exhibit increasing returns and consumer transportation costs are high. A few studies have empirically considered preference externalities and product offerings, and the current paper contributes by adding an even starker empirical setting. In Waldfogel (2003) and Waldfogel (2008), race is correlated with preferences for radio stations and fast food restaurants, respectively, and geographic areas with more members of a race have more establishments serving their preferences. In our setting, preferences for attending an African-American theater was not merely correlated with race but rather dictated for blacks by segregation practices. This also stands in contrast to Neumark and Mazzolari (2012). They find that immigration leads to ethnic diversity in restaurants, which they explain by the comparative advantage of immigrants in producing ethnic foods.

As mentioned, a second contribution of our paper is in providing evidence regarding the historical institution of public accommodation segregation and the black businesses that entered in response. Wright (2013) details the history of segregation, and provides several pieces of suggestive evidence evaluating the effects of public accommodations segregation on the sales of white businesses and on the success of black entrepreneurs. Aside from this book, we are not aware of an economics literature providing systematic empirical evidence in this area.

A recent tangential literature studies the origins and effects of residential segregation. Troesken and Walsh (2017) examine how segregation ordinances arose in the early 1900s as a result of the breakdown of informal institutions that acted to discourage property transfer to other races. Boustan (2010) studies the role of post-war black migration played in the suburbanization and resulting segregation of northern cities. Cook et al. (2017) examine the hypothesis that residential segregation may contribute to ethnic fractionalization, and thereby violent crimes, by studying the historical pattern of residential segregation and how it correlates with racial violence. They point out that the impact of segregation is theoretically unclear. Segregation affects exposure to members of the opposite race, and exposure could either lead to increased tolerance or resentment. Using the detailed measures of residen-

[1] The empirical literature regarding the effects of residential segregation is mixed across a wide range of settings and empirical approaches. Cutler and Edward (1997) and Ananat (2011) find that living in a segregated city has adverse effects on a range of outcomes for African-Americans, including lower incomes, reduced schooling, and increased incidence of single motherhood, while Collins and Margo (2000); Cutler et al. (2008), and Borjas (1995) find varying effects depending on the time frame and demographic or socioeconomic group.

[2] See for instance the protected market hypothesis of Aldrich et al. (1985). In addition to the direct benefits that entrepreneurship opportunities provides, spatial mismatch (Kain, 1968) suggests that improving business ownership in minority neighborhoods could improve employment opportunities.