



Black-Friendly businesses in cities during the Civil Rights Era[☆]

Maggie E.C. Jones^{a,b}, Trevon D. Logan^{c,b,*}, David Rosé^d, Lisa D. Cook^{e,b}

^a Emory University, United States of America

^b NBER, United States of America

^c The Ohio State University, United States of America

^d Wilfrid Laurier University, Canada

^e Michigan State University, United States of America

ARTICLE INFO

Keywords:

Race
Black business
Location of firms
Public accommodations

ABSTRACT

Quantitative analysis of Black business districts and evidence on the magnitude of social change leading up to the passage of the Civil Rights Act of 1964, in particular as it relates to the accessibility of public accommodations, is limited. We combine newly digitized data on the precise geocoded location of nearly 6000 Green Book establishments – public accommodations that were friendly towards African American clientele – across major urban areas with existing and new sources of data on social change to understand the dynamics of Black-friendly businesses within cities during the middle of the twentieth century. In doing so, we document a new set of facts. First, we show that the location and growth of Green Book establishments responded to economic forces. Second, we show that there was a large increase in the number of Green Book establishments in cities between 1939 and 1955. Third, for Green Book establishments located in cities for which the Home Owner's Loan Corporation (HOLC) drew residential security maps, the vast majority (nearly 70 percent) were located in the lowest-grade, redlined neighborhoods. And finally, we show that 1950s urban renewal projects were related to the contraction of non-discriminatory businesses. Collectively, these facts suggest that more research on Black-owned and Black-friendly businesses is needed to fully understand the economics of urban change in the twentieth century.

“As a specific form of urban adjustment, the black business district is characterized by social and economic activities similar to those found in the dominant white business district and some that are peculiarly its own.”— Wilson (1975), p. 353

In the mid-twentieth century, America segregated African Americans and Whites by both law and practice. The causes and consequences of *de jure* and *de facto* residential segregation have received substantial attention from scholars. The consensus is that residential segregation

exacerbated racial disparities in income, employment, education, political influence, and homeownership (Cutler and Glaeser, 1997; Card and Rothstein, 2007; Ananat and Washington, 2009; Ananat, 2011; Aaronson et al., 2021). Relatively less attention has been paid to understanding segregation's role in access to public accommodations and business ownership.¹ This is not due to a lack of interest or importance; after all, the denial of services to African American consumers and equal access to public accommodations was one of the key demands of the Civil Rights Movement and the most contentious topic in the

[☆] We thank Fraser Summerfield for valuable feedback on this work, as well as seminar participants at Wilfrid Laurier University and 2023 CEA conference. We thank Dr. Peggy Ann Brown and Kevin Morrow for help with the phone books at the Library of Congress. This work would not have been possible without the help of our dedicated team of research assistants: Shekdoon Abdulle, Stefan Arsic, Ashley Brewster, Maddy Conkle, Jack Csokmay, Vi Dinh, Mark Drodz, Matthew Edwards, Burke Evans, Alisa Feng, Fahim Hossain, Rohan Kaushal, Daniel Lake, Julia Miracle, Daniel Missell, Abby Nenna, Yamini Panagari, Ethan Pointer, Ryan Scott, Maggie Seikel, Jessica Shakespere, Jamila Spears, Morgan Thompson, Julia Uhler, Brandon Wong, Eric Yam, and Lingxuan Yang. Portions of the research were supported by the National Science Foundation, United States (Award #1949159). Parts of this paper were previously circulated as NBER Working Paper No. 26819, “The Green Books and the Geography of Segregation in Public Accommodations”. This paper is dedicated to Prof. Franklin D. Wilson (1942–2020) and is indebted to his mentorship, scholarship, and methodological approach. All errors are our own.

* Corresponding author at: The Ohio State University, United States of America.

E-mail address: logan.155@osu.edu (T.D. Logan).

¹ Important exceptions to this are Gil and Marion (2018) which studies the entry decisions of Black cinemas in segregated areas and Gil and Marion (2022) which studies the role of taste-based discrimination by consumers and firms in upholding segregation in cinemas. Another exception is Roback (1986)'s study of segregated streetcars.

<https://doi.org/10.1016/j.jue.2024.103640>

Received 31 May 2022; Received in revised form 14 January 2024

0094-1190/© 2024 The Author(s). Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Congressional debate surrounding the passage of the Civil Rights Act of 1964 (Wright, 2013). Rather, the absence of reliable data on the location and number of non-discriminatory businesses has hampered researchers' ability to investigate this topic.

Sociologists have developed a more thorough approach to the topic, having long been interested in Black business formation and the discriminatory and non-discriminatory practices of firms in urban areas. Since DuBois' pioneering study of Black Philadelphia in 1899, researchers have noted the necessity of Black businesses for urban Black households (see the classic studies of Drake and Cayton (1945), Williams (1964), and Clark (1965) as examples). Several patterns emerge in these seminal studies of the urban racial landscape. First, extensive consumer discrimination from Whites and residential segregation necessitated the development of service sector businesses (e.g. hotels, eating establishments, and places of recreation) that would serve Black Americans near their places of residence. Even then, the provision of services was extremely limited. Second, the development of Black businesses were geographically distinct from the major business districts of the city—reflecting their nearly-exclusive clientele. Third, the businesses that were frequently found in such areas were typically small, due both to the shorter tenure of the businesses and the fact that financial discrimination limited the ability of the businesses to expand (Wilson, 1975).

This knowledge, however, comes from a relatively small empirical base. The existing studies of Black businesses during the mid-twentieth century are relatively sparse. The best-known include Frazier (1937)'s study of Harlem in New York City, Reiss and Aldrich (1971)'s study of the extent of absent owners in Boston, Chicago, and Washington, D.C., and Wilson (1975)'s study of Birmingham, Alabama. Attempts at more comprehensive analysis, such as Sturdivant (1970)'s, have not been subsequently extended, largely supplanted with administrative sources from the Federal government. This has led to a dearth of historical analysis. Wilson (1975) notes that "few attempts have been made to trace the historical origin and *location* of black business districts" (emphasis added, p. 354). Even more, the work of Wilson (1975), who analyzed businesses in Birmingham from 1965 to 1971, suggests that by the time reliable federal data existed for Black businesses, the number of Black businesses, and the strength of Black business districts, was already in decline.

In an attempt to fill this large gap in the urban economics literature, this paper has two related goals. Our first goal is to empirically document the correlates, location, and trends of Black-friendly businesses in mid-twentieth century America. The second goal of this paper is to explore how urban policy in the mid-twentieth century changed these business districts. We address both of these goals using a novel dataset of Black-friendly businesses that builds on the work of Cook et al. (2020), who use the Green Books – travel guides that assisted African Americans in navigating segregation prior to the passage of the Civil Rights Act of 1964 – to analyze the growth of non-discriminatory public accommodations across counties between 1939 and 1955. We geocode the exact location of nearly all of the Green Book establishments digitized by Cook et al. (2020). Combining these data with other standard and unique data sources, allows us to study the dynamics of Black-owned and Black-friendly businesses in fine geographic detail, thereby providing a unique lens into the location of businesses that served Black consumers in urban America in the mid-twentieth century.

In addressing the first goal of the paper, we uncover three facts about Black-serving businesses in the urban United States. First, we use a straightforward supply-and-demand analysis and show that, at the neighborhood level (defined by census tracts), Green Book listings responded to typical economic forces: they increased with the market size of the consumer base – both the number of Black consumers and the fraction of these consumers in the labor force determine the size of the non-segregated market – and for hyper-local businesses, such as eating and drinking establishments, entry was more likely when

markets were less competitive and thus the return to entry was higher.² This census tract level analysis was made possible by a data innovation; we created a crosswalk that links enumeration districts from IPUMS to census tracts in 1940. This allows us to generate a variety of census tract-level variables from the 1940 full-count census.

Next, we show across several major urban areas that there was a large and significant increase in the number of non-discriminatory businesses in cities from 1939 to 1955, consistent with the growth of the Black population in urban centers. Finally, we investigate where these changes happened within cities. We find that Green Book businesses were systematically located outside of central business districts. We establish this fact by exploiting information from digitized copies of the Home Owner's Loan Corporation (HOLC) residential security maps from the 1930s. From here, we can overlay the location of Green Book establishments with the HOLC maps of residential neighborhood grading (Aaronson et al., 2021). These maps assigned risk-assessment scores to neighborhoods for lending companies to consider when evaluating whether or not to provide loans to residents of these neighborhoods. Of the Green Book establishments located in urban areas for which HOLC maps are available, we find that the majority of these businesses (63 percent) were located in the lowest-grade, redlined residential neighborhoods. The second largest group of Green Book establishments were located in areas without an grade, which were likely central business district areas or other industrial areas within cities.³

Turning to the second goal of this paper, the remainder of the analysis explores the impact of urban renewal policies on the prevalence of Black-friendly businesses. While contemporary research underpins the decline in urban residential areas as a function of historical segregation and exclusion (Aaronson et al., 2021), and others have explored the broader impacts of urban policies, such as slum clearance (Collins and Shester, 2013; Lavoie, 2022), little is known about the impact these policies have had on Black-friendly or Black-owned businesses.⁴ This is important insofar as Black business districts were one of the few areas of Black entrepreneurial activity and a source of nascent Black wealth creation. We exploit the precise location of Green Book businesses and urban renewal projects in the 1950s to identify the impact of these projects on subsequent changes in Black business districts. We find a positive correlation between a census tract eventually becoming the site of an urban renewal project and the presence of Green Book businesses, underscoring the prevalence of these projects in Black business districts. Moreover, we find that *within* census tracts, Green Book businesses that were in urban renewal zones experienced significant declines relative to those in the same census tracts but outside of urban renewal zones. In particular, eating establishments experienced the most precipitous decline after urban renewal projects began. Results by type of business underscore that businesses that served the local area in personal services were the most negatively impacted by the renewal projects. We corroborate our results with a city-level analysis that suggests these businesses did not simply relocate elsewhere in the city, rather, they exited the markets.

² Admittedly, these variables may represent – either directly or indirectly – both supply or demand factors, thus we remain agnostic on their interpretation.

³ We do not use HOLC grading in a causal fashion. In light of the current debate regarding the causal impact of the HOLC's red-lining maps on economic and social outcomes for Black households (for recent examples, see Fishback et al. (2023) and Aaronson et al. (2021)), our use of the maps is descriptive, we note the relationship between neighborhood grading and business location. At the same time, we speculate that the same forces that led to reduced access to credit for Black residential investment also affected Black entrepreneurship in the businesses we study.

⁴ There are some exceptions, including contemporaneous surveys from the period of urban renewal. See, e.g., Kinnard and Malinowski (1960), Zimmer (1967), Taylor (1974). Our empirical analysis closely aligns with the results of this earlier work.

Taken together, these findings should spur additional investigation into the historical origins and development of Black business districts, Black-friendly businesses, and their relationship to larger urban processes. Unlike the increasing residential segregation which peaked in 1970, we find that Black-friendly businesses in urban areas were on the decline as residential segregation increased and infrastructure developments made inroads to the urban core. Similarly, urban renewal projects being negatively related to Black-friendly businesses suggests that such projects would have impacted access to public accommodations and Black entrepreneurship more generally. We therefore conclude with a call for additional research on these topics and the short- and long-term effects of changes in Black business districts on racial inequality more generally.

Aside from the contributions to the historical and economic narrative, our project makes several data contributions that are of interest to economic historians and other social scientists.

1. The Green Books data

This section provides a brief background on the history of the Green Books. We then describe how we converted the Green Books into data and some of the methodological challenges we faced.

1.1. A brief overview of the Green Books

In the words of historian John Hope Franklin, by the middle of the twentieth century,

“The wall of segregation had become so formidable, so impenetrable, apparently, that the entire weight of the American tradition of equality and all the strength of the American constitutional system had to be brought to bear in order to make even the slightest crack in it.”—Franklin (1956)

In the South, the Jim Crow laws permeated all facets of civil society: segregated churches, libraries, schools, housing complexes, employment, restaurants, hotels, public transit, hospitals, orphanages, and jails were ubiquitous (Woodward, 1955). Although legal structures were not as strict in the North and West, many communities practiced *de facto* segregation (Drake and Cayton, 1945; Clark, 1965). This climate led to the creation of the *Negro Motorist Green Books* (henceforth, Green Books). While there is relatively little narrative history of the Green Books, the brief overview that follows draws heavily from the works of Sorin (2009, 2020), Taylor (2020), and Cook et al. (2023b).

The Green Books, named after their founder, Harlem postal worker Victor Green, were travel guides for African American motorists that were first published in 1936 as a ten-page pamphlet for New York City.⁵ Rather than listing establishments that would simply serve African Americans, albeit as second-class citizens, Green's objective was to provide a directory of establishments that would treat African American clientele with dignity and respect. This meant that the establishments in the Green Books provided a reliable quality of service. Despite the original intention of the Green Books to help African American motorists by listing hotels, motels, and service stations that were friendly towards African American travelers, the listings included several other types of services within cities, like restaurants and bars, barber shops, beauty parlors, pharmacies and other shops; however, in Cook et al. (2023b) we show that while many shops and services were included in the Green Books, the vast majority of listings were for restaurants and accommodations.

Following the inaugural publication in 1936, the Green Books quickly expanded in popularity and by 1939 were virtually national

⁵ Green's conception of the travel guides bore from his own experiences with racial discrimination while on the road with his wife, Alma, in 1939 (Brown, 2017).

in scope. After a pause in publication from 1942–1946, when domestic resources were diverted to supporting America's engagement in World War II (Landry, 1988), the Green Books resumed and remained the leading travel guide for Black motorists up until just after the passage of the Civil Rights Act outlawed racial discrimination in public accommodations (McGee, 2010). Importantly, the Green Books being initiated in New York City itself speaks to the entrenched nature of racial discrimination in large urban areas outside of the South.⁶ New York state would not outlaw racial discrimination in public accommodations until the Rockefeller administration in the early 1960s.

In Fig. 1, an illustrative example of the entries found within the Green Book, from the 1956 edition, is presented. Establishments were organized by cities within states and, in almost all instances, included exact street addresses.⁷ A listing in the publication was free for businesses and information on establishments for the Green Books were sourced through a variety of ways. First and foremost, information on Black-friendly businesses spread through word-of-mouth, both from individuals writing to the Green Book editors to inform them of potential listings, as well as from the recommendations of Black postal workers across the U.S. (Khan, 2015; Taylor, 2020).⁸ In some instances, businesses paid for advertisements, as shown in Fig. 1(c), though these were generally a small fraction of overall listings (Cook et al., 2020).

1.2. Constructing the Green Book dataset

Cook et al. (2020) presents the first use of the Green Books as a comprehensive dataset to study the economics of discrimination in public accommodations. We build on this work in several ways. Most importantly, we introduce a new census tract-level dataset constructed from geographic coordinates of the exact location of addresses in the digitized version of the Green Books from Cook et al. (2020). Like their dataset, ours draws from 20 years of Green Book publications available online through the New York Public Library's (NYPL) Digital Collections: 1938–1941, 1947–1957, and 1959–1963.⁹

In addition to the reasons presented by Cook et al. (2020) for using a combination of hand recording and probabilistic matching when digitizing the Green Books, we note that the presence of print error can confound the analysis of city-level business formation. For example, there are instances in which an establishment is listed more than once; sometimes under a “hotels” sub-heading as well as a “general” businesses sub-heading—but the names are slightly different. As an example, in the 1955 edition, in Montgomery Alabama “Hotel Ben Moore” with address “Cor. Hight & Jackson Sts.” appears in bold under the hotel sub-heading. Meanwhile, “Ben Moore, Cor. High & Jackson” also appears under the non-hotel heading. Other errors include misspellings of street names, business names, and, in the case of rural establishments, rough approximations of the address, including the city in which an establishment is located.¹⁰

We provide a detailed overview of the process by which we recorded, checked, and geocoded the information in the Green Books in subsection A1 of the Online Appendix. Our method allows us to locate 85% of the establishments in the Green Books precisely. We assign geographic coordinates to the remaining 15% with varying margins of error which are all described in Section A1 of the Online Appendix.¹¹ Overall,

⁶ Even in the 1930s, W.E.B. DuBois noted that there were fewer than five hotels in New York City that would house Black customers (Bay, 2021).

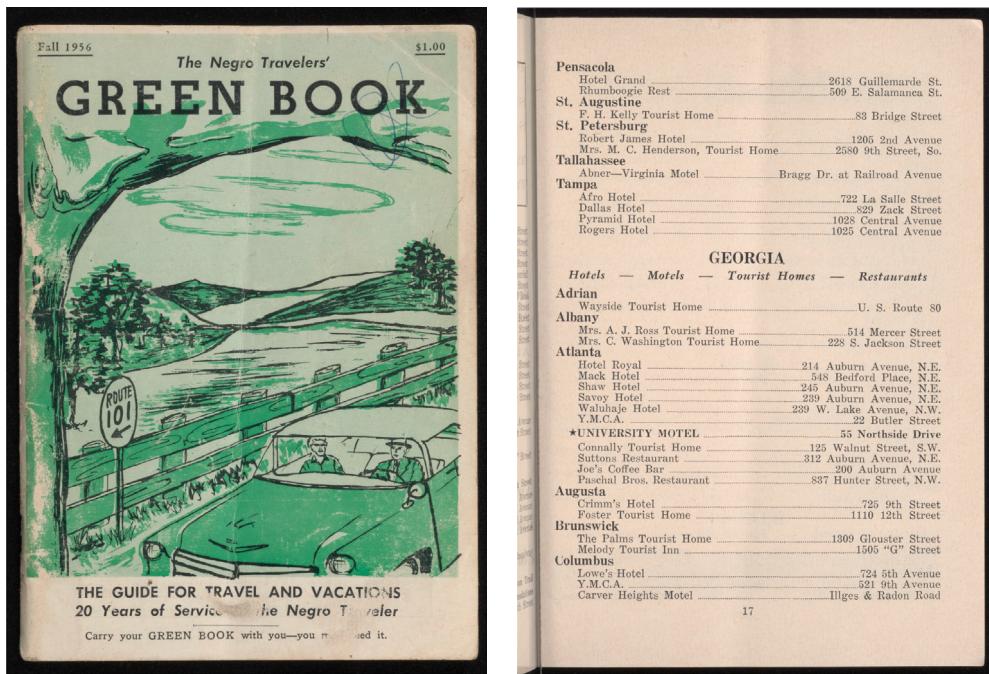
⁷ In urban areas (the focus of this paper), most of these were numbered street addresses, but listing an intersection was also common.

⁸ Beginning in 1938, Green asked the public to notify the editors about any potential listings that were not already included in the Green Books.

⁹ The complete collection can be found here: <https://digitalcollections.nypl.org/collections/the-green-book>.

¹⁰ Fortunately, these addresses are often descriptive in nature, which improves the accuracy of geocoding.

¹¹ For our census tract analysis, we only include precisely geocoded establishments.



(a) Front page

(b) Example from Georgia

(c) Example of an advertisement

Fig. 1. Sample of the Green Book publications from the year 1956 and the state of Georgia.
Source: Reproduced from the New York Public Library Digital Collections.

our procedure has distinct advantages over automated approaches. First, since there are idiosyncratic errors in the original Green Book publications, we are able to them and to correct the corresponding data to ensure that existing and new businesses are appropriately recorded. Second, since our procedure involves checks of addresses against two sources for geocoding, we have a substantially higher match rate than studies such as [Akbar et al. \(2019\)](#), who link addresses over subsequent census enumerations.¹²

¹² A third advantage which is not pertinent to our current study, owing to its urban focus is that our method works to ensure that the overall match rate is not driven by urban locations alone, as a failure to accurately account for rural establishments could result in biased inference from the data. A number of Green Book locations are in rural areas, and accurately geocoding them is important for capturing the geographic coverage of firms listed in the Green Books.

One important question regarding the use of the Green Books as a data source to study economic or social questions relates to the selection of businesses into the publications. As noted above, listings in the Green Books were often sourced through word-of-mouth or the network of Black postal workers who would recommend businesses to the publication ([Taylor, 2020](#)). Businesses could also pay for an advertisement in the Green Books. Fortunately, [Cook et al. \(2023b\)](#) provide an empirical analysis that reveals that the Green Books were generally at least as representative as other competing travel guides. Furthermore, they show that the vast majority of the growth in Green Book establishments between 1939 (the year it became national in scope) and the mid-1950s occurred in counties that already had a Green Book establishment in 1939. Thus, selection is unlikely to occur across regions, although it may still be present within a city or county. Finally, they also show that the prevalence of Green Book establishments on a per capita basis tends to be a marker of a less discriminatory climate, as

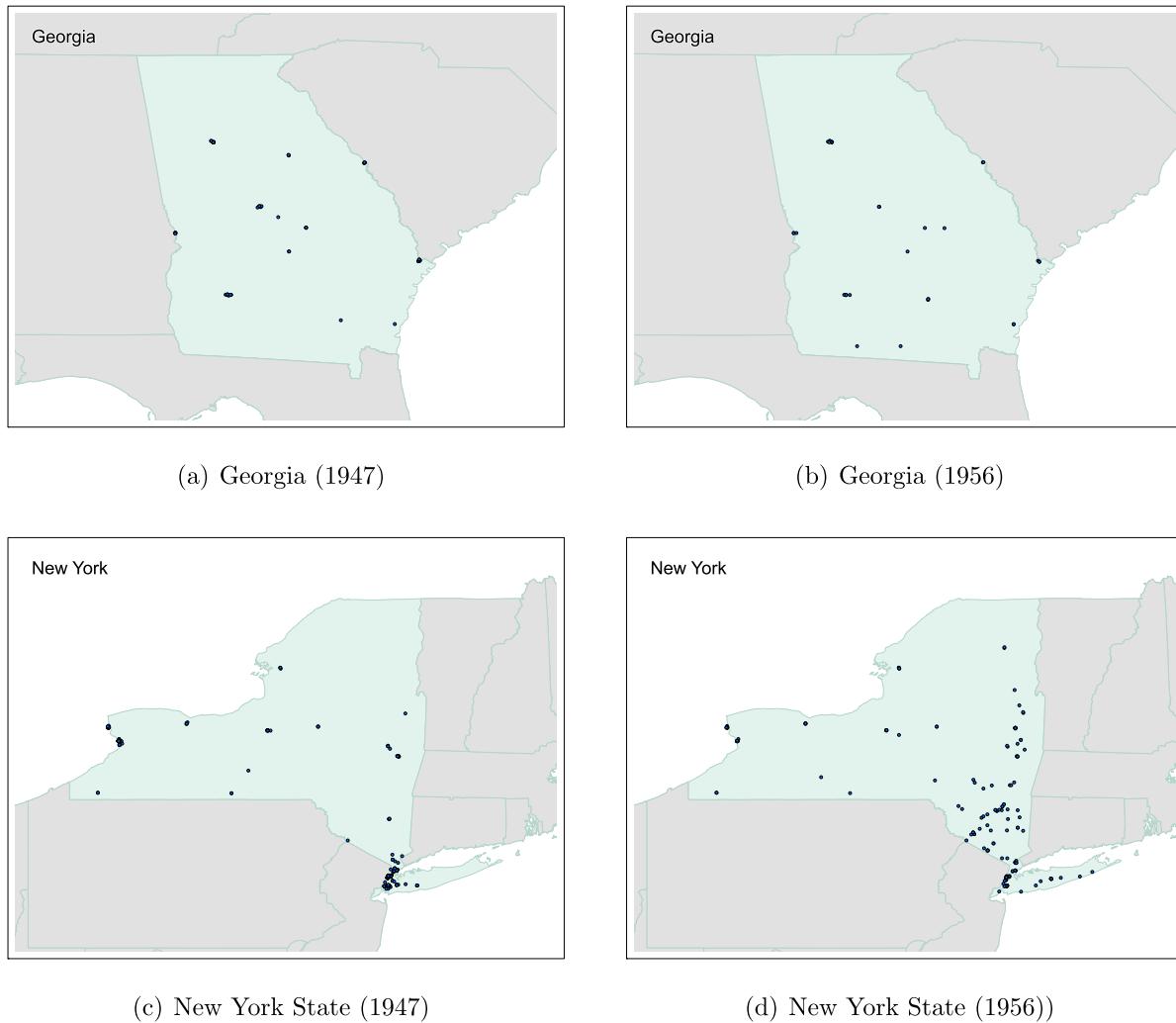


Fig. 2. Location of Green Book establishments in 1947 and 1956 in Georgia and New York State.

measured by the number of anti-discrimination laws relating to public accommodations.

In spite of the aforementioned issues with the Green Books, generating counts of the Green Book establishments by specific geographic levels of aggregation, like cities, is relatively straightforward, since Green Book establishments are uniquely identified in each issue.¹³ Panel (a) of Fig. 2 shows the location of all Green Book establishments in Georgia in 1947, while panel (b) shows the establishments in this state in 1956. Panels (c) and (d) of the same figure show the analogous maps for New York State. By 1956, Green Book establishments were present in every state in the contiguous United States, aside from Montana and North Dakota, but a majority of the growth happened within areas with an existing Green Book establishment (Cook et al., 2023a). This can be seen in the maps for Georgia, where there do not appear to be many new areas showing up on the map between 1947 and 1956, while New York State shows a greater expansion in coverage over this decade. In what follows, we restrict our analysis to cities, using only the Green Book entries that were located in contemporaneously defined metropolitan statistical areas.

Table 1 provides an overview of the Green Book data, by year. The nominal price of the Green Book publication ranged from 25 cents

in 1938 to \$1.95 in 1963. By 1939, almost all states had at least one Green Book listing, though it was not until the final year that every state, as well as D.C., was listed in the Green Book. Over time, as the number of states included in the Green Books grew, so too did the number of cities (column (4)), establishments (column (5)), as well as the length of the publications (column (2)).¹⁴ A notable jump in these measures occurred during the WWII period when the publication of the Green Book halted for five years. Between 1955 and 1956 the number of cities included in the Green Books dropped by nearly 100, and the number of establishments declined from 3605 to 1671.¹⁵ Interestingly, this drop did not correspond with a decline in the number of states or pages included. For now, it is important to note that this drop is not driven mainly by the cities exiting the Green Books between 1955 and 1956. In Figure B.1 of the Online Appendix, we show that if we exclude cities that dropped from the Green Books from the overall trend, there remains a precipitous drop in the number of establishments. In the same figure we show that these trends change very little when we “fill in” missing observations. That is, if a business appears in 1951 and again in 1953, we assume it must have existed in 1952. Figure B.2 of the Online

¹³ The exceptions to this are usually double entries of listings due to the inclusion of an establishment in the “listings” section and a separate advertisement for said establishment, sometimes with minor variations in the name.

¹⁴ Note that we refer to cities here as the municipality in which the establishment is located, which includes both large cities and smaller towns.

¹⁵ Figure B.3 of the Online Appendix shows that the fraction of businesses that exited was heavily skewed between 1955 and 1956 compared to adjacent years.

Table 1
Descriptive statistics: Green Books over time.

Year	(1) Nominal Price	(2) # States	(3) # Cities	(4) # Pages	(5) # Est	(6) # Est/Page	(7) # Ads	(8) Fraction Ads
1938	0.25	25	234	21	1006	47.90	33	0.033
1939	0.25	46	485	48	1945	40.52	70	0.036
1940	0.25	46	439	48	2013	41.94	14	0.007
1941	0.25	46	455	48	1959	40.81	27	0.014
1947	0.75	46	519	81	3470	42.84	29	0.008
1948	0.75	48	545	80	3822	47.78	42	0.011
1949	0.75	48	553	80	3818	47.72	47	0.012
1950	1	49	593	88	4034	45.84	18	0.004
1951	1	49	592	80	3907	48.84	17	0.004
1952	1.25	48	599	80	3793	47.41	27	0.007
1953	1.25	48	606	80	3666	45.83	15	0.004
1954	1.25	48	617	80	3693	46.16	59	0.016
1955	1.25	48	611	80	3590	44.88	41	0.011
1956	1	49	521	80	1662	20.78	49	0.029
1957	1.25	50	613	80	1810	22.63	72	0.040
1959	1.25	50	627	86	1793	20.85	213	0.119
1960	1.95	50	627	129	1890	14.65	277	0.147
1961	1.95	50	650	129	1986	15.40	211	0.106
1962	1.95	50	619	128	1837	14.35	174	0.095
1963	1.95	51	629	103	2164	21.01	93	0.043

Notes: This table displays basic descriptive information from the Green Book data. Column (3) includes D.C. in the calculation.

Appendix shows that the fraction of businesses that can be filled in this way is small and stable over time.

Cook et al. (2020) show that, while the number of businesses listed in the Green Books dropped sharply after 1955, the fraction of listings that were advertisements increased during the same time. This suggests that the change in the number of establishments may have been due to changes in the revenue structure at the Green Books, at least in part. The drop is likely also a reflection of the expansion of the Interstate Highway System, and the proliferation of urban renewal projects, both of which often disproportionately impacted neighborhoods that were predominantly African American. We evaluate the impact of these urban renewal projects in more detail in Section 2.

We begin by briefly describing the characteristics of census tracts with Green Book establishments compared to those without Green Book establishments to gain a sense of the factors that tend to correlate with the presence of these establishments. This descriptive analysis can be found in Table 2 for demographic and economic variables, and in Table 3 for neighborhood characteristics. These statistics are presented for data that we have aggregated from the 1940 complete count census from IPUMS. This was made possible by a new crosswalk that we have constructed to match enumeration districts (reported for individual-level observations in the IPUMS full-count dataset) to census tracts, the smallest unit of census geography for which shapefiles are readily accessible for working with spatial data (Manson et al., 2020). This was done using the Census Bureau's Census Enumeration Descriptions (Department of Commerce)—detailed descriptions given to census enumerators of the geographic area that they were responsible. Fortunately, the corresponding census tract for each enumeration district was also included in these notes. Using these notes we are able to create the correspondence of enumeration districts to census tracts. In total, we are able to create reliable demographic information, by race, for almost 95 percent of census tracts outside of New York City in all cities.¹⁶ More details on this crosswalk can be found in Section A2 of the Online Appendix.

In each table, column (1) displays the overall statistics, column (2) presents statistics for census tracts that never had a Green Book establishment, column (3) presents the same statistics for census tracts that

had a Green Book establishment at some point between 1938 and 1963, and column (4) presents the difference in means tests between columns (3) and (2). Overall, the summary statistics highlight some interesting differences between census tracts with Green Book establishments and those without. Beginning with Table 2, we see perhaps unsurprisingly, that census tracts with Green Book establishments tend to have lower White populations and higher Black populations. This likely reflects the relevant consumer base for these establishments, a point we return to in the following section. Both White and Black incomes tend to be lower in census tracts with Green Book establishments, although Black incomes are only marginally lower in these census tracts. Labor force participation rates are lower for White residents in Green Book neighborhoods and higher for Black residents in Green Book neighborhoods, but these differences are small in magnitude. Census tracts with Green Book establishments had more Black hotel owners per capita, although the number of Black restaurant owners was not statistically different between Green Book and non-Green Book neighborhoods.

Turning to the neighborhood characteristics in Table 3, we can see that places with Green Book establishments were much more likely to be located in a region that eventually received an urban renewal project. We compute this value by overlaying digitized maps for projects that appear in the federal government's publication titled *Urban Renewal Project Characteristics* (1955–1966). These files are available online through the substantial contributions of the Digital Scholarship Lab at the University of Richmond (Nelson et al., 2022b). While their files are not a complete set of urban renewal projects, we see that, among their post-1955 projects, census tracts with Green Book establishments are substantially more likely to have an urban renewal project compared to those without Green Book establishments.

Both types of census tracts were equally likely to intersect with an area for which the Home Owners Loan Corporation (HOLC) drew maps depicting the risk of lending to specific neighborhoods. The HOLC was established in 1933 as a Depression-era program designed to stabilize communities by refinancing home mortgages that were at risk of foreclosure. To do so, the agency mapped 239 cities and graded areas within each city by the risk of lending in a specific area. Neighborhoods were assigned a rating of A (least risky) to D (riskiest). Each type of neighborhood was color-coded on the maps, with the highest risk, D-grade, neighborhoods colored in red, leading this practice to become known colloquially as "redlining". We combine the census tract boundary files with digital reproductions of historical maps drawn by the Home Owner's Loan Corporation (HOLC) in the 1930s. These maps are available online for 202 cities by the Digital

¹⁶ New York was unique in that the main published tables and maps produced by the Census Bureau were for Health Areas, which are aggregations of census tracts. At this time we are unable to link census tracts to Health Areas, so we cannot aggregate the IPUMS microdata to create Health Area variables.

Table 2

Descriptive statistics (Demographic and Economic): Census tract characteristics in 1940, by Green Book status.

	(1) Overall	(2) No GB	(3) At least one GB	(4) Difference
White Pop	3987.03 (2710.10)	4090.89 (2686.37)	3500.95 (2769.12)	-589.94***
Black Pop	672.63 (1500.76)	373.79 (912.27)	2071.27 (2555.74)	1697.48***
Non-White Pop	697.73 (1505.03)	394.43 (922.25)	2117.30 (2539.16)	1722.88***
Share Non-White	0.15 (0.26)	0.10 (0.20)	0.37 (0.35)	0.27***
Income (White)	1153.69 (359.15)	1184.18 (363.50)	1010.96 (299.51)	-173.22**
Income (Black)	638.34 (289.52)	639.69 (304.24)	632.03 (207.18)	-7.65
Shr LF With Min (Grade 10) (Black)	0.08 (0.16)	0.05 (0.11)	0.23 (0.23)	0.18***
Shr LF With Min (Grade 10) (White)	0.72 (0.25)	0.77 (0.21)	0.53 (0.31)	-0.24***
LFP Rate (Black)	0.67 (0.18)	0.67 (0.19)	0.65 (0.12)	-0.02**
LFP Rate (White)	0.59 (0.07)	0.59 (0.06)	0.62 (0.08)	0.03***
Share LF Semi-Skilled (Black)	0.62 (0.22)	0.63 (0.23)	0.60 (0.14)	-0.03***
Share LF Semi-Skilled (White)	0.35 (0.12)	0.35 (0.12)	0.37 (0.11)	0.02***
Share Homeowners (Black)	0.25 (0.31)	0.27 (0.32)	0.18 (0.22)	-0.09***
Share Homeowners (White)	0.35 (0.20)	0.37 (0.19)	0.25 (0.18)	-0.12***
Hotel Owners Per 1,000 (White)	2.19 (4.41)	1.82 (3.39)	3.95 (7.29)	2.14***
Hotel Owners Per 1,000 (Black)	1.38 (8.12)	0.98 (7.68)	3.23 (9.69)	2.25***
Rest Owners Per 1,000 (White)	4.23 (4.77)	4.03 (4.60)	5.14 (5.38)	1.11***
Rest Owners Per 1,000 (Black)	2.08 (25.52)	2.12 (28.05)	1.91 (3.99)	-0.21
Observations	3891	3206	685	3891

Notes: This table displays summary statistics for Census Tracts in 1940. Column (1) displays statistics for all census tracts in our dataset; (2) displays statistics for census tracts that did not have a Green Book establishment; (3) shows the statistics for tracts that had at least one Green Book establishment; and (4) shows the results of a difference in means test for (3)–(2). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Scholarship Lab at the University of Richmond (Nelson et al., 2022a). From here, we compute the share of each census tract that was covered by an HOLC map of each grade.

As an example of the practice of redlining in relation to the location of Green Book establishments, Fig. 3 displays the location of Green Book establishments in 1956 with the HOLC map for Newark and the Burroughs of New York City. Visually, it appears that the majority of Green Book establishments are located in redlined neighborhoods. Table 3 shows just how strong this empirical regularity is. Approximately 52% of the area of census tracts that had a Green Book establishment at some point between 1938 and 1963 were redlined by the HOLC. This is something we investigate in further detail in the sections that follow.

As for the Green Book businesses themselves, census tracts that had a Green Book establishment at some point between 1938 and 1963 had an average of 0.8 of them in 1940, likely because the Green Books expanded substantially in the post-WWII period. Within these tracts, formal accommodations and eating and drinking establishments occurred most frequently, with an average of 0.22 and 0.18 per census tract, respectively.

The correlations in these two tables start to paint a picture of the location of Green Book establishments within cities. It is highly likely that local demand for the establishments, as proxied by the Black population, is related to their presence. But government legislation, zoning bylaws, and urban policy also influence where and when these businesses appear. In the next subsection, we provide an economically grounded analysis of the location of these businesses in 1940. Then, we focus on some of the trends in Green Book establishments within cities

and how urban policy has likely shaped their evolution. Together, this allows us to use the Green Book data to better understand the economic, social, and legal forces that have influenced and continue to influence the provision of services to Black Americans.

1.3. Considering supply and demand factors

In this section, we consider the economic forces that underpin the location and number of Green Book establishments. While the correlations noted above are useful in describing where we find more Green Book businesses, they are limited in explaining why these trends exist. To set ideas, we consider both the supply of Green Book establishments and the demand for such businesses to see how we might expect the entry of Green Book establishments to evolve over time.

In the market, the supply of public accommodations is comprised of three types of establishments. These are segregated or White-only firms, non-segregated firms (those that serve both White and Black customers), and marginal firms—that is, firms that are segregated but that would be open to serving Black customers under specific market conditions.¹⁷ With our Green Book data, we are able to measure, but not separate, non-segregated and marginal firms. Entry of such firms into a given market will depend on a variety of factors, including the

¹⁷ In reality, there would have been some firms, like informal accommodations, that served Black clients exclusively, but that would have been open to serving White customers. Our discussion abstracts from this additional type of firm.

Table 3

Descriptive Statistics (Neighborhood): Census Tract Characteristics in 1940, by Green Book Status.

	(1) Overall	(2) No GB	(3) At least one GB	(4) Difference
Urban Renewal Area	0.23 (0.42)	0.19 (0.39)	0.41 (0.49)	0.22***
Has HOLC Map	0.89 (0.31)	0.89 (0.32)	0.90 (0.30)	0.01
A Grade	0.03 (0.12)	0.03 (0.13)	0.01 (0.06)	0.02***
B Grade	0.08 (0.21)	0.10 (0.22)	0.03 (0.13)	0.06***
C Grade	0.23 (0.32)	0.25 (0.33)	0.14 (0.26)	0.11***
D Grade	0.32 (0.38)	0.28 (0.36)	0.52 (0.40)	-0.24***
# GB Establishments	0.14 (0.76)		0.80 (1.66)	
# GB Barber & Beauty	0.02 (0.20)		0.14 (0.46)	
# GB Eating & Drinking	0.03 (0.27)		0.18 (0.62)	
# GB Formal Accom	0.04 (0.29)		0.22 (0.67)	
# GB Gasoline Stations	0.01 (0.10)		0.05 (0.24)	
# GB Informal Accom	0.03 (0.22)		0.16 (0.51)	
# GB Other Est	0.01 (0.11)		0.06 (0.26)	
Observations	3891	3206	685	3891

Notes: This table displays summary statistics for Census Tracts in 1940. Column (1) displays statistics for all census tracts in our dataset; (2) displays statistics for census tracts that did not have a Green Book establishment; (3) shows the statistics for tracts had at least one Green Book establishment; and (4) shows the results of a difference in means test for (3)-(2). *
 $p < 0.10$, **
 $p < 0.05$, ***
 $p < 0.01$.

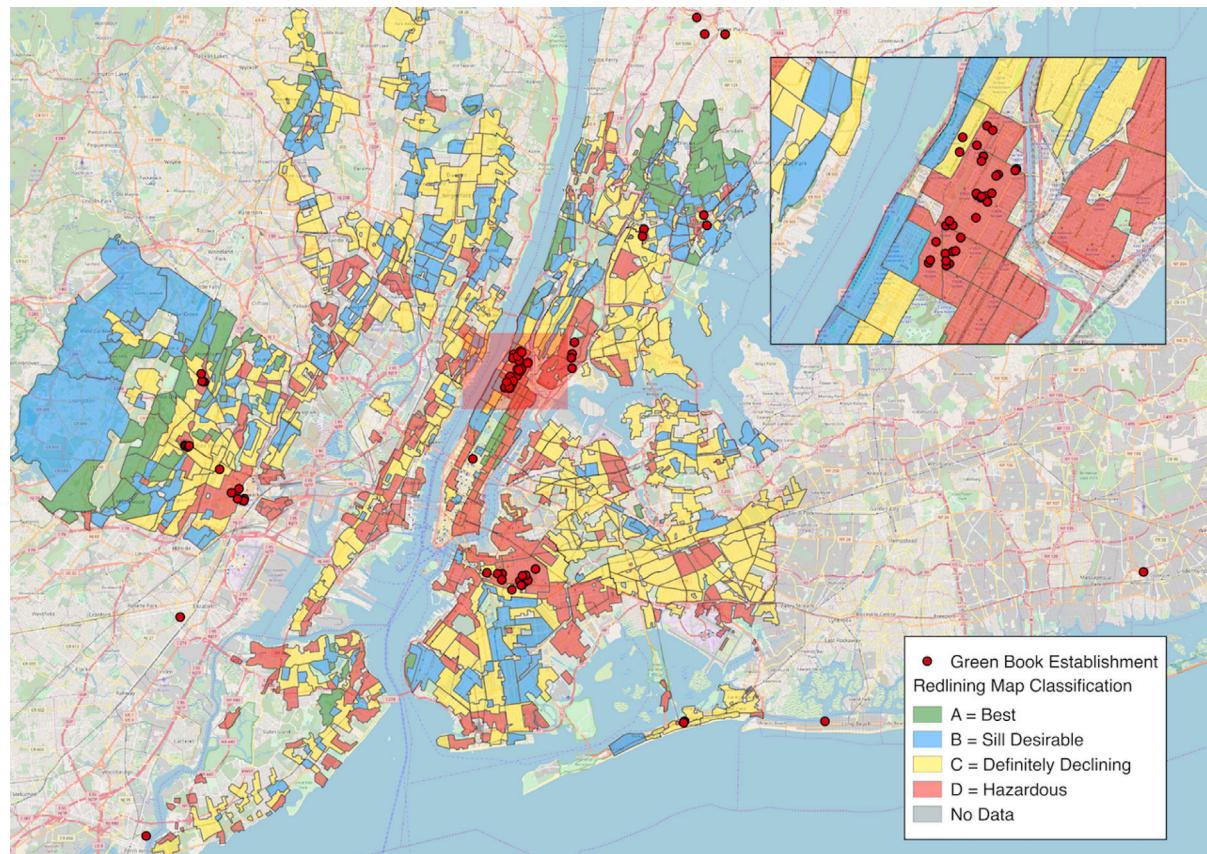


Fig. 3. Redlining and the location of Green Book establishments in New York, NY, and Newark, NJ in 1956.

Table 4

The correlation between Green Book establishments and competition.

	(1) All	(2) Eating	(3) Formal	(4) Informal	(5) Barber	(6) Gasoline	(7) Other
Total # Est 1939	0.00380 (0.006)						
Eating # Est 1939		-0.0147* (0.008)					
Formal # Est 1939			0.00416 (0.005)				
Informal # Est 1939				-0.0503*** (0.004)			
Barber # Est 1939					0.00399 (0.014)		
Gas # Est 1939						-0.0139 (0.011)	
Other # Est 1939							-0.393*** (0.009)
Log (White Income)	-0.0350** (0.015)	-0.00317 (0.007)	-0.0196*** (0.005)	-0.00205 (0.004)	-0.00951 (0.008)	-0.00308 (0.003)	0.00459 (0.004)
% White Pop in LF	0.0429 (0.062)	0.0405 (0.028)	-0.0111 (0.022)	0.0300** (0.014)	0.0127 (0.031)	0.00104 (0.014)	-0.00424 (0.018)
Log (White Pop)	-0.0103*** (0.004)	-0.00682*** (0.002)	0.00215 (0.001)	0.000823 (0.001)	-0.00446** (0.002)	-0.00281*** (0.001)	-0.00266** (0.001)
Log (Black Income)	0.000241 (0.009)	0.00248 (0.004)	-0.00188 (0.003)	-0.00196 (0.002)	0.00123 (0.004)	0.000837 (0.002)	-0.000680 (0.003)
% Black Pop in LF	0.0812*** (0.024)	0.0225** (0.011)	0.0191** (0.008)	0.00350 (0.006)	0.0393*** (0.012)	0.00869* (0.005)	0.00288 (0.007)
Log (Black Pop)	0.0159*** (0.002)	0.00399*** (0.001)	0.00290*** (0.001)	0.00171*** (0.001)	0.00802*** (0.001)	0.00184*** (0.001)	0.00214*** (0.001)
Observations	4532	4532	4532	4532	4532	4532	4532
Adjusted R^2	0.033	0.016	0.007	0.045	0.038	0.018	0.310

Notes: The dependent variable in all columns is the difference in the number of Green Book establishments in 1940 and 1939. The type of establishment under consideration is depicted by the column headers. All columns include city-area fixed effects. Standard errors are included in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

demand for the firm's product, the size of the fixed start-up costs, the substitutability of the firm's products, and the existing degree of competition in the market (Berry and Reiss, 2007).

Given the data available to us, the most readily measurable element of the firm's entry decision is the demand for its product. In the context of the demand for public accommodations, we can consider three types of consumers in the market for public accommodations—discriminatory White consumers, non-discriminatory White consumers, and Black consumers. Demand for a Green Book establishment specifically would come from the number of non-discriminatory White consumers and the number of Black consumers. Without additional information on the propensity for White consumers to discriminate, conditional on the level of the White consumer base, we should see more Green Book listings in places with more Black consumers. Importantly, the number of Black consumers will depend both on the population and the propensity for Black people to consume, which will be directly related to the purchasing power of Black residents in a given market.

It is also possible to consider the existing degree of competition in a local market. Since a firm will have more of the market to capture when the market is relatively less competitive, we would expect more entry in period t in places with less competition in period $t - 1$. With these ideas in mind, it is possible to estimate a specification that examines how the change in the number of Green Book establishments between t and $t - 1$ relates to a number of these demand-shifters. That is, we estimate:

$$\Delta \# \text{Green Books}_r = X_r \beta + \gamma_c + \epsilon_r, \quad (1)$$

where $\Delta \# \text{Green Books}_r$ is the number of Green Book establishments in census tract r in 1940 minus the number of Green Book establishments in census tract r in 1939. The matrix X contains a variety of census tract-level characteristics that are motivated by the supply and demand framework. Specifically, for both White and Black residents it includes the logarithm of the number of residents, the fraction of residents in the labor force, and the average income of residents in the labor force.

It also includes the number of establishments in tract r in 1939 as a measure of the potential competitiveness of the market. The idea is that conditional on these other demand factors (the number and purchasing power of consumers), entry will be less likely in more competitive markets. This specification includes city-level fixed effects γ_c so that variation in the estimating equation comes from differences across census tracts within cities.

Table 4 shows the results of estimating Eq. (1). An advantage of using a more restricted and carefully selected set of controls from the variables presented in Tables 2 and 3 is that we have slightly more observations that contain non-missing observations (it is for this reason that the number of observations is higher than in the previous tables). To ensure that our results are not driven by the inclusion of these observations, we show that our results are restricted to the more limited set of observations in Table E.3 of the Online Appendix.¹⁸ Column (1) uses the total change in Green Book establishments between 1940 and 1939 as an outcome. This is regressed on the demand shifters (population, labor force participation, and income, by race) and the competitiveness of the market in 1939 (proxied by the total number of establishments in 1939). The remaining columns replicate column (1) for each of the industries in our dataset. In column (1) nearly all variables enter with the expected sign. A larger Black population and a greater fraction of the Black population in the labor force are correlated with a larger change in the number of establishments. Black income is not statistically correlated with the change in establishments, however. One possible reason for this is that our specifications are limited by the fact that we only have this level of granularity for 1940, thus we must estimate our specifications in levels and not changes. We acknowledge this limitation and that with the availability of full count census data

¹⁸ Each specification in this table includes the full set of demand and supply factors. To see specifications that only include population and ones that include population and consumer purchasing power variables, refer to Tables E.1 and E.2 of the Online Appendix.

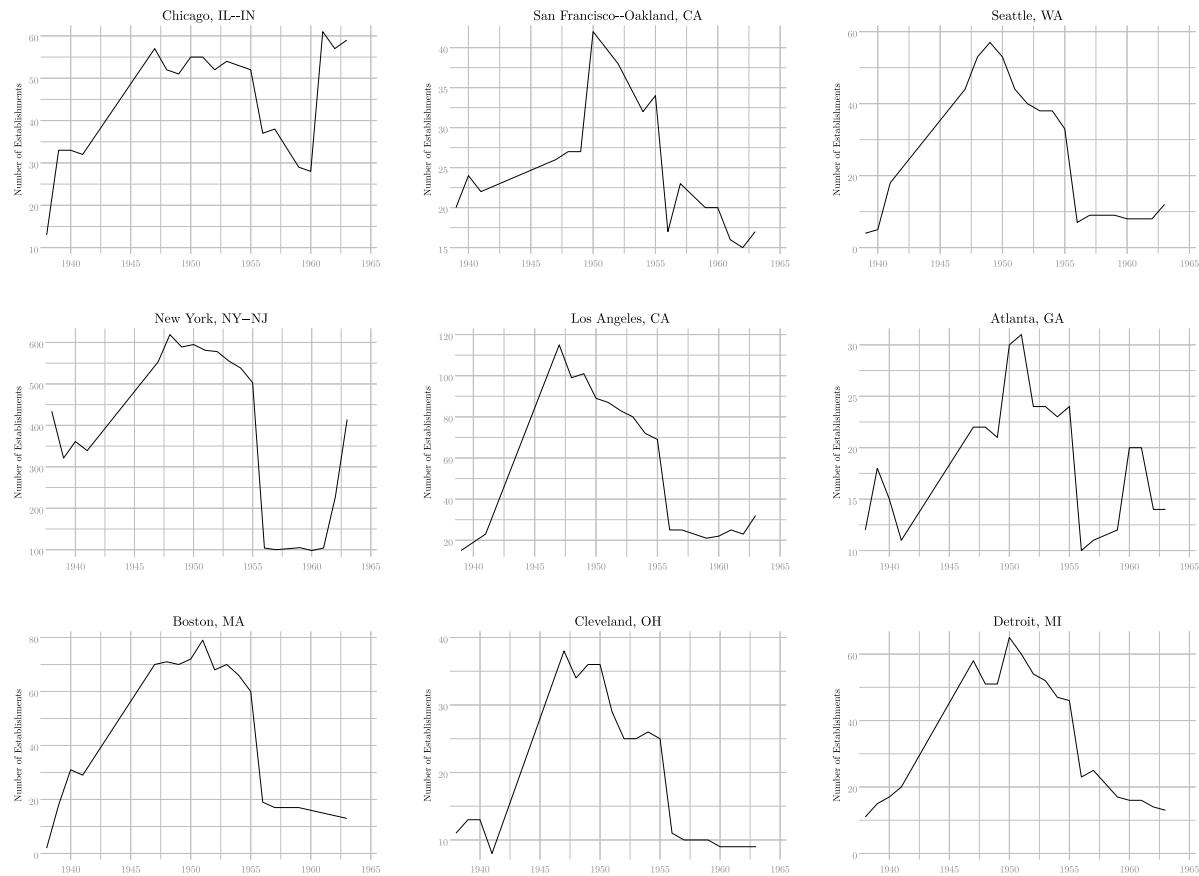


Fig. 4. City level trends in the number of Green Book establishments for major urban areas in the United States. All values are calculated using urban area boundaries defined as of 1990.

for 1950 in the coming years, we will be able to analyze population and demographic change more thoroughly. The White variables enter the specification with the opposite signs in most cases. White income and population are both negatively correlated with the change in Green Book establishments, but the fraction of the White population in the labor force is not.

In the specification that examines the total number of Green Book establishments, we do not find a statistically significant relationship between the degree of competition in 1939 and the change in establishments between 1939 and 1940. This changes when we turn to the industry-specific models in columns (2) through (7). Competition in 1939 appears to be a stronger predictor of entry in 1940 among eating and drinking establishments, informal accommodations, and “other” establishments.¹⁹ The relationships between the other sets of covariates and entry in 1940 are generally consistent as we move across the industry specifications, although the statistical significance varies depending on the covariate.

On the whole, the results in this section suggest that the location of Green Book establishments and the entry decision of firms had a strong economic underpinning. In the remainder of this section, we take these economic forces as given and we provide a more hands-off statistical analysis of the patterns, trends, and correlates of Green Book establishments.

¹⁹ When we analyze a specification in percent changes (necessitating dropping locations with no Green Book establishments at time $t - 1$), we find an important role for competition. The change in Green Book establishments was 4.5% lower in Census Tracts that had one more Green Book establishment in 1939. These results can be found in Table E.4 of the Online Appendix.

1.4. The patterns of Green Book establishments within cities

Bearing in mind the economic rationale behind the decision of a firm to enter or exit the non-segregated market, this section takes a descriptive approach to analyzing the patterns in Green Book establishments across time. We start by examining the trends in Green Book establishments across nine major urban areas in the United States: Chicago, San Francisco, Seattle, New York, Los Angeles, Atlanta, Boston, Cleveland, and Detroit. We use fixed urban area boundaries as of 1990 to ensure that we are not confounding increases (or decreases) in the number of Green Book establishments with changes in urban boundaries. These plots are displayed in Fig. 4. Two important features are apparent in nearly every city. First, there was a substantial increase in the number of Green Book establishments between the start of America’s involvement in World War II in 1941 and the end of the war in 1945. This rise is apparent in every city in Fig. 4.

Second, consistent with the broader discussion of change in the number of Green Book establishments in Section 1.2, there was a notable decline in the number of Green Book establishments in most cities after 1955. While Black-friendly businesses recovered in some cities, like Chicago, New York, and Atlanta, many cities had a persistent decline in Black-friendly businesses.²⁰ In Section 2 we empirically evaluate one possible contributing factor: the prevalence of Urban Renewal projects that often impacted Black communities within cities. For now, we focus on the period leading up to 1955.

²⁰ Figure D.2 of the Online Appendix shows that these patterns are not driven by establishments that leave the Green Book in one year and reappear after a year absence. Figure D.1 also shows the number of businesses that enter and exit the Green Books in each city and year.

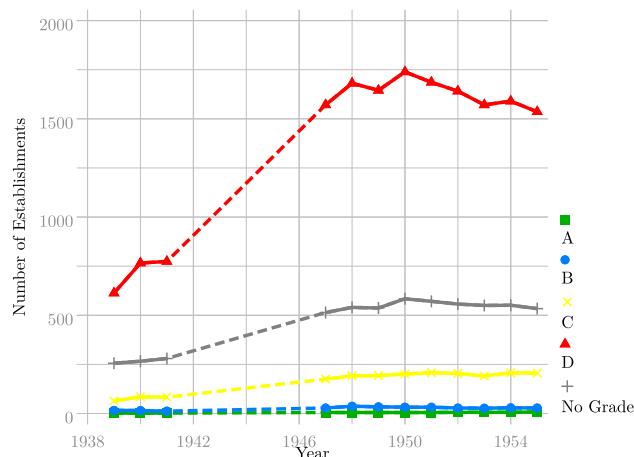


Fig. 5. Number of establishments over time by HOLC grade.

Using the geocoded addresses from the Green Books allows us to understand where Black-friendly businesses were located within cities. There are many possible ways one could conduct this type of analysis and our approach is to examine the intersection of Green Book establishments and the HOLC maps. While there is active debate on how to interpret the borders between communities over various risk levels (see [Aaronson et al. \(2021\)](#) and [Fishback et al. \(2023\)](#)), our purpose here is to exploit the fact that the maps identify distinct areas within cities that varied by their racial composition, average income, and other amenities that are useful for descriptive analysis of the businesses located within them.²¹

Our analysis focuses on Green Book establishments that we were able to match exactly to a latitude and longitude (about 85 percent of the total Green Book establishments). We again overlay the location of these establishments with digital reproductions of the HOLC maps. Unlike in Section 1.2, here we focus on the full set of Green Book establishments, not just those in census tracts for which we have complete data from the 1940 full count census. In total, over 64 percent of Green Book listings are located in cities for which redlining maps are available. This overlay allows us to see whether businesses are located in neighborhoods that received A, B, C, or D grades by the HOLC and how the number of these businesses evolves over time. Some neighborhoods were never classified by the HOLC, but were located in cities that had HOLC maps. These were predominantly business districts or other types of non-residential areas and are assigned a value of “No Grade” in our analysis.

We examine trends in the number of Green Book establishments by HOLC grade in Fig. 5, where it is clear that between 1939 and 1955 Green Book establishments expanded most quickly in “D-grade” neighborhoods. Neighborhoods that did not receive a grade, but were located within cities for which we have HOLC security maps also experienced a reasonably large increase in the number of establishments, though by 1955 there were still half as many establishments in “No-grade” neighborhoods in comparison to “D-grade” neighborhoods. “A-grade” neighborhoods experienced almost no growth in Green Book establishments. In fact, in 1955 – the year with the highest number of Green Book establishments in “A-grade” neighborhoods – there were only 8 Green Book establishments in these highest-rated neighborhoods out of all cities in the U.S. for which the HOLC security maps are available.

²¹ [Aaronson et al. \(2021\)](#) present a thorough discussion of the historical debate surrounding the exact use of HOLC maps by lenders. They find evidence that HOLC classification had causal impacts on home-ownership rates, house values, and rents that continue to persist. [Fishback et al. \(2023\)](#) argue that redlined areas were already economically distressed when the HOLC and FHA, but that these ratings may have contributed to under-development by hampering mortgage lending.

Fig. 6 shows how the number of Green Book establishments in each HOLC-grade neighborhood evolved across industry types. For each industry, the majority of establishments are found in redlined neighborhoods. That being said, the number of Green Book establishments grew in nearly all HOLC-grade neighborhoods and across all industries. Two notable exceptions include barber shops and gasoline stations, which did not appear in A-grade neighborhoods at any point between 1939 and 1955. The absence of businesses in either category from A-grade neighborhoods is not entirely surprising as neither one is often found in highly sought-after residential neighborhoods, even today. We also present these trends across regions within the U.S. in Figure D.3. These results largely mirror those in the country-wide plot in Fig. 5.

These results are consistent with the sociological literature on Black businesses and Black business districts. The Green Book establishments were highly likely to be located in Black *residential* communities within cities, as opposed to central business areas for the metro area. The businesses in these areas were primarily services such as eating and drinking establishments and businesses where Black consumers were likely to face discrimination in other parts of the city, consistent with existing literature that notes that more than a third of all businesses in Black business districts were in the service sector ([Wilson, 1975](#); [Reiss and Aldrich, 1971](#)). The Black business districts described in the sociology literature served not only economic but social and cultural functions as well. A central element to serving as cultural and social touch-points was being embedded in the residential community, as highlighted by the earliest scholarship on these business districts. Key to understanding their co-location in residential communities is the predominantly working-class nature of Black neighborhoods themselves, which necessitated services that were physically close to the residents ([Horton et al., 2000](#)).

It is also useful to consider these patterns in the context of the theoretical intuition presented in Section 1.3. In that section, we discussed three potential types of firms: those that are always segregated, those that are non-segregated, and marginal firms. Non-segregated firms are either Black-owned businesses or businesses owned by non-discriminatory White people, whereas marginal firms are most likely White-owned firms that, under the right market conditions, may decide to desegregate their establishment.²² Identifying the location of Green Book establishments within cities likely has important implications for understanding the degree to which variation in Green Book establishments reflects differences in these types of firm owners. That is, the overlay of Green Book establishments and the HOLC maps informs us about whether the rise in the number of Green Book establishments is due to a rise in Black business ownership versus discriminatory practices on the part of White owners, depending on the location of the establishments ([Cook et al., 2023b](#)). It is important to note that many White business owners who served Black communities were absent (non-resident and rarely present) owners ([Reiss and Aldrich, 1971](#)). Given that the racial composition of a neighborhood was an explicit determinant of the HOLC grade assigned to a neighborhood ([Aaronson et al., 2021](#)), Green Book establishments in “D-grade” neighborhoods were more likely to be Black-owned and Black-serving compared to those in “No-Grade” (business) districts.²³ We can therefore interpret

²² In reality, there were some non-discriminatory firms whose owners were neither Black nor White. In fact, the Green Books listed many Chinese restaurants that were open to serving Black clientele. For simplicity, we abstract from this detail in our discussion.

²³ Although scholars have discussed the propensity of some White businesses to locate in predominantly Black neighborhoods in order to subvert the zoning laws that prevented them from operating in White neighborhoods, these businesses were often in industries that produced negative externalities, such as noise, pollution, or unsightliness, not consumer-facing businesses ([Rothstein, 2017](#)). It would have been more unusual to find White-owned formal accommodations in predominantly Black neighborhoods ([Frazier, 1937](#); [Sturdvant, 1970](#); [Wilson, 1975](#)).

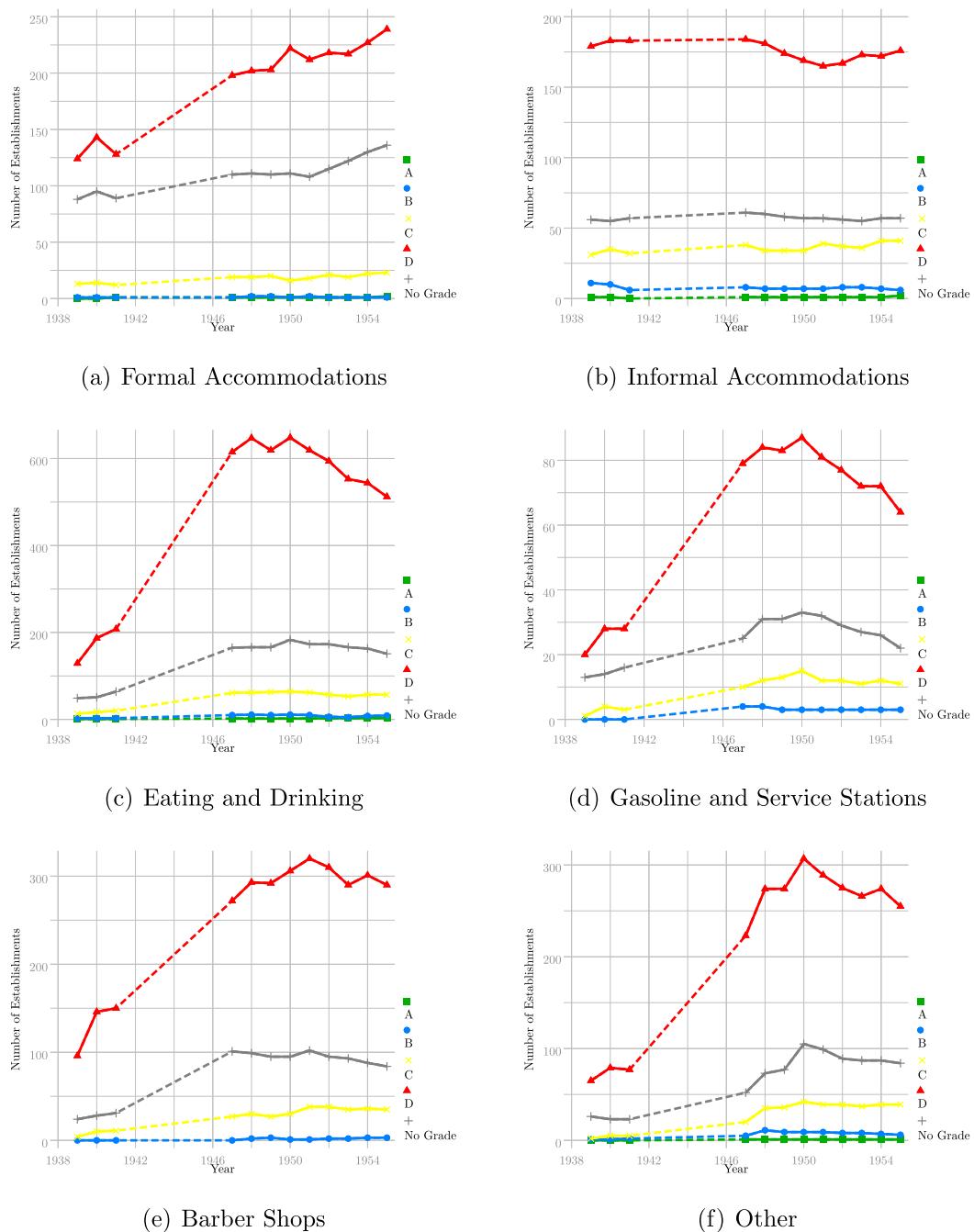


Fig. 6. Number of establishments over time by HOLC grade and by industry.

changes in the number of Green Book establishments in these neighborhoods as changes in the number of “non-segregated” establishments. Similarly, changes in the number of Green Book establishments in business districts inform us about the change in “marginal” firms.

Both the rise of Green Book establishments in “D-grade” neighborhoods and the rise in “No-Grade” neighborhoods are consistent with the intuition presented in Section 1.3. From 1910–1970, more than 6 million African Americans moved from mostly rural locations in the South to mostly urban locations in the North. These population inflows changed the demographic makeup of the consumer base located within cities. In many cases, migrants settled in neighborhoods based on patterns of chain migration—that is, the tendency for migrants to locate near other migrants from their origin regions. Through these channels, we might expect neighborhoods that were redlined to have

experienced an increase in Black residents. This, in turn, would have increased the demand for certain types of public accommodations in these neighborhoods, especially those like eating and drinking establishments which would have catered to local clientele in addition to travelers. Similarly, an increase in the Black consumer base, through a change in the number of residents, as well as an increase in the purchasing power of Black residents, would have increased the attractiveness of desegregating for these marginal firms. Notwithstanding the change in demand, it is also important to note that the 1940s and 50s were also a period of tremendous social change, with the lead-up to and eventual birth of the Civil Rights Movement, and so it is possible that the rise in Green Book establishments also reflects the changing attitudes of the time.

The HOLC maps can be combined with other historical data sources to shed further light on the nature of the growth of business listings

Table 5
Analysis of entrants by HOLC grade and pre-existing status.

	(1) 1941	(2) 1941 (NYC, ATL)	(3) 1947
GB entries	191	154	407
Matched t phone book	90	77	165
New entrants	29 (32%)	26 (34%)	55 (33%)
Matched $t \& t-1$	85	72	148
New entrants	29 (34%)	26 (36%)	51 (34%)
Redline	90%	88%	78%
Outside redline	10%	12%	22%
Matched t & NOT $t-1$	5	5	17
New entrants	0	0	4
Redline			75%
Outside redline			25%

Notes: This table displays a descriptive analysis of new Green Book entrants by whether they existed previously.

in the Green Books. Specifically, does the increase represent a rise in Black-friendly businesses (new entry), and if so, is this attributable to Black-owned businesses (non-segregated entry)? Or, is the increase the result of a conscious decision not to discriminate on the part of White business owners (marginal firms switching)? Finally, could it be the case that existing non-segregated firms became aware of the fact that they could list in the Green Books (awareness)?

In an ideal world, we would be able to answer this question by observing whether new Green Book businesses were Black-owned or White-owned. Unfortunately, these guides do not list the race of the business proprietors. An innovation we propose to address this question is to compare the growth of businesses that are newly listed in the Green Books but are not new businesses by neighborhood HOLC grade. As we discussed above, the establishments that appear in redlined neighborhoods are more likely to be (although not exclusively) Black-owned. Under this assumption, businesses that are located in these redlined neighborhoods in a particular year but do not appear in the Green Books until a later year likely represent the “learning” or “awareness” channel. Those in other grade neighborhoods are more likely to be White-owned, representing the “switchers”, or using the terminology above, the marginal firms.

Since it is impossible to know from the Green Books which establishments existed previously, we sought information on Green Book businesses from the Library of Congress phone book and city directory collections. A research team examined 191 Green Book entries from Atlanta, Los Angeles, New York City, and St. Louis in 1941 and 1940; and 407 Green Book entries from Atlanta and New York City in 1948 and 1947. **Table 5** displays basic summary information from this exercise. Column (1) shows this analysis for the four cities in 1941/1940, column (2) restricts the 1941/1940 analysis to just include Atlanta and New York City to be comparable to column (3), which shows the 1948/1947 analysis.

In the 1941 sample, we were able to match 90 of the Green Book establishments to the 1941 phone books.²⁴ Of these matches, 29 were new to the 1941 edition of the Green Books. We were able to match a large portion of the establishments (85) to both the 1941 and 1940 phone books. All of the new entrants in 1941 were comprised of this match type. That is, all 29 were new to the Green Books in 1941

²⁴ One caveat to this analysis is that some establishments may have been included in the Green Books but not in the phone books. The information in **Table 5** allows us to construct an upper bound on these types of businesses. Here we see that in 1941, we were able to match 47% of the Green Book entries to the phone books, and in 1947 we were able to match about 41%. While some of our inability to match these establishments could be due to match errors that arise by chance, much of this may be due to the fact that many businesses operate informally. Further, since the Green Book establishments included informal accommodations, like tourist homes, these would almost surely be excluded from the business directories of phone books.

but existed in the phone book in 1940. Of these, 90% were found in redlined neighborhoods and 10% were found outside of redlined neighborhoods. The analysis is relatively comparable when we restrict to New York City and Atlanta in column (2).

Turning to the 1948 sample, we were able to match 165 of these entries to the phone books, where 55 were new Green Book entrants. Of the 165 establishments we were able to match to the 1948 phone book, 148 of them were also located in the 1947 phone book, including 51 of the new entrants. Here, we see that 78% of the new entrants in this category were located in redlined neighborhoods compared to 22% outside of redlined neighborhoods. Out of establishments that were new to the Green Books and the phone books (17 total), 4 of these represented new entrants, with 75% located in redlined neighborhoods and 25% located outside of this type of neighborhood.

This brief analysis highlights a few key points regarding the type of establishment that the Green Books capture. If a new Green Book entrant in year t can be found in the phone book in year $t-1$ then it is either a switcher (marginal firm) or a non-segregated establishment that has learned about the Green Books. Given the historical literature on Black business formation, we hypothesize that the firms of this type that arise outside of redlined neighborhoods are likely to be the former kind, while those located inside redlined neighborhoods are more likely to be the latter kind. Leveraging the overlay of Green Book establishments with the HOLC maps reveals that over time existing establishments that were newly listed in the Green Books were increasingly likely to be located outside of redlined, “hazardous” neighborhoods (HOLC grade of D). Thus, under our assumption about firm types, we likely observe an increase in marginal firms over the course of our analysis. Of course, our evidence is descriptive, and other factors may be driving the change in Green Book listings during this period; however, our results are consistent with this interpretation. A more complete analysis of the choices of these marginal firms is beyond the scope of this paper but is presented in greater detail in Cook et al. (2023a). Overall, the change in the number of Green Book establishments within cities is consistent with both economic intuition and the historical narrative.

Another point worth noting is that, of the 90 establishments in the 1941 sample, 29 establishments (32%) were new entrants but not new businesses (i.e., they appeared in 1940 phone books). In our 1948 sample, 51 (31%) were new Green Book listings but were located in the 1948 and 1947 phone books. This is consistent with no measurable change, or even a slight decrease, in the likelihood that an existing firm would become listed in the Green Books over time.

2. Urban renewal and the decline of Green Book establishments

The previous sections provide an economic interpretation of the presence of Green Book establishments within cities during the 1940s and 50s. Abstracting from such a framework, we can use the Green Book data to examine other questions in urban economics. One such question that features prominently in the literature on Black businesses is their decline in the second half of the twentieth century. Wilson (1975), for example, documents a significant decline in the Birmingham, Alabama Black business district from 1965 to 1971, where more than a third of the businesses disappeared in a five-year period. Similarly, Taylor (2020) notes that fewer than 10% of the Green Book businesses exist today. There are several reasons for this decline, and most have been attached to theories of urban decay, the concentration of poverty, competition from newly desegregated White businesses, and limited access to capital.

However, there are reasons to believe that the types of businesses in the Green Books would be resistant to many of the forces that reshaped central business districts in the middle of the twentieth century (Taeuber, 1964). Since many of the businesses in the Green Book were generally geared towards Black clientele, they would not face sharp drops in demand during the first waves of suburbanization, which largely excluded Black Americans. Additionally, these businesses

were located within Black communities, making them less sensitive to changes in work sites after the Second World War. Third, these businesses would have served a more affluent Black population, who were making unprecedented gains in income at the time. Fourth, the early and mid-1960s predated the boom years for interstate construction, which would later target urban areas that were disproportionately Black.

Despite the fact that the Green Book businesses may have been relatively insulated from these aforementioned forces, any policies or projects that effectively reshaped cities could have impacted the location, number, or entry decisions of Green Book establishments. As was shown in Section 1.4, many of the Green Book establishments were located in regions that were highly likely to have been Black neighborhoods. These neighborhoods were often the same neighborhoods that were demolished when the urban sections of the Interstate Highway System were constructed (Carter, 2023) or during the period of urban renewal (Lavoice, 2022). In addition to infrastructure projects, there are other factors that could have contributed to the shrinking of Black business districts. First, the lessening of housing discrimination would have allowed more affluent Black households to leave the community, which would not only have impacted the size of the customer base, but also its spending power. Second, Black urban communities were also transforming as they became increasingly noted for vice and other activity which increased police presence and could have marginally dampened demand. Third, while employment opportunities in general were expanding, there is some evidence of contracting or stagnant economic opportunities for Black residents of large urban centers, lessening the buying power of the residents (Bayer and Charles, 2018).

In this section, we focus specifically on the process of urban renewal in the 1950s and 60s, or “slum clearance”, and how it impacted the availability of Black-friendly public accommodations. To do so, we exploit the geocoding of the Green Book businesses and the locations of urban renewal projects in the 1950s and early 1960s. With the precise location of businesses and urban renewal projects, we can ask a new set of questions about the relationship between federal urban policy and the persistence and change in Black-friendly businesses over time.

2.1. Historical background on urban renewal projects

After World War II, cities across America made it a policy priority to redevelop their central cores.²⁵ Proponents argued that blighted areas within cities needed intervention and current resource constraints on local governments, as well as large transaction costs associated with private redevelopment, limited the incentives for any large-scale clearance or renewal efforts.²⁶ Urban renewal, or “slum clearance”, was enacted by Title I of the Housing Act of 1949. Broadly speaking, through this program, subsidies were provided to cities to implement local redevelopment projects after the city was able to successfully argue that the project was financially feasible, show evidence of political commitment, and provide an acceptable plan for eliminating existing “slums”.

In the program, a municipality wishing to access federal funding would first have to go through an approval and planning process that started with the passage of state legislation to create Local Public Agencies (LPAs), a necessary step for initiating urban renewal projects. The LPAs were responsible for identifying neighborhoods for renewal

²⁵ The concept of urban renewal originated during the Great Depression (Greer, 1965), although urban renewal did not become a national program until nearly 1950.

²⁶ On top of this, the public was increasingly dissatisfied with the existing form of “slum clearance” that followed the Housing Act of 1937 wherein sub-standard housing was torn down and replaced with large-scale public housing units. It was thought that a more encompassing approach was required to address the scale of deterioration across neighborhoods during the Depression and WWII, including non-residential structures.

and ultimately securing public or government support for the project. The next step involved approval from the Housing and Home Finance Agency, and later, the department of Housing and Urban Development to proceed with project planning. Plans often included detailed information on both current and proposed land use, as well as any potential changes to streets and utilities, the amount of aid provided to displaced residents and businesses, and a total estimate of the costs.

In practice, once the plan was approved, funding was directed to cities. Cities used the funds to purchase land in blighted neighborhoods and then to clear it, both of residents and businesses, and of the existing housing and commercial infrastructure in disrepair. As a result, some of the funds were reserved to subsidize residents and businesses for relocation costs.²⁷ Another portion of the funds was allocated towards the costs of physically clearing the area of structures that had deteriorated to a point where rehabilitation would have been infeasible. Once clear, land was resold to private developers who would operate according to the pre-approved reuse plans. As documented by Gans (1965), these projects did not occur in short time frames, and it was not uncommon for projects to take over a decade to complete.²⁸

By the 1960s, support for urban renewal as an economic development tool waned, with a number of critical studies highlighting the problems with the existing urban renewal process.²⁹ As the effects of urban renewal took form, many members of the Black community who were initially supportive of the program for its potential to alleviate the housing shortage crisis, began to question the program’s merits. Funding for urban renewal eventually ended in 1974. At this point, estimates suggest that the program funded a total of 2100 separate projects at a cost of over \$76 billion (2023 dollars) (Collins and Shester, 2013).

Addae (2022) calls Black businesses the “unnamed casualties” of urban renewal, as the impact of these projects on businesses, and Black-serving businesses in particular, has received less attention from the existing literature. There are a variety of ways businesses may be impacted by urban renewal, especially when the project involves relocating establishments elsewhere in the city, or even outside the city (Kinnard and Malinowski, 1960). For many businesses, the relocation costs alone, even if subsidized by the government, were too large to overcome, making business failure common among affected establishments (Addae, 2022). But aside from the obvious costs associated with relocating, many businesses, especially Black-owned businesses, faced other more nuanced costs. Because of the nature of segregation during this period, many Black businesses served exclusively Black-clientele. Even if a business were to remain in an urban renewal project area, the loss of local demand may have been large enough to force exit from the market. Zimmer (1967) notes that non-survival rates were substantially higher among establishments that served a neighborhood-based clientele. These businesses were often small and relied on the local population. In the case of the businesses represented in the Green Books, accommodations would have catered to individuals from out of town; however, many of the other listings – restaurants, services, barber shops and beauty parlors – would have been for establishments that also served their local markets and thus may have been particularly vulnerable to the impacts of urban renewal. Moreover, many of these Black business districts also benefited from a “cluster effect” where people could take care of several errands in a single outing by frequenting multiple establishments located near one-another (WUOT News, 2021). The loss of one business in this area therefore decreases the value of going to each of the other businesses, eventually leading to business failure.

²⁷ Additionally, assistance in finding new housing or a new location for a business was often provided in-kind.

²⁸ Gans (1965) reports that, of the projects completed prior to 1959, the average time to completion was 12 years.

²⁹ Jacobs (1961), Greer (1965) and Zimmer (1967) all contain descriptions of the problems associated with urban renewal.

It is important to recognize that the cost associated with losing Black-serving businesses goes beyond the direct costs imposed on firm owners. As we discussed in Section 1.4, these businesses served an economic and a cultural function, providing a hub for cultural preservation and civic engagement. They empowered Black communities and the destruction of these establishments was a form of disenfranchisement (Addae, 2022). The fact that Black consumers faced discrimination in accessing services meant that the set of available alternatives was smaller for Black consumers than when an equivalent White-serving business was forced to close.

Related to this, Taylor (2019) finds that urban housing programs such as Section 235 accelerated household economic decline by subsidizing home loans for dilapidated properties sold at above-market prices to owners who were likely to default.³⁰ The housing stock in these communities did not improve, but the economic status of the families declined through default and “flipped” properties where speculation was government-subsidized. This not only increased housing distress, it also negatively impacted wealth for existing homeowners.³¹ By the time the housing programs ended in 1973, the federal government had paid more than \$4 Billion in mortgage insurance claims, showing the extent of default concentrated in urban communities. As such, the surrounding communities served by these businesses were in economic decline through related urban housing programs.

Given the number of channels through which urban policy would impact Black business districts, studying the role of government policy in the trajectory of Black business formation and persistence is critically important. In addition, the granularity of the Green Book data allows us to empirically examine the effects of urban renewal projects on Black-serving businesses in a way that has not been possible in previous analyses. In the sections that follow we describe the additional data sources we employ and the empirical methodology we use to evaluate the impact of urban renewal on Black-serving businesses.

2.2. Data on urban renewal projects

Our analysis of the impact of urban renewal projects on the prevalence of Black-friendly businesses makes use of two separate sources that document urban renewal projects. One source allows us to conduct a granular, neighborhood-level, analysis, while the other source allows us to examine whether urban renewal projects affected Black-friendly businesses at the city-level. We describe each source as follows.

Our preferred analysis examines the impact of urban renewal projects at the neighborhood-level. To construct these data, we again make use of the contributions of the Digital Scholarship Lab at the University of Richmond (Nelson et al., 2022b). They have digitized historical maps for projects that appear in the federal government's publication titled *Urban Renewal Project Characteristics* (1955–1966) and made the shapefiles available to the public. Unfortunately, these shapefiles are just a snapshot of urban renewal in the United States. They do not include urban renewal projects that occurred prior to 1955 nor those projects that continued well into the 1970s. They exclude state-funded urban renewal projects, as well as federally funded interstate- or housing-construction projects.

To evaluate the impact of urban renewal on Black-friendly business formation, we overlay the urban renewal shapefiles with census tracts from 1940. We restrict our analysis to census tracts that are partly

³⁰ Under the terms of the program, mortgage issuers profited from default since the government insured the mortgages, creating incentive problems that exacerbated the housing crisis in urban areas. While banks and savings and loan companies rarely participated in the program, brokers created markets for the securitized bundled loans for the program.

³¹ Taylor (2019) uses contemporaneous federal audits and reports to argue that as many as one-quarter of the homes in the program were in such poor physical condition that they should not have been insured in the program due to their uninhabitable condition.

covered by an urban renewal project so that we can focus on the effects of *within-tract* variation in urban renewal on business growth.³² We then overlay the urban renewal-census tract (UR-CT) regions with the location of Green Book establishments, again focusing only on those that returned an exact match. This exercise gives us the number of Green Book establishments in each UR-CT region during each year between 1947 and 1963. Fig. 7 shows the overlay between Green Book businesses, census tracts, and several urban renewal projects in a portion of downtown Atlanta, Georgia in 1947 and 1956. The figure shows the tight clustering of the Green Book businesses in one of Atlanta's Black Business districts. It also shows the sharp decline in Green Book businesses along this corridor between 1947 and 1955. In the same census tract, however, there are Green Book businesses that are located inside and outside of the zone created for the urban renewal project. This is the variation we exploit in our main empirical strategy to uncover the relationship between Black-friendly businesses and mid-century urban policy. Importantly, this differs slightly from other work, like Collins and Shester (2013) who examine the effects of more dollars per capita in urban renewal funds, but is similar in spirit to Lavoie (2022) who looks at the effect of receiving an urban renewal project on outcomes later. Neither of these works looks specifically at the impact on Black-serving businesses.

Although many businesses impacted by urban renewal ultimately ceased to exist, it is possible that some businesses were relocated to other regions within the same city, or even outside the city altogether (Kinnard and Malinowski, 1960). To account for the possible relocation of businesses within cities, we also conduct a city-level analysis that compares the number of Green Book establishments in cities with urban renewal projects to those without urban renewal projects in the years after an urban renewal project is initiated. The time period covered by this sample differs from the time period covered by the Nelson et al. (2022b) sample as we draw from a different data source to conduct this analysis. We use the set of cities from Collins and Shester (2013), which includes 458 cities over the period 1950 to 1974, though for our analysis we only include urban renewal projects that occurred before the end of our data, in 1963.³³ They identify cities as participating in the urban renewal project by drawing on information from the *Urban Renewal Directories* which were published until 1974. Of these cities, 281 had urban renewal projects and 177 did not. Fig. 8 displays a histogram for the date of first urban renewal project among cities with projects. We see that nearly 15% of cities had their first project in 1950. The projects then decline in frequency until 1953, after which point they begin to increase in frequency. The number of projects was somewhat stable between 1956 and 1963.

Fig. 9 displays two panels that show the trends in the number of Green Book establishments by urban renewal status for each of the sources of variation we exploit. In the first panel, the trends are displayed for cities in the Collins and Shester (2013) sample of cities with and without an urban renewal project during the time span of our

³² Since this empirical strategy focuses on very local impacts of urban renewal, we do not expect the use of the select set of projects from the Digital Scholarship Lab to pose a problem for our analysis. For this to be an issue there would have to be unreported urban renewal projects in the same census tracts as the reported urban renewal projects, which we think is unlikely. In fact, our estimates likely produce lower bound estimates of the true impact of urban renewal projects on Black-serving businesses. The source documentation for the data states, “For some projects what's represented here is not a definitive representation of the project boundaries but a moment in the project's planning or execution for which we were able to locate a map” (Nelson et al., 2022b). As such, if the project boundaries expanded from what was depicted in the maps, our analysis will likely uncover lower-bound estimates of the impact of these projects on the prevalence of Black-friendly businesses.

³³ Collins and Shester (2013) select cities that had a population of 25,000 or more in 1950 and 1980 and had available data for their set of outcomes and controls.

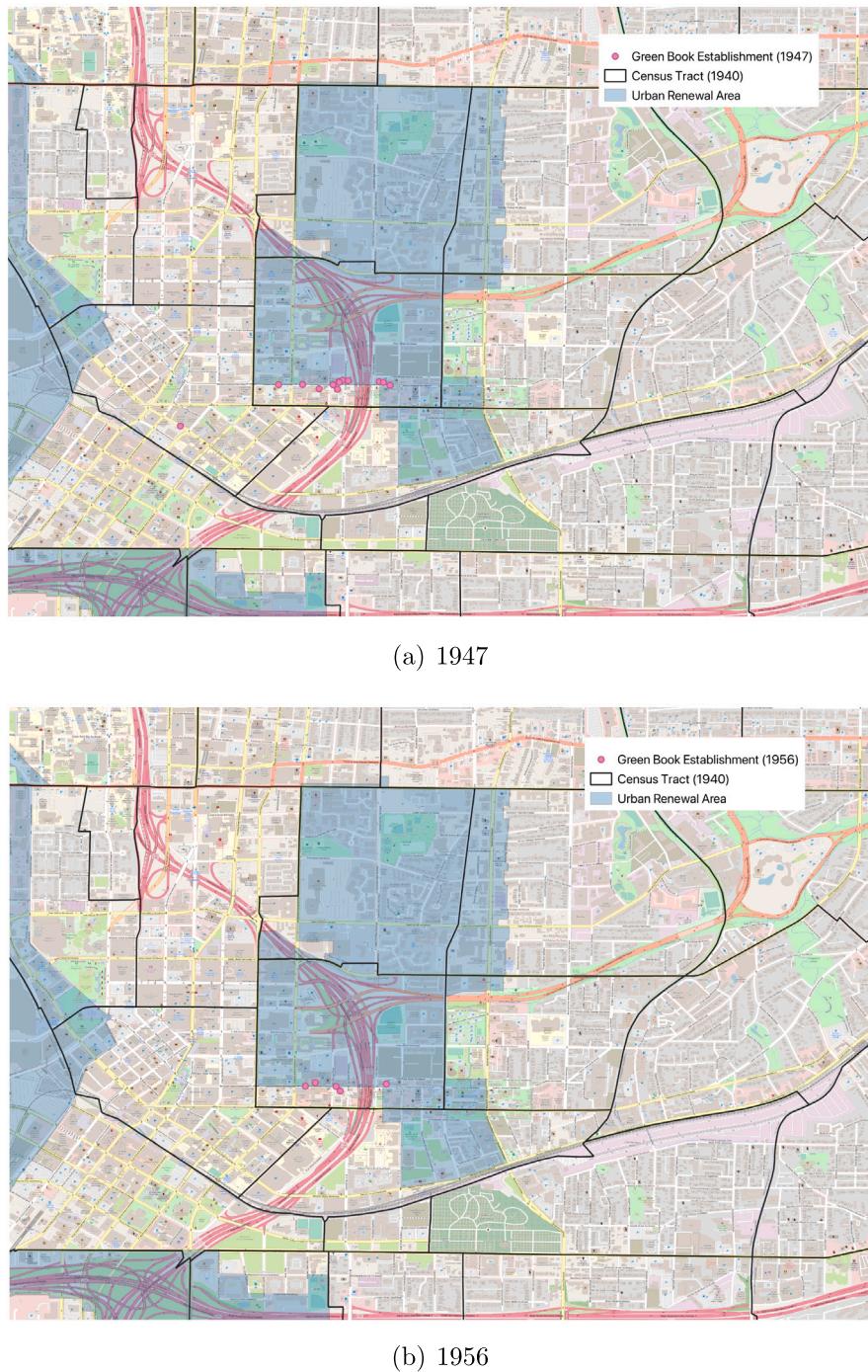


Fig. 7. Location of Green Book establishments, urban renewal projects and census tracts in downtown Atlanta, 1947 and 1956.

analysis. Here we see a very sharp drop in the number of Green Book establishments in 1955 that occurred within cities with urban renewal projects. We do see a small decline in the number of establishments in cities that did not have an urban renewal project, but this drop is disproportionately large for cities with urban renewal projects. Panel (b) of Fig. 9 shows the same patterns, where we restrict to census tracts that intersect with urban renewal areas. Here, we display the trends for the portion of the census tract that overlaps with an urban renewal area and the portion of the census tract that is outside the urban renewal area. Both regions experienced substantial declines in the number of Green Book establishments, with the drop being substantially larger in the part of census tracts with urban renewal project areas.

While it is certainly true that not all urban renewal projects occurred in 1955, the connection between urban renewal and the patterns in Fig. 9 cannot be ignored. One possible reason why the drop in Green Book establishments after 1955 was more pronounced in urban renewal regions, despite the fact that many of the projects actually occurred before 1955, could be related to the propensity of the Green Book publishers to audit their publication over time. The year 1956 marked the 20th anniversary of the Green Book publication and it is possible that the editors audited establishments more heavily in preparation for this celebratory publication. Thus it could be the case that urban renewal was responsible for a decline in businesses prior to 1955, but that this was not reflected in the publication until 1956. For this reason,

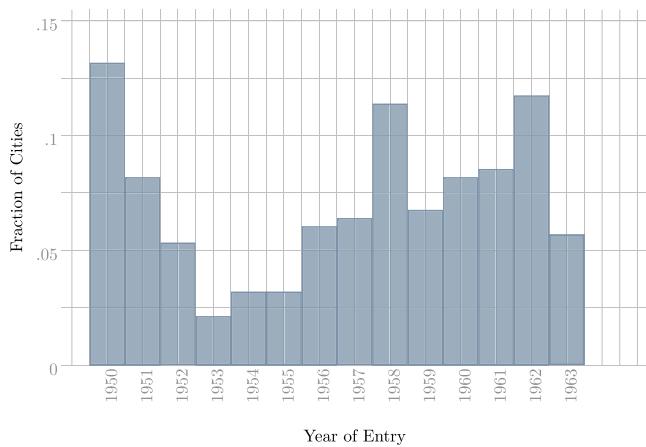


Fig. 8. This histogram depicts the fraction of cities (155 in total) with urban renewal projects by year of first urban renewal project. Data is from [Collins and Shester \(2013\)](#).

in the analysis that follows, we present results for the full time period (1946–1963) as well as the post-1955 time period.

2.3. Empirical methodology

The empirical analysis in this section exploits the staggered rollout in urban renewal projects to identify the causal impact of urban renewal projects on the growth of Black-friendly businesses. Specifically, we estimate a two-way fixed effects (TWFE) model with lags and leads:

$$N_{0,it} = \alpha_i + \alpha_t + \sum_{k=-2}^2 \gamma_k D_{it}^k + \sum_{k=0}^L \gamma_k D_{it}^k + \epsilon_{it}, \quad (2)$$

where, $N_{0,it}$ is the number of Green Book establishments in either UR-CT or city i in year t . The treatment variable, D_{it}^k , equals 1 if the UR-CT has an urban renewal project at some stage of development. That is, the dummy variable turns on for UR-CT regions in the minimum of the year in which the urban renewal project is proposed, approved, funds disbursed, or relocation commenced. This allows us to ensure that we capture any potential adjustment effects that occur between when a project is announced and when funds are formally disbursed. We provide additional analysis that restricts treatment to time periods when funds are approved or disbursed, and when they are disbursed only. For cities, our treatment is defined by the available year of entry date included in the replication package of [Collins and Shester \(2013\)](#). UR-CT or city fixed effects (α_i) and year fixed effects (α_t) are included to account for unobservable factors that vary at the UR-CT or city-level or year, respectively. Given the potential for bias in the TWFE model arising from heterogeneity in treatment effects across groups affected at different times, our main specification uses the methodology of [Callaway and Sant'Anna \(2021\)](#) to estimate the average treatment effects on the treated over time in an event-study framework.^{34,35}

2.4. Results: Urban renewal's impact on black-friendly businesses

2.4.1. Main treatment effects

We present the event study results graphically beginning in 1947 and ending in 1964. [Fig. 10](#) displays these coefficient estimates for

³⁴ Indeed, additional estimates suggest that areas where urban renewal projects began in different years experienced different trajectories. The [Callaway and Sant'Anna \(2021\)](#) methodology is thus well-suited for our setting as it provides a weighted average of dynamic treatment effects for the entire period.

³⁵ We use the `csdid` stata package to compute all of our estimates and generate the figures in this section.

all establishments. Panel (a) and (b) show the city-level estimates and panel (c) and (d) show the within census tract urban area-level estimates. Panel (a) and (c) show the full sample and panel (b) and (d) show the post-1955 sample.³⁶

In the years after an urban renewal project, the number of Green Book businesses declined in urban renewal areas – this was true in cities, as well as in portions of census tracts affected by urban renewal – relative to non-urban renewal areas. Importantly, in our census tract-level analysis we only use census tracts that are partially covered by urban renewal projects so that our comparison group is comprised of the area in these census tracts that lies outside of the urban renewal zone. By 7 years after the start of an urban renewal program, the average treatment effect on the treated (ATT) implies 0.07 fewer Black-friendly businesses in census tracts affected by urban renewal and nearly 10 Black-friendly businesses in at the city level. In both levels of analysis, we see that the treatment effect gradually increases in magnitude over time, likely due to the long lag between when a project starts and is eventually finished—upwards of 12 years, on average, for projects completed by 1965 ([Gans, 1965](#)).

That the negative effects of urban renewal persist at the city level is evidence that many businesses were not able to relocate elsewhere in the city. Contemporaneous survey evidence suggests that while some businesses were able to relocate elsewhere in the city, or in rare cases, outside the city, many businesses simply ceased to exist.³⁷

To our knowledge, this is the first evidence of the negative impact urban renewal had on business formation within Black communities across the nation. Our results also corroborate the findings of several early studies on urban renewal in select regions. For example, [Zimmer \(1967\)](#) reported on businesses in Providence, Rhode Island, noting the negative impacts of urban renewal on small businesses; [Kinnard and Malinowski \(1960\)](#) focused primarily on New Haven and Hartford, CT, with supplementary evidence from elsewhere, and again found detrimental impacts for small business owners; and [Taylor \(1974\)](#) specifically surveyed minority businessmen affected by the Morningside and Mountain View urban renewal areas in Knoxville, TN, where he found that many businesses simply could not foresee how they would cover the costs associated with relocation and therefore closed preemptively.

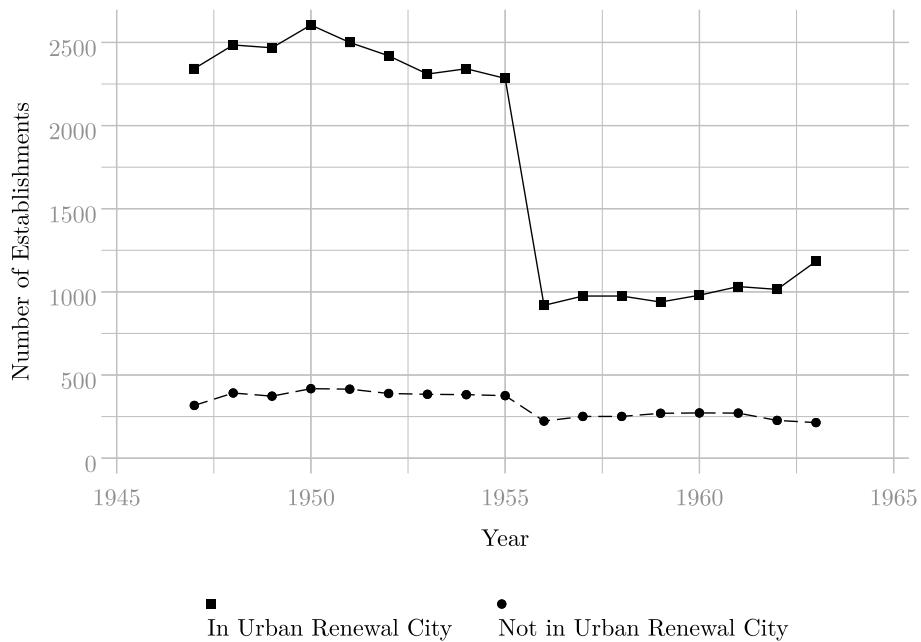
2.4.2. Robustness of main results

We examine the robustness of our results in [Table 6](#). Here, we pool estimates and present a variety of specifications and samples. Column (1) displays a simple difference-in-differences estimate where we interact the urban renewal area with a post-1955 indicator to see whether, within a census tract, the decline after 1955 was more pronounced in the urban renewal section of the census tract. The point estimate suggests this is likely the case, although the standard errors are large. This specification effectively statistically quantifies the differential drop in Green Book establishments observed in urban renewal portions of census tracts in panel (b) of [Fig. 9](#).

Column (2) exploits the variation in treatment timing and presents a two-way fixed effects estimate of the treatment effect. Here, we see that, on average, there are about 0.05 fewer Green Book establishments in the post-treatment period. Given the well-known problems with TWFE estimators, we present the ATT for the pooled sample using our preferred method of [Callaway and Sant'Anna \(2021\)](#) in column (3). Here, we see the treatment effect increase in magnitude to about 0.08 fewer Green Book establishments. Importantly, this does not depend

³⁶ For average treatment effects on the treated, by year (i.e., averaging all the post-treatment effects for projects in 1956 separately from those in 1957, etc., the reader is referred to Figure C.1 of the Online Appendix.

³⁷ Following the Church Street project in New Haven, CT, 71% of businesses successfully relocated, 6.4% remained in the renewal area, and the remainder were assumed to have closed ([Kinnard and Malinowski, 1960](#)).



(a) By whether the city has an urban renewal project

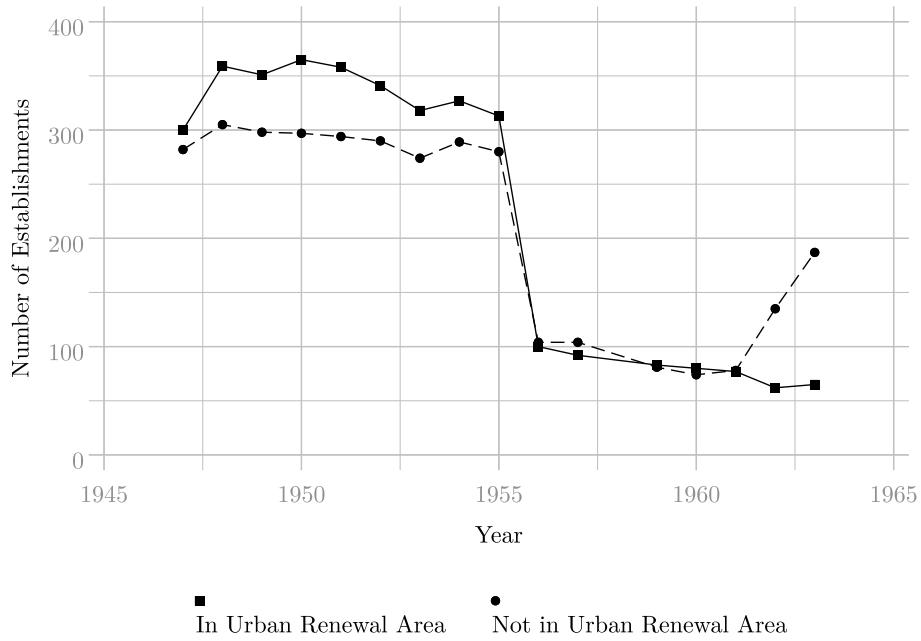


Fig. 9. These graphs show the evolution of Green Book establishments by urban renewal status. The first plot shows the total number of establishments in the sample of cities from [Collins and Shester \(2013\)](#) that had urban renewal projects compared to those that did not. The second panel shows the number of establishments in urban renewal areas compared to outside urban renewal areas, where we restrict the sample to only include census tracts that overlap with urban renewal projects.

much on the way in which we define the dependent variable; as shown in column (4), with the inverse hyperbolic sine transformation, we still see a treatment effect in the realm of 3%. Column (3) shows that some of this decline occurs at the extensive margin. Regions in census tracts that received an urban renewal project were about 1.7 percentage points less likely to have a Green Book establishment in the following years. The results are also robust to using not-yet-treated units as our control group (column (6)).

Notably, the effects are slightly smaller when we redefine treatment as either the approval of an urban renewal project or the disbursement of funds (column (7)), or just the disbursement of funds (column (8)).

This implies that businesses might have closed in anticipation of an urban renewal project beginning. The existing discussion is consistent with this finding. By 1954, urban renewal projects provided business owners with upwards of \$2500 to assist in relocating; however, this was often inadequate to cover the full costs of reopening elsewhere ([Kinnard and Malinowski, 1960](#); [Addae, 2022](#)). The expected costs alone were large enough that many businesses closed on their own ([Taylor, 1974](#)). In fact, some marginal firm owners that had been considering closure prior to the announcement of an urban renewal program saw urban renewal as a catalyst to close shop and take up employment elsewhere ([Zimmer, 1967](#)).

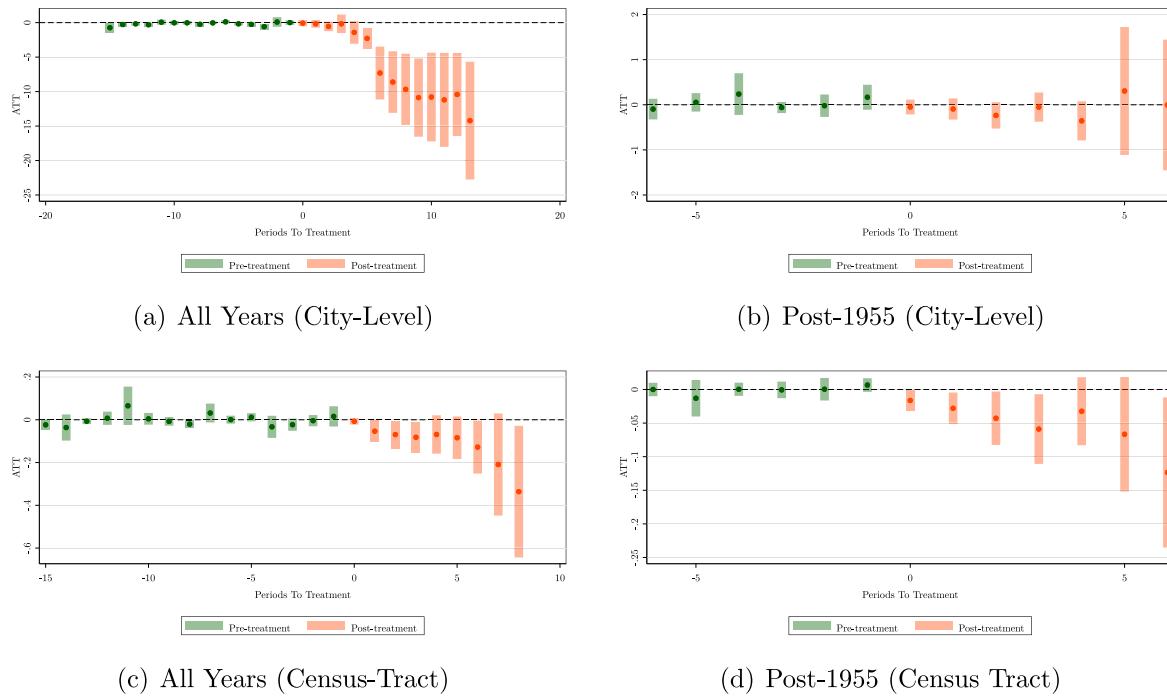


Fig. 10. Coefficient estimates and 95% confidence intervals from event studies that estimate the effect of urban renewal projects. Panel a and b show the differential change in the number of Green Book establishments in cities with urban renewal projects compared to those without urban renewal projects. Panel c and d show the differential change in the number of Green Book establishments in the portion of census tracts that intersect with urban renewal areas compared to the portion of the same census tracts that do not intersect with urban renewal areas following the start of an urban renewal project. Estimates are constructed using the method of [Callaway and Sant'Anna \(2021\)](#). The Green Book data span 1947–1963 in panel (a) and (c) and 1956–1963 in panel (b) and (d). Panels (a) and (b) present results from the city-level analysis and panels (c) and (d) present results from the census tract-level analysis.

Table 6
Estimates of the impact of urban renewal projects on Green Book establishments.

	(1) DID	(2) TWFE	(3) CS	(4) Asinh	(5) Had GB
UR Area X Post-1955	-0.0767 (0.063)				
UR Area X Post-Project		-0.0487* (0.028)			
ATT			-0.0788** (0.040)	-0.0304** (0.012)	-0.0172** (0.008)
Observations	32 810	32 810	32 810	32 810	32 810
Adjusted <i>R</i> ²	0.623	0.623			
	(6) NYT	(7) app/dis	(8) dis	(9) LV	(10) City
ATT	-0.0789** (0.039)	-0.0366* (0.019)	-0.0366* (0.019)	-0.101** (0.049)	-3.830*** (1.108)
Observations	32 810	32 810	32 810	26 282	7786

Notes: This table presents estimates of the impact of urban renewal on Black-serving businesses. The dependent variable in all columns, except (4) and (5), is the number of Green Book establishments. In column (4) it is the inverse hyperbolic sine of the number of Green Book establishments and in column (5) it is an indicator that equals 1 if the urban renewal X census tract area had at least one Green Book establishment. Column (1) presents a standard difference-in-differences estimate, column (2) presents a TWFE estimate, columns (3)–(10) uses the [Callaway and Sant'Anna \(2021\)](#) estimator. Column (6) uses not yet treated units as the control, column (7) defines treatment as projects that were approved or had funds disbursed, column (8) defines treatment as projects that had funds disbursed, column (9) restricts to the cities in [Lavoie \(2022\)](#). Columns (1)–(9) use the urban renewal area X census tract data and column (10) presents city-level estimates using the sample of cities from [Collins and Shester \(2013\)](#). Standard errors clustered by census tract in parentheses in columns (1) and (2), and robust standard errors in parentheses in columns (3)–(10). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

In column (9) we restrict the set of cities in our analysis to those that appear in both our dataset and in the sample of cities used by [Lavoie \(2022\)](#). Here, the treatment effect increases in magnitude to about 0.1 fewer Green Book establishments post-treatment. Although our exact identification strategy differs from [Lavoie \(2022\)](#), we view this estimate as more comparable to her estimates of the impacts of urban renewal on housing and population density, the racial composition of neighborhoods, and income and rents.

Finally, using the city-level data from [Collins and Shester \(2013\)](#) yields a pooled effect of approximately 4 fewer Green Book establishments in cities following an urban renewal project. Again, this estimate reflects the fact that these projects did not just displace Black-serving businesses out of urban renewal areas. Rather, many of these businesses ceased to exist altogether. While we cannot quantify the ramifications of the loss of Black-serving businesses on psychological or sociological outcomes, as we noted previously, the implications of losing these businesses go beyond the direct effects on the firm owners.

2.4.3. Differences by industry

Turning back to the dynamic effects of urban renewal, in [Figs. 11](#) and [12](#) we display the estimates from the event study framework by type of establishment. The pooled estimates are found in [Table 7](#).³⁸ There, we see heterogeneous results by business type. In the census tract and city analyses, urban renewal projects had a negligible or small impact on formal and informal lodging. Effects were similarly non-existent for gasoline stations, and other types of businesses at the census

³⁸ The ATTs by year of treatment for the industry-level specifications can be found in Figure C.3 of the Online Appendix.

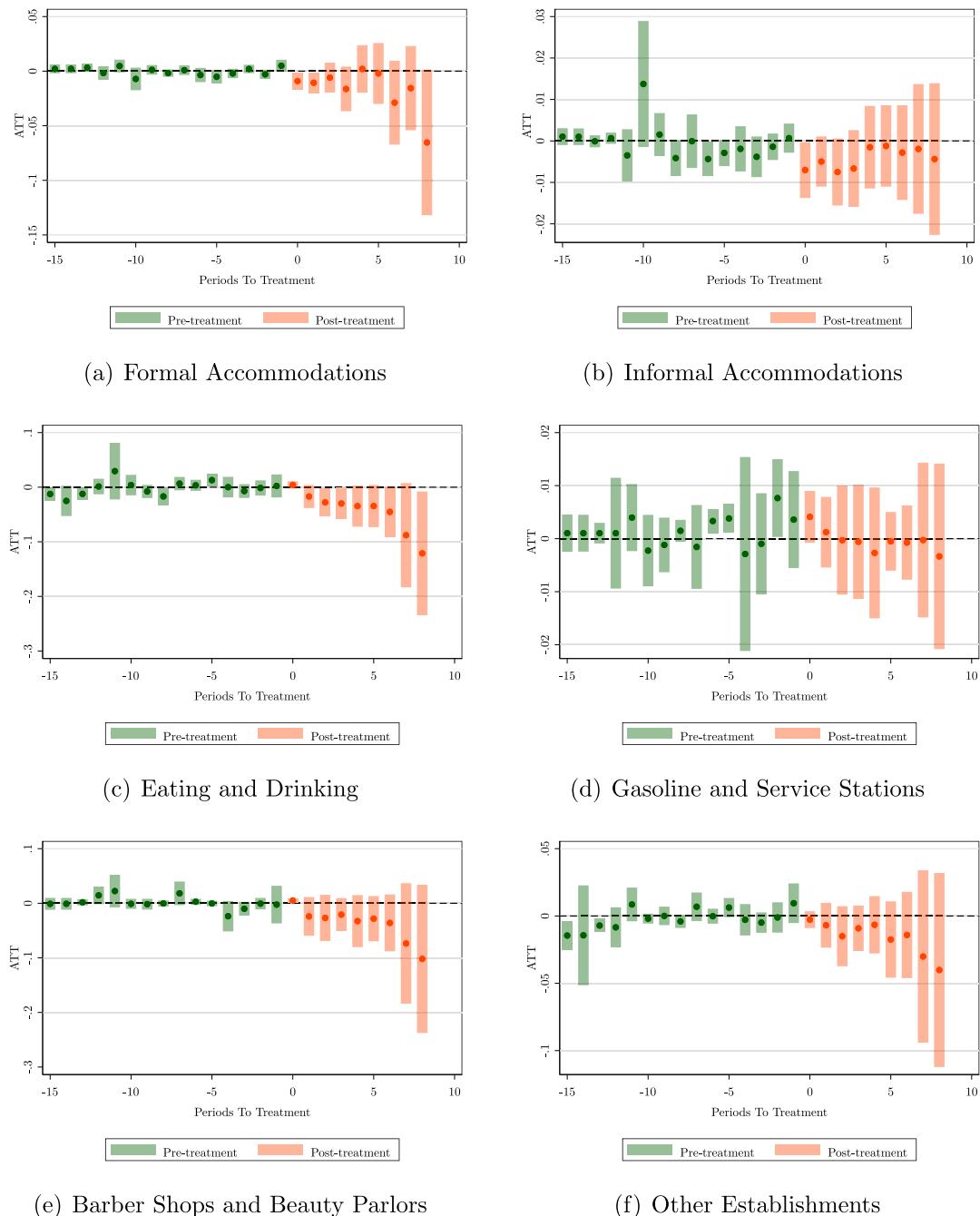


Fig. 11. Coefficient estimates and 95% confidence intervals from event studies that estimate the differential change in the number of Green Book establishments in the portion of census tracts that intersect with urban renewal areas compared to the portion of the same census tracts that do not intersect with urban renewal areas following the start of an urban renewal project. Estimates are constructed using the method of [Callaway and Sant'Anna \(2021\)](#). The Green Book data span 1947–1963.

tract level; however, in the city-wide analysis, both of these types of establishments appear to be negatively related to urban renewal.³⁹

³⁹ One important point regarding the industry-level analysis is that the drop in establishments after 1955 happened disproportionately in certain kinds of businesses. Formal and informal accommodations, as well as restaurants did not experience this sharp decline in listings between 1955 and 1956. To verify that our results are not driven by specific kinds of establishments exiting the Green Books we have redone the analysis using formal accommodations and restaurants only. We find a similar pattern using these two types of establishments, although the total effect is smaller in magnitude, which is expected since we are evaluating a smaller number of establishments. These results are unreported but available upon request.

By far the most affected businesses in terms of magnitude were eating and drinking establishments and barber shops and beauty parlors, which each saw large declines in both the census tract and city analyses. This is important as both comprised large shares of businesses in Black business districts. For instance, beauty parlors and barber shops were 20% of Birmingham's Black businesses, and eating and drinking establishments were another 11% of the total number of businesses ([Wilson, 1975](#)). The impact of urban renewal projects on these types of establishments mirrors the existing survey evidence from the time that found that businesses that were least likely to survive relocation were eating and drinking establishments, and other small businesses, often with more elderly owners ([Kinnard and Malinowski, 1960](#); [Zimmer, 1967](#); [Taylor, 1974](#)).

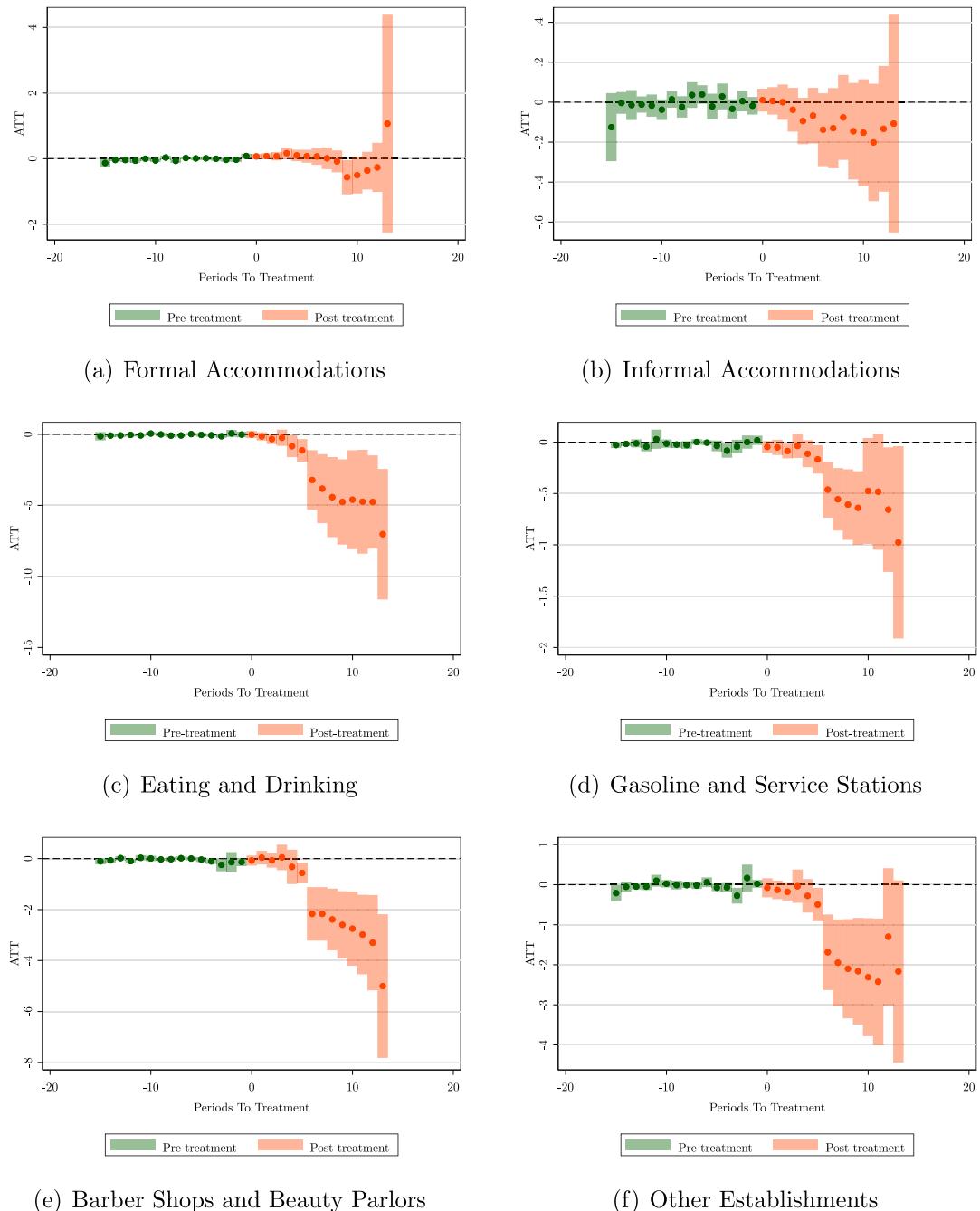


Fig. 12. Coefficient estimates and 95% confidence intervals from event studies that estimate the differential change in the number of Green Book establishments in cities with urban renewal projects compared to cities without urban renewal projects following the start of an urban renewal project. Estimates are constructed using the method of [Callaway and Sant'Anna \(2021\)](#). The Green Book data span 1947–1963.

2.4.4. Limitations and discussion

In [Cook et al. \(2020\)](#), one explanation given for the decline in establishment listings in the late 1950s was a change in advertising strategy in the Green Books beginning in the mid-1950s. Meanwhile, the results of our analysis suggest that another potential channel was through urban renewal projects. Here we discuss some reasons that lead us to believe that the decline cannot be entirely explained by a change in advertising strategy, and that urban renewal projects did, in fact, play an important role. First, the timing of the results *within cities* is inconsistent with a national change in advertising strategy by the Green Books. Second, the declines here are consistent with those documented by [Wilson \(1975\)](#) for Birmingham—eating and drinking establishments and beauty parlors and barber shops were each more than 10% of the

total decline in businesses in the Black business district over the time period. During the same period, Wilson found no change in the number of hotels or service stations. Additional evidence comes from the fact that [Wilson \(1975\)](#) specifically noted that changes in land use and zoning were leading to the decline in the Black Business district at the time, which is consistent with urban renewal projects more generally.

That being said, the large drop specifically in 1955 is inconsistent with the overall timing of urban renewal, which rolled out over several decades, with projects occurring both before and after 1955. As we discussed earlier, given the strong statistical relationship between the presence of these projects and the decline in Black-serving businesses, it could be that the publication was audited more heavily in 1956 and

Table 7
Effects of urban renewal by type of establishment.

	(1) Total	(2) Eat/Drink	(3) Formal	(4) Informal	(5) Barber/Beauty	(6) Gas	(7) Other
<i>Panel A: Census Tract</i>							
ATT	-0.0788** (0.040)	-0.0294* (0.015)	-0.0116 (0.009)	-0.00486 (0.004)	-0.0280 (0.021)	0.000161 (0.004)	-0.0120 (0.012)
<i>Panel B: City-Level</i>							
ATT	-3.830*** (1.108)	-1.766 *** (0.609)	0.0127 (0.092)	-0.0630 (0.057)	-1.260*** (0.357)	-0.260*** (0.090)	-0.873*** (0.268)

Notes: This table presents estimates of the impact of urban renewal on Black-serving businesses, by establishment type, and by urban renewal area X census tract or city. The dependent variable in all columns is the number of Green Book establishments of the type indicated in the column headers. All columns use the [Callaway and Sant'Anna \(2021\)](#) estimator. Panel A uses census tract X urban renewal area observations and panel B uses city-level observations. Robust standard errors in parentheses. The number of observations in panels A and B, are 32810 and 7786, respectively. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

the drop reflects businesses that closed over a longer time horizon than just between 1955 and 1956.

Our analysis also does not separately evaluate the impact of constructing the Interstate Highway System through urban centers on Black-serving businesses. Given that the timing of the IHS coincided with many of these urban renewal projects, it is possible that there is a confounding impact of the highway system in our analysis. However, there are reasons to believe that the effect of the urban renewal projects that we identify are real and align with previous work in this space. The study from [Zimmer \(1967\)](#) that evaluated displaced businesses in Providence, RI, provides a comparison between the businesses displaced by urban renewal and those displaced by the IHS. On average, urban renewal projects tended to displace different kinds of businesses than the IHS projects. Consistent with our analysis, urban renewal projects displaced smaller businesses, which often did not have the means to financially withstand relocation. Thus, these establishments were discontinued about 30% more often than establishments displaced through the IHS projects. Projects in urban renewal areas also disproportionately served ethnic or minority clientele. Overall, we view this survey evidence from [Zimmer \(1967\)](#) as reassurance that our estimates capture something meaningful about the impact of urban renewal on Black-serving businesses.

Our findings complement the existing work of economic historians who have studied the economic impacts of urban renewal. Among this work, [Collins and Shester \(2013\)](#) find that, at the city level, those cities with urban renewal projects experienced an increase in income, property values, and population; however, at a more granular level [Lavoie \(2022\)](#) shows that, the city-wide "benefits" were at the expense of historically Black neighborhoods. Specifically, while neighborhoods that were targeted for urban renewal projects did see increases in income and rent, African American neighborhoods were disproportionately targeted for urban renewal which ultimately resulted in a decline in housing and population density, and the share of Black residents. It is perhaps expected, then, that urban renewal also resulted in a decline in Black-friendly businesses given the location of Green Book establishments within cities and the targeted nature of urban renewal projects.⁴⁰

3. Conclusion

Urban economics has not focused on the unique spaces created by Black-friendly businesses. This is not due to a lack of interest in Black entrepreneurial activity, but a paucity of data to analyze trends in Black business formation. In this paper, we introduce a novel data source from a national directory of Black-friendly businesses to analyze the trends and location of these businesses over time. In doing so, we uncover several facts about these Green Book businesses. First, they grew significantly from 1939 to 1955. Second, most of their

growth was concentrated in the lowest-graded and disproportionately Black *residential* neighborhoods of cities. Third, we found that these businesses were more likely to decline if they were located in areas designated for urban renewal projects. The fortunes of Black business districts and their related economic and wealth building capacity was intimately related to the policies and trajectory of the urban core.

We view this work as the start of a project to better analyze Black business districts on their own terms. More historical work is needed to identify the set of conditions that have led to a dearth of businesses in the urban core ([Herring, 2004](#)). We find novel results that, at a time of Black income growth and growing integration, Black-friendly businesses were stymied by urban renewal projects. These findings should be extended and enhanced in several ways. First, scholars should be more diligent in discovering information about racialized businesses in the past, particularly in urban areas. While several studies consider the labor market and political implications of Black migratory patterns and the changing racial composition of cities ([Derenoncourt, 2022](#)), few have exploited or analyzed the attendant business communities that were deeply embedded in these areas. There are city-level directories, local surveys, Black newspapers, and travel guides similar to Green Books which have not been analyzed. Second, greater attention to the tradition of Black business geography and ecology from the sociological tradition could help inform the approach that urban economists take to the issue. Black businesses operated in a particular social context that deserves considered cogitation when considering firm decisions such as location, competition, pricing, and demand responsiveness. Third, exploiting the geospatial differences in urban policy as they pertained to Black businesses and public accommodations would be important additions to the literature. Fourth, more careful attention to the role of Black businesses in Black employment, consumption patterns, and wealth would be welcome and important avenues to explore. Finally, the role of business practices, financial inclusion of entrepreneurs, and discrimination in credit markets would enhance this research agenda in truly generative ways.

CRediT authorship contribution statement

Maggie E.C. Jones: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **Trevon D. Logan:** Conceptualization, Data curation, Funding acquisition, Methodology, Project administration, Writing – original draft, Writing – review & editing. **David Rosé:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **Lisa D. Cook:** Conceptualization, Data curation, Funding acquisition.

Appendix A. Supplementary data

Supplementary material related to this article can be found online at <https://doi.org/10.1016/j.jue.2024.103640>.

⁴⁰ This also provides suggestive evidence that urban renewal programs acted as a transfer between residents in the city as Black neighborhoods declined.

References

Aaronson, D., Hartley, D., Mazumder, B., 2021. The effects of the 1930s HOLC “redlining” maps. *Am. Econ. J. Econ. Policy* 13 (4), 355–392.

Addae, A.E., 2022. The perils of urban redevelopment for black business districts tulsa race massacre symposium issue: Probing the causes and interrogating the law. *Tulsa Law Rev.* 57 (1), 171–196.

Akbar, P.A., Li, S., Shertzer, A., Walsh, R.P., 2019. Racial Segregation in Housing Markets and the Erosion of Black Wealth. Working Paper.

Ananat, E.O., 2011. The wrong side(s) of the tracks: The causal effects of racial segregation on urban poverty and inequality. *Am. Econ. J. Appl. Econ.* 3 (2), 34–66.

Ananat, E.O., Washington, E., 2009. Segregation and black political efficacy. *J. Public Econ.* 93 (5–6), 807–822.

Bay, M., 2021. Traveling Black: A Story of Race and Resistance. The Belknap Press of Harvard, Cambridge, Massachusetts.

Bayer, P., Charles, K.K., 2018. Divergent Paths: A New Perspective on Earnings Differences Between Black and White Men Since 1940. *Q. J. Econ.* 133 (3), 1459–1501.

Berry, S., Reiss, P., 2007. In: Armstrong, M., Porter, R. (Eds.), Chapter 29 Empirical Models of Entry and Market Structure. In: *Handbook of Industrial Organization*, vol. 3, Elsevier, pp. 1845–1886.

Brown, D.L., 2017. Life or death for black travelers: How fear led to ‘the negro motorist green-book’. *The Washington Post*. Accessed: 2 October 2017.

Callaway, B., Sant’Anna, P.H., 2021. Difference-in-differences with multiple time periods. *J. Econometrics* 225 (2), 200–230, Themed Issue: Treatment Effect 1.

Card, D., Rothstein, J., 2007. Racial segregation and the black-white test score gap. *J. Public Econ.* 91 (11–12), 2158–2184.

Carter, C.E., 2023. The road to the interstates: A case study from Detroit. Working Paper.

Clark, K., 1965. Dark Ghetto. Harper and Row.

Collins, W.J., Shester, K.L., 2013. Slum clearance and urban renewal in the United States. *Am. Econ. J. Appl. Econ.* 5 (1), 239–273.

Cook, L.D., Jones, M.E.C., Logan, T.D., Rosé, D., 2020. The Green Books and the Geography of Segregation in Public Accommodations. Working Paper.

Cook, L.D., Jones, M.E.C., Logan, T.D., Rosé, D., 2023a. Competition and Discrimination in Public Accommodations: Evidence from the Green Books. Technical report, The Ohio State University.

Cook, L.D., Jones, M.E., Logan, T.D., Rosé, D., 2023b. The evolution of access to public accommodations in the United States. *Q. J. Econ.* 138 (1), 37–102.

Cutler, D.M., Glaeser, E.L., 1997. Are ghettos good or bad? *Q. J. Econ.* 112 (3), 827–872.

Department of Commerce, 2023. Enumeration District Descriptions, 1850–1950, Record Item: various, Series: Enumeration District Descriptions, Record Group 29: Records of the Bureau of the Census, Repository: National Archives and Records Administration[Online Archive].

Derenoncourt, E., 2022. Can you move to opportunity? Evidence from the Great Migration. *Amer. Econ. Rev.* 112 (2), 369–408.

Drake, S.C., Cayton, Jr., H.R., 1945. Black Metropolis: A Study of Negro Life in a Northern City. Harcourt Brace.

Fishback, P.V., LaVoie, J., Shertzer, A., Walsh, R.P., 2023. The HOLC maps: How race and poverty influenced real estate professionals’ evaluation of lending risk in the 1930s. *J. Econ. History* 83 (4), 1019–1056.

Franklin, J.H., 1956. History of racial segregation in the United States. *Ann. Am. Acad. Political Sci.* 304 (1), 1–9.

Frazier, E.F., 1937. Negro harlem: An ecological study. *Am. J. Sociol.* 43 (1), 72–88.

Gans, H.J., 1965. The failure of urban renewal. Commentary <https://www.commentary.org/articles/herbert-gans/the-failure-of-urban-renewal/#:~:text=Renewal%20sometimes%20even%20created%20new,double%20up%20in%20other%20ghettos>.

Gil, R., Marion, J., 2018. Residential segregation, discrimination, and african-American theater entry during jim crow. *J. Urban Econ.* 108, 18–35.

Gil, R., Marion, J., 2022. Why did firms practice segregation? Evidence from movie theaters during jim crow. *J. Law Econ.* 65 (4), 635–663.

Greer, S., 1965. Urban Renewal and American Cities: The Dilemma of Democratic Intervention. The Bobbs-Merrill Company, Inc.

Herring, C., 2004. Open for business in the black Metropolis: Race, disadvantage, and entrepreneurial activity in chicago’s inner city. *Rev. Black Political Econ.* 31 (4), 35–57.

Horton, H.D., Allen, B.L., Herring, C., Thomas, M., 2000. Lost in the storm: The sociology of the black working class, 1850 to 1900. *Am. Sociol. Rev.* 65 (1), 128–137.

Jacobs, J., 1961. *The Death and Life of Great American Cities*. New York, Random House, Inc..

Khan, E.M., 2015. The ‘Green Book’ legacy, a beacon for black travelers, New York times.

Kinnard, Jr., W.N., Malinowski, Z.S., 1960. The Impact of Dislocation from Urban Renewal Areas on Small Business. Technical report, Small Business Administration Management Research Grant Program.

Landry, B., 1988. *The New Black Middle Class*. University of California Press.

LaVoice, J., 2022. *The Long-Run Implications of Slum Clearance: A Neighborhood Analysis*. Working Paper.

Manson, S., Schroeder, J., Riper, D.V., Kugler, T., Ruggles, S., 2020. IPUMS national historical geographic information system, Version 15.0. <http://dx.doi.org/10.18128/D010.V10.0>. Data retrieved from IPUMS USA.

McGee, C., 2010. The open road wasn’t quite open to all. *N.Y. Times* Accessed: Oct. 1, 2017.

Nelson, R.K., Winling, L., Marciano, R., Connolly, N., et al., 2022a. Mapping inequality. In: Nelson, R.K., Ayers, E.L. (Eds.), *American Panorama*.

Nelson, R.K., Winling, L., Marciano, R., Connolly, N., et al., 2022b. Renewing inequality. In: Nelson, R.K., Ayers, E.L. (Eds.), *American Panorama*.

Reiss, Jr., A.J., Aldrich, H., 1971. Absentee ownership and management in the black ghetto: Social and economic consequences. *Soc. Problems* 18 (3), 319–339.

Roback, J., 1986. The political economy of segregation: The case of segregated streetcars. *J. Econ. History* 46 (4), 893–917.

Rothstein, R., 2017. *The Color of Law: A Forgotten History of how Our Government Segregated America*. New York., Liveright Publishing.

Sorin, G.S., 2009. “Keep going”: African Americans on the road in the era of Jim Crow (Ph. D. thesis). University at Albany, State University of New York.

Sorin, G., 2020. *Driving While Black: African American Travel and the Road To Civil Rights*. Liveright Publishing.

Sturdvant, F.D., 1970. *The Ghetto Marketplace*. The Free Press.

Taeuber, A.F., 1964. Population redistribution and retail changes in the central business district. In: Burgess, E., Bouge, D. (Eds.), *Contributions To Urban Sociology*. University of Chicago Press, pp. 163–177.

Taylor, C., 1974. A Case Study of the Consequences of Displacement Caused by Urban Renewal and Highway Construction on Minority Businesses in the City of Knoxville, Tennessee. University of Tennessee-Knoxville.

Taylor, K.-Y., 2019. *Race for Profit: How Banks and the Real Estate Industry Undermined Black Homeownership*. University of North Carolina Press.

Taylor, C., 2020. *Overground Railroad: The Green Book and the Roots of Black Travel in America*. Abrams Press, New York, NY.

Williams, R.M.J., 1964. *Strangers Next Door: Ethnic Relations in American Communities*. Prentice Hall.

Wilson, F.D., 1975. The ecology of a black business district. *Rev. Black Political Econ.* 5 (4), 353–375.

Woodward, C.V., 1955. *The Strange Career of Jim Crow*. Oxford University Press.

Wright, G., 2013. *Sharing the Prize*. Harvard University Press.

WUOT News, 2021. Losing home: The loss of black-owned businesses, WUOT. <https://www.wuot.org/news/2021-06-17/losing-home-the-loss-of-black-owned-businesses>.

Zimmer, B., 1967. In: Wilson, J.Q. (Ed.), *The Small Businessman and Relocation*. In: *Urban Renewal: The Record and the Controversy*, The MIT Press.