THE EVOLUTION OF ACCESS TO PUBLIC ACCOMMODATIONS IN THE UNITED STATES [*]

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Abstract

The economic analysis of racial discrimination in public accommodations is remarkably limited. To study this issue, we construct a national dataset of non-discriminatory establishments from the *Negro Motorist Green Books*, a travel guide published from 1936 to 1966 to aid Black Americans in finding non-discriminatory retail and service establishments. We document patterns in the geographic spread and evolution of Green Book establishments, as well as the correlates of Green Book presence. We find economic and social measures, as well as state laws relating to racial discrimination and anti-discrimination, were correlated with the provision of non-discriminatory services. We then use the Green Book data to test whether market conditions and White consumer discrimination led businesses to bar Black customers prior to the Civil Rights Act of 1964. We use plausibly exogenous variation from White WWII casualties and Black migration patterns to isolate the effect of a change in the racial composition of consumers on the growth of non-discriminatory businesses. We find that the share of non-discriminatory establishments grew faster in locations with larger increases in the share of the Black population, but the magnitudes were small. These results highlight the importance of federal legislation in ending racial discrimination in public accommodations.

Keywords: Green Books, public accommodations, segregation, Jim Crow laws
JEL Codes: J15, L83, N32, N82, N92

"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."— John Hope Franklin, 1949

Ending racial discrimination in public accommodations was a major focus of the Civil Rights Movement. From *Plessy v. Ferguson* (1896), a Supreme Court decision about segregated railway cars that established the constitutionality of "separate but equal," to the Montgomery Bus Boycott (1955-1956) and the lunch-counter sit-ins in Greensboro, NC (1960), discrimination in public accommodations has been a flash-point throughout American history. Wright (2013) argues that by the early 1960s, denial of equal service by public facing firms was the most prominent source of civil rights protests in the South. The sections of the 1964 Civil Rights Act that banned racial segregation in public accommodations were the most vociferously debated—they were the subject of the longest filibuster in the history of the US Senate. Despite the prominence of segregation in public accommodations in historical and political analysis, economic analysis of racial discrimination in public accommodations is remarkably thin.

This paper aims to fill two important gaps in our understanding of this topic in American history by making use of a tool created to assist African Americans in navigating through a nation with discrimination in public accommodations. From 1936 to 1966, Harlem postal worker Victor Green and his associates published travel guides for African American motorists.[1] Colloquially known as the *Green Books*, these directories listed hotels, businesses, restaurants, and other services that were friendly towards African American clientele during a time when travel could be uncomfortable, at best, and dangerous, at worst.[2] Our first

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[1]Taylor (2020) documents that Victor Green worked on the Green Books up until the time of his death in 1960. His wife, Alma, ran the publication until 1962 at which point she sold it to Langley Waller, a Harlem businessman, and Melvin Tapley, an illustrator for the *New York Amsterdam News* (Sorin, 2020).

[2]See Loewen (2009) for an account of Sundown Towns—places that forbade African Americans from entering after dark. Cook (2012a) describes the data on racial violence in the form of lynching, which as

contribution is to digitize these guides and document the extent and evolution of access to non-discriminatory public accommodations for African American consumers by uncovering regional and county-level patterns in business listings. In doing so, we provide a unique lens into the evolution of racial discrimination in public accommodations during the last decades of legal Jim Crow in the United States. Our second contribution is to use these data in an empirical analysis guided by Wright's (2013) argument that the preferences of White consumers were the main driver behind private businesses' decisions to discriminate against Black consumers, and that government legislation was necessary to bring these practices to an end.

Our descriptive analysis uncovers several previously undocumented facts about the geography of access to public accommodations for Black Americans. First, consistent with the nationwide practice of *de facto* racial discrimination, we find that the majority of Green Book listings were actually outside of the South. Even in Northeastern states, where some *anti*-discrimination laws were in place, there were thousands of Green Book listings. It is clear that even outside of the South, information about establishments that welcomed African American patrons was valued by Black consumers, which indicates that they did not take equal service as given.[3]

Second, access to non-discriminatory establishments was not uniform across the United States. As a single region, the South had the largest number of Green Book establishments, while the West had the fewest.[4] However, the South had the fewest establishments per Black resident, while the Midwest had the most. Consistent with the need for a publication to solve this information problem, the scope of non-discriminatory businesses in any location

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disproportionately practiced on non-residents.

[3]As additional evidence on the lack of equal access, the first lunch counter sit-ins to protest racial discrimination occurred in Chicago during WWII. This experience was shared with other minority groups, such as the Jewish community, that experienced similar types of discrimination when it came to accessing public accommodations. In fact, Victor Green pointed to similar travel guides for American Jews as his inspiration for creating the Green Books (Sorin, 2020).

[4]We employ the U.S. Census Bureau definition of the South throughout our study (this includes states that joined the Confederacy as well as border states): Alabama, Arkansas, Delaware, the District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

was far from uniform.

Third, we also digitize sections of the 1935 and 1948 Census of Business to obtain county-level data on the total number of formal accommodations (hotels and motels), restaurants, and gas stations.[5] Combining counts from the Green Books with the Census of Business counts allows us to compute the *share of non-discriminatory businesses* by sector and county. Using this measure, which captures the relative accessibility of public accommodations for Black Americans, we find that the South had the highest share of non-discriminatory hotels and gas stations, with the Northeast lagging slightly behind. At first glance, this result may seem counterintuitive, especially since segregation was the law in the Jim Crow South; however, the South had a disproportionately lower number of overall establishments leading to a much smaller value in the denominator of the share calculations.[6] For restaurants, the Northeast had the highest share of non-discriminatory establishments with the South slightly behind. Overall, however, the relatively narrow gap in terms of the share of non-discriminatory accommodations is similar to patterns of residential segregation found during the early twentieth century (Logan and Parman, 2017).

Our analysis reveals that the number of Green Book establishments per Black resident correlates positively with several measures of economic activity. In particular, the number of Green Book businesses per Black resident were positively correlated with measures such as manufacturing output, wages, and number of establishments. Green Book businesses were also positively correlated with Black and White educational attainment and Black political organization, proxied by NAACP chapters. Further, we find that Green Book businesses were negatively related to residential segregation, lynchings, and the presence of

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[5]While the 1948 Census of Business volume lists hotels and tourist courts (also known as motels) separately, the 1935 publication only lists hotels explicitly; however, it is our contention that the 1935 definition would have included both categories of establishment. This is supported by the fact that the inclusion criteria are quite detailed and many other types are explicitly excluded (boarding houses, Y.M.C.A.s, and tourist camps, for example). Moreover, the decision to list them separately most likely reflects the increased prominence of tourist courts following the end of WWII gasoline rationing and the return of troops following the cessation of hostilities. The heyday of motels was during the 1940s and 1950s (Jackson, 1993).

[6]For example, in 1940, counties in the South had an average of 6 hotels, whereas counties in the North had an average of 36.

Confederate memorials–measures of discrimination and racial animus that have been studied in the literature.[7]

Although these guides are not a complete census of businesses that catered to Black consumers, we argue that the process by which firms were listed and the correlations with other measures of discrimination against African Americans indicate that Green Book listings convey real information about non-discriminatory behavior by public-facing firms in retail and service industries. At the state level, we use the legislative record on discrimination and anti-discrimination laws across the United States by 1950 to understand how Green Book presence is related to legal segregation in the U.S. We digitize nearly 2,000 pieces of legislation, originally compiled by legal scholar and civil rights activist Pauli Murray (1950), that describe either the strengthening *or* weakening of racially discriminatory legislation by state.[8] Consistent with our interpretation of what Green Books capture, we find that the number of anti-discrimination laws is positively correlated with the number of listings in the Green Books (adjusted for the size of the Black population), while discriminatory laws correlate negatively with Green Book establishments.

After documenting the evolution of public accommodations, we explore in greater detail the increase in the number of Green Book listings. The appearance of greater numbers of Black-friendly firms during this period was the result of decisions by business owners to welcome Black patrons, it was not binding legislation.[9] The public discourse about racial segregation in public accommodations features a variety of arguments about the economic impracticality of banning racial discrimination in private businesses open to the public, the role of White consumer preferences in firm discrimination policies, and the necessity

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[7]For more on residential segregation see Logan and Parman (2017), for more on lynchings see Cook (2012a), for more on Confederate memorials see Williams (2021).

[8]Murray also includes a small number of municipalities in the analysis, but too few to use empirically with the Green Book data.

[9]State laws banning racial discrimination in public accommodations were rare and not standardized. Murray (1950) notes that covered businesses, severity of fines for violation, investigations, and enforcement varied widely for the policies that were in place. In the *Heart of Atlanta Motel v. United States* (1964) the Supreme Court noted that only two states– Minnesota (1947) and New York (1948) had state legislation banning the banning public accommodations discrimination that could be comparable to the Civil Rights Act of 1964.

of government legislation for private businesses to cease discriminating against Black consumers. Firm owners in the 1950s and 1960s routinely noted that racial segregation was profit-maximizing given the preferences of their White customers. The notion that White businesses were cognizant of the trade-off between potential revenue from selling to Black patrons and losses from White customers defecting to discriminatory competitors also finds support in contemporaneous accounts of store owners worried about turning profitable businesses into money-losers if they were to accept Black patronage (Wright, 2013).[10] Using the Green Books data, we test for the role of changes in the racial composition of the consumer base in the expansion of non-discriminatory businesses.

Exploiting the exogenous county-level change in the White population due to casualties in WWII, we find evidence that declines in the White population led to increases in the number of non-discriminatory businesses. Our baseline difference-in-differences estimate is that a 10% increase in White casualties resulted in a 0.65% increase in the number of non-discriminatory establishments in a county. In tying these results closer to the intuition of consumer discrimination, we use WWII casualties as an instrument for changes in the Black share of the population, and find that a 10% increase in the share of the Black population is related to a 2.2% increase in the share of non-discriminatory hotels, a 0.6% increase in the share of non-discriminatory restaurants, and a 0.2% increase in the share of non-discriminatory gas stations. We further test the robustness of this IV strategy using Black migration as the instrument for Black population inflows to Northeastern and Midwestern areas, similar to the strategy used by Boustan (2009) and Derenoncourt (2022). There, we find that a 10% increase in the share of the Black population is related to a 5.7% increase in the share of non-discriminatory hotels, a 10% increase in the share of non-discriminatory restaurants, and a 0.6% increase in the share of non-discriminatory gas stations.

Our results are consistent with strong White consumer preferences for discriminatory

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[10]The threat of lost business from Whites was so pervasive that it affected firm behavior outside of the United States as well. The Sevilla-Biltmore Hotel in pre-revolutionary Havana presents a striking example of this. It was initially integrated but by 1947 it had introduced segregation to appeal to White American tourists that did not want to commingle with Black guests (Amsterdam News, 1947).

services which would not be easily bid away via a market process. To be clear, extrapolating from our reduced-form estimates with White casualties, the United States would have needed to engage in *several* World Wars to have even a quarter of the businesses in an area provide non-discriminatory services.[11] Our results therefore also highlight the necessity of federal policy in overcoming the prevailing social order of this time period. This particular finding is not only of historical importance, but is relevant in contemporary policy discussions if discriminatory beliefs in the consumer population leave a segment of the population prone to discriminatory treatment by business establishments which serve the public.

Our work adds to the sparse literature on consumer discrimination and segregation in business services in American history. Gil and Marion (2018) study the impact of residential segregation on the entry decisions of African American movie theatres in the South. They find that segregation induced greater entry of these establishments and that this effect is driven by greater variable profits per-person in more segregated areas but that entry costs are also higher in these areas–perhaps indicating higher input costs for entrepreneurs. In related work, Gil and Marion (2020) exploit the enforcement of a ban against segregation in Washington, D.C. in 1953 to test whether segregation in cinemas was due to taste-based discrimination among cinema owners, consumers, or both parties. They find that cinemas in D.C. experienced lower profits as a result of desegregation, a finding that is more consistent with White consumers' discriminatory preferences driving the decision of firm owners to exclude Black patrons.

Another notable exception is Roback (1986)'s study of segregated streetcars. She explores whether the development of the Jim Crow system stemmed from political considerations by elites or a widespread shift in attitude towards African Americans. Finally, Harvey and West (2020) study the Supreme Court's decision to strike down the public accommodations section of the Civil Rights Act of 1875 on the weight (a potential proxy for well-being) of Black Union Army veterans and they find a detrimental effect of public

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[11]For context, after WWII, the next event that caused such a spike in American mortality was the COVID-19 pandemic's effect on 2020 mortality.

accommodations discrimination on health.[12] Our empirical analysis of access to public accommodations is distinct from this small literature on consumer discrimination insofar as we explore the market's response to (relative) demand shocks for non-discriminatory retail and service businesses, use a national dataset of firms, and are able to explore the role of consumer discrimination in multiple industries.[13]

Aside from the data and economic contributions, our work contributes meaningfully to the history of the Civil Rights Movement. Our analysis of the relationship between the market composition of Black and White consumers and firm behavior sheds light on how consumers have played a part in the limited expansion of non-discriminatory firms before the Civil Rights Act of 1964 banned discrimination in public accommodations. While this thesis was proposed previously by Wright (2013), data availability has limited empirical tests of this hypothesis to date.

II   Segregation in Public Accommodations

After the Civil War, the Civil Rights Act of 1875 explicitly forbade racial discrimination in public accommodations, ensuring "full and equal enjoyment of public accommodations," based upon the equal protections clause of the 14th Amendment. The Act was ruled unconstitutional in 1883, when the Supreme Court ruled that Congress had no authority over private firms under the equal protections clause of the 14th Amendment.[14] Even before that ruling, the "first Jim Crow law" was enacted in the state of Tennessee, requiring railroad companies to provide separate seating for Black first-class passengers in 1881. This

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[12]The authors note that a major challenge with studying the impact of access to public accommodations is determining what outcome to study. Using the Green Books data, we approach this by measuring actual prevalence of Black-friendly establishments at the local level in different lines of business.

[13]Leonard, Levine and Giuliano (2010) also studies customer discrimination, but focuses on how the racial make up of employees impacts customers' decisions of where to shop. In contrast to studying how segregation affected the demand for services among African Americans, Cook (2012b) examines the strategies Black inventors developed to cope with consumer-side discrimination, with a particular emphasis on the strategies implemented by Garret A. Morgan, inventor of both the gas mask and traffic light.

[14]For this reason, non-discrimination in public accommodations under the Civil Rights Act of 1964 is enforced under the Commerce Clause. The legality of this was immediately challenged after the passage of the Civil Rights Act of 1964 in the *Heart of Atlanta Motel v. USA* case decided in 1964, where the Supreme Court ruled that the Commerce Clause could be used to enforce non-discrimination.

legislation marked the beginning of a lengthy period of legal moves that barred African Americans from equal access to services. By the time of the *Plessy v. Ferguson* decision in 1896, segregation was legally enshrined in the Southern United States and practiced by custom in every corner of the nation (Woodward, 1955; Franklin, 1956).

In the South, legal segregation penetrated almost every facet of social life, extending to churches, schools, libraries, housing, employment, restaurants, public transportation, sports, hospitals, orphanages, prisons, asylums, funeral homes and morgues (Woodward, 1955). Because of the notoriety of the Jim Crow laws, segregation is usually discussed in the context of the South, but areas outside of the South practiced forms of *de facto* segregation. Du Bois remarked that by 1934, "there was not a single Northern city, except New York, where a Negro can be a guest at a first-class hotel. Not even in Boston is he welcome; and in New York, the number of hotels where he can go is very small." Incidents of anti-Black riots in the North occurred as early as the 1830s and 1840s in the cities of Utica and Palmyra in New York, and in Philadelphia (Franklin, 1956). Several cities experienced streetcar protests over segregation in public transportation– more than 25 protests took place between 1900 and 1905 alone across the country (Kelley, 2010). In many instances, African Americans were prevented outright from living in certain White-only towns, and restrictive covenants were also used to segregate Black residents within cities (Loewen, 2009).

Logan (1956) discusses the achievements related to legal desegregation from 1911-1955, including cases such as *Buchanan v. Warley* in 1917 and a 1951 New York City council ordinance prohibiting discrimination or segregation in private housing complexes that were receiving tax exemptions or financial aid from the city. Desegregation in public accommodations rose to legal prominence after the landmark Supreme Court ruling *Brown v. Board*, that banned segregation in public schools in 1954, invalidating *Plessy v. Ferguson*. This ruling was met with fierce opposition from those who vehemently disagreed with integration of educational facilities, and any other setting that implied equality between White

and Black people more generally.[15] Opposition was met with increased pressure from Black Americans to desegregate. In the aftermath of *Brown v. Board*, a series of civil rights protests that became hallmarks for the Civil Rights Movement appealed to state and local governments to desegregate public accommodations. Some of the most iconic instances of protest include the bus boycotts, Freedom Rides, and the sit-in movement. These events eventually culminated in the Civil Rights Act of 1964, which prohibited discrimination in public accommodations on the basis of race, color, religion, or nationality in Title II of the Act.

The Civil Rights Act of 1964 was unquestionably a turning point for American society, but in terms of its impact on public accommodations, many businesses were concerned that desegregation would negatively affect their profits. The prevailing view among business owners at the time was that serving Black customers was not economically expeditious. Wright discusses the chairman of a committee assembled to resolve the sit-in crisis in Greensboro, North Carolina:[16]

> *"The managers are extremely sensitive to public reaction, and merchants engaged*
> *in general merchandising businesses who also have food departments are fearful*
> *that if they served all races on an integrated basis in the food department, they*
> *will lose a sufficient percentage of their present patronage to the nonintegrated*
> *eating establishments in our city to cause a presently profitable food department*
> *to operate at a loss."* (Wright, 2013, p. 78)

Anecdotal evidence from the *Green Books* also supports this view. In the 1948 edition, Victor Green recounts his efforts to find listings in North Dakota. A local from the town of Dickinson explained why he could not provide any recommendations for inclusion in the

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[15]Arguably the largest legal opposition to *Brown v. Board* came from the "Massive Resistance," a campaign led by U.S. Senator, Harry F. Byrd Sr., that sought to enact a series of new laws that would block school desegregation (Mays, 2008).

[16]On February 1, 1960 a group of Black college students sat down and ordered coffee at the lunch-counter at Woolworth's. Although, as Wright (2013) points out, this was not the first sit-in, it was the one that popularized the tactic and set off the sit-in movement.

guide:

> *"[...] several places of business, while they are glad to provide for Negro customers, do not care to advertise for Negro trade. The attitude of the majority of those I contacted was that, while they themselves had no color prejudices, some of their regular customers did have. This was the impression I gained from hotel operators, barbers, and others contacted."* (Green, 1948, p. 4)

These examples illustrate that, prior to the Civil Rights Act, business owners were concerned that serving Black customers *on an equal basis with Whites* would alienate their White customers who harbored racial prejudices. Not only would White consumers defect to competitors, but the losses from White consumers could outpace the gains from serving Black customers. It is important to stress that many discriminatory businesses *did* serve Black customers, but in segregated and marginalizing ways. This included restrictions to ordering take-out as opposed to being seated in a restaurant or barring Black customers from trying on clothing and shoes before purchase, or prohibiting them from returning items after purchase. Wright (2013) shows that retail sales in the South actually increased quite substantially following the passage of the Civil Rights Act, a finding that highlights that business owners harbored potentially false beliefs about the impact that desegregation would have on their profits. At the same time, the blanket ban prevented White consumer defection from desegregated firms.[17]

Against this backdrop, Black consumers had to travel and use public accommodations in everyday life, as limited as they were. Given the entrenched discriminatory environment, Black Americans faced a large information problem because *de facto* and *de jure* segregation was common. To overcome this problem, Black Americans "crowd sourced" information on businesses which would not subject them to second-class treatment. Below, we describe the most prominent example of crowd-sourced information used by Black consumers seeking

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[17]Wright (2013) stresses that business owners came to see a ban on discrimination as the only way to ensure that the defection they feared was impossible.

to solicit non-discriminatory businesses during this period of American history, the *Negro Motorist Green Books.*

III   The Green Book Data

III.A   A Brief History of the Green Books

The Green Books were a series of travel guides created by Victor Hugo Green, an African American postal employee from Harlem, New York City. Green's objective was to provide information on businesses that Black travelers could frequent without jeopardizing their safety. The Green Books provided a directory of safe and dignified places that Black Americans could rely upon while traveling. The first Green Book was published in 1936 as a ten-page pamphlet containing New York City establishments that served African Americans in a non-discriminatory fashion. The idea behind the Green Books was born out of Green's own experience with racial discrimination while traveling with his wife, Alma, in 1936 (Brown, 2017).

Green's original publication listing non-discriminatory establishments in New York City in 1936 was so successful that coverage was expanded across the Northeast in the following year and to the South and Midwest the year after. Figure I shows the proliferation of Green Book listings from the earliest years of the publication to the middle of the 1950s.[18] The original intention of the Green Book was to help African American travelers undertake their journeys safely by providing listings of gas stations, hotels, motels, and tourist homes.[19] In the 1947 *Green Book*, Green writes:

> *The idea of "The Green Book" is to give the Motorist and tourist a Guide not only*

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[18]For our analysis here we stop with listings as of 1955. See Cook et al. (2020) for further details in the Green Books which make the post-1955 editions incompatible with earlier ones for the purposes of quantitative analysis for all business types (with the exception of accommodations).

[19]This is a point also made by Andrew Brimmer, who provided the research for congressional testimony that demonstrated the burden of racial segregation on interstate commerce. That testimony was cited by the Supreme Court in upholding the public accommodation's section of the Civil Rights Act of 1964 (U.S. Senate, 1963).

of the Hotels and Tourist Homes in all of the large cities, but other classifications

that will be found useful wherever he may be. (Green, 1947, p. 1)

It is clear that Green recognized the importance of the Green Books for African Americans seeking other types of services within cities, including restaurants, bars, barber shops and beauty parlors, and pharmacies.

There is relatively little narrative history of the Green Books themselves, works by Sorin (2020) and Taylor (2020) provide the most comprehensive histories of the Green Books development and distribution. Information on businesses that were friendly towards African Americans spread largely through word-of-mouth. In several instances, Green sourced information from the network of Black U.S. postal workers to obtain recommendations from letter carriers across the U.S. (Khan, 2015; Taylor, 2020). Beginning in 1937, the Green Books included listings drawn from the US Department of Commerce's information on Black businesses (Bay, 2021). Starting with the 1938 edition, Green invited the public to provide information about places that were not listed so that they could be included in subsequent editions. In addition to simply being listed, businesses could also pay to have an advertisement included in the travel guides. The Green Books were organized in a manner similar to other business directories. Establishments were organized by cities within states and, in almost all instances, included exact street addresses.

Although many shops and services were included in the Green Books, we document that the vast majority of listings were for accommodations, as well as eating and drinking places (see Figure I in the Online Appendix). Publication of the Green Books halted from 1942-1946, when virtually all domestic resources were diverted to World War II efforts (Landry, 1988). Publication of the guides continued until 1966, although just one edition was published after the Civil Rights Act outlawed the racial segregation that had once necessitated the Green Books (McGee, 2010). According to Taylor (2020), at their peak the Green Books reached over two million consumers.

III.B Using the Green Books as Data

This paper constructs and analyzes a county-level panel data set on the number of establishments by type of industry that were friendly towards Black patrons before 1955. Using a combination of hand collection and probabilistic matching techniques, we digitize all the entries, including advertisements, in the 21 Green Books that are published in the New York Public Library's Digital Collections.[20] In particular, we hand-recorded all names, descriptions, and locations, including exact street addresses, in each edition of the Green Books. The inconsistent formatting of entries across and within Green Books, largely due to the irregular size and placement of advertisements, and variation in image quality proved to be ill suited for OCR.

After collecting, vetting, and auditing the data for accuracy for each annual edition, a combination of probabilistic matching and human verification was used to clean the data, which involved matching establishments across years. The idiosyncrasies of the published volumes make it challenging to rely solely on machine learning or probabilistic matching techniques such as Levenshtein or Jaro-Winkler distance to match observations over time. Table I highlights two examples where human judgment is useful, if not critical.

Example 1 is straightforward: the entry for Fresno Motel had the same name and address between 1957 and 1962, but in the following year its name was slightly different, and the address became more detailed (an intersection instead of simply a street name). For the purposes of geocoding businesses and quantifying openings and closures, identifying these as a match and using the most accurate address are critical. Human processing of the data is well poised to exploit contextual information and make this determination.

Example 2 makes the challenges of processing the Green Books data even more apparent. From 1947-52 two related business: "Jim Summers" (a restaurant) and "Summers" (a liquor store) are listed at addresses on Main Street. In 1953, these two businesses disappear, and

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a similarly named establishment, "Summer's Hotel & Court" is listed with the address 721 Adams Street. The following year, "Summer Hotel," which has a slightly different street number takes its place. In 1955 the street number changes once again. And over the following two years, either the name or the street address changes. The most likely explanation for this pattern is that the proprietor of "Jim Summers" and "Summers" closed these businesses in 1952 and the following year a hotel opened on Adams Street; however, additional contextual information from city directories would be useful for determining if this hotel was owned by the same proprietor as the aforementioned restaurant and liquor store. Although manually intensive, this procedure results in a superior time-consistent coding of businesses over time, and minimizes the chances of double-counting unique businesses.[21]

III.C   Comparison to Other Sources

Do the Green Books provide a representative sample of public accommodations that were friendly towards African American patrons? Unfortunately, there are no other singular sources that were as popular as the Green Books for a direct comparison.[22] Nevertheless, we are able to provide a nationwide comparison of the Green Books with alternative sources for one specific industry: formal accommodations.

A direct comparison of formal accommodation listings is advantageous for several reasons. First, accommodations (formal and informal combined) are one of the most frequently

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[21]Another issue that arises in accurately digitizing the Green Books is print error. 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. For example, in the 1955 edition, in Montgomery Alabama "Hotel Ben Moore" with address "Cor. Hight & Jackson Sts." appears in bold under the hotels 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 city in which an establishment is located. Fortunately, these addresses are often descriptive in nature, which allows for their accurate geocoding and attribution to the correct county.

[22]While there were competitors to the Green Books–(Bay, 2021) documents at least five competitors whose publication dates overlapped with those of the Green Books: *Grayson's Guide* (1936-1946); *A Directory of Negro Hotels and Guest Houses* (1939, 1941); *Go: The Guide to Pleasant Motoring* (1952-1959); *Bronze American National Travel Guide* (1961-1962); and *Travelguide* (1947-1963)–, none had both the national distribution of the Green Books and the same coverage of services nor were they published continually. In addition, some sources were curated versions of Green Book listings, such as the *Go Guides* which were also national in scope but were focused on higher-end accommodations and convention travel (Sorin, 2020).

listed type of establishments in the Green Books and the main information problem that the guides aimed to solve for African American travelers. Second, accommodations are likely to be more accurately surveyed in an annual report than other types of businesses due to less churn in the market and their explicit need to target non-residents. Third, formal accommodations are businesses which are highly likely to be consistently recognized across different sources, as opposed to other establishments which could be overlooked in other sources due to their size or location or audiences of the publication.

To assess the representativeness of Green Book hotels, Figure II compares the number of Green Book hotels in 1950 to another source of information on non-discriminatory hotels, the number of hotels listed in the Wisconsin Black Business Directory (WBBD) in 1950 (Shadd, 1950). While the WBBD focused on businesses in the state of Wisconsin, it also included an addendum with a national list of hotels that were friendly to African American travelers. We show these correlations by state in the left panel of Figure II along with a 45-degree line. Observations above the line have more Green Book hotels than WBBD hotels and those below the line have more WBBD hotels than Green Book hotels. Here, we see that the vast majority of states and cities have more Green Book hotels than WBBD hotels, which supports that the Green Book listings provide a reasonable snapshot of the hotel market open to African American clientele.[23]

Moving further back in time, we can also compare the Green Book hotels in 1939 to the Census of Business' Black-owned hotels in 1935 (this is the nearest year for which such information is available).[24] In Figure II we show that the coverage of the Green Books is superior to that of the Black-owned formal accommodations listed in the Census of Business.[25] Since many of the properties listed in the Green Books are known to have been Black-owned businesses, especially in the South (Taylor, 2020), this lends some credence to the notion

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[23]Figure II in the Online Appendix displays the city-level correlations between Green Book hotels and WBBD hotels with circles weighted by frequency.

[24]Information on the number of Black-owned hotels by state in 1935 comes from a Department of Commerce press-release (1938). We thank Ellora Derenoncourt for directing us to this document.

[25]Unfortunately, the number of Black-owned hotels in each state is only available for 1935, so we cannot check if this relationship continued to hold in later years.

that the Green Books listings capture a meaningful portion of the non-discriminatory marketplace for Black accommodations. The difference between the Black-owned hotel (and motel) count and the Green Book count in the Northeast is consistent with the fact that some White-owned hotels welcomed African American patrons at a higher rate than other parts of the country. This finding, together with the comparison of Green Book coverage to the WBBD, gives us confidence that the Green Books captured a meaningful share of non-discriminatory businesses.

III.D How the Green Books Sourced their Listings

One factor that is crucial to interpreting the expansion in Green Book establishments is the process by which firms entered into the publication. We are interested in understanding whether we can interpret changes in Green Book listings as changes in access to public accommodations for Black customers, or, alternatively, whether changes in listings represented changes in the propensity to list, perhaps due to an information diffusion process wherein business owners learned about the Green Books over time.

A key detail of the Green Book listing process is that listings were crowd-sourced and free for firms. While firms could pay for an advertisement, they did not have to pay for inclusion in the guides. As we discussed in the previous section, Victor Green leveraged his employment in the U.S. Postal Service to get recommendations from letter carriers with routes all across the U.S. (Khan, 2015; Taylor, 2020; Sorin, 2020). In addition, the general public, as well as firms, could provide recommendations directly. This broad scope of sources gives us some confidence that, once there was awareness about the Green Books in a given county, an increase in listings does indeed measure an actual increase in local access to public accommodations.

A related consideration is how one should interpret aggregate trends. Is the increase in Green Book listings due to expanded geographic coverage or an actual increase in non-segregated firms in local markets? We address this issue at the county-level by plotting the

share of counties with at least one Green Book establishment in Figure 3(a). In general, the trend is not consistent with a model of social learning, which typically follows an S-shaped pattern. It could still be the case that the 1940-1955 time period was one of gradual diffusion and, even in the absence of the Civil Rights Act, a more rapid expansion of non-discriminatory establishments would have followed; however, this is not something we are able to empirically evaluate. The increase in the share of counties with at least one Green Book establishment from just over 12% in 1939 (the first year with nationwide coverage) to about 16% in 1955 translates to roughly 126 new counties in the Green Books over the period. This finding indicates that the vast majority of the growth in new Green Book establishments occurred along the intensive margin. We provide additional evidence to support this claim in Figure 3(b) which displays a decomposition of establishment counts into the number of establishments that appear in counties that already had at least one Green Book listing in the previous year and the number that appear in "new" counties. The figure shows clearly that the majority of growth in Green Book establishments appeared in counties that already had at least one listing.

III.E The Relationship between the Green Books and Discrimination Laws

An important concern related to the feasibility of using Green Book listings to understand discriminatory behavior has to do with how accurately Green Book listings reflect the level of non-discriminatory firms in an area. This is analogous to asking whether changes in listings over time reflect a greater number of non-discriminatory firms or merely the acknowledgement of existing non-discriminatory firms in Victor Green's publication. One important point of clarification that helps to attenuate this concern is that the Green Books' objective was to provide Black travelers with a directory of establishments that would welcome them and treat them with dignity, thereby providing a higher bar for establishments than merely accepting their patronage whilst providing second-class treatment.

To gain some insight into this issue, we compare Green Book establishment counts with

the cumulative number of discriminatory laws by 1949 at the state level. In 1950, African American activist and lawyer, Pauli Murray published *"States' Laws on Race and Color."* Murray's 746-page collection, which Thurgood Marshall later termed the "bible" of *Brown v. Board of Education*, listed all the laws passed in the United States that were related to racial segregation and discrimination.[26] We digitize all entries in *"States' Laws on Race and Color"* to construct a new state-level dataset of the number of laws passed related to segregation or discrimination up to 1949. For our purposes, we focus on both anti-discrimination and discriminatory laws.[27] As an example of an anti-discrimination law, in 1944 the state of Maine passed a statute prohibiting life insurance companies from racially discriminating between individuals of the same class of insurance risk. Alternatively, an example of a law upholding discrimination includes a statute from Maryland passed in 1935 that prohibited marriage between Whites and African Americans. To our knowledge, this is the first quantitative use of Murray's coding of racial discrimination laws.

In Figure IV (left-panel) we present scatter plots of the number of Green Book establishments on the vertical axis and the number of discriminatory laws passed by 1949 on the horizontal axis. Both variables have been residualized by the 1950 Black population.[28] Conditional on the Black population in 1950, a linear regression of the number of Green Book establishments on the number of discriminatory laws produces a slope coefficient of -1.27, suggesting that an additional discriminatory law is associated with roughly 1.3 fewer Green Book establishments, on average.[29] In Figure IV (right-panel) we present a similar exercise, where we explore the relationship between Green Book listings and the count of anti-discriminatory state laws. Again both variables have been residualized using the 1950 Black population. Conditional on the Black population in 1950, we find a positive correla-

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[26]See the description in *The New Yorker*'s "Many Lives of Pauli Murray": https://www.newyorker.com/magazine/2017/04/17/the-many-lives-of-pauli-murray.

[27]Both anti-discrimination and discriminatory laws include acts of assembly, assembly bills, constitutional changes, executive orders, general acts, house bills, house resolutions, joint resolutions, regional compacts, resolutions, and statutes. Municipal ordinances are excluded from this analysis.

[28]For each of the variables we regress the level on the Black population in 1950 and then we predict the residual from these specifications.

[29]For reference, the average state had 82.5 Green Book establishments in 1950.

tion between anti-discrimination laws and the number of Green Book establishments. With a slope coefficient of 2.51, this relationship is much larger in magnitude, suggesting an additional anti-discrimination law is associated with almost 2.5 more Green Book establishments. Taken together, the conditional correlations of anti-discriminatory and discriminatory laws and the number of Green Book listings lend support to the notion that a higher prevalence of Green Book listings indicates lower levels of discrimination against African Americans by public-facing businesses.[30]

III.F   Supply and Demand for Green Book Listings

One important question about using Green Book listings as a proxy for the level of discrimination in a county is how to interpret changes in their number. A higher supply of non-discriminatory businesses, all else equal, indicates a less racially prejudiced market. However, the Green Books are not an exhaustive directory of all non-discriminatory establishments in the United States over the period of study. The interpretation of changes in the number of listings over time or across space depends on whether they are due to a greater supply of non-discriminatory establishments or if they are due to greater demand from tourists for information about the location of (already existing) non-discriminatory establishments. If the first effect dominates, we can interpret changes in the number of Green Book listings as increases in access to non-discriminatory businesses for Black consumers. If the latter dominates, we can conclude that there is greater awareness about the availability of non-discriminatory establishments. While it is difficult to disentangle these two forces, the key for interpreting an increase in Green Book listings as a decrease in the level of discrimination faced by Black consumers is that the supply channel dominates. One piece of suggestive evidence comes from the negative correlation between Green Book listings and the level of discriminatory laws at the state level. If we assume that the value that Black

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[30]In Figure III of the Online Appendix we present scatter plots that exclude outliers. We classify outliers as observations with high leverage or a high squared residual using a leverage vs. squared residual plot. This does not have a meaningful impact on the relationship between Green Book listings and state level legislation that pertains to discrimination or anti-discrimination.

travelers put on information about establishments that welcomed them in a particular location was *increasing* in the level of discrimination there, the fact that this correlation is actually negative in the data suggests that the supply of non-discriminatory establishments dominates.

A concern more specific to the nature of the Green Books is that since the guides were targeted primarily at motorists, changes in the number of Green Book listings in a given location may be driven by changes in the road network. Of particular concern would be the possibility that improvements in road access were a driver of tourist demand and thus the incentive for businesses to list in the Green Books (or for the publishers to seek out eligible establishments), in which case changes in the number of listings would not reflect real changes in the level of access to public accommodations for African Americans. Fortunately, this concern is attenuated by the fact that the period of study (1939–1955) marked a discernible lull in highway expansion. The two major 20th century episodes of U.S. highway and road construction, New Deal infrastructure improvements and the U.S. interstate highway system, occurred before and after the period we study, respectively. The vast majority of New Deal era road construction was completed by 1938, and construction of the U.S. interstate highway system did not commence until passage of the Federal Highway Act of 1956 (Interrante and Yu, 2017).[31] For this reason, it is unlikely that changes in highways are a major driver of the evolution of Green Book listings.

IV   Trends and Correlates of Green Book Listings

IV.A   Green Book Establishments Over Time

Figure V plots trends in the number of Green Book establishments over time. Figure V(a) plots the total number of Green Book establishments listed in each year by type of industry: service stations, beauty and barber shops, eating and dining places, formal accommodations,

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[31]A notable exception during the earlier period is the 1940 completion of the Pennsylvania Turnpike which became a blueprint for the design of the U.S. interstate highway system.

informal accommodations, and other establishments.[32] The most striking aspect of this figure is that there was a marked increase in the number of Green Book establishments between the beginning and end of America's involvement in World War II. The growth of non-discriminatory businesses was not limited to one type of business. The second panel in Figure V shows the breakdown of Green Book establishments by region. There, the growth in Green Book establishments after the Second World War is seen in every region. Also, while the South had the most Green Book establishments by count, per capita of the Black population they had the least, as seen in Figure V(c).[33]

Because this time period was characterized by large-scale out-migration of Black Americans from the South to the North and West, per-capita trends in Green Book establishments may mechanically be related to population change during this time period. For instance, the many Southern Black migrants who settled in the West, likely caused the downward trend in per-capita establishments following the growth during World War II. A more informative approach is to compute the share of establishments that are non-discriminatory. Fortunately, we can construct these shares by combining our Green Book data with digitized establishment counts from select industries listed in the Census of Business. The downside of this approach is that the Census of Business only lists specific types of industries and only includes data for counties that meet certain reporting requirements. From here we construct the share of all establishments that are listed in the Green Book for each of these three industries.We digitized the number of formal accommodations, restaurants, and gas stations in the 1935 and 1948 Censuses of Business and we interpolate/extrapolate counts for intervening years. More information on the Census of Business and reporting criteria can be found in the Online Appendix in Section I. Figure VI displays these results for hotels in panel (a), eating and drinking establishments in panel (b), and gas stations in panel (c).

Overall, the small share of Black-friendly public accommodations depicted in these fig-

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[32]We exclude 1937 and 1938 because these editions of the Green Books did not include western states.

[33]We use 1930, 1940, 1950, and 1960 population counts from the census and interpolate county-level Black population for intervening years.

ures mirrors comments from others regarding the relative scarcity of Black-friendly businesses during this era. Bay (2021) provides several examples from prominent Black figures, including a quote from John Hope Franklin lamenting about the lack of non-discriminatory service stations on the route between Charleston and Baltimore. In fact, according to Bay, 94 percent of hotels and motels *nationwide* who responded to a market survey in the mid-1950s indicated that Black patrons would not be welcome at their establishments.

The trends in the shares of non-discriminatory establishments also display an increase in overall access during the World War II period for restaurants and gas stations; however, they remain relatively flat for formal lodging. Once again, we see that the South has the highest share of non-discriminatory formal accommodations and gas stations, and trails the Northeast in the non-discriminatory shares of restaurants. It is important to note that variation in the share of non-discriminatory businesses may be the result of differences in either the numerator or denominator. In the case of the South, there were fewer establishments overall when compared to other regions in the United States. The average county in the South had 6 hotels, compared to 8 in the Midwest, 36 in the Northeast, and 26 in the West. Given the small values in the denominators of the South, it is perhaps not surprising that we see a larger overall share of establishments listed in the Green Books. In general, while there is an increase in all industry shares over this time period, there is substantial regional variation in the changes in access to non-discriminatory services in the mid-twentieth century.

IV.B   County Characteristics and the Presence of Green Book Establishments

How is variation in local-area social and economic factors related to the location of Green Book establishments? A primary descriptive objective is to analyze the correlates of Green Book establishment presence. We perform this analysis at the county level, using measures of economic development, education, and measures of segregation and discrimination. Following the literature, we analyze the presence of Green Book locations with contextual

factors to provide the first nationwide descriptive analysis of variation in non-discriminatory public accommodations.

Figure VII displays the results of this descriptive analysis using data from 1940. We focus on 1940 for several reasons: this was after the Green Books became national in scope, it was before the major social and economic changes associated with World War II, and it is the most recent year for which full-count census data are available, which is required to compute many of the correlates of interest at the county-level. Each row of Figure VII presents the estimate from a separate regression of the number of Green Books per (Black) capita on a potential correlate. Specifications condition on the Black population in the county and both the independent and dependent variables have been standardized to have mean 0 and variance 1. As such, the correlations are population weighted and standardized, and therefore conservative. These correlations should be viewed as new, descriptive, findings about the relationship between access to public accommodations and measures of population, economic activity, and discrimination that are considered to be important determinants of the well-being of Black Americans during this period in American history.[34]

The first correlate we examine is the Black population. While a simple regression of the number of Green Book establishments on the number of Black residents produces a positive coefficient estimate (unreported), Figure VII shows that both a higher proportion of Black residents and more Black people in absolute terms is related to a lower count of Green Books per Black resident.[35] This is likely due to the fact that the Black population in 1940 was still concentrated in the South, where on a per Black resident basis there were fewer Green Book establishments.[36]

Given that narrative accounts about the Green Books point to a network of Black postal workers as an important source of listings, we may expect places with a larger number

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[34]The interested reader can also find similar correlations for the county-level shares of formal accommodations, eating and drinking places, and gas stations that are listed in the Green Books in Figures IV, V, and VI, respectively, of the Online Appendix.

[35]This is the only specification that does not also condition on the Black population.

[36]Similarly, the Black population was still predominantly rural until the 1950 Census.

of Black postal workers to also have a greater presence of Green Book establishments. Indeed, we find that, conditional on the Black population, there is a positive relationship between per (Black) capita Green Book establishments and Black postal workers.[37] This is an important finding because it lends legitimacy to the narrative surrounding the process by which establishments appeared in the Green Books. This is relevant for empirical work that must grapple with the issue of selection into the guides–a task that is challenging because business records of the guides have not survived (Taylor, 2020).

Next, there is a substantial body of scholarship studying the determinants and effects of the Great Migration - the movement of roughly 7 million African Americans out of the South and into the Northeast and West between 1910 and 1970.[38] We suspect that the presence of Green Book establishments would be correlated with migrants both because migrants may be drawn to areas with better amenities and because amenities respond to changes in local demand. For now, we remain agnostic on the direction of causality (we return to this in Section V). The next two estimates in Figure VII show correlations between per (Black) capita Green Books and the share of the Black population who are migrants from *out of state*, as well as the share of the Black population who are migrants from *within* state. The presence of both types of migrants is positively correlated with the number of Green Book establishments, but only statistically significant for the share of Black migrants from out of state.

The next set of estimates in Figure VII examine a darker part of American history. Here, we display the correlations for a number of proxies for racial animus or discrimination. In line with the work of Williams (2021), we regress the measure of per (Black) capita Green Book listings on the number of Confederate symbols in a county.[39] Counties with more Green Book establishments per (Black) capita have fewer Confederate symbols—statues, plaques,

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[37]We compute the number of Black postal workers by summing over the number of Black mail carriers, post masters, and express messengers and railway mail clerks.

[38]For a recent overview of this body of work see (Collins, 2020).

[39]The Confederate symbols are collected from the Southern Poverty Law Centre's collection: https://www.splcenter.org/20190201/whose-heritage-public-symbols-confederacy.

and roads or public building named in honour of Confederate soldiers and politicians. We also consider the relationship between Green Book establishments and historical violence against African Americans, captured by the cumulative number of Black lynchings in a county, up to 1936, before the Green Books began publishing. These measures are from a recently updated version of the national lynching database collected by Cook (2012a). We again find that this measure of discrimination is negatively correlated with the presence of Green Books per Black resident. As another proxy of the racial environment, we find that the number of NAACP chapters are positively related to Green Book establishments.[40] This is consistent with the contextual narrative, as the NAACP was active in seeking to end racial discrimination in public accommodations at the time, but it was not as active in direct protests of establishments that discriminated.

We also examine the relationship between measures of residential segregation and public accommodations. We present the correlation of Green Book establishments with respect to three measures of residential segregation: the dissimilarity index, the isolation index, and the Logan-Parman neighbor-based segregation index.[41] The dissimilarity index measures the similarity of the distribution of minority residents to that of non-minority residents in a geographic unit, by comparing the percentage of Black residents to the percentage of White residents across geographic sub-units. The isolation index measures the "extent to which minority members are exposed only to one another" (Massey and Denton, 1988). The Logan-Parman segregation index provides an alternative to these two measures, which may be especially suitable for historical data, since many Green Book listings are in rural areas. Within a census enumeration area (county), this index compares the number of households with neighbours of a different race to the benchmark cases of total segregation and random residential assignment. Although the dissimilarity and isolation indices are standard measures of segregation in the literature, the Logan-Parman index is only weakly

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[40]The NAACP data come from the *Mapping American Social Movements Project* (Estrada and Hermida, 2020) and are computed for the closest available year to 1940, which is 1941.

[41]For each of the three indices a value of one indicates complete residential segregation, while a value of zero indicates complete residential integration. See (Cutler and Glaeser, 1997; Logan and Parman, 2017).

correlated with each of these indices and it outperforms the former two indices in rural areas, which comprise a non-trivial fraction of counties in our dataset (Logan and Parman, 2017).

All three segregation measures are obtained for 1940 from Logan and Parman (2017) at the county level. Keeping in mind that a higher value of each of the segregation indices indicates a higher degree of segregation, we find that areas with a greater per (Black) capita Green Book presence tend to be areas that are less segregated when measured by the Logan-Parman index and the isolation index, although the latter estimate is not statistically significant. On the other hand, the dissimilarity index, which is not affected by the relative size of the White and Black populations, is positively correlated with Green Books per (Black) capita. Put together, the correlations from this figure tell us that places with relatively larger Black populations that were more residentially segregated generally have fewer Green Book establishments.[42] This result is in line with the historical record of Black business districts being more prominent in places where Black Americans had greater access to capital and generally better economic standing, and the likelihood that stronger racial intolerance manifested itself in residential racial sorting. Since both are jointly impacted by the development of housing as well a business practices when it came to serving members of the minority group, the negative relationship between Green Books and segregation is unsurprising.

Schooling was one public good where significant differences by race could be related to racial discriminatory practices and racial wage disparities.[43] The next set of estimates correlate the share of Black and White adults (15-65) with no school with the presence of Green Books per (Black) capita. Overall, it appears that having both less educated Black and White populations were associated with a lower presence of Green Book establishments.

Turning to proxies of economic activity closely tied to the types of businesses in the

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[42]Logan and Parman (2017) note that the Logan-Parman index captures a finer level of segregation than the dissimilarity and isolation indices, leading us to draw greater inference from this correlation than the other measures, which are not as well suited to rural areas.

[43]See Margo (1995), Card and Krueger (1992), and Margo (2007).

Green Book, the next set of estimates examines the correlation of Black and White hotel and restaurant owners and per (Black) capita Green Book establishments.[44] We find that all measures of business-owners correlate positively with the presence of Green Book establishments per (Black) capita, but that the correlation with Black restaurant owners is not statistically significant. Next, we turn to broader levels of economic well-being. By race, we estimate the correlations with the percent in the labor force, average wage/salary income of those employed, and homeownership. All of the measures for Whites are positively related to Green Books, but Black labor force and wage/salary income are more strongly correlated with Green Book businesses. Black homeownership is less correlated with Green Book presence than White homeownership, likely due to the more limited homownership levels for Black Americans in the first half of the twentieth century.

The final estimate in Figure VII tells a similar narrative to the other economic measures. On a Black per capita basis, Green Book establishments appear more prominently in areas with more manufacturing establishments.[45] Overall, the correlations of Black per capita Green Book establishments with respect to various measures of economic activity are generally positive and statistically significant.

The results of this section provide an overview of the factors that are important correlates of the presence of Green Book establishments on a Black per capita basis and should serve as a guide for researchers wishing to conduct future analyses with the Green Book data.

V The Role of Consumer Discrimination in Upholding Segregation

The Green Book data can also be used to test some central ideas in the economics of racial discrimination. As noted earlier, the empirical literature on discrimination in public

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[44]Potential business owners are individuals who were reported to be self-employed and working in either the formal accommodation or eating and drinking establishment industries in the 1940 full-count census (Ruggles et al., 2020).

[45]These correlations also hold for total manufacturing wages, establishments, wage earners, output, and value added. U.S. federal government World War II contracts are also associated with more Green Book establishments per (Black) capita, as are other measures of material well-being, like the percent of households with a fridge, electricity, or radio. These results are unreported, but available on request.

accommodations is remarkably thin. The standard theory of consumer discrimination predicts that a positive level of segregation– discrimination in services to a particular group– can be a stable equilibrium outcome even in the absence of prejudice on the part of firm owners. Specifically, if firms are profit maximizers facing White consumers with discriminatory preferences, it may be profitable to discriminate. This is similar to work such as Holzer and Ihlanfeldt (1998), which detailed how the racial composition of customers impact racial hiring discrimination especially in customer-facing positions, and is also in line with Gil and Marion (2020) which finds evidence consistent with cinema owners choosing to discriminate against Black customers in response to the discriminatory preferences of White cinema-goers.[46] In such a setting, the firm would *not* be a profit maximizer if it was *non-discriminatory.* At the same time, as the Black consumer share increases, so would the share of non-segregated firms in the market. Taking this idea further, it suggests that segregated businesses may have an incentive to serve Black customers on non-discriminatory terms if enough White customers are absent from the market. Put another way, relatively fewer White consumers represent fewer consumers who would not solicit the firm if it were to abandon discriminatory practices relative to the increase in revenue from serving Black customers.

This naturally leads to the question: Was the expansion of non-discriminatory business in the United States related to these types of market forces? While there is an expansive literature on firm-based discrimination in employment, for public accommodations the narrative literature has stressed the role of consumer discrimination.[47] This also includes the acquiescence of White customers without discriminatory preferences to solicit business at establishments which practiced racial discrimination (i.e., White customers that are indifferent to shopping at a segregated establishment). Wright (2013) hypothesizes that White business owners were resistant to serving Black clientele if they were concerned they would

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[46]Moreover, they find that profits fell following desegregation, which, all else equal, is not consistent with discriminatory tastes on the part of cinema-owners leading to forgone profits from excluding Black customers.

[47]For a recent summary of this literature, see Lang and Kahn-Lang Spitzer (2020).

lose their White customers. Logically, this suggests that as Black people make up a larger share of potential consumers, some segregated businesses may desegregate because the increase in Black clientele would offset the decrease in discriminatory White clientele refusing to patronize their establishment.

Empirically identifying this relationship is difficult given the endogenous nature of population change. Black customers would likely sort to locations with more non-discriminatory businesses and White customers with discriminatory preferences would likely sort away from such locations, leaving the relationship between firm shares and population shares endogenous. The overall correlation could overstate or understate the relationship. Without a source of exogenous variation in population change that is unrelated to the provision of non-discriminatory businesses, we cannot determine whether this relationship is causal. In this section, we empirically examine this *market conditions hypothesis* in more detail by exploiting exogenous variation in the population induced by White casualties in World War II. Using White casualties in this manner was pioneered by Ferrara (2022)'s analysis of Black occupational upgrading during World War II and builds on similar variation which has been used to analyze the effects of manpower mobilization in World War II on women's educational attainment and family formation (Jaworski, 2014), labor force participation (Goldin and Olivetti, 2013), and the structure of mid-century wages (Acemoglu, Autor and Lyle, 2004).

V.A   Additional Data

This section describes the additional data sources we use to examine this *market conditions hypothesis*, including the World War II casualty data and sources for additional controls.

V.A.1   World War II Casualties

We obtain World War II casualty data from Ferrara (2022) who matched the WWII Enlistment Records to the WWII Honor List of Dead and Missing for the Army and Army Air Force using a combination of direct matches on unique serial numbers and probabilis-

tic matching on name and demographic characteristics for those serial numbers that were indecipherable.[48]

It is important to note that racist attitudes within the military meant that Black enlistees had proportionally lower mortality during WWII as they were significantly less likely to be placed in combat roles.[49] An example of such attitudes is found in the June 1945 Congressional Record , where James Eastland (D-MS) used the racial policies of the military to declare Black veterans inferior soldiers. Eastland said: *"In not one instance, Mr. President, could they place a Negro officer in a responsible position. In not one instance could they place upon his shoulders the responsibility of combat [...] Had we depended upon it, the German Army would have gone south to the toe of the Italian boot and destroyed our armies in Europe. The Negro soldier was an utter and dismal failure in combat in Europe."* Going further, he stated that soldiers from the South were fighting in World War II to maintain White supremacy and that this sentiment was widely shared and not restricted to Southerners, but simply more open among them. Given these prevailing attitudes, there were very few Black combat units, with African American involvement primarily taking the form of support units (Lee, 1963). In total, fewer than one million African Americans served in the war, although they were by far the largest minority group in the military (The National WWII Museum, 2021). It was not until July of 1948, when President Truman issued Executive Order 9981, that the armed forces desegregated.

V.A.2   Additional Controls and Descriptive Statistics

Table II reports county characteristics in 1940, separately for those that appeared in the Green Books over the 1939-55 period and those that did not. In terms of the breakdown of Green Book listings, Table II shows that, on average informal lodgings were the most

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[48]This is not an exhaustive list of all Americans that died during WWII. It excludes enlistees that served in the Navy, Marines, and the Coast Guard, but it captures the vast majority of servicemen deaths. See Ferrara (2022) for further discussion about the details of the matched WWII enlistment-mortality data.

[49]White mortality in the war was more than 35% greater than Black mortality. Until the Korean War, African American troops were generally confined to non-combat roles in the armed forces (Indacochea, 2019; Ferrara, 2022).

numerous listings in 1940, with an average of 1.9 establishments in the listed counties. Meanwhile, formal lodging, which includes hotels and motels, are at about half of this level and are roughly even with eating and drinking places.

The average county with a Green Book had approximately 8,800 White enlistments, of which 240 died. This is in comparison to 1,100 enlistments and 34 deaths in counties that did not have a Green Book listing. Figure VIII shows the geographic variation in the number of White casualties during the war. Key to our identification is the plausible exogeneity of the geographic variation once we have accounted for other factors that were related to mobilization during the war. While the Selective Training and Service Act (STSA) of 1940 required all men aged 21 to 35 to register with local draft boards, deferments were initially widespread and could be granted based on having dependents, employment in specific occupations, and physical and mental disabilities (U.S. Congress, 1940). Deferments eventually became more difficult to obtain and the maximum age of conscription increased through several extensions to the STSA (Goldin and Olivetti, 2013). By the end of the war, nearly 17 million Americans had served in military, approximately 60% of whom were draftees and 40% volunteers (The National WWII Museum, 2021).

Since this historical narrative suggests that there are some factors that correlate with enlistment, our empirical analysis verifies that our results are robust to the inclusion of a set of baseline controls. These include the factors outlined in Section IV.B, as well as the share of farmland in 1940, as this has been shown to be an important determinant of mobilization during WWII (Acemoglu, Autor and Lyle, 2004). We also use the county-level value of WWII contracts, which could reflect pre-conditions for war-related industrial buildup (United States. Bureau of the Census, 2012). Table II also shows the breakdown of these controls for counties with and without a Green Book listing. Those with at least one Green Book establishment were larger in terms of population than those with none. Listed counties had less farmland and were more residentially segregated. Other proxies for discrimination such as the number of Confederate symbols and the number of historical

lynchings of the Black population are more prevalent in counties with Green Book listings. Educational attainment was not substantially different between the two types of counties, for Black or White residents, but income, labour force participation rate and homeownership rates are higher in counties that had a Green Book listing.

V.B Difference-in-Differences Methodology

We begin with a difference-in-differences specification that estimates the differential change in the number of Green Book establishments in counties with varying levels of White casualties in World War II.We adjust for county-border changes over time using the Ferrara et al. (2021) crosswalk, details can be found in Section I of the Online Appendix. In this specification, using White casualties to proxy for an exogenous decrease in the number of White consumers is useful because we can use all years of available Green Book data between 1939 and 1955 to estimate the impact of a change in the White customer base on the provision of non-discriminatory businesses. Further, we start by presenting results for the total number of Green Book establishments, so that we can use all establishment types available in the Green Books to measure the aggregate impact of White population change on non-discriminatory business provision. This flexible specification focuses on how the number of Green Book establishments is related to the level of exogenous change in White consumers for all years and industries in our data. Specifically, we estimate a standard specification of the form:

$$\text{Asinh}(\text{N}_{0_{ct}}) = \beta_0 + \beta_1 \text{Asinh}(\text{casualties}_c) \times \text{post-WWII}_t + \phi_c + \zeta_t + \epsilon_{ct}, \tag{1}$$

where $\text{N}_{0_{c,t}}$ is the number of Green Book establishments in county c at time t, casualties_c is the number of White casualties (in 100s) in county c, and post-WWII$_t$ is an indicator equal to 1 if the year is after World War II. We are interested in the estimate, $\hat{\beta}_1$, which measures the differential change in the number of Green Book establishments after World War II attributable to an additional 100 White casualties. We include time fixed effects, ζ_t,

to account for unobservable factors that vary across time, but not counties, in addition to county fixed effects, ϕ_c, to control for time-invariant unobservable factors that vary across counties. We transform the dependent variable and all independent variables, including the number of White casualties, using the inverse hyperbolic sine function, so that our coefficient estimates can roughly be interpreted as elasticities.[50] Standard errors are clustered by county in all specifications. While our preferred specification uses county and year fixed effects, we also present results where we replace county-level fixed effects with a matrix of pre-WWII control variables, $\mathbf{X}'_c$, to account for a variety of initial conditions that could be simultaneously correlated with the number of WWII casualties and the growth in Green Book establishments.[51] We also interact these controls with a post-WWII indicator to allow their impact to vary over time.

Identification of the causal impact of White World War II casualties on the growth in Green Book establishments is based on several standard assumptions embedded in the difference-in-differences framework. First, counties with low levels of casualties must share common support with counties with high levels of casualties. Fortunately, our county fixed effect framework assists with controlling for any such differences that are time-invariant. Further, we examine the robustness of our results to including a rich set of county controls. These include all Green Book correlates that we discussed in Section IV.B, as well as the share of farmland and the value of World War II contracts; we allow the effects of these controls to vary across the pre- and post-WWII periods which relaxes the requirement of a time-invariant relationship between local discrimination and selection into treatment.

Second, changes in Green Book listings must reflect real changes in the provision of non-discriminatory public accommodations and not merely selection into the Green Books. If there is selection across counties, a sufficient condition for this assumption being met is that the selection process is independent of the treatment. As we discussed in the previous

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[50]Since a relatively large portion of counties have zero Green Book establishments in a given year or have zero casualties in WWII, we use the inverse hyperbolic sine instead of taking logarithms. Results are robust to using $\log(x+1)$ transformations (unreported).

[51]All controls are also transformed using the inverse hyperbolic sine function.

sections, nearly all of the growth in Green Book establishments occurred in counties that already had at least one Green Book. While this does not rule out selection within counties with existing Green Books, it does alleviate the concern that selection occurred *across* counties.

In terms of the independence of treatment some concerns that arise from the historical context merit discussion since the number of WWII deaths experienced in a county is related to the number of men that enlisted in the armed forces. During the early part of the war effort, men volunteered for military service, which raises the possibility that volunteering by Black and White men could be correlated with local racial attitudes. It could be the case that men who were members of White ethnic or religious minorities were more predisposed to enter the war than other White men. This would affect the ethnic composition of enlistments, deaths, and could have been correlated to local racial attitudes.[52] However, volunteering for the war was prohibited by the federal government in December 5, 1942, less than one year after the war started, by Executive Order 9279, so this is unlikely to be a major concern.[53]

A related concern is about the demand for Black soldiers. The draft was administered by local draft-boards that had considerable discretion and there is clear evidence that Black men were drafted at lower rates due to racial discrimination. [54] Since the military set draft quotas, this raises the possibility that more White men were drafted in places where anti-Black sentiment was higher. As long as the attitudes that drive this relationship did not change over time, they will be accounted for by the county fixed effects in our estimating equation and the independence between the treatment variable and the number of Green

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[52]Recent work by Qian and Tabellini (2021) highlights the relationship between racial discrimination and volunteering to fight in WWII; specifically, they find that areas with higher levels of discrimination also had lower levels of volunteering into the armed forces by African Americans.

[53]In Table I of the Online Appendix we reproduce our difference-in-differences results using White draftee deaths only and the estimates are almost unchanged.

[54]For example, capacity constraints at racially segregated barracks, low scoring on the Army General Classification Test (AGCT) which largely reflected the lower quality of education in the Jim Crow South and sometimes resulted in rejection (Ferrara, 2022).

Book listings will hold.[55]

The third assumption required to interpret $\hat{\beta}_1$ as the causal effect of White casualties on the growth of Green Book establishments is that there cannot have been any anticipation effects leading up to World War II. This means that Green Book establishments cannot have been increasing or decreasing prior to World War II in anticipation of the shortage of White consumers induced by the war. This is an assumption that is plausible given the nature of America's involvement in the war. The fourth assumption is that of parallel trends, which requires that in the absence of World War II all counties would have experienced the same growth in Green Book establishments, regardless of their level of White casualties. Since the parallel trends assumption is speculative in nature—that is, we cannot say for certain what *would* have happened if World War II had not occurred—we cannot test it directly; however, we can estimate a flexible empirical specification that lends support to the credibility of the assumption. To do so, we estimate an event study:

$$\text{Asinh}(\text{N}_{0ct}) = \psi_c + \varphi_t + \sum_{t=1939, \neq 1941}^{1955} \lambda_t 1(\text{year} = t) \times \text{Asinh}(\text{casualties}_c) + \epsilon_{ct}, \qquad (2)$$

where we replace the interaction of White casualties and the indicator for being observed in the post-war period with a set of interactions between the level of White casualties and each year. We leave out 1941 so that all coefficients are measured with respect to the first year the United States formally entered World War II. If there were no differential pre-trends in the number of Green Book establishments observed in counties with high and low enlistment rates, then the coefficient estimates on the interaction terms in the pre-war period should not be statistically different from zero.

The event study estimates are found in Figure IX. Each of the points represents a separate coefficient estimate of λ_t from equation 2. Bands represent 95% confidence intervals. Immediately this figure makes it clear that there were no differential trends in the growth of

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[55]For example, if lower Black drafting occurred due to agricultural labor needs that were predicated on a racially stratified labor market, these would be controlled for in the fixed effects and more specifically in the version of equation 1 that includes county controls.

Green Book establishments before the war, lending credence to the parallel trends assumption. After WWII, a 1% change in the number of White casualties is associated with a 0.25% increase in the number of Green Book establishments. This treatment effect remains stable over time, suggesting that the number of Green Book establishments grew faster during the wartime period, but did not continue to diverge after White deaths from the war subsided.

Our specification is a dosing (or continuous treatment) difference-in-differences, which exploits the difference between high- and low casualty counties. In this class of difference-in-differences models, an additional identifying assumption is that the "average treatment effect function" does not vary with the dose of treatment. In this type of specification, low-dose units serve as the counterfactual outcomes for high-dose units. As such, we must assume that high-dose units would have had the same treatment effects, in addition to untreated potential outcomes, as the low-dose groups (Callaway, Goodman-Bacon and Sant'Anna, 2021). This is unlikely to be true, if the dose itself is correlated with observables. Figure VII of the Online Appendix shows the results of a balancing test for White casualties during WWII that specifically evaluates the degree to which the dose is related with covariates. Each row displays the estimate from a separate regression of the standardized World War II casualties on the standardized regressor defined along the horizontal axis. Specifications include state fixed effects and control for the total population in 1940. The coefficient estimates show that there is little to distinguish between the high and low-casualty areas with the exception of the White population and level of White enlistments, which should be related to war mortality.

V.C Difference-in-Differences Results

The results from estimating equation 1 for the full set of industries that appear in the Green Books are found in Panel A of Table III, where the pre-treatment period includes the years 1939-1941 and the post-treatment period is 1947-1955. Column (1) presents standard

difference-in-differences estimates where we do not include any controls or fixed effects.[56] The treatment effect of 0.065 can be interpreted as a 0.65% increase in Green Book establishments after WWII for a 10% increase in White casualties. Column (2) includes state fixed effects to capture regional variation in the propensity to discriminate, which was evident in Figure IV, but this inclusion does not change the results. Given that the mean number of Green Book establishments in counties was 0.65 in 1941 and the mean number of White casualties was 60, this means that an additional 6 White casualties leads to a 0.04 increase in the number of Green Book establishments. Although these effects are modest in size, they establish that the non-discriminatory market did, in fact, respond to shifts in the consumer market caused by WWII White mortality.

Column (3) of Table III includes the full set of county-level controls and their post-WWII interactions, as well as year fixed effects.[57] The coefficient estimate decreases from column (1) but remains economically and statistically significant, where a 10% increase in White casualties would result in a 0.26% increase in non-discriminatory businesses. This result is worth highlighting, as it suggests that even after we control for a rich set of factors that are likely to correlate with both manpower mobilization in World War II *and* the expansion of Green Book establishments, we still observe a relationship between exogenous population change and growth in non-discriminatory establishments.

Column (4) replaces county controls with county fixed effects and the results are nearly identical to those in column (1) and (2). Column (5) is slightly more restrictive, it includes state × year fixed effects on top of county fixed effects. Again, we see the coefficient estimate remains stable, albeit slightly larger in magnitude, with a 0.88% increase in non-discriminatory businesses in response to a 10% increase in White casualties. Finally, our

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[56]This amounts to controlling for an indicator that equals 1 if the year is after WWII as well as the level of White casualties, instead of controlling for year and county fixed effects.

[57]For counties that are missing controls, we replace the value of the missing control with a 0 and include a dummy variable that equals 1 if the county is missing this control. Our empirical results are robust to case-wide deletion of counties that have missing values for any of the control observations (unreported). We use the dummy variable adjustment strategy because our preferred specifications are estimated parsimoniously using county fixed effects, this allows for the inclusion of counties that would otherwise be dropped from the estimation sample.

most restrictive specification, column (6) includes county-level linear time trends in addition to county and year fixed effects–these allow for different trends in Green Book growth across counties. The coefficient estimate in this specification suggests that a 10% increase in White casualties is associated with a 0.48% increase in Green Book establishments.

One concern with our specification is the extent to which our results may be driven by outlier counties—that is, counties with very high or low levels of White casualties that are not representative of the average county in our sample. We evaluate the stability of our coefficient estimates along this dimension by systematically dropping counties at the top and the bottom of the distribution of White casualties in increments of one percentile up to twenty-five percentiles. This means that trimming the top and bottom percentiles leaves the middle 98 percentiles, and trimming the top and bottom 25 percentiles leaves the middle 50 percentiles (interquartile range) of the distribution. The results of this exercise are found in Figure X, where the first coefficient estimate in red is the estimate from our preferred specification that uses the full set of counties and includes county and year fixed effects. While the coefficient estimate is largest in our preferred specification, it is relatively stable up until we drop more than the top and bottom 15 percentiles (removing 30 percent of the sample). It is important to note that this exercise mechanically restricts the variation in casualties needed to estimate the coefficient of interest. Even with this caveat, the coefficient estimate is still economically significant (more than a 0.3% increase in non-discriminatory businesses in response to a 10% increase in White casualties).[58]

Due to the detailed nature of our Green Book data, we are also able to provide an analysis of the WWII White casualties by the type of industry. Panel B of Table III displays these results, where barber shops and beauty parlors are found in column (1), eating and drinking establishments in column (2), gas or service stations in column (3), hotels and motels, which we call "formal lodging," in column (4), informal accommodations in column (5), and other establishments in column (6). The breakdown by type of establishment lends

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[58]Using quantile regression at the median to estimate the difference-in-differences specification yields estimates that are qualitatively similar, albeit smaller in magnitude (unreported).

additional support to the general thrust of the market composition hypothesis regarding firms' incentives to discriminate.

First, the largest effect is among eating and drinking establishments ($\hat{\beta} = 0.074$), these are businesses that are not always intended for tourists, and should, therefore, be most affected by the number of White casualties in the county in which the business is located. Gas stations, which were generally less discriminatory than restaurants and lodging (they typically provided gas service, but would not always provide access to restrooms for Black customers), see a smaller effect ($\hat{\beta} = 0.026$). Formal accommodations (hotels and motels) which were the main target of the guides had a similar sized effect ($\hat{\beta} = 0.019$), this is notable because the WWII mortality shock would have a less direct impact on demand for these businesses since most of their customers would be from outside the local market, even though they adhered to local discriminatory norms.[59] Meanwhile, the smallest effect appears for informal accommodations ($\hat{\beta} = 0.005$–this coefficient is not statistically significant at conventional significance levels). This last finding is reassuring because the results for informal accommodations act as a quasi-placebo test for the market conditions hypothesis. With the exception of Y.M.C.As and Y.W.C.As, these establishments were not patronized by White clientéle, so the effect of county-level White population changes would have had a limited impact on the demand for informal lodging services.[60]

Panels A and B provide empirical evidence that is consistent with a narrative wherein indifferent profit maximizing firms respond to changes in the racial composition of consumers; as World War II eroded the local White consumer base, some firms that had been remaining segregated to appease White customers served Black clients as they became a

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[59]Demand for formal accommodations would still be affected by shocks to the local population on account of tourist demand to visit family and friends, as well as hotels' special occasion venue services (weddings, conferences, etc.).

[60]One caveat to this is the degree of competition between formal accommodations and informal accommodations. If the elasticity of substitution was high, we would expect a White WWII mortality induced increase in non-discriminatory hotels and motels to cause informal accommodations to exit the market. However, the latter had tighter capacity constraints, were unregulated, and were generally of lower quality (including locations), and for these reasons, they are unlikely to have been close substitutes to formal accommodations.

larger share of the consumer base. We examine this hypothesis more directly in the third panel in Table III, which combines the Green Book counts with county-level counts of the number of hotels, eating and drinking establishments, and gas stations from the 1935 and 1948 Censuses of Business.[61] This allows us to generate shares for the number of hotels that are listed in the Green Books as a fraction of the total number of hotels, the share of eating and drinking establishments that are listed in the Green Books, and the share of gas stations that are listed in the Green Books.

Panel C presents two sets of results for each type of establishment. Odd columns include county and year fixed effects and even columns include state-year fixed effects. Columns (1) and (2) display results for formal accommodations, (3) and (4) for eating and drinking establishments and (5) and (6) for gas stations. The coefficient estimates are all small in magnitude (reflecting small baseline non-discriminatory shares), but suggest that more White casualties are associated with an increase in the share of non-discriminatory establishments in the post-war period relative to areas with fewer White casualties. Specifically, a 10% increase in the number of White casualties leads to a 0.004% increase in the share of eating and drinking establishments that are non-discriminatory (this is statistically significant at the 1 percent significance level), 0.002% increase in the share of formal accommodations that are non-discriminatory, and a 0.0007% increase in the number of gas stations that are non-discriminatory (the latter two coefficient estimates are not precisely estimated). Given the low level of non-discriminatory shares in each industry, these results are consistent with a modest change in the market share of non-discriminatory business due to population changes induced by WWII.

V.D Instrumental Variables Framework

Thus far, we have presented empirical evidence that higher levels of White mortality in WWII had a positive causal impact on access to public accommodations for African Amer-

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[61]We interpolate between 1935 to 1948 and we extrapolate through to 1955.

icans throughout the United States and across a wide range of retail and service sector businesses. While we have suggested that the causal relationship between White casualties and Green Book growth is related to the change in the market composition of Black and White consumers, the difference-in-differences specification does not provide a formal test for this hypothesis, nor does it identify the mechanism. The results of Panel C of Table III point in this direction, but do not include the appropriate population shares to estimate the relationship. The following provides an empirical analysis that more directly links changes in consumer population shares to firm decisions to provide non-discriminatory services.

A simple empirical test of whether the racial composition of a local consumer market impacts firms' decisions to discriminate would be to regress the change in the share of establishments that are non-discriminatory on the change in the share of the population that is Black:

$$\Delta\text{Share GB}_c^{1940-1950} = \alpha_0 + \alpha_1 \Delta\text{Share Black}_c^{1940-1950} + \epsilon_c, \tag{3}$$

where $\Delta\text{Share GB}_c^{1940-1950}$ is the change in the share of firms in county c that are non-discriminatory between 1940 and 1950 as a fraction of existing establishments:

$$\Delta\text{Share GB}_c^{1940-1950} = \frac{\text{GB Est}_c^{1950} - \text{GB Est}_c^{1940}}{\text{Total Est}_c^{1940}}$$

and Share $\text{Black}_c^{1940-1950}$ is the change in the share of residents who are Black between 1940 and 1950 as a fraction of existing population:

$$\Delta\text{Share Black}_c^{1940-1950} = \frac{\text{Black Pop}_c^{1950} - \text{Black Pop}_c^{1940}}{\text{Total Pop}_c^{1940}}$$

Defining the change in shares in this way—as a fraction of the initial (1940) total population or total number of establishments—is consistent with other literature examining the impact of changes in the share of Black residents in an area on economic outcomes, particularly in relation to the Great Migration (Boustan, 2009; Derenoncourt, 2022). This will be important, later, as we exploit this additional source of variation and require a consistent

specification and definition of treatment and outcome. We show in Section IV of the Online Appendix, however, that defining the change in shares in other ways does not meaningfully alter our conclusions.

Equation 3, which regresses differences in outcomes on differences in treatment, allows us to account for time-invariant factors that are specific to each county; however, an important concern with this specification stems from the observation that population change is almost certainly not exogenous. This is because people may endogenously relocate to areas with more or better amenities, but also because there could be unobservable factors that are simultaneously correlated with the share of residents who are Black and the share of establishments that are non-discriminatory. That is, over time there could be sorting of Black and White consumers in such a way that changes in "Share Black" and "Share GB" are endogenously determined. For example, a potential omitted factor may be changes in the level of discrimination in a local market which is likely to be positively correlated with the share of African American residents and negatively correlated with the share of establishments that are non-discriminatory. In this case, the estimate of the relationship between the two would be biased downwards. A further empirical issue that arises in the OLS specifications is the potential for measurement error to attenuate the coefficient estimates. Given the degree to which measurement error is often present in historical data, this is likely also a concern for our analysis.

To alleviate these concerns we directly instrument the change in the Black share of the population using the number of White casualties in World War II. In the first stage of the IV specification we regress the change in "Share Black" on the number of White casualties and in the second stage, we regress the change in "Share GB" on the predicted value of the change in "Share Black". In this sense, the IV methodology isolates the population change mechanism, where White casualties affect the share of non-discriminatory establishments

through their effect on Black population share changes. Formally, the first stage is:

$$\Delta \text{Share Black}_c^{1940-1950} = \beta_0 + \beta_1 \text{casualties}_c + \nu_c, \tag{4}$$

and the second stage is:

$$\Delta \text{Share GB}_c^{1940-1950} = \gamma_0 + \gamma_1 \widehat{\Delta \text{Share Black}}_c^{1940-1950} + \epsilon_c, \tag{5}$$

The identifying assumption required for the IV specification is that the instrument only correlates with the outcome through its effect on the endogenous regressor. That is, our instrument, White casualties, must be correlated with the endogenous regressor, $\Delta \text{Share Black}_c^{1940-1950}$, but uncorrelated with the error term associated with the firm share, ϵ_c. In all specifications we report F-statistics on the first stage regressions, they indicate that our instrument is indeed correlated with the endogenous regressor.

Regarding the independence of our instrument and the error term, the arguments put forth about the validity of the exogeneity restriction in the difference-in-differences empirical framework also apply. Specifically, it must be true that the number of White casualties does not have a direct effect on the growth in non-discriminatory establishments, other than through the indirect effect these casualties have on the composition of the consumer base. One way this would be violated is if individuals who perished in WWII had discriminatory preferences that were different from the rest of the population. White (2019) looks at whether veterans came to hold more liberal attitudes on racial segregation than their counterparts who did not serve. Using the Negro Political Participation Study to look more closely at the impact of White veteran status on racial attitudes, he finds that southern White veterans were "just as supportive of Jim Crow segregation as southern Whites who did not serve, and they were not any more sympathetic to the sit-in movement" (White, 2019, p. 93). WWII veteran status was not associated with liberalization in attitudes towards segregation or other policies to reduce inequities. Empirically, this implies that White casualties were removed from the same distribution of preferences as the rest of the White

population–in expectation, areas with larger casualties would lose larger numbers of potentially discriminatory consumers than those with smaller casualties.

A final consideration that has to do with the interpretation of our mechanism relates to the impact of the war on Black socioeconomic standing. Specifically, (Ferrara, 2022) shows that war casualties among whites who held semi-skilled occupations prior to their involvement in the war resulted in domestic labor shortages that were filled by black workers. This occupational upgrading likely led to improvements in income, which may in turn have caused an increased demand for public accommodations. While this would imply that our IV estimates cannot literally be interpreted as the effect of White casualties on the Black population share, it is also entirely consistent with the profit maximizing motive of businesses to segregate. In this instance, the improved economic status of Black consumers decreases the economic gains to businesses of discriminating[62]

V.E   IV Results

Table IV shows the IV results. Panel A displays OLS estimates of equation 3, Panel B displays the first stage results, Panel C the reduced form results, and Panel D displays the IV estimates of equation 5. The first three columns use all counties for which we have firm-level data. As before, sample sizes vary across columns because the availability of firm-level data varies depending on the volume of the Census of Business. Column (1) suggests that a 10% increase in the change in "Share Black" leads to a 0.7% increase in the change in the share of formal accommodations listed in the Green Books, a 0.2% increase in eating and drinking establishments, and a 0.06% increase in gas stations. While these effects on the share of non-discriminatory businesses are economically and statistically significant, the estimates imply relatively small changes in the share of non-discriminatory businesses that Black consumers could solicit when their share of the local population increased.

Table IV exploits a second source of variation that isolates changes in the Black popu-

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[62]In both difference-in-differences and IV specifications, the estimate for the share of establishments that are non-discriminatory is robust to the inclusion of changes in Black occupation rank and employment.

lation. We use a Black migration instrument that combines national-level changes in Black out-migration from Southern states ($M_j^{1950-1940}$) with initial stocks of Black Southern migrants at the county-level (π_{jc}^{1940}).[63] Since this instrument is Black out-migration from the South, we are restricted to non-Southern locations when using this instrument. Formally,

$$Z_c^{1950-1940} = \frac{\sum_{j=1}^{J} \pi_{jc}^{1940} \times M_j^{1950-1940}}{\text{Total Pop}_{1940}},$$

which we normalize by the total population of county c in 1940 to be comparable to the change in "Share Black".

Column (4) of Table IV suggests that a 10% increase in the change in "Share Black" in non-Southern locations leads to a 2% increase in the change in the share of formal accommodations listed in the Green Books. For restaurants the OLS effect is 1.6%, and for gas stations the effect is 0.09%. Given that Jim Crow was the law in the South, we would expect firms in the South to have less ability to desegregate in response to changes in the market composition of consumers. It is therefore unsurprising that the OLS results are larger when we focus on counties outside of the South, as in columns (4)-(6).

Panel B of Table IV reports the first-stage estimates for the effect of White WWII casualties on the change in Black population shares (Columns 1-3) and the Black migration instrument on Black population shares (Columns 4-6). For both sources of population shocks, the first stage relationship is quite strong. F-statistics for WWII casualties are all above 100, and they are above 30 for Black migration instrument. Further, these estimates confirm that both White Casualties and the Black migration instrument are positively related to the change in the Black population share. Panel C also confirms a reduced form relationship between our instruments and the outcomes of interest, which are consistent with both sets of population shocks having an effect on the changes in the share of non-discriminatory

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[63]Specifically, we consider an individual a migrant if they are Southern-born and living outside the state in which they were born. We provide more detail on this instrument construction in Section IV of the Online Appendix; however, our results are robust to defining a migrant based on their state of residence in 1935 (unreported).

businesses, albeit less-so for gas stations.

Finally, Panel D of Table IV reports the IV-estimates for the effect of the change in Black population shares on the changes in the share of non-discriminatory businesses. Recall our intuition above that suggested OLS would understate the magnitude of the effect. The endogeneity of population shares and the provision of non-discriminatory businesses should result in a downward bias in the OLS estimates. Consistent with this intuition, we find the IV estimate equivalents reported in Panel D to be substantially larger than the OLS estimates. Here, we see in the full sample and using the White casualty instrument that a 10% increase in the change in "Share Black" results in a 2.2% increase in the change in non-discriminatory shares of formal accommodations, a 0.6% increase in eating and drinking establishments (column 2), and a 0.16% increase in gas station shares (column 3). The first two coefficient estimates are statistically significant at the 5% level, while the estimate for gas stations is not. In all instances, the IV estimates are larger than the OLS estimates.

The same is true for the Black migration IV estimates that focus on counties outside the South. Here, we see that a 10% increase in the change in "Share Black" results in a 5.7% increase in the change in non-discriminatory shares of formal accommodations (Column 4), a 10% increase in eating and drinking establishments (column 5), and a 0.55% increase in gas station shares (column 6). As with the WWII instrument, in all instances the IV estimates are larger than the OLS estimates.

Even though the IV estimates are larger than the OLS estimates, it is still the case that the baseline shares of non-discriminatory businesses are small such that these changes in the Black population shares would not provide a *substantively* large increase in the provision of non-discriminatory businesses for Black consumers. The share of non-discriminatory businesses were less than 5% in any industry. Given this, even a 10% increase in the *share* of non-discriminatory businesses would result in less than half of a percentage point increase in the non-discriminatory firms share of the market. That is, while there does appear to be a market response consistent with firms taking into account changes in consumer shares,

the response is relatively small. Understanding the other forces and institutional changes that led to an increase in non-discriminatory treatment of Black consumers by public facing business is left to future research.

VI   Conclusion

A central focus of the Civil Rights Movement was to end racial discrimination in public accommodations. This paper takes an economic lens to the Civil Rights Movement, and provides the first empirical analysis of the extent of changes in access to public accommodations that served African American clientele in the years leading up to the Civil Rights Movement and subsequent Civil Rights Act of 1964. We construct a novel dataset that includes all non-discriminatory public accommodations listed in the *Negro Motorist Green Books*—travel guides that were published for African American motorists—between 1936 and 1966. We use this dataset to document trends in the provision of non-discriminatory businesses in the mid-twentieth century. The provision and growth of non-discriminatory businesses varied by region, industry, and with social and economic factors. In general, the provision of non-discriminatory public accommodations was consistent with other social and economic indicators of non-discriminatory norms.

We also use the Green Books to study the determinants of firms' decision to discriminate against potential customers that belong to a minority group. We suggest that the composition of consumers in a local market plays an important role in determining the number (and share) of firms who agree to serve the minority clientele on an equal basis with White customers. Motivated by the narrative record and the economics of consumer discrimination, we test the predictions that an increase in the share of Black consumers will lead to less discrimination in public accommodations. Using counties as the unit of observation, we identify the causal impact of an exogenous change in the White population, and thus the local racial composition, on the number of establishments listed in the Green Books using a difference-in-differences methodology with the level of White WWII mortality as

the source of identifying variation. We find that, across the U.S., a 10% increase in White WWII deaths leads to roughly 0.65% increase in Green Book establishments in a county.

To further isolate the impact of changes in the composition of consumers, we use WWII mortality and a variation in Black migration to instrument for the change in the Black-White consumer ratio for the hotel and motel, restaurant, and gas station industries. We find that a 10% increase in the Black population share is related to a 2.2% increase in the share of non-discriminatory hotels, a 0.6% increase in the share of non-discriminatory restaurants, and a 0.2% increase in the share of non-discriminatory gas stations when using White WWII casualties as the instrument for Black population change. When using the Black migration instrument for Black population inflows to Northeastern and Midwestern areas, we find that a 10% increase in the Black population share is related to a 5.7% increase in the share of non-discriminatory hotels, a 10% increase in the share of non-discriminatory restaurants, and a 0.6% increase in the share of non-discriminatory gas stations.

In addition to contributing to a greater understanding of the trends in non-discriminatory businesses over time and space, we shed light on the determinants of discrimination in public accommodations before the Civil Rights Act of 1964. Our findings support an interpretation that among the industries captured in the Green Books, local retail and service markets were responsive to changes in the racial composition and discriminatory preferences of local consumers. In particular, this highlights the role of consumer discrimination in supporting a segregated equilibrium and provides empirical evidence in line with Wright (2013)'s hypothesis that profit-maximizing firms practiced segregation on the basis of White consumer discrimination. It further provides evidence that helps to answer a longstanding question in sociology, legal studies, and political science: namely, would desegregation have occurred without the legislation of the Civil Rights Act of 1964? Our results suggest that while market conditions did influence firm behavior, full equal access to services would not have been possible without legal intervention.

At a broader level, access to public accommodations are not only reflective of market

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forces, profit, and consumer preferences. Access to public accommodations are intimately related to politics, and particularly citizenship. The impetus behind the Civil Rights Act of 1875 was to ensure that newly emancipated Black citizens would be able to move freely through the nation and solicit businesses as needed. This was considered an important part of their newly-established citizenship. That citizenship was fiercely resisted for social and cultural reasons, and kept in place by both legal and economic forces which held Black Americans in second-class status for decades. It would take more than 90 years for the United States to legally end this practice. The mutually-reinforcing discriminatory factors would only be overcome by legislation which ended the second-class citizenship of Black Americans.

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A   Figures
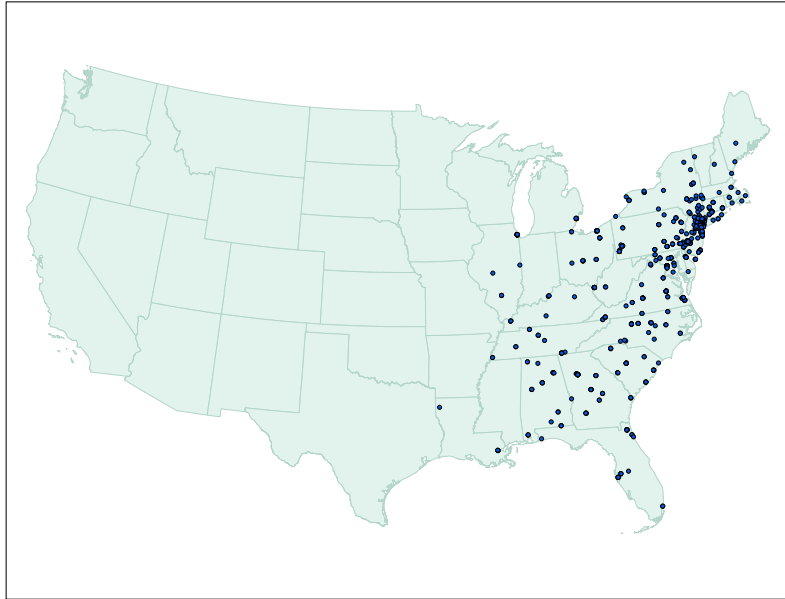
(a) All Green Book locations in continental USA (1938)
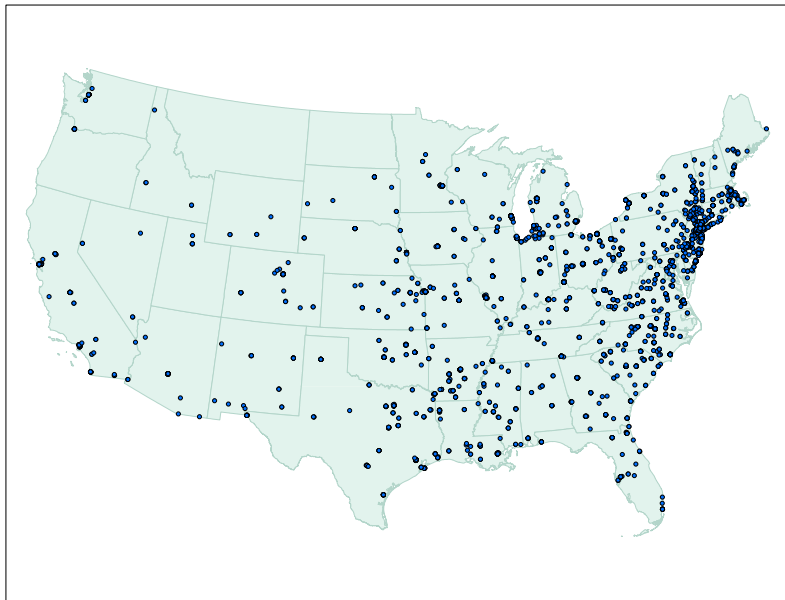
(b) All Green Book locations in continental USA (1955)

Figure I: Location of Green Book establishments in 1938 and 1955.
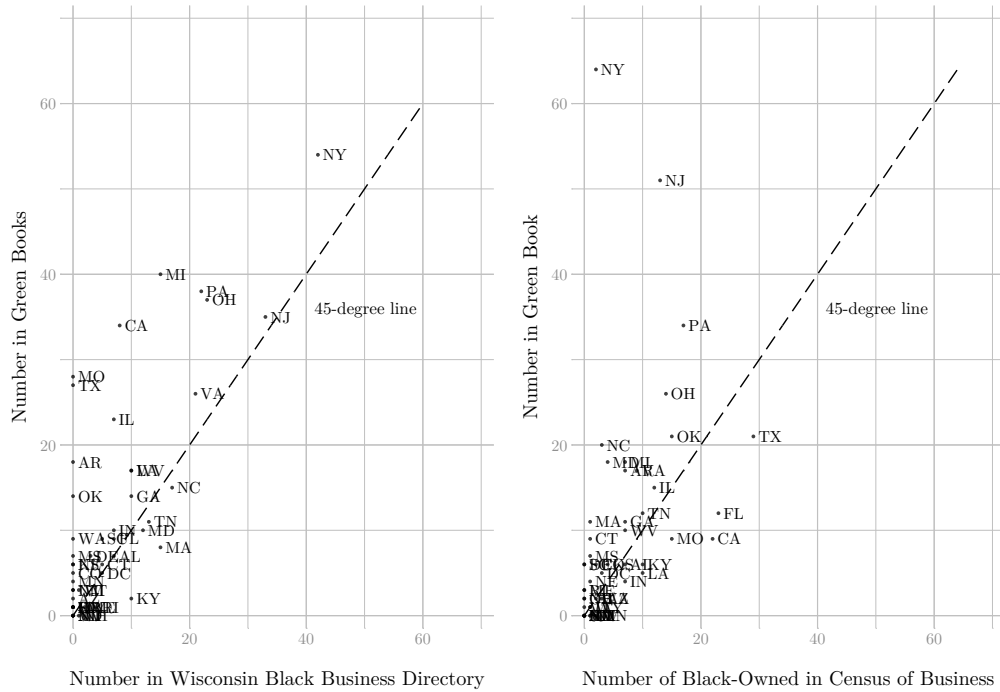
Figure II: Comparison of the number of Green Book formal accommodations to other sources of Black-friendly and Black-owned businesses formal accommodations. The left panel compares Green Book listings with the national hotel listings in the 1950 Wisconsin Black Business Directory. The right panel compares Green Book listings in 1939 with the number of Black owned hotels in each state in 1935.
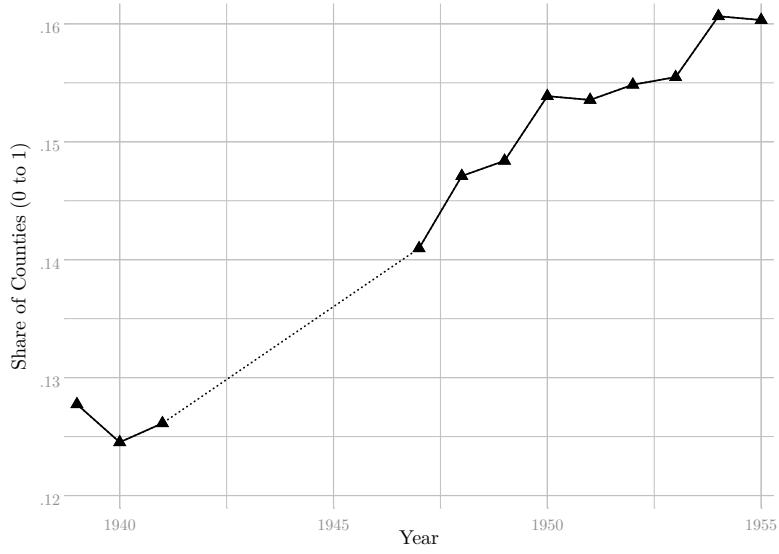
(a) The share of counties with a Green Book listing

▲   ●   ✕

Total No. of Establishments   No. Est. in New Counties   N. Est. in Existing Counties
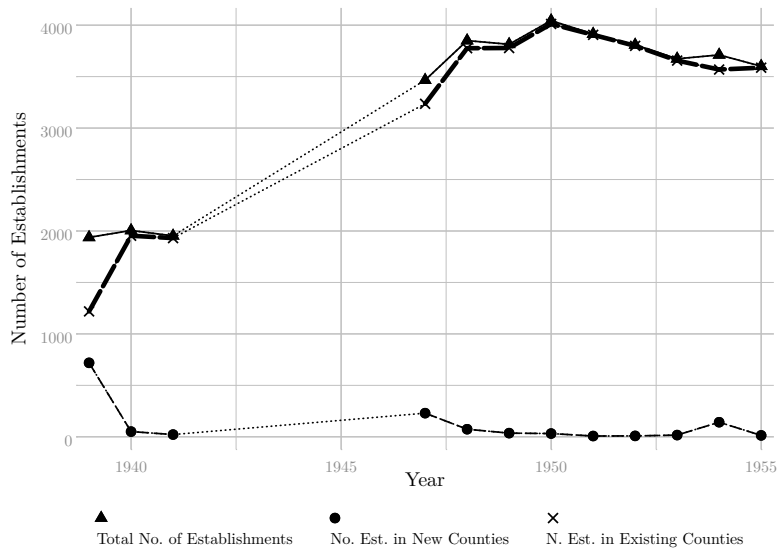
(b) Total number of establishments
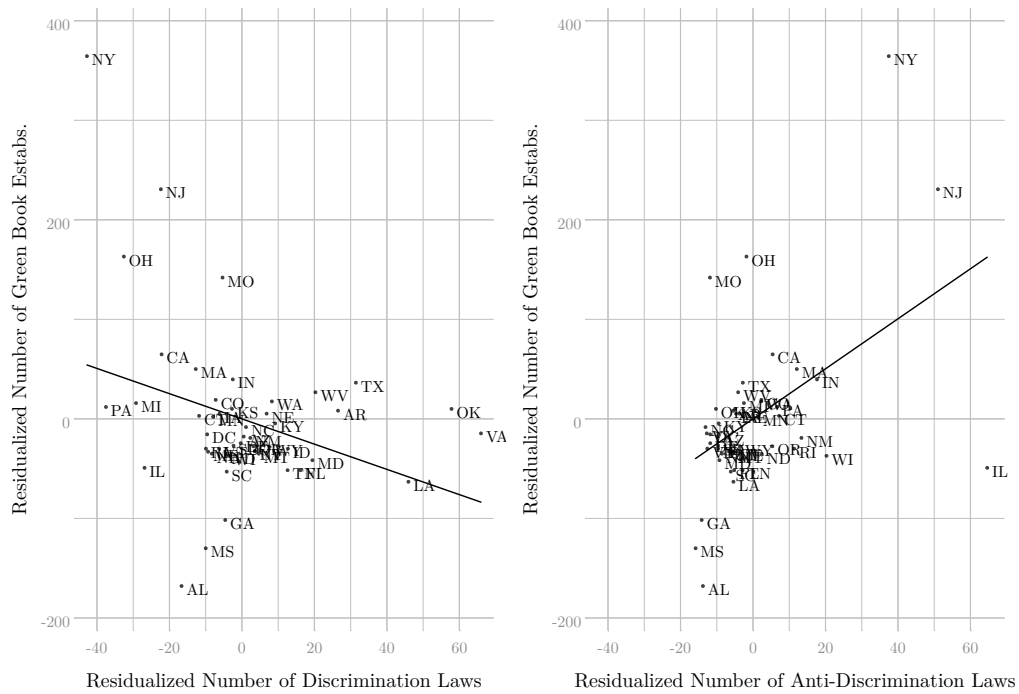
Figure III: Geographic coverage and Green Book listings growth

Figure IV: Correlation between the number of Green Book establishments and the number of laws upholding discrimination by 1950 (left panel) and the number of anti-discrimination laws by 1950 (right panel). All variables have been residualized using the Black population. Discrimination and anti-discrimination laws come from Murray (1950).
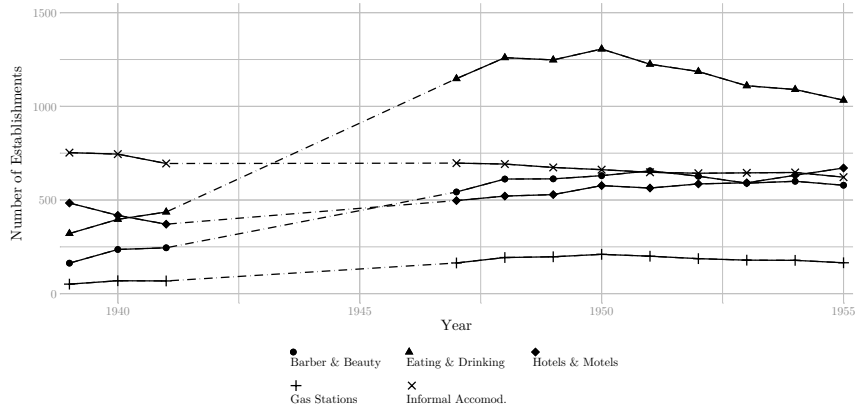
(a) Number of establishments by industry
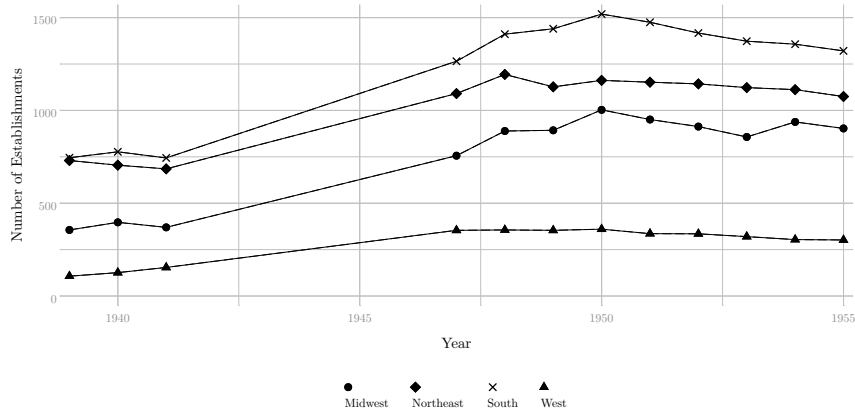
(b) Number of establishments by region
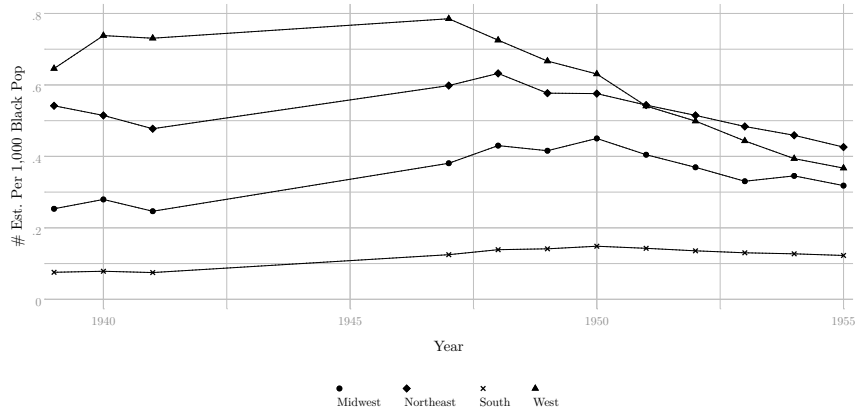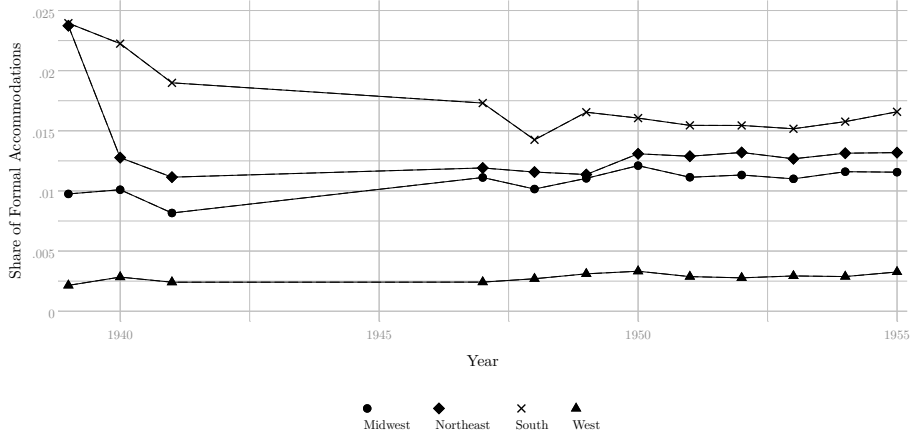

(c) Establishments per Black population by region

Figure V: The evolution of Green Book establishments by industry and region

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(a) Share of formal lodging, regional breakdown
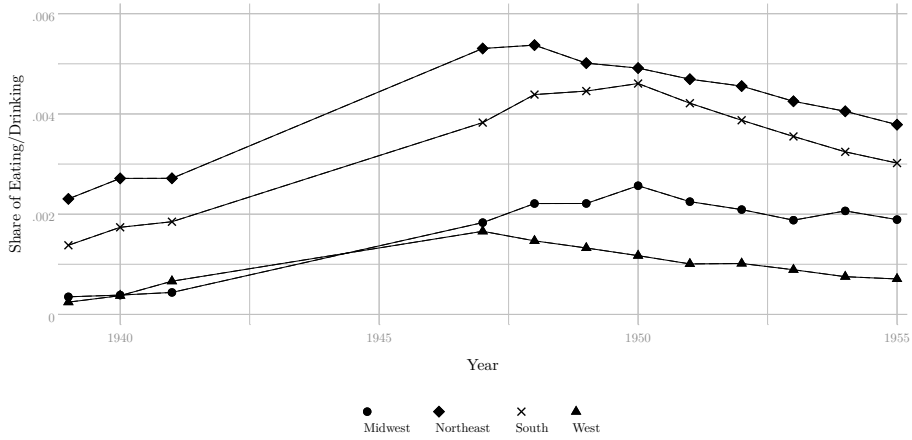
(b) Share of eating and drinking, regional breakdown
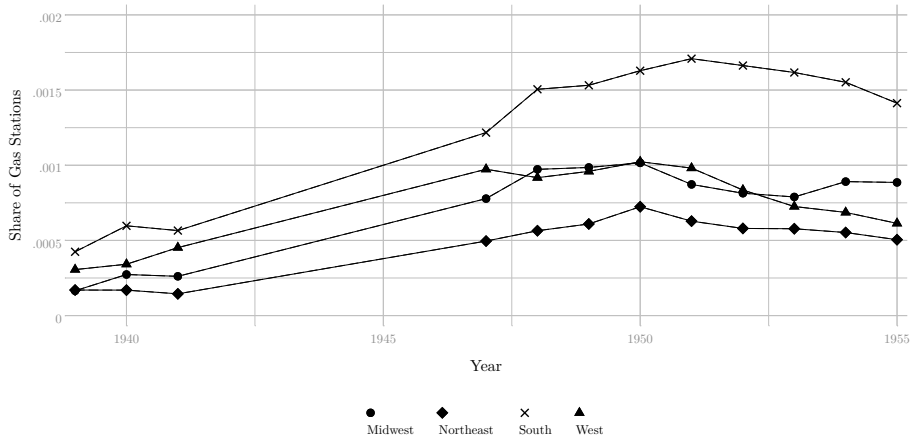
(c) Share of gas stations, regional breakdown

Figure VI: Trends in the share of establishments that are listed in the Green Books, by industry and region.
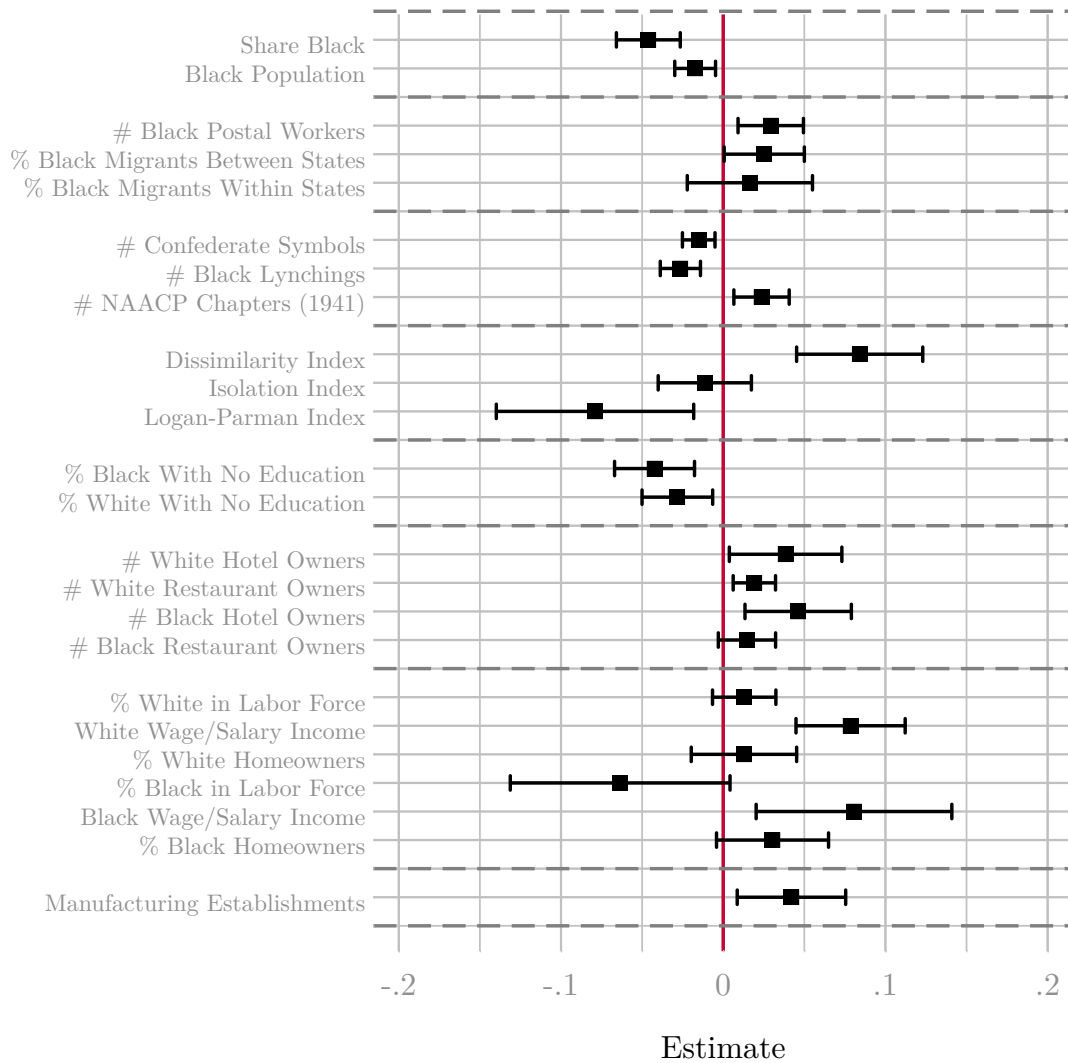
Figure VII: Correlates of Green Books per 1,000 Black residents, conditional on the Black population

Notes: Each point represents the magnitude of the coefficient estimate on the regressor associated with the label on the vertical axis. Estimates are from separate regressions of the number of Green Book establishments per 1,000 Black residents on each correlate, conditional on the Black population. Error bands represent 95% confidence intervals computed using robust standard errors.
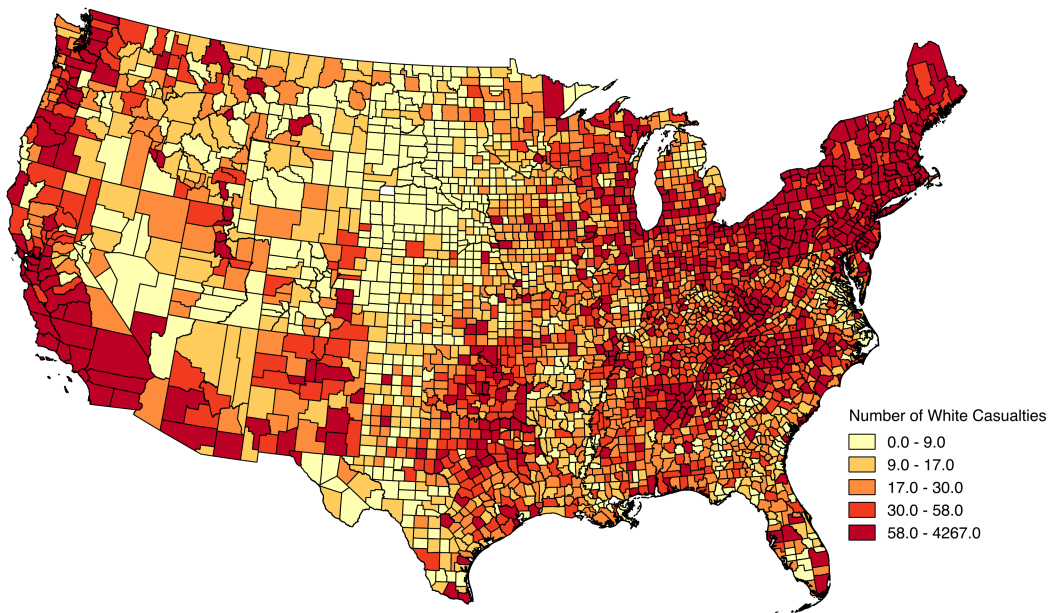
Figure VIII: Geographic variation in the number of White casualties in World War II.
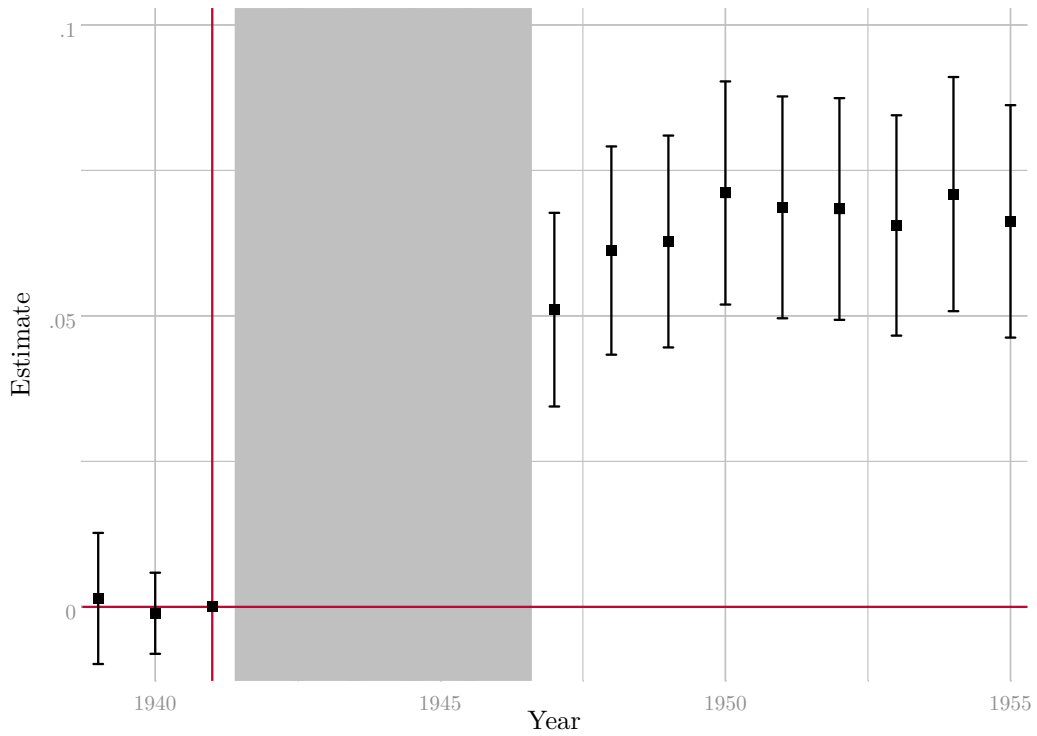
Figure IX: Event study coefficient estimates

Notes: Coefficient estimates and 95% confidence bands from estimating equation 2 using OLS. The dependent variable is the inverse hyperbolic sine of the number of Green Book establishments. Each estimate is measured with respect to 1941, so that coefficient estimates can be roughly interpreted as the differential % change in the number of Green Book establishments related to a 1% change in the number of White casualties relative to 1941. Standard errors are clustered by county.
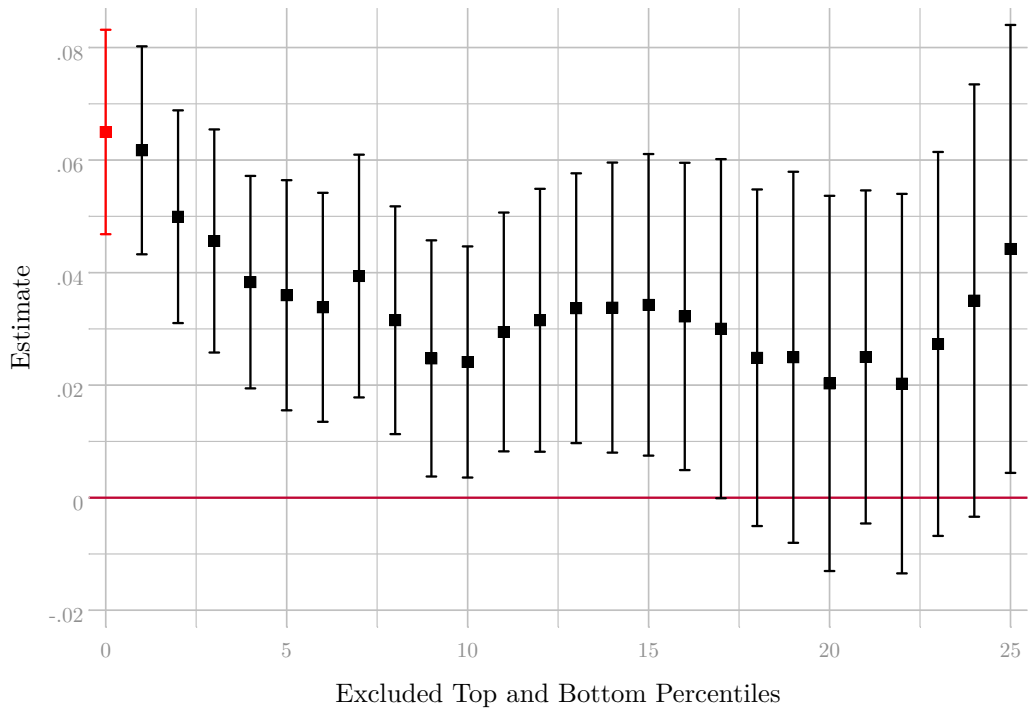
Figure X: Trimming percentiles from the distribution of White casualties

Notes: Coefficient estimates and 95% confidence bands from estimating equation 2 using OLS where we sequentially trim the bottom and top percentiles from the White casualty distribution. The dependent variable is the inverse hyperbolic sine of the number of Green Book establishments. Coefficient estimates can be roughly interpreted as the differential % change in the number of Green Book establishments related to a 1% change in the number of White casualties relative to the pre-WWII period. Standard errors are clustered by county.

B Tables

Table I: Idiosyncratic Green Book Entries

Example	Year	Establishment	Address	City	Type
Fresno Motel	1957 - 1962	Fresno Motel	Hwy. 99	Fresno, CA	Lodging
	1963	Fresno Hacienda	Hwy. 99 and Clinton	Fresno, CA	Lodging
Summer's Hotel & Resto.	1947-52	Jim Summers	719 S. Main St	Camden, AR	Restaurant
	"	Summers	715 1/2 S. Main Street	Camden, AR	Liquor store
	1953	Summer's Hotel & Court	721 Adams Street	Camden, AR	Lodging
	1954	Summer Hotel	754 1/2 Adams St. S. W.	Camden, AR	Lodging
	1955	Summer Hotel	740 Adams Ave. S.W.	Camden, AR	Lodging
	1956	Summers Hotel & Restaurant	740 Adams Avenue S.W.	Camden, AR	Lodging & Resto.
	1957	Summer's Hotel & Motel	750-754 1/2 Adams Ave.	Camden, AR	Lodging

Table II: Baseline Descriptive Statistics in 1940

	Listed		Never Listed	
	mean	sd	mean	sd
Green Book Listings				
# Green Book Establishments	5.2	9.7	0	0
# Informal Accommodations	1.9	1.9	0	0
# Formal Accommodations	1.1	2.1	0	0
# Gasoline Stations	.18	.6	0	0
# Eating & Drinking Est.	1	3.8	0	0
# Barber Shops & Beauty Parlors	.6	2.5	0	0
# Other Establishments	.39	1.9	0	0
World War II				
# Black Casualties (100s)	.2	.48	.021	.062
# Black Enlistments (100s)	10	23	1.1	2.9
Black Population (100s)	170.29	352.53	23.20	49.54
# White Casualties (100s)	2.4	4.9	.34	.63
# White Enlistments (100s)	88	187	11	23
White Population (100s)	1583.16	3415.09	210.56	387.74
Other Demographics				
Share Farmland	.6	.27	.71	.27
# Black Postal Workers	11	42	.24	1.5
% Black Migrants B/W State	.067	.071	.077	.16
% Black Migrants W/I State	.56	.12	.5	.24
Residential Segregation & Discrimination				
# Confederate Symbols	1.8	4.4	.44	1.3
# Black Lynchings	1.7	3.7	.88	2.3
# NAACP Chapters (1941)	.6	.83	.067	.29
Dissimilarity Index	.64	.18	.5	.32
Isolation Index	.25	.2	.09	.12
Logan-Parman Index	.57	.22	.39	.27
Education, Employment, and Income				
% Black w/ No School	.048	.047	.057	.087
% Black w/ ≥ 5 Yrs School	.94	.057	.93	.097
% Black w/ ≥ 10 Yrs School	.58	.18	.54	.26
% White w/ No School	.019	.022	.018	.024
% White w/ ≥ 5 Yrs School	.98	.025	.98	.029
% White w/ ≥ 10 Yrs School	.83	.093	.8	.13
% Black in Labor Force	.6	.11	.58	.19
Income Among Black Workers	455	184	296	278
% Black Own Home	.33	.15	.42	.26
% White in Labor Force	.55	.065	.52	.062
Income Among White Workers	922	247	620	238
% White Own Home	.47	.092	.52	.097
Observations	386		2,718	

Table III: Effects of White Casualties on the Number of Establishments

Panel A: Main specification

	(1)	(2)	(3)	(4)	(5)	(6)
	Total	Total	Total	Total	Total	Total
Asinh(# White Deaths) × Post-WW2	0.0650***	0.0650***	0.0264*	0.0650***	0.0884***	0.0488***
	(0.009)	(0.009)	(0.013)	(0.009)	(0.012)	(0.013)
County Controls			X			X
County F.E.				X	X	
Year F.E.			X	X	X	X
State F.E.		X				
State X Year F.E.					X	
County X Linear Trends						X
Observations	37248	37248	37248	37248	37248	37248
Adjusted R^2	0.179	0.257	0.624	0.906	0.909	0.958
Clusters	3104	3104	3104	3104	3104	3104

Panel B: Results by industry

	(1)	(2)	(3)	(4)	(5)	(6)
	Barber & Beauty	Eating & Drinking	Gasoline Station	Formal Lodging	Informal Lodging	Other Retail & Service
Asinh(# White Deaths) × Post-WW2	0.0550***	0.0740***	0.0263***	0.0192***	0.00488	0.0602***
	(0.008)	(0.010)	(0.005)	(0.005)	(0.005)	(0.009)
County F.E.	X	X	X	X	X	X
Year F.E.	X	X	X	X	X	X
Observations	37248	37248	37248	37248	37248	37248
Adjusted R^2	0.818	0.844	0.766	0.865	0.878	0.788
Clusters	3104	3104	3104	3104	3104	3104

Panel C: Results by industry shares

	(1)	(2)	(3)	(4)	(5)	(6)
	Formal Lodging	Formal Lodging	Eating & Drinking	Eating & Drinking	Gasoline Station	Gasoline Station
Asinh(# White Deaths) × Post-WW2	0.000474	0.00137	0.000234**	0.000399***	-0.0000661	0.0000762
	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
County F.E.	X	X	X	X	X	X
Year F.E.	X		X		X	
State X Year F.E.		X		X		X
Observations	23953	23953	36620	36620	36684	36684
Adjusted R^2	0.668	0.677	0.744	0.744	0.638	0.637
Clusters	2957	2957	3071	3071	3070	3070

Notes: The dependent variable in panel A is the inverse hyperbolic sine of the number of Green Book establishments; in panel B it is the inverse hyperbolic sine of the number of each type of establishment; and in panel C it is the inverse hyperbolic sine of the share of all establishments that are listed in the Green Books (separately for formal lodging, eating and drinking establishments, and gasoline stations). County controls, all transformed using the inverse hyperbolic sine, include the White and Black population, the number of Black postal workers, the share of Black migrants from out of state, the share of Black migrants from in-state, the number of confederate symbols, the number of Black lynchings, the number of NAACP chapters, the dissimilarity index, the isolation index, the Logan-Parman segregation index, the share of farmland, the share of the Black and White populations with each level of education, the number of Black and White hotel owners and restaurant owners, the share of Black and White adults in the labor force, the average income of Black and White workers in the labor force, the number of Black and White homeowners, and average manufacturing establishments, workers, wages, output, and value added. We include dummy variables for missing controls and we interact all controls and dummies with a post-WWII indicator. See Section I the Online Appendix for a complete list of variable definitions and sources. Standard errors clustered by county in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table IV: The relationship between the change in the fraction of Black residents and the change in the fraction of Green Book establishments

	(1) Formal & Lodging	(2) Eating & Drinking	(3) Gasoline Station	(4) Formal Lodging	(5) Eating & Drinking	(6) Gasoline Station
Panel A: OLS Estimates						
Asinh(Δ Share Black$_{1940-1950}$)	0.0656***	0.0234***	0.00643*	0.202***	0.158***	0.00908
	(0.025)	(0.005)	(0.003)	(0.045)	(0.019)	(0.017)
Adjusted R^2	0.003	0.010	-0.004	0.013	0.035	-0.009
Panel B: First Stage						
Asinh(White Casualties)	0.00993***	0.00868***	0.00893***			
	(0.001)	(0.001)	(0.001)			
Asinh(Black Migration)				0.385***	0.318***	0.316***
				(0.068)	(0.055)	(0.055)
First stage F-statistic	169.0	135.9	143.0	31.94	33.39	32.95
Panel C: Reduced Form						
Asinh(White Casualties)	0.00217**	0.000502**	0.000146			
	(0.001)	(0.000)	(0.000)			
Asinh(Black Migration)				0.221**	0.317***	0.0175
				(0.109)	(0.042)	(0.038)
Adjusted R^2	0.006	0.006	-0.004	0.000	0.026	-0.009
Panel D: IV Estimates						
Asinh(Δ Share Black$_{1940-1950}$)	0.219**	0.0579**	0.0163	0.573**	0.995***	0.0554
	(0.085)	(0.024)	(0.016)	(0.285)	(0.195)	(0.120)
IV=White Casualties	X	X	X			
IV=Black Migration				X	X	X
Observations	1909	3050	3056	1235	1659	1654

Notes: The dependent variable in all specifications is the inverse hyperbolic sine of Δ GB$_{1940-1950}$ = $\frac{\# \text{ GB}_{1950} - \# \text{ GB}_{1940}}{\# \text{ GB}_{1940}}$. Similarly, Asinh($\Delta$ Share Black$_{1940-1950}$) = Asinh($\frac{\# \text{ Black}_{1950} - \# \text{ Black}_{1940}}{\# \text{ Black}_{1940}}$). Columns (1)-(3) use the full sample and columns (4)-(6) restrict to counties outside the South. Columns (1)-(3) instrument for Asinh(Δ Share Black$_{1940-1950}$) using the inverse hyperbolic sine of the number of White casualties in WWII. Columns (4)-(6) instrument for Asinh(Δ Share Black$_{1940-1950}$) using the inverse hyperbolic sine of the Black migration instrument which we compute by interacting pre-1940 Black southern migration stocks with Black migrant outflows between 1940 and 1950. All columns include state fixed effects. Standard errors reported in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$