The Profitability of Diversity in the Media

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March 2025

Preliminary Draft

Abstract

Firm decisions in media markets have important political and societal implications. In this paper, I propose and apply an outcome test to detect firm-owner discrimination. Using a newly constructed panel dataset covering commercial radio stations across the U.S. during the post-war Jim Crow era, I find evidence consistent with firm-owner discrimination. Stations offering more programming for Black audiences were significantly more profitable, a robust finding that holds both across firms and within firms over time. In contrast, similar patterns are not observed for stations with foreign-language programming. These results suggest that owner discrimination led firms to "leave money on the table" by underserving a profitable segment of the market.

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1 Introduction

Discriminatory firm decisions can have substantial consequence for economic and societal outcomes. Classical economic theory predicts that market competition should mitigate or eliminate discrimination (Becker, 1957), but this does not necessarily imply the absence of discrimination in markets. Firm owners with biases or misperceptions may continue operating, systematically underserving certain consumer groups and foregoing profitable opportunities.

In this paper, I empirically assess the existence of firm-owner discrimination in media markets. Specifically, I study the profitability of serving racial minorities through the case of Black-oriented radio stations—those devoting part or all of their airtime to programming for Black audiences—in the post-World War II United States. Using industry magazines and government archives, I hand-collect and construct a novel dataset of all commercial radio stations in the U.S. from 1955 to 1957. I then quantify product positioning decisions and profitability using directly observable station-level Black-oriented programming hours and financial information. There was less content available for Black audiences, while Black-oriented stations were significantly more profitable. This pattern holds both in comparisons across stations within a market and within individual stations over time.

Audiences in minority groups may be underserved for many reasons in broadcast media. I present a conceptual framework to aid in the interpretation of the results. Through the lens of the model and by ruling out alternative explanations, the observed levels of content provision and profitability provide evidence of firm-owner discrimination.

The intuition is as follows: radio stations mainly derived their revenue from advertisers, and advertising revenue is a function of the audience reached by the station. The programming choice of a station owner, therefore, can be seen as a decision about what percentage of programming to allocate to Black versus White audiences. If firms with more Black-oriented programming are consistently more profitable, then some firms with less Black-oriented programming may be "leaving money on the table", potentially due to biases or misperceptions about the profitability of serving Black audiences. This interpretation is in the spirit of Becker's outcome test (Becker 1957) and similar to outcome tests in other contexts that compare the outcome for different decisions to detect bias in decision-making. Given that Black-oriented radio emerged as a format in the late 1940s,

these findings suggest that firm-owner discrimination persisted nearly a decade after the format's introduction.

I also show that serving minority groups is not always more profitable. A similar pattern of profitability is not observed for the niche market of foreign-language programming. Furthermore, the gap in profitability between Black-oriented and other stations narrows in presence of additional competition from other Black-oriented stations.

There is a small but growing body of work that looks at diversity in the media and entertainment industries. Fowdur, Kadiyali and Prince (2012) finds that movies with a Black lead actor and an all White supporting cast were rated lower by critics compared to other racial compositions, suggesting the presence of racial bias among critics. Luo and Zhang (2022) shows that the #MeToo movement led to an increase in female representation among writers in Hollywood. Kuppuswamy and Younkin (2020) finds that films with more diverse casts had higher revenue. Gil and Marion (2018) looks at movie theaters in Southern states catering to African Americans in the 1950s and shows that racial bias increases variable profit and fixed cost. Gil and Marion (2022) focuses on the desegregation of theaters in Washington, DC in 1953, and finds that revenues decreased due to customer discrimination. There is a large and distinguished literature on discrimination,[1] showing disparate treatment based on characteristics such as age, gender, and race across a wide range of domains. However, it could be difficult to pinpoint the reason for disparate treatment without additional data (such as direct outcome measures on individual performance or firm profitability) in observational studies. With detailed financial data, my paper not only provides the first set of evidence on the relationship between diversity and profitability in the media market, but also rules out several potential explanations as to why Black audiences were underserved. Similar to existing literature that shows firms hiring underrepresented groups enjoy higher profits, I find that serving minorities could prove to be highly profitable.

The paper also contributes to the broader empirical literature on the effect of diversity on firm performance. Hoogendoorn, Oosterbeek and Van Praag (2013) conducted a field experiment where college students were asked to start and run a company for an entrepreneurship program. They find that teams with an equal gender mix outperformed male-dominated teams in terms of

[1]Most of this work focuses on employment and wage gap by protected classes such as race and gender. See Charles and Guryan (2011) and Lang and Spitzer (2020) for a literature review on racial discrimination.

sales and profits. Calder-Wang and Gompers (2021) shows that venture capital firms whose senior partners have daughters are more likely to hire women and their funds perform better. Ewens and Townsend (2020) finds that female-led startups are less likely to raise capital from male investors while still outperforming, and claims this is consistent with gender bias. Siegel, Pyun and Cheon (2019) shows that multinationals improve profitability and productivity through their hiring of female managers because women are discriminated against in the local labor market. Similarly, Hellerstein, Neumark and Troske (2002), Kawaguchi (2007) and Weber and Zulehner (2014) find firms with a higher percentage of women have higher profits and survive longer. Outside of gender diversity, Huber, Lindenthal and Waldinger (2021) finds the expulsion of Jewish managers in Nazi Germany led to lower market valuation of firms. Bates, Bradford and Jackson (2018) provides evidence that minority-owned firms are underserved in equity-capital markets. Investments in minority-owned portfolio companies enjoy higher net returns as compared to those in White-owned companies. These results are consistent with the theoretical framework in Becker (1957), which predicts that firms who discriminate have lower profits.

Decisions by firms in media and entertainment industries have far-reaching social, cultural, and political implications. In the short-run, these decisions directly affect the profitability of the station and its competitors. Moreover, in this two-sided market, choices made by station owners shape both the benefits Black audiences derive from radio programming and advertisers' ability to target Black listeners. As Black-oriented stations have provided a venue for African American performers to reach larger audiences, these decisions also have implications on minority representation in broadcast media and in related sectors like the music industry. In the long run, these choices may have broader societal impacts extending beyond their immediate impacts. A large literature has studied the economic, social, and political impacts of traditional media (see, for example, DellaVigna and Gentzkow 2010, DellaVigna and La Ferrara 2015, and Enikolopov and Petrova 2015 for a review). Bernini (2023) and Wang (2022) show that Black-oriented radio increased political participation, activism, and mass mobilization in the 1960s, over a decade after the emergence of Black-oriented radio stations.

This paper proceeds as follows: Section 2 provides the historical background and Section 3 describes the data collected. Section 4 presents the empirical results. Section 5 outlines a conceptual framework and discusses possible mechanisms. Section 6 concludes.

2 Background

Radio was introduced to American households in the 1920s. By 1922, over 600 radio stations were active across the U.S. However, it was not until 1948 that radio stations started to devote full airtime to Black programs. These stations, including WDIA in Memphis, Tennessee, WANN in Annapolis, Maryland, and WERD in Atlanta, Georgia, started a trend of White businessmen either starting or switching to a higher proportion of radio program content catering to Black or African American audiences.

This paper studies Black-oriented radio stations – stations that broadcasted some programming catering to Black audiences – in 1955-1957. This ranged from just a few minutes per week to 100% of Black-oriented programming. Figure A2 provides a snapshot of programming at WERD, one of the first 100% Black-oriented radio stations (and the first of very few African American-owned radio stations in the 1950s). The programming spanned a diverse range of content, including music, "homemaker shows," soap opera sports, and news. This wide variety of content was representative of the radio landscape during that era. Despite the emergence of television in the late 1940s, radio remained a crucial source of information and entertainment for Americans throughout the 1950s. These radio programs were transmitted predominantly via AM broadcasting, which enabled their reach over long distances.[2]

The main source of radio station revenue came from advertising. Black-oriented radio stations derived their revenue from advertisers in a wide range of industries. Appendix Figure A3 shows a sample of advertisers on WERD. These included businesses that sold consumer goods such as food and clothing, as well as those that provided services such as beauty shops and theaters.

This context presents a unique opportunity to study the profitability of serving racial minorities for several reasons. First and foremost, the setting represents the introduction of racial diversity in broadcast media. Although the history of Black newspapers can be traced back to the 19th century and there were earlier African American radio personalities, it was not until the late 1940s that significant Black-oriented programming could be easily accessed by the turning of a radio dial. This emergence of Black-oriented programming on the radio was accompanied by an increase in racially diverse representation on the airwaves: Black-oriented stations hired African Americans

[2]Although FM radio had been introduced in 1955, it was not widely adopted until the 1960s. In the 1950s, FM stations mostly broadcasted the same content as AM stations under the same call letter.

and provided an opportunity for talents on broadcast media that was previously not possible.

The policy environment has important implications for firm strategic decision-making and performance. Government regulations were much stricter during the 1950s. Prior to 1992, a broadcaster could own at most one AM and one FM station in a local area. The Main Studio Rule and Program Origination rules instituted in 1946 required stations to have a main studio in the city of license and 50% of programming locally produced, leading to a large increase in the number of stations established in the late 1940s. This is evident in Appendix Figure A1, as there was a surge in the number of stations established in 1947 and 1948.[3]

Another relevant feature of the industry is that very few Black-oriented radio stations were owned by African American entrepreneurs – a phenomenon that persisted into the 1990s, as noted in Siegelman and Waldfogel (2001). Anecdotal evidence suggests that there were fewer than five Black-owned radio stations in the 1950s (Sterling, 2004). This was less than 1% of all stations with some Black-oriented programming.

Radio waves overcame physical segregation. However, consumer preference was more closely associated with race. Siegelman and Waldfogel (2001) and Waldfogel (2003) document that radio listenership is divided by race even in the 1990s.[4] Similarly, George and Waldfogel (2003) documents that different groups have different preferences for newspaper content. This difference in media consumption was more pronounced in the 1950s, when African Americans still faced segregation and open discrimination under Jim Crow laws. For example, the market for popular music was segregated by race, and the work of African American performers was in separate charts as "Race Records" on billboards until the late 1940s. Radio stations with Black-oriented programming chose to horizontally differentiate; they opted not only to serve a different group of listeners, but also to source their advertising revenue from a different set of businesses. The earlier time period in this paper provides a setting to both identify listeners for a station and link them directly to observable local market demographic characteristics.[5]

Finally, the availability of relevant data in this time period makes it possible to study diversity and profitability and test for firm-owner discrimination without confounds from other sources of

[3]This is based on surviving stations as of 1955.

[4]That is, there was little overlap in listenership. For example, Black and Black/Adult Contemporary were two top formats for Black audiences. These formats accounted for over half of all Black listening, while they only accounted for less than 2.5% of non-Black listening.

[5]Compared to, for example, classical music, for which potential audience is much harder to identify.

discrimination. The key variables of interest—programming choices and profitability—are directly observed, with programming choices recorded in industry magazines and profitability obtained from government archives.

3 Data

3.1 Data Sources

This paper combines multiple data sources from industry magazines and government archives. The first data source is hand-collected Federal Communications Commission (FCC) documents from the National Archives.[6] Stations were required to hold licenses granted by the FCC and report financial information by law under the Communications Act of 1934 (FCC, 1934). These annual financial reports include income statements, partial balance sheets, and for some years basic employment numbers.[7] Since reporting was a legal requirement, these reports were completed carefully and promptly, offering a comprehensive and accurate financial snapshot of the American commercial radio industry.

The financial data used in this paper are extracted from scans of all available income statements for 1955, 1956, and 1957. This includes 1) a page on broadcasting revenue and its breakdown, including sales of station time to local and regional/national advertisers or sponsors, and 2) a page on broadcasting expenses and its breakdown, including salaries and wages divided by function, and the number of part-time and full-time employees. See Figure 1 for a sample of an annual financial report for a Black-oriented radio station.

In addition, I digitized several industry magazines. One primary data source comes from *Broadcasting Yearbook*, an annually published industry magazine with a directory of all radio stations across the country. Starting in 1955, the magazine published yearly lists of "Stations with Negro Programming and Total Weekly Hours" and "Stations Broadcasting Foreign Language Programs

[6]Reports from 1937 to 1971 are publicly available at the National Archives facility in College Park, Maryland.

[7]The FCC stopped collecting this information in the early 1980s and papers from later years rely on station-level revenue data that are estimated from other data sources such as ratings. Anderson, Waldfogel and David (2016) notes the following on computed revenue: "...revenue estimates are closely related to audience size, market share, and format but it is unclear whether this relationship reflects a very close relationship that exists in reality or just the relationship that BIA assumes when making its estimates." Berry, Eizenberg and Waldfogel (2016) discusses why they are not using the later industry revenue estimates: "These station-specific revenue data are computed using various assumptions based on methodology proprietary to the data provider."

with Total Weekly Hours."[8] These are used to identify location, year of establishment and programming of stations (including hours per week of Black-oriented and foreign-language programming).

I supplement the analysis with *Sponsor*, a magazine for advertisers. In a special issue in 1958, the magazine published articles on the African American consumer market, with results from a survey of Black-oriented radio stations. This special issue includes a list of Black-oriented radio stations with the self-reported percentage of Black-oriented programming and percentage of Black-oriented advertisers.

From the 1950 and 1960 census and the 1956 County and City Data Book, I obtain market-level demographic information such as total population and nonwhite population.

3.2 Definition of a Market

The definition of a market used in the main analysis is State Economic Area (SEA). This concept was used by the Census Bureau and defined just prior to the 1950 census. A SEA consists of one or more counties within the same state that have similar economic and social characteristics which distinguishes it from other SEAs. This delineation divided the contiguous United States into 467 State Economic Areas. This definition is used as it is as close to the years of analysis as possible and proxies for the radio market relevant for firms' entry and programming decisions. In robustness checks, I explore alternative market definitions and find that the results are qualitatively consistent.

3.3 Industry Characteristics

Black-oriented radio stations existed around the country, with a notable concentration in the South and to the east of Mississippi. To visualize the number of hours of Black-oriented programming available across the nation, Figure 2 shows the distribution of Black-oriented programming by State Economic Area in 1955. In addition to shedding light on the radio station industry, this map also provides a visualization of minority representation in broadcast media across the country in the post-war period, as television and most other radio stations did not hire Black talent.

Across stations, the amount of Black-oriented programming ranged from a few minutes per week to 100% of all programming (up to 154 hours per week) in 1955. There were very few stations that broadcasted a similar share of Black-oriented and other programming. Appendix Figure A4

[8]These yearbooks are in PDF format accessible through AmericanRadioHistory.com.

shows that the frequency of percentage of Black-oriented programming is bimodal: in 1958, stations either broadcasted less than 20% of their programming catering to African Americans or around 100%.[9]

Table 1(a) presents summary statistics at the station level for stations operating in 1955-1957. A firm is defined at the call letter level. On average, the annual profit of a station is around $11,000, with revenue of around $119,000 and expense of $109,000.

In the analysis, I focus on spot radio stations – local stations that are not associated with a major network. This is because the programming decisions for spot radio respond to local market characteristics and there is very little Black-oriented programming on network radio. Column 2 summarizes the characteristics of these local radio stations. They were younger and had lower profits than network stations and were established and operated by small business owners. Column 3 focuses on the subset of spot radio stations that broadcasted any Black-oriented programming and Column 4 focuses on the subset that broadcasted significant amounts of Black-oriented programming. Stations with significant Black-oriented programming were considerably more profitable than the average spot radio station.

Table 1(b) presents summary statistics at the market level. The number of stations ranged from 0 to 24 stations, and the number of Black-oriented radio stations ranged from 0 to 13 stations in a SEA. Comparing Columns 1 and 2, markets with some Black-oriented programming had more radio stations, were more populated, had on average almost twice the non-white population than the average market with any radio station, and had significantly higher non-white population shares. Comparing Columns 1 and 3, the difference is even more pronounced. It is clear that stations with significant Black-oriented programming were located in more populated and diverse markets. As there are 467 SEAs in total, almost all markets had at least one radio station, and around half of them had at least one station broadcasting some Black-oriented programming.

[9]The figure is based on survey results reported in *Sponsor* in 1958 (the closest year in which data on the percentage of Black-oriented programming is available).

4 Provision and Profitability of Black-oriented Programming

4.1 Provision of Black-oriented Programming

I first examine the amount of programming available for the general population and for African American audiences. Figure 3 plots the number of Black-oriented programming hours per 100,000 non-white population, and separately the number of all programming hours per 100,000 total population. To calculate this, stations are assumed to operate for 114 hours/week or just over 16 hours/day on average.[10] Dividing SEAs into quantiles by total population, these hours by population averages are plotted separately for each quantile. Significantly less Black-oriented programming is available when comparing per capita hours in both less populated and more populated SEAs.

There are many possible explanations for this observed pattern. In a monopoly market, for instance, the firm will choose programming to maximize audience numbers. If advertisers pay the same rate per listener, and listeners have different preferences by race, then a profit-maximizing monopolist would cater to the White majority. Furthermore, even with an equal share of Black and White audiences, it may still be more profitable for the station to target White audiences if Black consumers have lower purchasing power and therefore less lucrative for advertisers. Finally, discrimination coming from White consumers, advertisers, and radio station owners could all contribute to a lower number of Black-oriented programming hours.

4.2 Profitability of Black-oriented Programming

Next, I provide evidence on the profitability of Black-oriented programming using the station level financial information. Table 2 shows the regression results with the following specification:

$$\pi_{jmt} = \phi\, h_{jmt} + \beta \mathbf{X}_{jmt} + \gamma \mathbf{Z}_{mt} + \lambda_1 h_{-jmt} + \lambda_2 N_{mt} + \alpha_t + \alpha_m + \varepsilon_{jmt} \tag{1}$$

The dependent variable π_{jmt} is the realized operating profits for firm j in market m in year t (symmetrically winsorized at the 5% level). This is calculated as total revenue minus total expenses from the Annual Financial Reports. This accounts for operating fixed costs, which could be different

[10] I do not observe the total number of programming hours for most stations. I impute this based on information available in the *Broadcasting Yearbook*, using stations that both reported their total number of hours and indicated that they are 100% Black-oriented. For stations that are 100% Black-oriented, the median station operated for 114 hours/week.

for stations of different formats. The expenses accounted for include salaries and wages, and talent, technical, program, selling, and administrative expenses.

The key parameter of interest is ϕ. $\mathbf{X}_{jmt}$ represents station-level characteristics, including the station's years in operation (both linear and squared terms), and the number of hours of Black-oriented programming aired by other stations. $\mathbf{Z}_{mt}$ represents market-level demographic characteristics, including the total number of stations in the market, a cubic polynomial of the total market population and a cubic polynomial of the total non-White population, using 1950 census for 1955, 1960 census data for 1957, and interpolating for 1956 due to data limitations. I include two competition controls: h_{-jmt}, representing the total number of hours of Black-oriented programming aired by all other stations in market m (excluding station j), and N_{mt}, representing the total number of stations operating in market m. The specification also includes time fixed effect α_t, capturing common shocks across all markets in a given period, and market fixed effect α_m, controlling for time-invariant differences across markets. ϵ_{jmt} is the error term.

The three columns in Table 2 differ in how h_{jmt}, Black-oriented programming aired by station j at time t, is defined. In Column 1, h_{jmt} is the number of Black-oriented programming hours. In Column 2 and 3, h_{jmt} are binary: it equals to 1 if a station is significantly Black-oriented in Column 2, and equals to 1 if a station is 100% Black-oriented in Column 3.

The market fixed effects are important. As shown in market-level summary statistics in Table 1(b), Black-oriented stations were located in more populated areas. It is possible that these stations were in urban areas with higher African American populations and higher entry costs (such as the cost of building a radio tower). This could drive a positive relationship between the level of Black-oriented programming and profitability. By including market fixed effects, I compare station profitability within each market. This maps to the conceptual framework in Section 5.1, and is consistent with the programming decision that station owners make. Owners determine the percentage of their programming dedicated to Black-oriented content based on local market conditions.

The results in Table 2 show that profitability differed by format. In Column 1, I show that the number of hours of Black-oriented programming was correlated with profit, significant at the 1% level. This implies that moving from 0 hours to 12 hours of Black-oriented programming per day would increase profit by around $9,000. The effect size is economically large: the median annual

profit of a station at the time was only around $7,000, and the median annual income for men was $3,400 (Bureau of the Census 1956). Switching to cater to African American audiences would allow the median firm to more than double its annual profit.

Columns 2 and 3 use two alternative definitions of format. They show that the results are driven by significantly Black-oriented stations. In Column 2, I compare stations with 4.25 hours/day or more of Black-oriented programming to those with fewer than 4.25 hours/day (which is the 90th percentile for Black-oriented hours among all stations with some Black-oriented programming). In Column 3, I compare stations with 100% Black-oriented programming to other stations, including those that have some Black-oriented programming. The effect on profit is driven by stations that were significantly Black-oriented.

This specification compares outcomes across stations. In a second specification, I compare outcomes within stations over time using the following model:

$$\pi_{jmt} = \phi\, h_{jmt} + \gamma \mathbf{Z}_{mt} + \lambda_1 h_{-jmt} + \lambda_2 N_{mt} + \alpha_t + \alpha_j + \varepsilon_{jmt} \tag{2}$$

Table 3 presents the results of this model. By incorporating station fixed effects, this specification controls for time-invariant firm heterogeneity, such as long-standing managerial quality, historical audience loyalty, and persistent differences in advertising contracts. The results indicate that, over the three-year period of analysis, stations that increased their Black-oriented programming hours experienced higher profits, while those that reduced such programming saw a decline in profits.

The results are robust to alternative definitions of a market, including defining stations within the same county or state as operating in the same market. In Appendix Table A1, I similarly observe a significant and large relationship between Black-oriented hours and profitability under these alternative market definitions.

The results presented above use operating profits winsorized symmetrically at the 5% level. To test the robustness of these findings to alternative profit measures, I re-estimate the primary specification using an inverse hyperbolic sine transformation of profits in Appendix Table A2. The results remain consistent and statistically significant.

4.3 Discussion

Programming choice is an important strategic decision for radio stations. Firms may choose to not cater to minority audiences because it is less profitable. This could be true even if the levels of Black and White population are the same within a market – it may be less profitable to cater to Black audiences because of discrimination by other stakeholders. This could include labor market discrimination leading to lower income and lower buying power, advertiser discrimination where advertisers are willing to pay for less per dollar of potential buying power, or audience discrimination where catering to Black audiences leads to fewer White listeners. For example, several papers, including Cook et al. (2022), Gil and Marion (2018), and Gil and Marion (2022), have found evidence of consumer discrimination in the 1940s and 1950s. Businesses practiced segregation in public accommodations such as hotels and restaurants to avoid losing prejudiced White consumers. The existence of these other sources of discrimination could drive down the profitability of catering to Black audiences, and explain the observed lower content provision.

However, these alternative sources of discrimination cannot account for the higher profitability observed among significantly Black-oriented radio stations. If anything, holding all else equal, other forms of discrimination would reduce the profitability of Black-oriented stations. Firm owners make programming decisions while taking market conditions—such as population size and discrimination from other stakeholders—as given. Therefore, profitability differences can only be explained through the strategic decision of radio station owners.

5 Mechanisms

5.1 Conceptual Framework

In this section, I present a simple framework for conceptualizing the optimization problem faced by station owners and derive an outcome-based test to detect discrimination by firm owners.

Suppose the payoff function for firm j in market m is given by:

$$V(h_{jm}; \boldsymbol{h}_{-jm}, \boldsymbol{X}_m, \boldsymbol{X}_j) = \pi(h_{jm}; \boldsymbol{h}_{-jm}, \boldsymbol{X}_m, \boldsymbol{X}_j) - \phi h_{jm}$$

Each firm j decides the number of hours of Black-oriented programming, h_{jm}, to broadcast

from a fixed total number of daily programming hours, $\bar{h}$, with the remaining $\bar{h} - h_{jm}$ hours allocated to White-oriented programming. The profit of the firm, π, depends on h_{jm}, given market-level characteristics $\boldsymbol{X}_m$ (e.g., total population), station-level characteristics $\boldsymbol{X}_j$ (e.g., years of operation), and the programming decisions of other radio stations in the market. In addition to profit, the payoff function includes a wedge term, ϕh_{jm}, which represents the distortion from firm-owner discrimination. This assumes a constant cost for each additional hour of Black-oriented programming but can be extended to accommodate other functional forms, allowing for varying costs or nonlinear distortions in firms' decision-making. Firm j chooses h_{jm} to maximize their payoff.

The wedge term may arise from taste-based discrimination (Becker, 1957), or from inaccurate statistical discrimination (Bohren et al., 2023), such as misperceptions about profitability of Black-oriented programming. In the latter case, firm owners may have incorrectly believed that Black-oriented programming was less profitable than it actually was, leading them to allocate fewer hours to it despite its higher potential returns.[11]

Louis Cantor, a former WDIA employee, explains why entirely Black-oriented stations did not exist until 1948:

> "The only plausible explanation has to be the dominant mindset of the South prior to 1948, which locked both radio stations and their potential advertisers into a kind of racist tunnel vision, and made certain assumptions about black people as potential consumers that virtually destroyed any incentive sponsors might otherwise have had to capture the black radio market." (Cantor, 1992)

This is modeled as White firm owners facing higher non-pecuniary costs when providing more Black-oriented programming, which may influence their programming decisions and therefore profitability.

5.2 Test for Firm-owner Discrimination

To derive an outcome test for firm-owner discrimination, consider the first-order condition from the firm's payoff maximization problem:

[11] Taste-based discrimination and incorrect beliefs cannot be separately identified without additional data on owner beliefs (Bohren et al., 2023).

$$\pi'(h_j) = \phi$$

The coefficient estimated from Equation 1 on the number of Black-oriented programming hours provides an estimate of ϕ under the assumption $\mathbb{E}\left[\varepsilon_{jmt} \middle| h_{jmt}, \mathbf{X}_{jmt}, \mathbf{Z}_{mt}, h_{-jmt}, N_{mt}, \alpha_t, \alpha_m\right] = 0$.

The comparison of profitability across formats with market fixed effects in Section 4 is in the spirit of Becker's outcome test of discrimination (Becker, 1957, 1993). Outcome tests have been applied in a variety of settings, including police searches (e.g., Knowles, Persico and Todd, 2001), bail decisions (e.g., Arnold, Dobbie and Yang 2018), hiring decisions (e.g., Szymanski 2000), and entrepreneurial financing decisions (e.g., Ewens and Townsend 2020), among others. Instead of looking just at the rate of decision (i.e., provision of Black- and White-oriented programming), the outcome test quantifies the success rate of those decisions (i.e., profitability by programming).

This setting presents a novel outcome test with several unique features. First, programming decisions are made at the discretion of firm owners, whereas hiring decisions are often delegated to hiring managers, making it more difficult to directly attribute discriminatory practices to the firm owner. Second, programming decisions have a direct and measurable impact on profits, whereas worker performance is more difficult to assess and even harder to directly link to a firm's profitability. Third, outcome tests typically observe outcomes only for individuals above a certain threshold (e.g., observing only the performance of applicants whose loans are approved). In contrast, in this setting, outcomes are observed across the full range of Black-oriented programming – from none to entirely Black-oriented programming.

This across-firm outcome test assumes that firm profit is determined solely by programming choices, station-level observables, choices by competitors, and market conditions. In the radio station market, this assumption is not unreasonable, as two main components of revenue – advertising revenue per listener and potential audience size – are largely determined outside of the firm's control once the programming decisions are made. If idiosyncratic profit shocks at the station level are uncorrelated with format choices, then profit differences across stations can still be used to test for the discrimination wedge in a large number of markets. However, if firm-specific unobservables significantly affect profitability, such as more productive firms being more likely to enter Black-oriented programming, then higher observed profits could arise even in the absence of

a distortion.

To address this, a second within-firm outcome test can be implemented using firm fixed effects. The coefficient estimated from Equation 2 on the number of Black-oriented programming hours provides an estimate of ϕ, under the assumption $\mathbb{E}\left[\varepsilon_{jmt} \middle| h_{jmt}, \mathbf{X}_{jmt}, \mathbf{Z}_{mt}, h_{-jmt}, N_{mt}, \alpha_t, \alpha_j\right] = 0$.

This within-firm outcome test accounts for time-invariant, firm-specific unobserved heterogeneity. For example, some firms may be better at managing cost or getting higher advertising price per listener. This test leverages the unique advantage of this setting, where multiple decisions and outcomes can be observed for the same firm over time.

These outcome tests have limitations. First, they do not account for time-varying, firm-specific shocks. In the next section, I discuss whether certain firms may gain specialized know-how or connections that make them more successful in broadcasting Black-oriented programming. Second, profitability comparisons can only be made in markets where both Black-oriented and non-Black-oriented programming are observed. Markets with strong biases or misperceptions – where no owner is willing to serve Black audiences – are excluded from the analysis. Consider two otherwise similar markets: one with Black-oriented stations and one without. The estimated profitability difference in the market with Black-oriented stations would serve as a lower bound for the potential profitability difference in the other market. As a result, excluding markets without Black-oriented stations makes it more difficult to detect firm-owner discrimination, as it is possible to observe no profitability differences even when discrimination influences programming decisions. Therefore, this analysis cannot be extended to earlier decades of the radio industry, before the emergence of a significant number of Black-oriented stations.

Nonetheless, these outcome tests indicate the presence of a wedge influencing programming decisions and the profitability of Black-oriented programming. Owners were underserving Black audiences and effectively "leaving money on the table," either due to bias or misperceptions about the profitability of Black-oriented content.

5.3 Alternative Explanations

In this section, I discuss various alternative explanations for the observed difference in profitability. First, there may be higher non-pecuniary costs associated with providing Black-oriented programming that are unrelated to discrimination or not reflected in financial reports. One potential source

of difference in non-pecuniary cost is connections with talent. However, this was unlikely. In the 1950s, Black ownership among Black-oriented radio stations was less than 1%. White businessmen chose between formats, and for those who decided to serve Black consumers, it was not particularly difficult to find talent. For example, announcers could be hired through a simple campus flyer – the only requirement for the job was that the person is African American and literate.[12] Nat D. Williams, the first disc jockey at WDIA, tried to approach other local radio stations before being hired at WDIA. He attempted to "sell himself as a disc jockey [but] was made the object of derisive laughter" (Cantor, 1992). It did not take special know-how or connections to become a Black-oriented station.

Second, there may be unobserved costs associated with serving Black consumers, such as potential backlash from White consumers, which are not reflected in observed profits. However, the experience of the first fully Black-oriented station suggests these costs cannot explain the substantial difference in profitability. The program director at WDIA notes that "the calls [from White listeners] were not nearly as nasty nor as plentiful as some expected" and "the indignant phone calls lasted only a day or two" after Nat D. Williams first appeared on air in 1948 (Cantor, 1992). It remains possible that firm owners perceived additional, unobserved costs—such as anticipated backlash—even if these did not materialize. In this case, owners would have overestimated the true cost of providing Black-oriented programming, consistent with misperceptions driving the observed profitability gap.

5.4 Sources of Higher Profitability

The comparison so far has abstracted from individual components of profit. Higher profitability of Black-oriented programming theoretically could arise from higher revenue, lower expense, or a mix of both.

Table 4 presents the relationship between hours of Black-oriented programming and various additional outcomes. Radio stations aired Black-oriented programming to attract advertisers targeting Black audiences.[13] Columns 2 and 3 illustrate that Black-oriented stations generated higher

[12]This was the experience of B Hayes, an industry expert who worked in a Black-oriented station in the 1950s. The story was shared via personal communications on January 3, 2020.

[13]Appendix Figure A5 shows that the percentage of Black-oriented programming was highly correlated with the percentage of Black-oriented advertisers, based on firm self-reports summarized in 1958.

total revenue, primarily from local advertisers. Given that the average price per listener is lower at Black-oriented stations,[14] this revenue difference is likely driven by a large number of listeners for Black-oriented stations on average. These findings are consistent with lower competition in Black-oriented programming, where stations are not providing enough Black-oriented programming and are therefore "leaving money on the table."

Black-oriented stations were also more productive. Column 1 shows that productivity, calculated as total revenue divided by total number of employees (full-time and part-time), is higher with more Black-oriented programming hours.

There is mixed evidence on whether Black-oriented programming involved lower expenses. The relationship between Black-oriented programming hours and total expenses is positive but not statistically significant in Table 4a) Column 4 (specification with market fixed effects), and negative but also not statistically significant in Table 4b) Column 4 (specification with station fixed effects).

Interestingly, Column 5 shows a positive relationship between Black-oriented programming and average wages, calculated as total salaries and wages divided by the number of employees. Although Black-oriented stations hired African Americans as announcers or disc jockeys, their overall workforce remained predominantly White, with nearly all other roles (e.g., engineers, administrative staff) filled by White employees (Cantor, 1992). This raises the possibility that Black-oriented stations compensated their White employees at higher wages compared to other stations.

5.5 Competition and Discrimination

Table 5 directly investigates the impact of competition on the profitability of Black-oriented stations. In Column 2, I measure the competition faced by a Black-oriented station by calculating the total number of Black-oriented programming hours offered by other stations in the same market. To facilitate interpretation, I convert this total to a station-equivalent unit (by dividing it by 16, the average number of hours of operation for a station per day).[15] Unsurprisingly, the coefficient for the number of Black-oriented programming hours is higher in Column 2 than Column 1 (which replicates Column 1 in Table 2). These results demonstrate that Black-oriented stations are more profitable in markets with less competition.

[14] Using data from 1999, Napoli (2002) estimates that the station revenue per listener is 25% lower at minority-targeted stations. This difference could be even larger in 1955 if advertiser discrimination declined over time.

[15] This proxy ranges from 0 to almost 2.93.

At the same time, the results also indicate that Black-oriented stations do not necessarily have to be the only station in the market to be profitable. The interaction term is negative and its magnitude is less than half that of the main coefficient on programming hours. The sum of the coefficients in Column 2 shows that Black-oriented stations can still be profitable even in a market with competition from other stations offering similar programming.

With the entry of a sufficient number of non-discriminatory firms, there should be no systematic difference in profitability between Black- and White-oriented radio stations. The results show that despite a competitive environment and a large number of entrants in the late 1940s, there is insufficient entry of non-discriminatory firms. There is a lack of minority ownership in the radio industry at the time, potentially due to barriers to entry for Black entrepreneurs like limited access to finance.[16] Furthermore, some White owners could have entered into Black-oriented programming, as the story of Nat D. Williams above demonstrates, but they did not because they preferred not to or underestimated its profitability.

5.6 Profitability of Foreign-language Programming

One potential reason for observed higher profitability could be that Black-oriented programming represented a niche market. As the size of the market was smaller than that of the general audience market, incumbents in Black-oriented radio may have been better positioned to deter potential entrants and potentially enjoy higher profits.

However, targeting niche markets is not always profitable. For instance, there were over 400 stations in 1955 that broadcasted some foreign-language programming, but a similar relationship is not observed. The top three languages broadcasted were Spanish, Polish, and Italian, and Table 6 shows either no relationship (all foreign-language pooled together, Spanish, and Polish) or a negative relationship (Italian) between hours and profits.

One explanation for the difference between Black-oriented vs. foreign-language programming could be the ownership of radio stations. Siegelman and Waldfogel (2001) studies race and radio in the 1990s and suggests that Black owners would be willing to serve Black audiences even if they believe it is less profitable to do so. In the 1950s, only 1% of Black-oriented stations were owned by

[16] One such barrier is access to finance. Chatterji and Seamans (2012), for example, find evidence for this using data from the 1970s and 1980s.

Black entrepreneurs, but the logic of the conjecture similarly applies to the Italian-programming market. Italian-language station owners may have been willing to take lower profits to serve the Italian-speaking community.

6 Conclusion

In this paper, I provide a novel test for firm-owner discrimination. I develop a simple conceptual framework and derive an outcome-based test based on the firm's profit-maximization decision. Using a newly constructed panel dataset covering commercial radio stations across the U.S., I apply this test and find clear evidence consistent with firm-owner discrimination in the 1950s. Specifically, firms that catered to African American audiences earned significantly higher annual profits—a result robust both across firms and within firms over time. In contrast, I find no similar relationship for stations offering foreign-language programming.

These results imply that although it is profitable to shift some programming hours from general audience to Black-oriented to attract listeners and advertisers, stations chose not to and "left money on the table." This could arise from personal taste or misperceptions about the profitability of catering to Black audiences. Given the importance of media markets, these firm decisions have far-reaching social, cultural, and political implications.

Beyond the radio context, the findings demonstrate that serving disadvantaged groups can not only have positive social impacts, but can also increase the bottom line of firms. However, it is also evident that serving minorities or niche markets is not always profitable, and it is important to understand the underlying reasons for the under-provision of a product or service.

Black-oriented stations emerged in the late 1940s, coinciding with the adoption of television. Past work on media and entertainment industries (e.g., Sweeting 2010, Seamans and Zhu 2014, Orhun, Venkataraman and Chintagunta 2016) has shown evidence of changes in product decisions driven by competition. One potential avenue for future research is to explore the effect of competitive pressure from television on product repositioning in the radio station market.

In the subsequent decades, government regulations through the FCC promote diversity in broadcast media under the assumption that diversity would otherwise be insufficient. In 1978, the FCC issued a "Statement of Policy on Minority Ownership of Broadcast Facilities" that outlined tax

incentives and special assessments for minority owners in license applications. The current mandate emphasizes diversity and localism (FCC, 2023). Quantifying and explaining the success of minority-oriented media in the absence of these incentives could be a first step to understanding the necessity of these policies and their implication for media owners and audiences.

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Table 1: **Summary Statistics**

(a) **Station-level Summary Statistics**

Variable	(1) All	(2) Spot	(3) Black-oriented	(4) Significantly Black-oriented
Hours of Black-oriented Programming	0.47	0.64	2.64	13.39
	(2.03)	(2.42)	(4.37)	(4.01)
Year of Establishment	1,945	1,948	1,948	1,947
	(10)	(7)	(7)	(10)
Revenue ($)	119,311.4	93,983.6	92,760.7	169,882.3
	(103,982.6)	(86,255.5)	(80,912.9)	(106,541.2)
Expense ($)	108,842.0	84,753.1	80,907.4	141,946.5
	(90,311.1)	(74,194.9)	(68,349.4)	(87,806.9)
Profit ($)	10,549.9	9,143.7	11,058.6	23,580.8
	(22,669.3)	(19,572.4)	(18,570.4)	(25,578.4)
Observations	8,607	5,824	1,401	169

(b) **Market-level Summary Statistics**

Variable	(1) Has station	(2) Has Black-oriented station	(3) Has Significantly Black-oriented station
Number of Black-oriented Radio Stations	1	3	3
	(2)	(2)	(2)
Number of All Stations	6	8	9
	(4)	(5)	(5)
Total Population	2,243,182	3,901,186	8,946,505
	(10963354)	(15768192)	(19613664)
Non-white Population	267,576	540,306	1,635,984
	(1,304,958)	(1,869,807)	(3,063,163)
Non-white Population Share	0.10	0.18	0.25
	(0.13)	(0.14)	(0.12)
Market in the South	0.40	0.69	0.76
	(0.49)	(0.46)	(0.43)
Observations	1,391	650	129

Notes: This table presents summary statistics at the station- and market-level. Spot radio refers to local radio stations that are not associated with major networks. I define Black-oriented station as those with some Black-oriented programming, and significantly Black-oriented as those with more than 4.25 hours/day of Black-oriented programming (which is the 90th percentile for Black-oriented hours among all stations with some Black-oriented programming).

Table 2: **Profit for Significantly or Entirely Black-oriented Stations**

	(1) Profit ($)	(2) Profit ($)	(3) Profit ($)
Hours of Black-oriented Programming	756.0*** (161.7)		
Significantly Black-oriented		8793.9*** (2190.9)	
Entirely Black Oriented			10346.8*** (3603.9)
Year	1955-57	1955-57	1955-57
Market FE	YES	YES	YES
Year FE	YES	YES	YES
Station Controls	YES	YES	YES
Competition Controls	YES	YES	YES
Demographic Controls	YES	YES	YES
Sample Mean	9,170	9,170	9,170
Observations	5,801	5,801	5,801

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: This table presents the relationship between profit and level of Black-oriented programming. The dependent variable in all three columns is annual profits. In Column 2, significantly Black-oriented is 1 for stations with more than 4.25 hours/day of Black-oriented programming and 0 otherwise (4.25 hours/day is the 90th percentile for Black-oriented hours among all stations with some Black-oriented programming). In Column 3, entirely Black-oriented is 1 for stations that are entirely Black-oriented and 0 otherwise.

Table 3: **Profit and Black-oriented Programming**

	(1) Profit ($)	(2) Profit ($)	(3) Profit ($)	(4) Profit ($)	(5) Profit ($)
Hours of	756.0***	515.3***	844.0***	1173.2***	506.2**
Black-oriented Programming	(161.7)	(177.3)	(247.1)	(204.4)	(213.9)
Year	1955-57	1955-57	1955	1956	1957
Market FE	YES		YES	YES	YES
Station FE		YES			
Year FE	YES	YES			
Station Controls	YES		YES	YES	YES
Competition Controls	YES	YES			
Demographic Controls	YES	YES			
Sample Mean	9,170	9,816	9,482	9,570	8,239
Observations	5,801	5,411	1,652	1,915	2,083

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: This table presents the relationship between profit and level of Black-oriented programming. The dependent variable in all three columns is annual profits. Columns 1, 3, 4, and 5 include SEA FE and Column 2 includes call FE.

Table 4: **Productivity, Revenue, Expense and Black-oriented Hours**

(a) **Results with Market FEs**

	(1) Productivity ($/person)	(2) Revenue ($)	(3) Local Ad ($)	(4) Expense ($)	(5) Wage ($/person)
Hours of	86.68***	1396.8*	1262.3***	168.8	22.85**
Black-oriented Programming	(24.98)	(764.1)	(468.6)	(666.9)	(10.46)
Year	1955-57	1955-57	1955-57	1955-57	1955-57
Market FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Station Controls	YES	YES	YES	YES	YES
Competition Controls	YES	YES	YES	YES	YES
Demographic Controls	YES	YES	YES	YES	YES
Sample Mean	7,794	96,119	77,919	87,507	3,601
Observations	5,759	5,801	5,801	5,801	5,759

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

(b) **Results with Station FEs**

	(1) Productivity ($/person)	(2) Revenue ($)	(3) Local Ad ($)	(4) Expense ($)	(5) Wage ($/person)
Hours of	43.12*	599.1*	440.8	-271.7	27.72*
Black-oriented Programming	(25.41)	(330.5)	(377.2)	(256.5)	(14.51)
Year	1955-57	1955-57	1955-57	1955-57	1955-57
Station FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Station Controls					
Competition Controls	YES	YES	YES	YES	YES
Demographic Controls	YES	YES	YES	YES	YES
Sample Mean	7,865	97,055	78,905	87,542	3,620
Observations	5,357	5,411	5,411	5,411	5,357

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: This table presents the relationship between various outcomes and the level of Black-oriented programming. In Column 1, the dependent variable is productivity, calculated as total revenue divided by total number of employees (full-time and part-time). In Column 2, the dependent variable is total revenue. In Column 3, the dependent variable is revenue from local advertisers. In Column 4, the dependent variable is total expenses. In Column 5, the dependent variable is wage/person, calculated as salaries and wages divided by total number of employees (full-time and part-time). Part (a) presents the results with SEA FEs, and Part (b) the results with station FEs.

Table 5: **Profit, Black-oriented Programming, and Competition**

	(1) Profit ($)	(2) Profit ($)
Hours of Black-oriented Programming	756.0***	1047.6***
	(161.7)	(240.5)
Hours of Black-oriented Programming × Black-oriented Programming Hours (Other Stations)		-404.0*
		(234.8)
Year	1955-57	1955-57
Market FE	YES	YES
Year FE	YES	YES
Station Controls	YES	YES
Competition Controls	YES	YES
Demographic Controls	YES	YES
Sample Mean	9,170	9,170
Observations	5,801	5,801

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: This table presents the relationship between profit, the level of Black-oriented programming, and the level of Black-oriented programming interacted with a measure of competition. The dependent variable in both columns is annual profits. In Column 2, competition is measured as the number of Black-oriented programming hours by other stations in the same market divided by 16 (the average number of hours of operation per day).

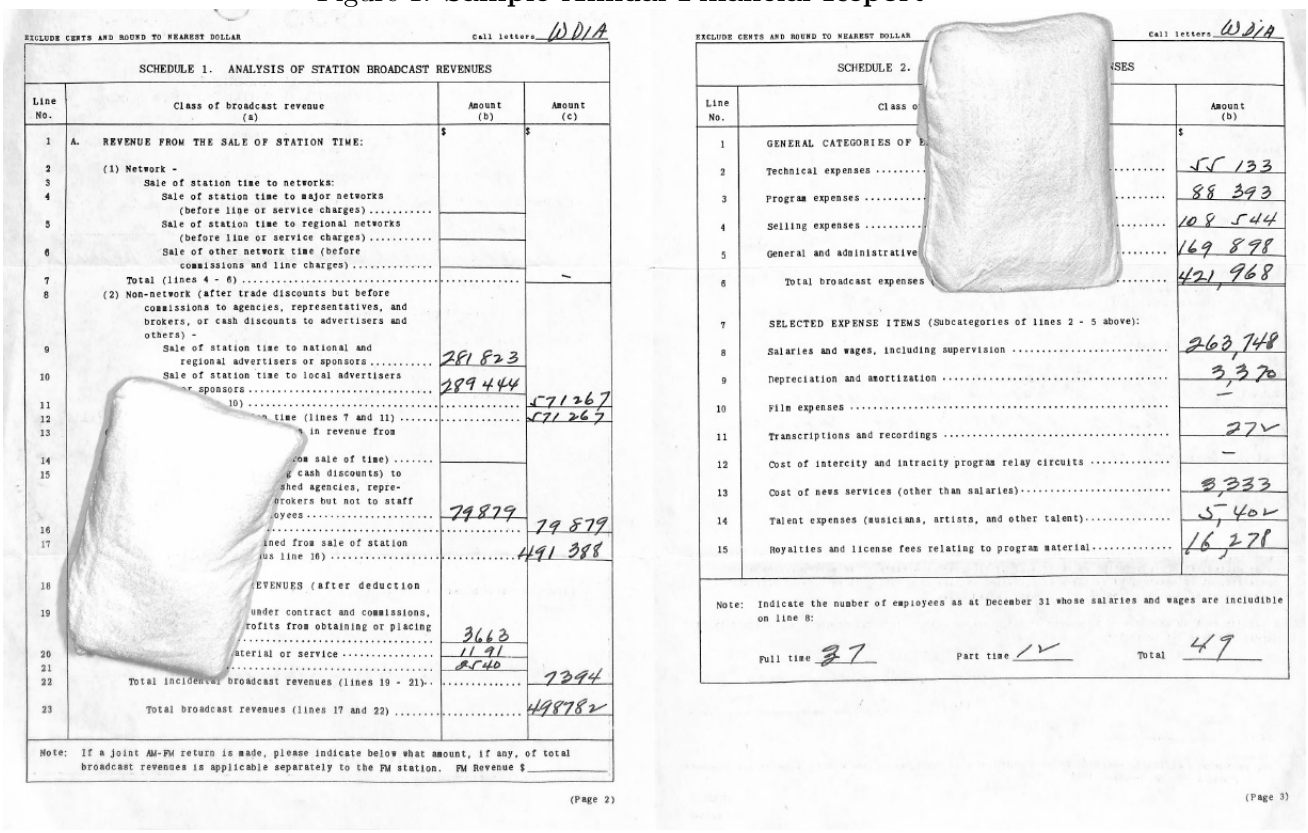
Table 6: **Profit and Foreign Language Programming**

	(1) Profit ($)	(2) Profit ($)	(3) Profit ($)	(4) Profit ($)
Hours of Foreign-language Programming	-488.6 (499.8)			
Spanish		-525.3 (415.8)		
Polish			4079.3 (4654.9)	
Italian				-4164.6** (1612.4)
Year	1955	1955	1955	1955
SEA FE	YES	YES	YES	YES
Sample Mean	9,442	9,442	9,442	9,442
Observations	1,660	1,660	1,660	1,660

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: This table presents the relationship between profit and level of foreign-language programming. In Column 1, the independent variable is the number of foreign-language programming, pooling all languages together. The next three columns show the top 3 languages separately, with the independent variable being the number of hours of Spanish, Polish, or Italian programming.

Figure 1: **Sample Annual Financial Report**



EXCLUDE CENTS AND ROUND TO NEAREST DOLLAR — Call letters WDIA

SCHEDULE 1. ANALYSIS OF STATION BROADCAST REVENUES

Line No.	Class of broadcast revenue (a)	Amount (b)	Amount (c)
1	A. REVENUE FROM THE SALE OF STATION TIME:	$	$
2	(1) Network -		
3	Sale of station time to networks:		
4	Sale of station time to major networks (before line or service charges)		
5	Sale of station time to regional networks (before line or service charges)		
6	Sale of other network time (before commissions and line charges)		
7	Total (lines 4 - 6)		-
8	(2) Non-network (after trade discounts but before commissions to agencies, representatives, and brokers, or cash discounts to advertisers and others) -		
9	Sale of station time to national and regional advertisers or sponsors	281823	
10	Sale of station time to local advertisers or sponsors	289444	
11	10)		571267
12	time (lines 7 and 11)		571267
13	in revenue from		
14	om sale of time)		
15	cash discounts) to shed agencies, repre- brokers but not to staff oyees	79879	
16			79879
17	ined from sale of station us line 16)		491388
18	EVENUES (after deduction		
19	under contract and commissions, rofits from obtaining or placing	3663	
20	aterial or service	1191	
21		8540	
22	Total incidental broadcast revenues (lines 19 - 21)		13394
23	Total broadcast revenues (lines 17 and 22)		498782

Note: If a joint AM-FM return is made, please indicate below what amount, if any, of total broadcast revenues is applicable separately to the FM station. FM Revenue $_____

(Page 2)

EXCLUDE CENTS AND ROUND TO NEAREST DOLLAR — Call letters WDIA

SCHEDULE 2. ...SES

Line No.	Class o...	Amount (b)
1	GENERAL CATEGORIES OF E...	$
2	Technical expenses	55133
3	Program expenses	88393
4	Selling expenses	108544
5	General and administrative	169898
6	Total broadcast expenses	421,968
7	SELECTED EXPENSE ITEMS (Subcategories of lines 2 - 5 above):	
8	Salaries and wages, including supervision	268,748
9	Depreciation and amortization	3,370
10	Film expenses	-
11	Transcriptions and recordings	27V
12	Cost of intercity and intracity program relay circuits	-
13	Cost of news services (other than salaries)	8,333
14	Talent expenses (musicians, artists, and other talent)	5,40V
15	Royalties and license fees relating to program material	16,278

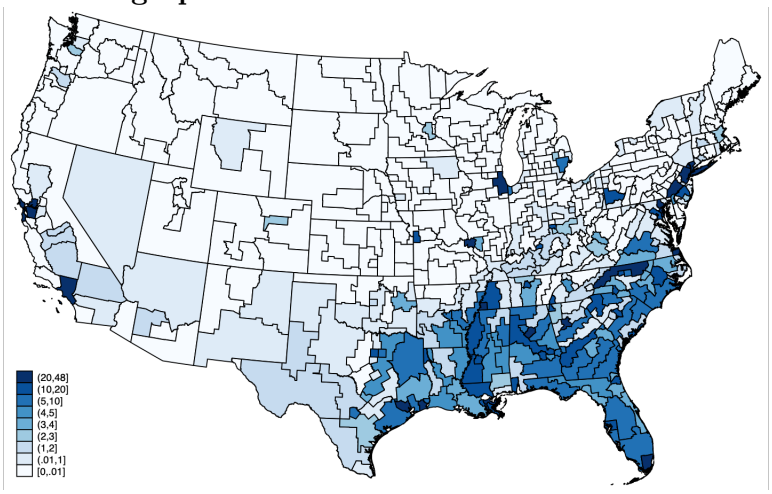
Note: Indicate the number of employees as at December 31 whose salaries and wages are includible on line 8:

Full time 37 Part time 1V Total 49

(Page 3)

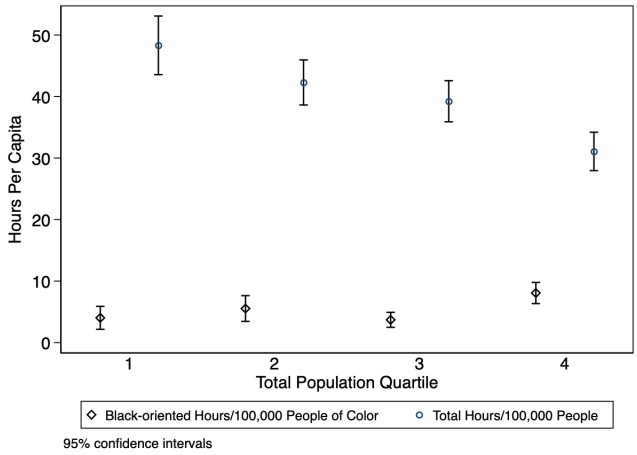
Notes: This figure presents a sample of annual financial reports held at the National Archives. As one of the measures to maximize the image quality, white paperweights were placed over areas with repetitive text to ensure that the pages laid flat.

Figure 2: **Geographical Distribution of Black-oriented Hours**



Notes: This figure plots the number of Black-oriented hours per day, aggregated across all stations, by State Economic Areas (SEAs).

Figure 3: **Hours by Population**

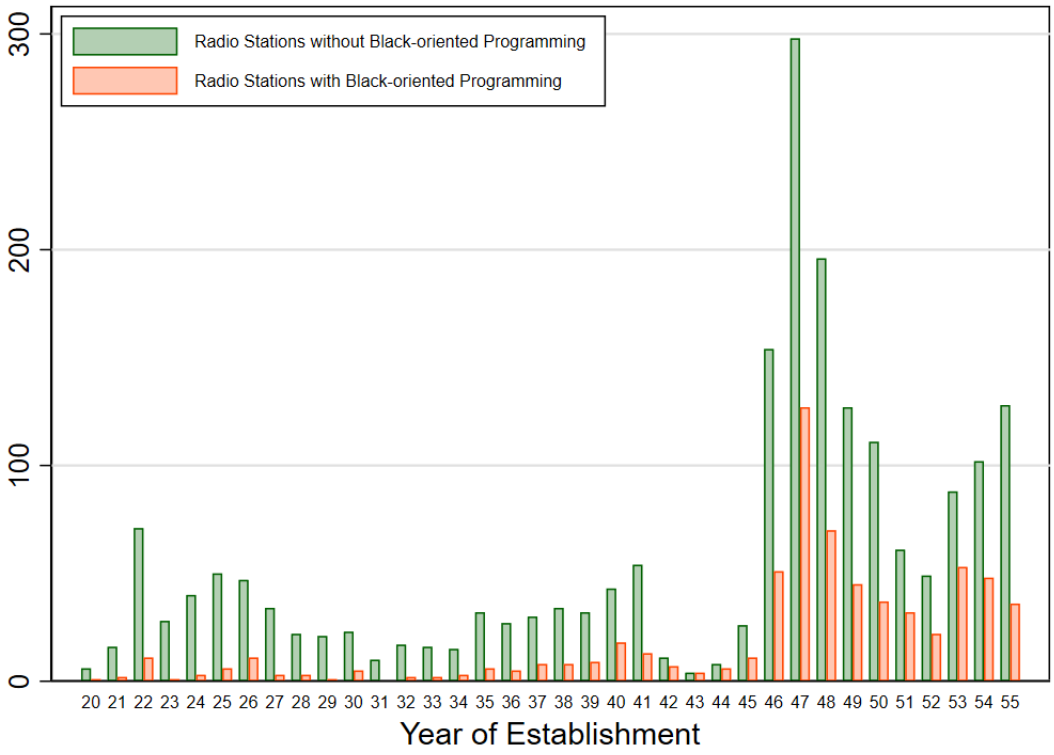


Notes: This figure plots 1) the number of Black-oriented programming hours per 100,000 nonwhite population and 2) the number of all programming hours per 100,000 total population for SEAs in different population quantiles. For general audience stations, this assumes around 16 hours/day of total programming per station for all stations.

Online Appendix: Not for Publication

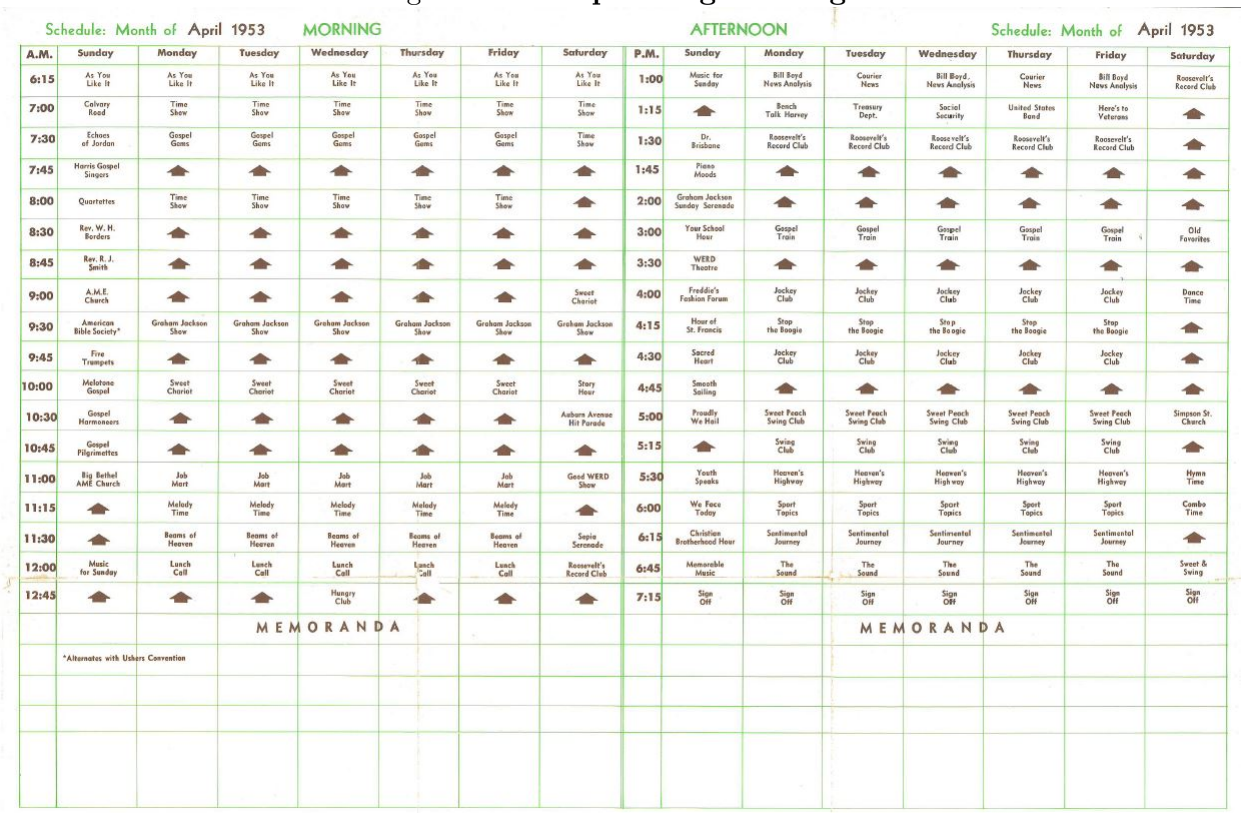
A Background Appendix

Figure A1: **Year of Establishment (as of 1955)**



Notes: This figure plots the year of establishment for stations that are operating in 1955, separately for stations with and without Black-oriented programming.

Figure A2: **Sample Programming**



Schedule: Month of April 1953 — MORNING

A.M.	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
6:15	As You Like It	As You Like It	As You Like It	As You Like It	As You Like It	As You Like It	As You Like It
7:00	Calvary Road	Time Show	Time Show	Time Show	Time Show	Time Show	Time Show
7:30	Echoes of Jordan	Gospel Gems	Gospel Gems	Gospel Gems	Gospel Gems	Gospel Gems	Time Show
7:45	Harris Gospel Singers	↑	↑	↑	↑	↑	↑
8:00	Quartettes	Time Show	Time Show	Time Show	Time Show	Time Show	↑
8:30	Rev. W. H. Borders	↑	↑	↑	↑	↑	↑
8:45	Rev. R. J. Smith	↑	↑	↑	↑	↑	↑
9:00	A.M.E. Church	↑	↑	↑	↑	↑	Sweet Chariot
9:30	American Bible Society*	Graham Jackson Show	Graham Jackson Show	Graham Jackson Show	Graham Jackson Show	Graham Jackson Show	Graham Jackson Show
9:45	Five Trumpets	↑	↑	↑	↑	↑	↑
10:00	Melotone Gospel	Sweet Chariot	Sweet Chariot	Sweet Chariot	Sweet Chariot	Sweet Chariot	Story Hour
10:30	Gospel Harmoneers	↑	↑	↑	↑	↑	Auburn Avenue Hit Parade
10:45	Gospel Pilgrimettes	↑	↑	↑	↑	↑	↑
11:00	Big Bethel AME Church	Job Mart	Job Mart	Job Mart	Job Mart	Job Mart	Good WERD Show
11:15	↑	Melody Time	Melody Time	Melody Time	Melody Time	Melody Time	↑
11:30	↑	Beams of Heaven	Beams of Heaven	Beams of Heaven	Beams of Heaven	Beams of Heaven	Sepia Serenade
12:00	Music for Sunday	Lunch Call	Lunch Call	Lunch Call	Lunch Call	Lunch Call	Roosevelt's Record Club
12:45	↑	↑	↑	Hungry Club	↑	↑	↑

MEMORANDA

*Alternates with Ushers Convention

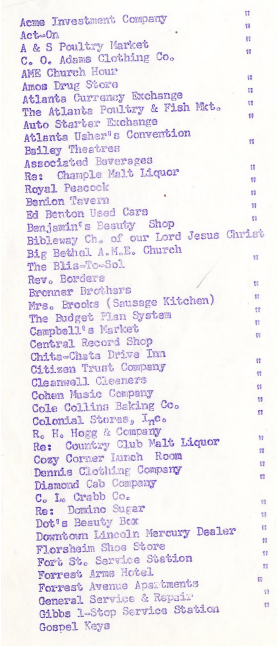
AFTERNOON — Schedule: Month of April 1953

P.M.	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1:00	Music for Sunday	Bill Boyd News Analysis	Courier News	Bill Boyd, News Analysis	Courier News	Bill Boyd News Analysis	Roosevelt's Record Club
1:15	↑	Bench Talk Harvey	Treasury Dept.	Social Security	United States Band	Here's to Veterans	↑
1:30	Dr. Brisbane	Roosevelt's Record Club	Roosevelt's Record Club	Roosevelt's Record Club	Roosevelt's Record Club	Roosevelt's Record Club	↑
1:45	Piano Moods	↑	↑	↑	↑	↑	↑
2:00	Graham Jackson Sunday Serenade	↑	↑	↑	↑	↑	↑
3:00	Your School Hour	Gospel Train	Gospel Train	Gospel Train	Gospel Train	Gospel Train	Old Favorites
3:30	WERD Theatre	↑	↑	↑	↑	↑	↑
4:00	Freddie's Fashion Forum	Jockey Club	Jockey Club	Jockey Club	Jockey Club	Jockey Club	Dance Time
4:15	Hour of St. Francis	Stop the Boogie	Stop the Boogie	Stop the Boogie	Stop the Boogie	Stop the Boogie	↑
4:30	Sacred Heart	Jockey Club	Jockey Club	Jockey Club	Jockey Club	Jockey Club	↑
4:45	Smooth Sailing	↑	↑	↑	↑	↑	↑
5:00	Proudly We Hail	Sweet Peach Swing Club	Sweet Peach Swing Club	Sweet Peach Swing Club	Sweet Peach Swing Club	Sweet Peach Swing Club	Simpson St. Church
5:15	↑	Swing Club	Swing Club	Swing Club	Swing Club	Swing Club	↑
5:30	Youth Speaks	Heaven's Highway	Heaven's Highway	Heaven's Highway	Heaven's Highway	Heaven's Highway	Hymn Time
6:00	We Face Today	Sport Topics	Sport Topics	Sport Topics	Sport Topics	Sport Topics	Combo Time
6:15	Christian Brotherhood Hour	Sentimental Journey	Sentimental Journey	Sentimental Journey	Sentimental Journey	Sentimental Journey	↑
6:45	Memorable Music	The Sound	The Sound	The Sound	The Sound	The Sound	Sweet & Swing
7:15	Sign Off	Sign Off	Sign Off	Sign Off	Sign Off	Sign Off	Sign Off

MEMORANDA

Notes: This figure presents the full program of WERD (one of the first 100% Black-oriented radio stations) in April 1953. This was retrieved from the Paul E.X. Brown WERD records, 1949-1955 at the Auburn Avenue Research Library (AARL) Archives.

Figure A3: **Sample Advertiser List**

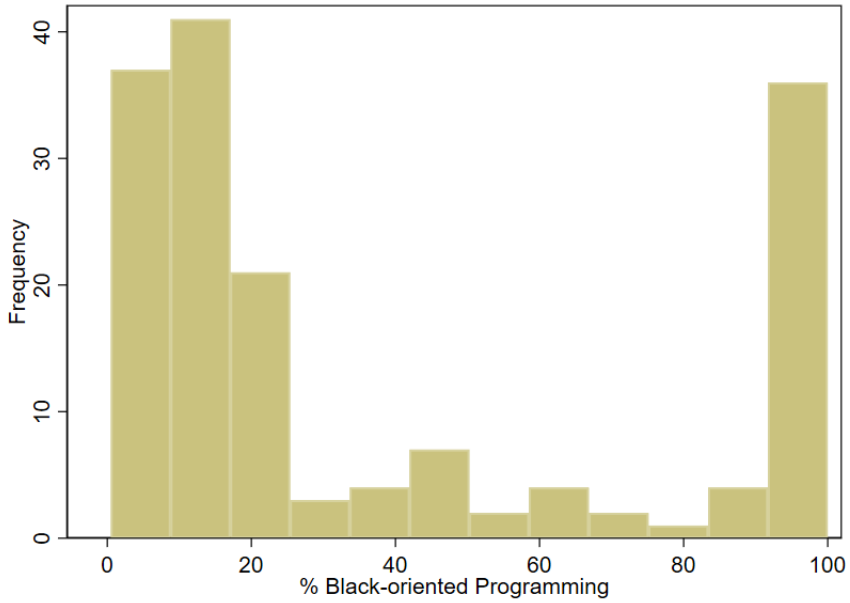


Acme Investment Company
Act-On
A & S Poultry Market
C. O. Adams Clothing Co.
AME Church Hour
Amos Drug Store
Atlanta Currency Exchange
The Atlanta Poultry & Fish Mkt.
Auto Starter Exchange
Atlanta Usher's Convention
Bailey Theatres
Associated Beverages
Re: Chample Malt Liquor
Royal Peacock
Benion Tavern
Ed Benton Used Cars
Benjamin's Beauty Shop
Bibleway Ch. of our Lord Jesus Christ
Big Bethel A.M.E. Church
The Blis-To-Sol
Rev. Borders
Brenner Brothers
Mrs. Brooks (Sausage Kitchen)
The Budget Plan System
Campbell's Market
Central Record Shop
Chita-Chata Drive Inn
Citizen Trust Company
Cleanwell Cleaners
Cohen Music Company
Cole Collins Baking Co.
Colonial Stores, Inc.
R. H. Hogg & Company
Re: Country Club Malt Liquor
Cozy Corner Lunch Room
Dennis Clothing Company
Diamond Cab Company
C. L. Crabb Co.
Re: Domino Sugar
Dot's Beauty Box
Downtown Lincoln Mercury Dealer
Florsheim Shoe Store
Fort St. Service Station
Forrest Arms Hotel
Forrest Avenue Apartments
General Service & Repair
Gibbs 1-Stop Service Station
Gospel Keys

Notes: This figure presents a list of sample advertisers for WERD (one of the first 100% Black-oriented radio stations). This was retrieved from the Paul E.X. Brown WERD records, 1949-1955 at the Auburn Avenue Research Library (AARL) Archives.

B Data Appendix

Figure A4: **Histogram of Percentage of Black-oriented Programming**



Notes: This figure plots the frequency of percentage of Black-oriented programming for Black-oriented stations, based on survey results reported in *Sponsor* in 1958.

C Results Appendix

Table A1: **Profit and Black-oriented Hours for Different Market Definitions**

(a) **State as a Market**

	(1) Profit ($)	(2) Profit ($)	(3) Profit ($)	(4) Profit ($)	(5) Profit ($)
Hours of	1129.5***	520.4***	1112.7***	1404.3***	826.2***
Black-oriented Programming	(141.0)	(179.5)	(176.2)	(169.3)	(215.3)
Year	1955-57	1955-57	1955	1956	1957
State FE	YES		YES	YES	YES
Station FE		YES			
Year FE	YES	YES			
Station Controls	YES		YES	YES	YES
Competition Controls	YES	YES			
Demographic Controls	YES	YES			
Sample Mean	9,188	9,816	9,652	9,673	8,364
Observations	5,807	5,411	1,718	1,963	2,126

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

(b) **County as a Market**

	(1) Profit ($)	(2) Profit ($)	(3) Profit ($)	(4) Profit ($)	(5) Profit ($)
Hours of	1040.4***	530.7***	1071.2***	1238.6***	790.4***
Black-oriented Programming	(171.7)	(193.1)	(211.6)	(210.5)	(238.8)
Year	1955-57	1955-57	1955	1956	1957
County FE	YES		YES	YES	YES
Station FE		YES			
Year FE	YES	YES			
Station Controls	YES		YES	YES	YES
Competition Controls	YES	YES			
Demographic Controls	YES	YES			
Sample Mean	9,187	9,816	9,707	9,744	8,424
Observations	5,798	5,411	1,665	1,904	2,066

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: This table presents the relationship between profit and level of Black-oriented programming for different market definitions. The dependent variable in all three columns is annual profits. Part (a) includes state fixed effects, and part (b) includes county fixed effects.

Table A2: **Profit and Black-oriented Programming (IHS tranformation)**

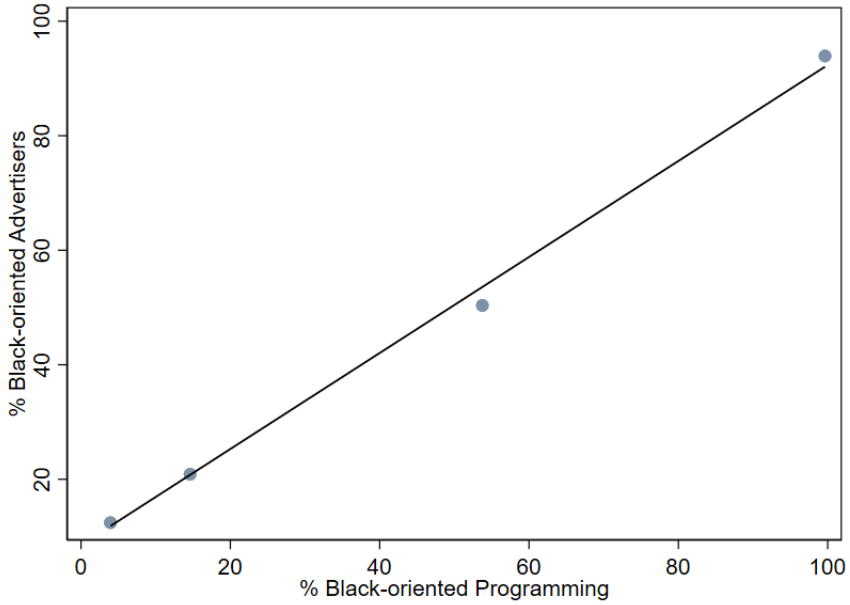
	(1) asinh(Profit)	(2) asinh(Profit)	(3) asinh(Profit)	(4) asinh(Profit)	(5) asinh(Profit)
Hours of	0.368***	0.206**	0.402***	0.385***	0.272***
Black-oriented Programming	(0.0617)	(0.100)	(0.0615)	(0.0726)	(0.0664)
Year	1955-57	1955-57	1955	1956	1957
Market FE	YES		YES	YES	YES
Station FE		YES			
Year FE	YES	YES			
Station Controls	YES		YES	YES	YES
Competition Controls	YES	YES			
Demographic Controls	YES	YES			
Sample Mean	4	5	5	4	4
Observations	5,801	5,411	1,652	1,915	2,083

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes: This table presents the relationship between profit and level of Black-oriented programming. The dependent variable in all three columns is annual profits with IHS transformation. Columns 1, 3, 4, and 5 include SEA FE and Column 2 includes call FE.

Figure A5: **Percentage Black-oriented Programming and Business from Black-oriented Advertisers**



Notes: This figure plots a binned scatterplot of percentage of revenue from Black-oriented advertisers against percentage Black-oriented programming, for the sample available in the special issue of *Sponsor* from 1958.