Discrimination and Media Diversity: Historical Evidence from U.S. Radio Stations

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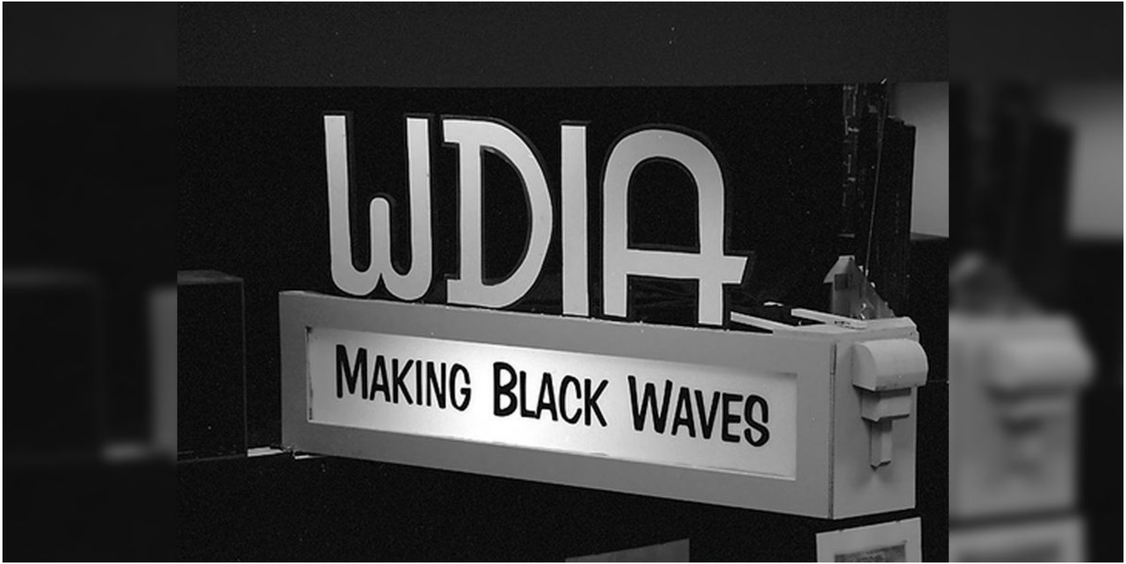
Black-oriented Radio

- Research question: does firm-owner discrimination affect the firm's programming decisions?
- Context: Black-oriented radio stations in post WWII US
- This project:
  - Derive a **test for firm-owner discrimination**: white owners leave money on the table by not catering towards African American audiences
  - Provide **evidence of firm-owner discrimination**: significant levels of Black-oriented content are correlated with higher profits
- Takeaway: incorrect beliefs/taste-based discrimination affect positioning (in addition to hiring) decisions, and this could lead to worse firm performance

Emergence of Black-oriented radio



Historical context

- In 1948, WDIA in Memphis, Tennessee became the first station to devote all its air-time to Black-oriented programming
- In mid 1950s, 20% of all radio stations had some Black-oriented programming
  - First time widespread Black-oriented content in American broadcast media
- Policy environment: FCC encourages competition and localism
- Almost all white owners
- Similar to general-audience (i.e. white-oriented) radio in format
- Difference: target audience and advertisers
  - Historically, consumer preference was closely associated with race (e.g. market for popular music)
  - Waldfogel (2003) documents differences in taste across race using radio data in 1997

Tests for discrimination

- Outcome test: Becker (1957, 1993), Knowles, Persico, and Todd (2001), Arnold, Dobbie, and Yang (2018)...
  - Look not just at the rate of decision, but also the success rate of those decisions
  - “If banks discriminate against minority applicants, they should earn greater profits on the loans actually made to them than on those to whites”
- Equivalent test in the media market: do firms choose programming that maximize their profit, irrespective of its race-orientation?
- Challenge: firm profitability is a function of other firms’ choices
  - Solution: free-entry equilibrium (FCC policies promoted competition)

Test for firm-owner discrimination

- Firm j's payoff function for entering into the market m with format f is:

$$V_f(N_B, N_W) = R_f(N_B, N_W; X_m) - FC_{mf} - EC_{mf}$$

- Free-entry equilibrium - firms enter until it becomes unprofitable for the marginal entrant

$$R_W(N_B, N_W + 1, X_m) - FC_{mW} < EC_{mW} < R_W(N_B, N_W, X_m) - FC_{mW}$$
$$R_B(N_B + 1, N_W, X_m) - FC_{mB} < EC_{mB} < R_B(N_B, N_W, X_m) - FC_{mB}$$

- If Black-oriented vs. white-oriented radio has different profitability, then they could have different entry cost (including non-pecuniary cost)
  - Possible to apply when both types exist
- Proposed test: does profitability differ by format after including market-level fixed effect

Related literature

- Two broad strands of literature: media markets and racial discrimination
- Radio: Berry and Waldfogel (1999a), Berry and Waldfogel (1999b), Berry and Waldfogel (2001), Siegelman and Waldfogel (2001), Waldfogel (2011), Berry et al. (2016a), Berry et al. (2016b), ...
  - Closely related to Berry et al. (2016) that looks at bias against preference minorities in 2005
- Causes and consequences of minority-oriented media content: Siegelman and Waldfogel (2001), George and Waldfogel (2003), Oberholzer-Gee and Waldfogel (2005), Wang (2020), Bernini (2020)
- Discrimination and firm performance: Hellerstein, Neumark and Troske (1999), Kawaguchi (2007), Weber and Zulehner (2014), Siegel, Pyun and Cheon (2016), Gompers and Wang (2017), Younkin and Kuppuswamy (2018), Huber et al. (2019), Ewens and Townsend (2020)
- Discrimination in post WWII US: Gil and Marion (2018, 2020), Cook et al. (2020)

Data

- **Broadcasting Yearbook**: industry magazine used as a source of information for station owners and advertisers
  - **Annual directory** of AM and FM radio stations across the US
  - Annual list of **“Stations with Negro Programming and Total Weekly Hours”** (starting from 1956 Yearbook)
  - Annual list of **“Stations Broadcasting Foreign Language Programs with Total Weekly Hours”** (starting from 1956 Yearbook)
- FCC **Annual Financial Reports**: station-level income statements
- **Sponsor**: magazine for advertisers
  - self-reported % of total business from Black-oriented advertisers
- Census data
- Electoral data

WDIA 1955 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	281 823	
10	Sale of station time to local advertisers … or sponsors	289 444	
11	… 10)		571 267
12	… time (lines 7 and 11)		571 267
13	… in revenue from		
14	… rom sale of time)		
15	… g cash discounts) to … shed agencies, repre- … brokers but not to staff … oyees	79879	
16	…		79 879
17	… ined from sale of station … us line 16)		491 388
18	… EVENUES (after deduction		
19	… under contract and commissions, … rofits from obtaining or placing …	3663	
20	… aterial or service	1191	
21	…	2540	
22	Total incidental broadcast revenues (lines 19 - 21) ..		7394
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 $______

EXCLUDE CENTS AND ROUND TO NEAREST DOLLAR — Call letters WDIA

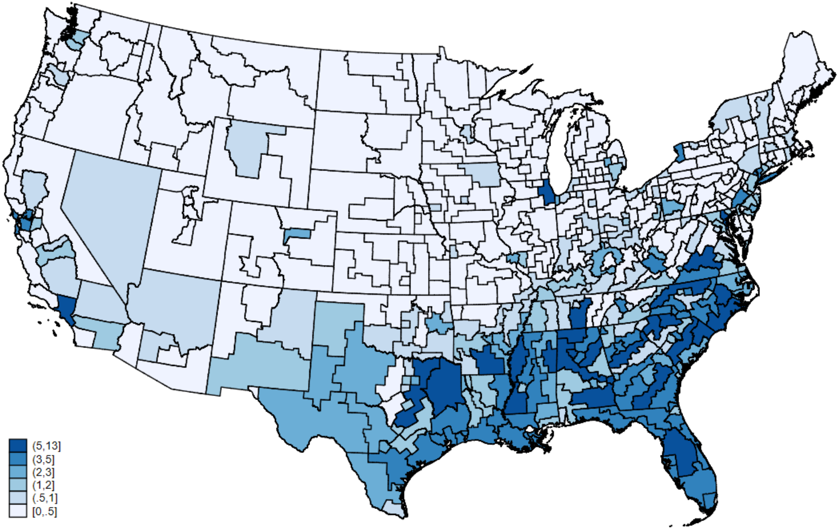
SCHEDULE 2. … NSES

Line No.	Class o…	Amount (b)
		$
1	GENERAL CATEGORIES OF E…	
2	Technical expenses .... …	55 133
3	Program expenses .... …	88 393
4	Selling expenses .... …	108 544
5	General and administrative …	169 898
6	Total broadcast expenses …	421,968
7	SELECTED EXPENSE ITEMS (Subcategories of lines 2 - 5 above):	
8	Salaries and wages, including supervision	263,748
9	Depreciation and amortization	3,370
10	Film expenses	–
11	Transcriptions and recordings	272
12	Cost of intercity and intracity program relay circuits	–
13	Cost of news services (other than salaries)	3,333
14	Talent expenses (musicians, artists, and other talent)	5,402
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:

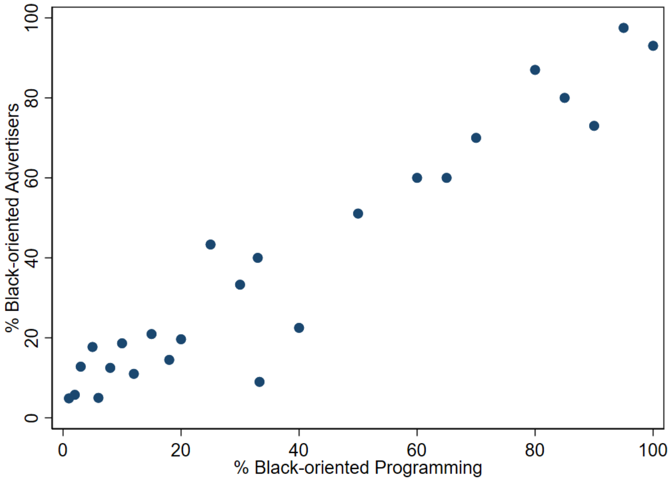
Full time 37 Part time 12 Total 49

Map of Stations with some Black-oriented programming



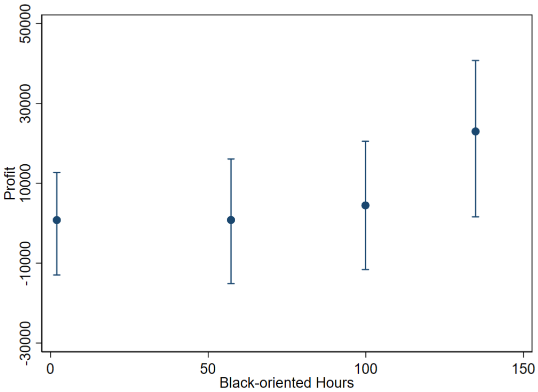
Programming and Black-oriented advertisers

- Black-oriented advertisers: e.g. investment company, poultry market, drug store, theaters, liquor, beauty shop...



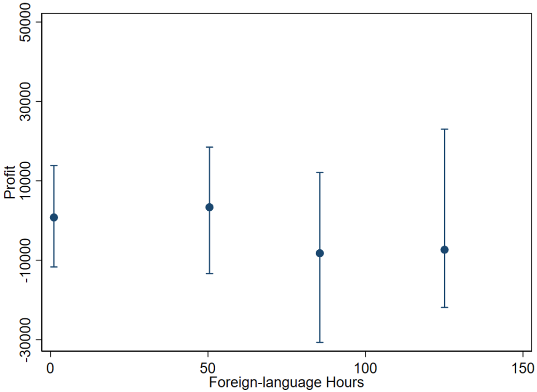
Fact 1 - significant Black-oriented programming correlated with significantly higher profit

- Apply the test with market-level FE
- Effect is large: 1955 median profit for a radio station was $7,000 and median income for men was $3,400



Fact 2 - similar pattern not observed for foreign language programming

- Foreign-language programming is another niche market that can be identified by demographic information
- No relationship for both pooled and individual languages



Market-level measure of racism: Dixiecrat vote share

- Use market-level % of votes for the States' Rights Democrat (Dixiecrat) candidate Thurmond in the 1948 presidential election
- Left the democratic party in order to support racial segregation in the South
- Won Louisiana, Mississippi, Alabama, and South Carolina
- Kuziemko and Washington (2018): conservative racial views strongly predict Democratic Party identification in the South

Fact 3 - higher profit residual in more racist markets

- Sub-sample of markets with non-zero Dixiecrat vote share
- Include market FEs, and hours interacted with controls for demographics

	(1)
	Annual Profit ($)
Hours of Black-oriented Programming	-393.5
	(939.0)
Hours of Black-oriented Programming × 1948 States' Rights Democratic Party vote share	3.433
	(1.806)
Market FE	YES
Demographics	YES
Observations	282

Standard errors in parentheses

Summary of empirical findings

- Radio stations that had significant Black programming generated higher profit than their counterparts
- The results are consistent with firm-owner discrimination – taste-based or incorrect beliefs

Contributions

- This paper:
  - Provides evidence that media firm owners are leaving money on the table
  - Consistent with taste-based discrimination or incorrect beliefs
- Large impact for firm profitability and availability of content for minorities in broadcast media
- Next steps: digitize and create a 20-year panel (TBC after National Archives re-opening)