American Idol: Evidence on Same-Race Preferences

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Abstract

This paper examines whether viewers of the popular television show, *American Idol*, exhibit racial preferences. We find evidence on same-race preferences among black viewers only; when there are more black contestants in the show, more black viewers are tuned in to watch it. The finding is robust after we account for the endogeneity problem regarding the contestants' racial composition, which arises due to the voting mechanism. Our point estimate tells that a 10 percentage point increase in the proportion of black contestants increases viewership ratings for black households by 1.3 percentage points. The results are robust after we control for the "color" of songs.

Keywords: Racial Preferences, Same-Race Preferences, TV Viewership Ratings, Voting.

1 Introduction

There are a number of empirical studies across disciplines on racial preferences, particularly "same-race preferences" – one favors others of his or her own race. In an early study, Hraba and Grant (1970) found, replicating the well-known doll experiment of Clark and Clark (1947), that children prefer a doll of their own color. Same-race preferences are also found in interpersonal relationships, such as high-school friendship (Hallinan and Williams, 1989), dating (Fisman, Iyengar, Kamenica and Simonson, 2008), and marriage (Wong, 2004). Holzer and Ihlanfeldt (1998) found that the racial composition of customers affects the race of new hires since business owners accommodate consumers' racial preferences, which is consistent with Becker's (1971) prediction that consumer preferences may give rise to racial discrimination.

This paper examines whether viewers of the television show, *American Idol*, exhibit same-race preferences. Looking at the television viewership ratings to test whether racial preferences exist is not a new empirical strategy. The idea is to look at "revealed preferences" rather than subjective responses. The previous studies consistently found that the racial composition of television appearances influences viewership ratings regardless of the type of program (Myers, 2008; Aldrich, Arcidiacono, and Vigdor, 2005; Kanzawa and Funk, 2001). The existence of racial preferences among television viewers shows not only cultural differences between races (Waldfogel, 2003) but also may yield unintended economic consequences for those who have stakes in the ratings (e.g. news anchors or professional sports players). Another important concern about racial preferences among viewers is that, if television program producers take viewers' preferences into account and accommodate their demand, minorities might be under-represented in those programs. This might have an impact on racial identity for the television generation.

Our main contribution to the literature is made by the novelty of our data and the unique format of the show. First, the earlier studies cannot test the existence of same-race preferences for each race separately because the aggregate data cannot tell whether the ratings are changed among whites or blacks or both. In contrast, we use the detailed ratings disaggregated by race. Same-race preferences do not necessarily exist for all races.

Second, following the previous studies, we examine how the racial composition of those who appear on television, i.e. the proportion of black singers in *American Idol*, affects the

program's viewership ratings. An econometric problem is that the racial composition of contestants is potentially endogenous because it is determined by viewers' public voting. It is therefore possible that viewers choose not only whether they will watch the show but also decide who will appear in the next show. This provides us with a unique opportunity to look at viewers' racial preferences disentangled from confounding factors such as television program producers' racial preferences or incentives to maximize the viewership ratings. In addition, the same feature of the show allows us to examine revealed racial preferences in a passive form (television watching) as well as in an active form (voting) at the same time within one context.[1]

To address the endogeneity problem, we use the instrumental variable (IV) estimation method. Our first IV is the racial composition of *viewers* for the previous week's show, which should have an impact on the voting outcome if there were same-race preferences in voting. The validity condition for the IV is that it is uncorrelated with unobservable determinants for the current week's viewing tendency of one race (e.g. white) conditional on the previous week's viewing tendency of the same race (a control variable). The condition is likely to be satisfied since the racial composition of viewers in the previous week is, after we condition it on the same week's viewing tendency of households of one race (e.g. white), determined by the same week's viewing tendency of households of the *other* race (i.e. black). We also use the interaction between the IV and the inverse of number of contestants as an additional IV given that, if any, the marginal effect of the racial composition of viewers on the racial composition of contestants should be proportionate to the inverse of total number of contestants since only one contestant is voted off every week. Our regression results show that a 10 percentage point increase in the proportion of black contestants increases the black household ratings by about 1.3 percentage points. Furthermore, our findings are robust when we control for the "color" of songs. We conclude that viewers take the racial composition of *contestants* into account, while the racial mix of *songs* does not concern them.

The remainder of this paper is organized as follows. Section 2 describes the basic frame-

[1]Racial preferences affect voting behaviors. Blacks are not only more likely to participate in voting when there is a black candidate, but also support candidates of their own race. Washington (2006) found that each black democrat candidate increases the voter turnout rate by 2 percentage points. Terkildsen (1993) conducted a field experiment where a random sample of adults is asked to evaluate fictitious candidates for governor with different skin colors and found that white voters discriminate against black candidates.

work of *American Idol* and presents our data. Section 3 presents a statistical model of television viewers' behavior, which embeds the hypothesis of same-race preferences and derives a simple equation for TV viewing tendency. Section 4 discusses our empirical findings. The endogeneity of the racial composition of contestants is tested and resolved by the two-stage least squares (2SLS) estimation method. Section 5 concludes.

2 Data

The television show, *American Idol*, originated from the British show *Pop Idol*, is a contest in which amateur singers compete with each other. Since the first season was televised in 2002, there have been seven seasons so far until 2008. The show became very popular immediately after the first season. About 8 percent of households watched season 1. It increased to 17 percent in season 5. More than 30 million Americans watched the final show of season 5. After season 5, the ratings have been decreasing, but the show is still very popular. The show has been, most of the time, the top program in the Nielsen Media's weekly TV ratings ranking. The program is very unusual in that it is equally popular among blacks and whites (Fisman *et al.*, 2008).

The format of the show is simple. Twelve finalists (ten in season 1), equally divided between men and women, are selected from thousands of applicants through early auditions and semifinals. Finalists are required to perform live songs from a common weekly theme. A common theme is given to ensure that contestants be judged based on performance, not on their selection of genre or style.

The show is nationally televised twice a week, on Tuesday and Wednesday. After each Tuesday show, people can vote for their favorite singer by sending text messages to or calling a toll-free number assigned to the contestant. They are allowed to vote as many times as they like for any number of contestants. Every week the contestant with the fewest votes is eliminated.

Our primary data are collected by the Nielsen Media Research. It measures the nationwide television viewership ratings by an electronic measurement system called the Nielsen People Meter. These machines are placed in a nationally representative sample of about 5,000

households, recording what program is being tuned. The data are available for all seven seasons including 144 individual shows.[2]

The raw data contain information on the numbers of total viewing households and black households. Thus we can compute the ratings for non-black households. We assume that most of non-black households are white because the show is not so popular among Hispanic people. The Nielsen Media Research provides the ratings for Hispanic households, but *American Idol* has never been ranked in top 10 programs for Hispanics. The show is very popular particularly among black people. The average rating for black households is 16.9%, while that for non-black households is 13.6%. Thus, the proportion of viewers who are black is about 15%.

Table 1 shows the ratings when the proportion of black contestants is higher or lower than its median, 1/3. When there are relatively more black contestants, the ratings for black households are relatively higher and, on the other hand, those for non-black households are slightly lower. The gaps are statistically significant at any standard significance level. This finding is consistent with the existence of same-race preferences.

Figure 1 shows the same pattern; the ratings for each race and the proportion of contestants of the same race are positively correlated. A simple linear regression shows that a 10 percentage point increase in the proportion increase the ratings by 1.1 and, in other words, attracts an additional 1.1% of black television households. For non-black households, the ratings are significantly lower in season 1 than the other seasons. After excluding season 1 (Figure 1.C), a 10 percentage point increase in the proportion of black contestants would decrease the ratings by 0.6.

Before proceeding to regression analysis, it is worthwhile to note that simple cross-sectional relationships found in Figure 1 prove the existence of same-race preferences. They show either a) as there are relatively more black contestants, there are more black viewers or b) a higher proportion of black viewers would keep more black contestants in the show since viewers would vote for their favorite contestants. Both explanations are consistent with same-race preferences.

[2]We exclude one week (2 shows) because a contestant was disqualified and so there was no voting.

3 Estimation

3.1 Viewing Tendency Equation

We consider an estimable structural model of viewership to examine how the racial composition of contestants affects households' television viewing behavior. Following Aldrich *et al.* (2005) and Waldfogel (2003), we specify the utility of household i of race r watching j-th show in season t as a linear function:

$$U_{irjt} = \beta_{r0} + \beta_{r1} R_{jt} + \beta_{r2} X_{jt} + \tau_{1rt} + u_{rjt} + \varepsilon_{irjt}, \tag{1}$$

where the last two terms, u_{rjt} and ε_{irjt}, represent unobservable preferences at the racial-group level and at the household level, respectively. As mentioned, we focus on two racial groups for which we can get the ratings; black and non-black (or white) groups. The vector X_{jt} includes the show's various characteristics, and τ_{1rt} represents race-specific seasonal dummies. The variable R_{jt} is our key variable, the proportion of black contestants. If there were same-race preferences, the coefficient for the proportion of black contestants should be positive for black households and negative for non-black households. This is a testable hypothesis given that we have the ratings data for each race separately.

Assuming that ε_{irjt}'s are iid logistic and that the utility of not watching is normalized to zero, the share of households watching the show among all households of the same race (the Nielsen ratings) is:

$$s_{rjt} = \frac{\exp(\beta_{r0} + \beta_{r1} R_{jt} + \beta_{r2} X_{jt} + \tau_{1rt} + u_{rjt})}{1 + \exp(\beta_{r0} + \beta_{r1} R_{jt} + \beta_{r2} X_{jt} + \tau_{1rt} + u_{rjt})}. \tag{2}$$

Taking the log of the ratio of the share choosing to watch over the share choosing not to watch yields the following estimable equation:

$$\ln(s_{rjt}) - \ln(1 - s_{rjt}) = \beta_{r0} + \beta_{r1} R_{jt} + \beta_{r2} X_{jt} + \tau_{1rt} + u_{rjt} \tag{3}$$

where the dependent variable is the natural logarithm of the ratio of viewing households to non-viewing households. Following Waldfogel (2003), we term this the "viewing tendency."

Lastly, we include the lagged value of the dependent variable (i.e. the previous week's viewing tendency) as a control variable to account for the possibility that there exists habit formation in television watching. As we will explain shortly, controlling for the lagged term is also important for our IV estimation.

3.2 Endogeneity of the Racial Composition of Contestants

A potential econometric problem with estimating the viewing tendency equation by OLS is that the proportion of black contestants might be endogenous since viewers in the previous week may affect the current week's racial composition of contestants through the voting mechanism. We resolve the problem by the instrumental variable estimation method. We estimate the first-stage regression equation for the proportion of black contestants:

$$R_{jt} = \alpha_0 + \alpha_1 X_{jt} + \alpha_2 Z_{j-1,t} + \alpha_3 (Z_{j-1,t} \times \frac{1}{a_{jt} + w_{jt}}) + \tau_{2t} + u_{1jt}, \tag{4}$$

where the vector X_{jt} includes the show characteristics and τ_{2t} represents seasonal dummies. There are two instrumental variables, $Z_{j-1,t}$ and $Z_{j-1,t} \times \frac{1}{a_{jt}+w_{jt}}$, which determine R_{jt} but should be uncorrelated with the primary equation error term, u_{rjt} in equation (3). The first instrumental variable is the share of black viewers for the previous week's Tuesday show. The idea is that the racial composition of contestants is determined by the public voting from viewers. Each week's voting begins immediately after the Tuesday show and ends after only a few hours. Thus, it seems reasonable to assume that most voters are the Tuesday show's viewers. If viewers prefer contestants of their own race, they should vote for those of the same race. The racial composition of viewers for the Tuesday show would affect the race of the contestant who is voted off on Wednesday and changes the racial composition of contestants for the next week's shows.[3] The instrumental variable is predetermined and

[3]Note that the ideal instrumental variable is the racial composition of votes, not that of viewers. The results below should be accepted with caution with regards to the proxy variable. First, viewers do not necessarily participate in voting; those who watched the show might not vote, while those who did not watch could vote. However we expect that the two variables should be strongly and positively correlated. The correlation should be strong when the number of votes per viewer is similar between blacks and whites. Second, since one is allowed to vote as many times as he or she likes, what we need is the count of votes (not voters). The proxy variable is only valid under the assumption that the number of votes per viewer is

should be uncorrelated with the error term in the main equation conditional on control variables including the previous week's viewing tendency. Conditional on the previous week's viewing tendency for one race, a change in the racial composition of viewers should arise due to a change in the ratings of the other race. The instrumental variable is valid as long as the change in the ratings of the other race (e.g. white) in the previous week does not directly affect the current week's viewing tendency of the original race (e.g. black).

The second instrumental variable is the interaction term between $Z_{j-1,t}$ and the inverse of the number of remaining contestants. Since only one contestant is voted off every week, the impact of the voting outcome on the racial composition of contestants varies over weeks depending on the number of contestants. Let $a_{j-1,t}/(a_{j-1,t}+w_{j-1,t})$ denote the proportion of black contestants in the previous week ($a_{j-1,t}$ is the number of black contestants, and $w_{j-1,t}$ is the number of non-black contestants). If a black contestant is voted off in the previous week (it is announced on Wednesday), then the proportion of black contestants in the current week (both Tuesday and Wednesday) becomes $(a_{j-1,t}-1)/(a_{j-1,t}-1+w_{j-1,t})$. On the other hand, if a non-black contestant is voted off, the proportion becomes $a_{j-1,t}/(a_{j-1,t}+w_{j-1,t}-1)$. The differential in the proportion depending on which race is voted off is $1/(a_{j-1,t}-1+w_{j-1,t}) = 1/(a_{jt}+w_{jt})$, which is the inverse of the number of surviving contestants. That is, if there were same-race preferences, then the racial composition of viewers should affect the race of the contestant voted off and, furthermore, the size of the impact should be proportionate to the inverse of the number of surviving contestants. Thus the interaction term between the share of black viewers in the previous week and the inverse of the number of contestants can serve as an additional instrumental variable.

Our instrumental variables are motivated by the fact that the racial composition of viewers determines the race of the contestant who is voted off. To check the assumption, we estimate a simple model of racial voting in which the race of the contestant who is voted off depends on the racial composition of voters. We estimate a Probit model where the dependent variable is whether a black contestant is voted off. The key independent variable is the share of black viewing households. The proportion of black contestants is included as a control variable because a black is more likely to be eliminated when there are more blacks. If all contestants

constant across shows.

are equally talented and if voters have no racial preferences, the voting outcome should be randomly decided and the probability in which a black contestant is eliminated should equal the proportion of blacks. In this case, the marginal effect of the proportion of black contestants equals one, while the coefficient for the racial composition of viewers is zero.[4]

Table 2 shows the results. The sample is restricted to those shows in which at least one black contestant remains. In column (1) we find that the share of black viewers significantly decreases the probability with which a black contestant is voted off.[5] An increase of the share of black viewers by 1 percentage point decreases the probability by 14 percentage points. We also find that the proportion of black contestants significantly increases the probability that a black is voted off. The marginal effect is statistically different from one. It is about 5 times larger than what would be under the hypothesis of random voting or race-blind voting. This indicates that black contestants are significantly more likely to be voted off. This might be because black contestants perform less well or they are less popular.

We have assumed that viewers of Tuesday shows represent voters. To check this assumption, in column (2), we estimate the same Probit model by using Wednesday viewers. This can be said to be a placebo test. We find no significant effect of the racial composition of Wednesday viewers on the voting outcome.

[4]Alternatively the marginal effect might reflect a racial gap in performance quality. If it is greater than one, it suggests that black contestants are generally more likely to be voted off.

[5]The finding is in contrast with the previous findings from another television show *Weakest Link* (Levitt 2004, Antonovics *et al.* 2005) where they find no evidence for racially-discriminatory voting behavior. There are at least two possible explanations. First, the main difference between *American Idol* and *Weakest Link*, which derives the contrasting results, is anonymity. In the latter show who voted against whom is completely revealed, so a stigma attached to racist views would affect voting decision. As Levitt (2004) explains, "contestants may shy away from targeting Blacks on a nationally televised program." On the other hand, in *American Idol*, voters are free to reveal their true preferences under anonymity. Second, contestants in *Weakest Link* vote in order to maximize their own expected prize, while voters for *American Idol* do not have such a direct pecuniary incentive. Thus those in the first show, even if they had racial preferences, should face a trade-off between money and their preferences for the race of their competitors, while *American Idol* voters express their preferences virtually at no cost.

4 Empirical Findings

4.1 IV Estimation Results

Table 3 shows the instrumental variable estimation results. The ratings might be correlated on the unobservables between Tuesday and Wednesday shows within weeks. Thus the standard errors are adjusted for clustering by weeks. The first-stage regression results in the first column show that a higher share of black viewers in the previous week's Tuesday show increases the proportion of black contestants in the current week. This is consistent with our expectation based on the empirical model of voting.[6] As we expected, the interaction term between the proportion and the inverse of total number of contestants is also significant and positive. The marginal impact of the proportion of black contestants is larger when there are fewer remaining contestants. A 1 percentage point increase in the share of black households will increase the proportion of black contestants by 4.3 percentage points when there are six contestants. The instrumental variables are significant in the first-stage equation accounting for about 20% of the R squared. The F-statistic is greater than 10. Lastly, the test of overidentifying restrictions cannot reject the validity of the instrumental variables.

The second-stage regression results show that the racial composition of contestants significantly changes the viewership ratings, particularly black households'. We recover the marginal effect on the ratings with respect to the proportion of black contestants using the following formula:

$$\frac{\partial}{\partial R_{jt}}\left(\ln(s_{rjt}) - \ln(1 - s_{rjt})\right) = \left(\frac{1}{s_{rjt}} + \frac{1}{1 - s_{rjt}}\right)\frac{\partial s_{rjt}}{\partial R_{jt}} = \frac{1}{1 - s_{rjt}}\frac{1}{s_{rjt}}\left(\frac{\partial s_{rjt}}{\partial R_{jt}}\right). \quad (5)$$

For black households, at the average ratings (0.169), the marginal effect is 0.936*(1-0.169)*0.169 = 0.131. This point estimate tells that a 10 percentage point increase in the proportion of black contestants raises the ratings by 1.3 percentage points. This amounts to 177,000 black households in 2008. For example, suppose that there is one black contestant among the top 3 and he or she advances to the final two. This transition implies a 16.7 percentage point increase in the proportion of black contestants. This will raise the black ratings by 2.2 per-

[6] We do not interpret other variables because the first stage equation has no structural meaning.

centage points or about 300,000 additional households. If there is no significant change in the non-black household ratings, this increases the total ratings by about 0.3 percentage point. It is interesting to compare our estimate with that of Kanzawa and Funk (2001). They found that an additional white player (a 16.7% increase in the proportion of white players), who is a minority in the sport, increases the ratings by 0.54 percentage point.

We found a significant effect of the racial composition of contestants on black household ratings while there is no significant impact on non-black ratings. This is an interesting but not surprising finding. Indeed some previous studies found that same-race preferences only exist among black or minority people. McCrary (1993) found that black listeners' preference ratings for taped music examples differ by performers' race while non-black listeners' ratings do not. Saha *et al.* (2000) found that minority patients prefer to choose physicians of their own race. McCormick and Tollison (2001), using the data on team racial composition and attendance for professional basketball, found that black fans have a preference for black players, while there is no strong evidence on same-race preference among white fans.

There are at least two explanations for our finding. First, the existence of same-race preferences among black viewers for this *particular* program might be a consequence of under-representation of minority people on television (Greenberg *et al.*, 2002). If this is the case, what we found is black viewers' tastes for diversity rather than same-race preferences. That is, black viewers like to watch the program when there are more black contestants or like to keep more blacks on the show while they also watch other programs where white appearances dominate. For minority viewers, it is difficult to disentangle same-race preferences from preferences for diversity or a balanced mix of races. On the other hand, white viewers might not be concerned about the racial composition of television appearances because their same-race preferences are satisfied by watching other white-dominant programs or they might even like to watch blacks in the program if their tastes for diversity are sufficiently strong.

Second, our finding is also consistent with a strong racial identity among blacks. There is evidence that blacks have a stronger group identity than other races. Hraba and Grant (1970) replicated the same doll experiment of Clark and Clark (1947) and, in contrast to the earlier study, found that black children prefer dark skin dolls. They argue that black children have recently become more proud of their race. This is in harmony with the trend that Fryer

and Levitt (2004) found about how black people name their children. They attributed the increasing popularity of distinctively black first names during the early 1970s to the Black Power movement and enhanced racial identity among blacks. McCormick and Tollison, cited above, found that black people's own-race preferences exist only in black-dominant residential areas. Blacks in those areas are likely to have strong racial identity than blacks in white areas or mixed race areas. Higher levels of racial self-esteem might make blacks prefer to watch more television appearances from their own group and to see them winning the contest. It is not surprising to find no same-race preferences among whites because own-race preferences among blacks historically resulted from their minority status.

4.2 Controlling for Color of Songs

Our main finding is that black viewers prefer to watch contestants of the same race. One reason might be that they tend to sing songs that their potential supporters favor. To check this, first, we looked at whether black idols are relatively more likely to select songs originally performed by black artists. We examined 623 songs performed during the final rounds. We ran a simple regression where the dependent variable is the dummy variable which equals one when the song's original performer is black and zero otherwise. We found:

$$\begin{array}{c} 1[\text{Original Singer } = \ \textit{Black}] = 0.276 + 0.205 \cdot 1[\text{Idol} = \textit{Black}] \quad \text{for N} = 623 \\ \qquad\qquad\quad (12.1) \quad (5.16) \end{array} \tag{6}$$

where t-statistics are in parentheses. The regression shows that black contestants are more likely to select songs that were originally performed by black artists. If we exclude those weeks with strong racial themes (e.g. Elton John, Stevie Wonder, or Motown) where the racial mix of songs is either zero or one (see Appendix Table 1 for weekly themes and the proportion of black songs performed), then the relationship gets stronger. Although many explanations are possible, this might simply show that they select these songs because they can sing them better.

The question is whether the "color" of songs affects viewers. The question is legitimate

in that there exist sharp differences in cultural tastes between races (Waldfogel, 2003). To check this, we estimate equation (3) again with a new variable included; the proportion of black songs on the Tuesday (performance) show. There is no individual performance on the Wednesday (result) show. Table 4 shows the results for the new variable as well as our main variable. It turns out that the new variable is not significant for both races.[7] This shows that viewers do not care about the color of songs they perform. One possible explanation is that since a common weekly theme is given to contestants, the songs they perform are of similar styles regardless of original performers' races.

5 Conclusion

The contestants on *American Idol* should be judged solely based on talent and performance on stage, independently of their race. We found evidence for the existence of same-race preferences among black television viewers. One caveat is that we cannot generalize our findings. *American Idol* viewers are not representative of the general population. Since its start, the show has almost always been the most watched program in the U.S. In 2008, more than 31 million people watched the season finale. Nevertheless, those viewers (particularly, those who participate in voting) are more likely to be teenagers and female.

It is still questionable whether these preferences revealed by television viewing behaviors translate into racial discrimination in the labor markets. It is, however, true that we have not found any reasonable cause but pure preferences for certain social problems like hate crimes and taboos against interracial relationships. More studies are needed to assess the relationships between racial preferences and discrimination in various contexts.

[7]The signs are, however, consistent with our expectation. As there are relatively more black songs, more black households watch the show while there are fewer non-black viewers. The results are similar when we use the number of black songs rather than the proportion.

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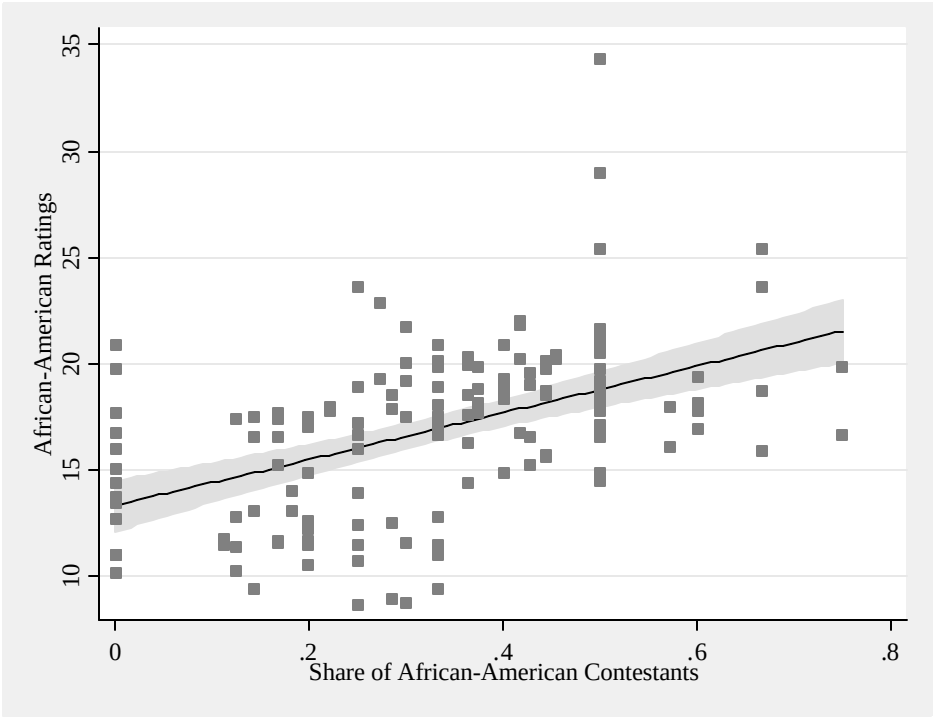
Table 1. *American Idol* Viewing Households from 2002 to 2008

	Proportion of Black contestants <= 1/3			Proportion of Black contestants > 1/3		
	Mean	Min	Max	Mean	Min	Max
All household ratings (%)	13.92 (3.69)	5.5	20.5	14.03 (2.31)	6.4	20.3
Black household ratings (%)	14.81 (3.64)	8.7	23.6	18.57 (3.43)	9.4	34.3
Share of Black households	0.13 (0.04)	0.08	0.26	0.16 (0.03)	0.09	0.24
Number of Black viewing households (millions)	1.949	1.082	3.108	2.412	1.663	4.380
Number of shows =	64			80		

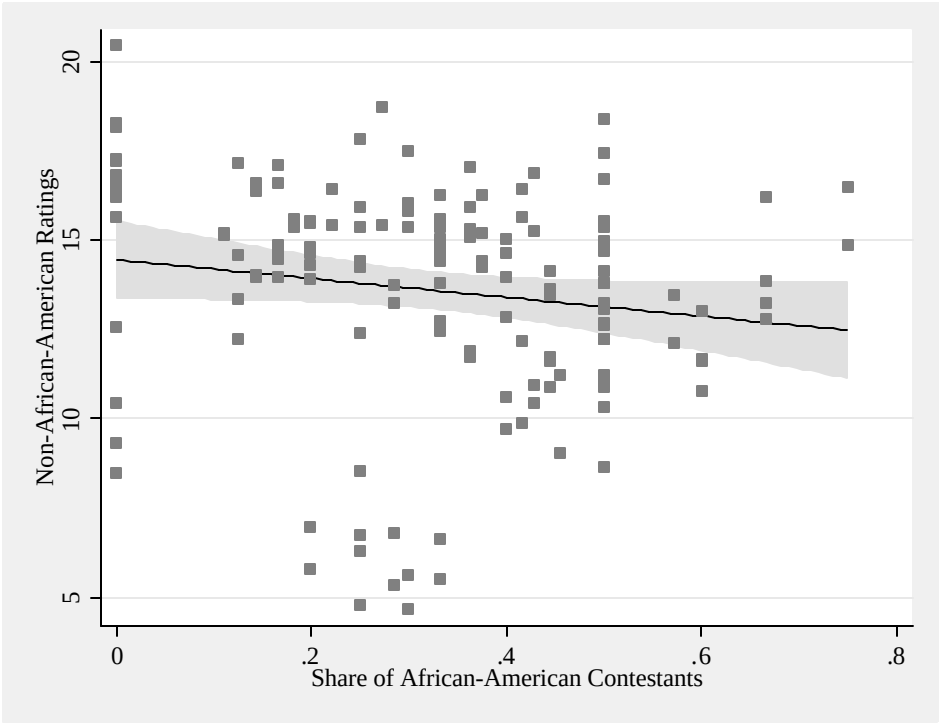
Note: Standard deviations are in parentheses. The Nielsen ratings are the percentages of viewing households among television households in each racial group.

Figure 1. Proportion of Black Contestants and TV Ratings by Race (144 Individual Episodes from Season One to Seven)

A. Black Household Ratings (%)



B. Non-Black Household Ratings (%)



C. Non-Black Ratings except Season One (%)

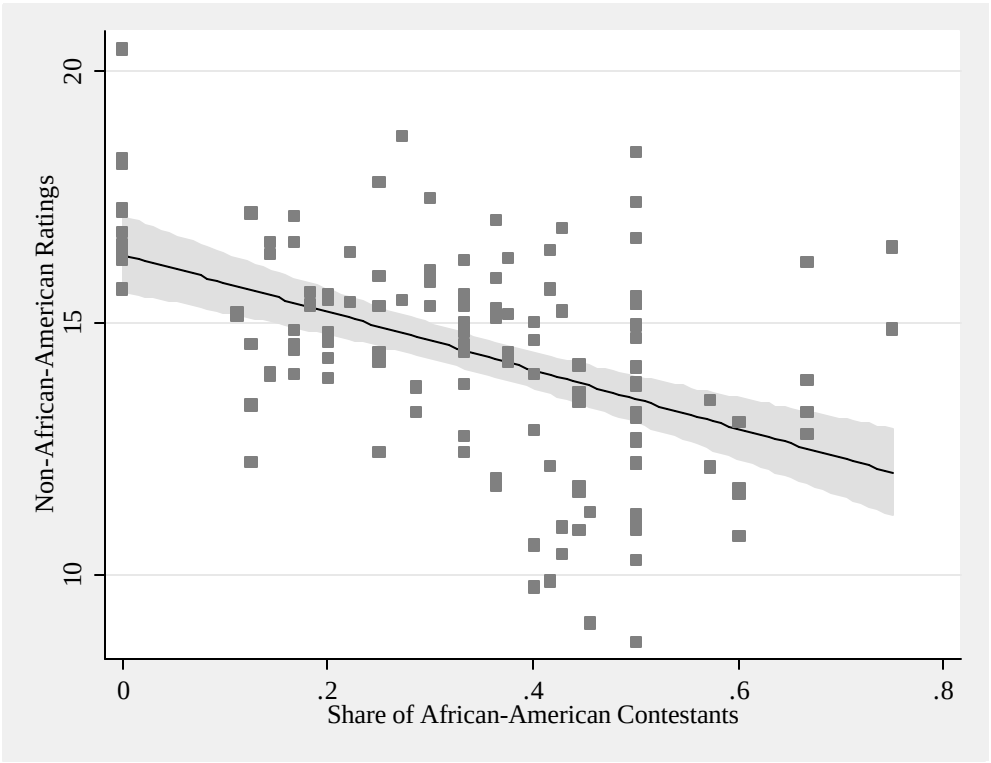


Table 2. Probit Model of Voting

(The dependent variable is an indicator of whether a Black contestant is voted off)

	(1) *Tuesday Viewers*	(2) *Wednesday Viewers* (Placebo Test)
Proportion of Black contestants	5.395	4.696
	(0.981)	(0.819)
Whether a Black contestant was voted off	0.318	0.240
at the previous week	(0.242)	(0.234)
Total number of remaining contestants	0.022	0.016
	(0.051)	(0.045)
Share of Black viewers	-14.186	-1.360
(*Tuesday* or *Wednesday*)	(5.025)	(4.345)
Season 2	-0.423	-0.517
	(0.039)	(0.055)
Season 3	-0.562	-0.561
	(0.036)	(0.082)
Season 4	-0.299	-0.299
	(0.054)	(0.205)
Season 5	0.047	0.193
	(0.152)	(0.472)
Season 6	-0.774	-0.692
	(0.129)	(0.203)
Season 7	-0.317	-0.014
	(0.087)	(0.568)
Hypothesis of Random Voting (p-value)	$p < 0.01$	$p < 0.01$
Pseudo *R* squared	0.344	0.314

* *Note:* N = 57 in each column. The sample is restricted to those shows in which there is at least one Black contestant. Marginal effects are evaluated at the sample means. Robust standard errors are calculated, adjusted for clustering by Seasons.

Table 3. Viewing Tendency Equation: IV-2SLS Estimation
(The dependent variable is $\ln(s_{rjt}) - \ln(1 - s_{rjt})$)

	Non-Black		Black	
	1st Stage	2nd Stage	1st Stage	2nd Stage
Proportion of Black contestants		-0.069		0.936
		(0.203)		(0.355)
Lagged viewing tendency	-0.172	0.213	0.084	-0.007
	(0.067)	(0.128)	(0.063)	(0.127)
Number of contestants	-0.097	-0.069	-0.071	-0.104
	(0.069)	(0.020)	(0.069)	(0.040)
Number of contestants squared	0.004	0.004	0.002	0.008
	(0.004)	(0.001)	(0.004)	(0.003)
Tuesday show (performance show)	-0.015	0.080	-0.0005	-0.008
	(0.007)	(0.024)	(0.003)	(0.025)
Season Finale	-0.005	0.216	0.002	0.338
	(0.024)	(0.062)	(0.023)	(0.074)
Season 2	0.275	0.434	0.126	0.360
	(0.062)	(0.116)	(0.060)	(0.102)
Season 3	0.436	0.526	0.274	0.247
	(0.063)	(0.140)	(0.062)	(0.101)
Season 4	0.295	0.627	0.106	0.425
	(0.072)	(0.140)	(0.077)	(0.074)
Season 5	0.255	0.768	0.044	0.533
	(0.077)	(0.158)	(0.079)	(0.086)
Season 6	0.536	0.714	0.331	0.238
	(0.082)	(0.168)	(0.084)	(0.121)
Season 7	0.354	0.614	0.210	0.029
	(0.077)	(0.139)	(0.077)	(0.057)
Share of Black viewers at the previous week's Tuesday show	4.059		4.140	
	(1.001)		(1.000)	
Share of Black viewers at the previous week's Tuesday show × (1/number of contestants)	1.159		1.150	
	(0.598)		(0.600)	
Constant	3.764	-1.735	4.383	-1.954
	(0.962)	(0.344)	(0.864)	(0.240)
Adjusted *R* squared	0.754	0.884	0.750	0.739
Partial R squared of instruments	0.207		0.206	
F-Test of excluded instruments (p-value)	10.29		11.35	
	($p < 0.001$)		($p < 0.001$)	
1% increase in the share of Black viewers at the previous week's Tuesday show when number of contestant = 6	0.043		0.043	
Hansen J statistic (p-value)		p = 0.262		p = 0.659

* *Note:* N = 130. Robust standard errors, adjusted for clustering by weeks, are in parentheses.

Table 4. Does Color of Songs Matter?
(The dependent variable is $\ln(s_{rjt}) - \ln(1 - s_{rjt})$)

	Non-Black 2nd Stage	Black 2nd Stage
Proportion of Black contestants	-0.069	0.929
	(0.306)	(0.358)
Proportion of Black songs	-0.020	0.020
	(0.037)	(0.046)
Adjusted *R* squared	0.885	0.740
Hansen J statistic (p-value)	p = 0.249	p = 0.676

* *Note:* N = 130. Robust standard errors, adjusted for clustering by weeks, are in parentheses. In each column, control variables in Table 3 are also included.

Appendix Table 1. Weekly Themes

Season	Round	Song Theme	Proportion of Black Songs
1	10	Motown	100%
1	8	1960s	75%
1	7	1970s	86%
1	6	Big Band	33%
1	5	Burt Bacharach Love Songs	50%
1	4	1980s and 1990s	63%
1	3	Contestants' Choice and Judges' Choice	17%
1	2	Finale	33%
2	12	Motown	92%
2	11	Movie Soundtracks	36%
2	10	Country Rock	10%
2	9	Disco	78%
2	8	Billboard Number Ones	25%
2	7	Billy Joel	0%
2	6	Diane Warren	17%
2	5	1960s/Neil Sedaka	20%
2	4	Bee Gees	0%
2	3	Random, Judges' Choice, and Contestants' Choice	56%
2	2	Finale	33%
3	12	Soul	92%
3	11	Country	0%
3	10	Motown	100%
3	9	Elton John	0%
3	8	Movie Soundtracks	25%
3	7	Barry Manilow	0%
3	6	Gloria Estefan	0%
3	5	Big Band	40%
3	4	Disco	63%
3	3	Judges' Choice, Contestants' Choice, and Clive's Choice	67%
3	2	Finale	33%
4	12	1960s	50%
4	11	Billboard Number Ones	27%
4	10	1990s	40%
4	9	Classic Broadway	0%
4	8	Songs from Birth Year	25%
4	7	1970s Dance Music	71%
4	6	21th Century	17%
4	5	Lieber & Stoller/Current week Billboard Chart	50%
4	4	Country/Gamble & Huff	50%
4	3	Judges' Choice, Contestants' Choice, and Clive's Choice	33%
4	2	Finale	17%
5	12	Stevie Wonder	100%
5	11	1950s	45%
5	10	2000s	10%
5	9	Country	0%
5	8	Queen	0%

5	7	Great American Songbook	71%
5	6	Love Songs	50%
5	5	Songs from Birth Year/Current Billboard Top 10	30%
5	4	Elvis Presley	0%
5	3	Judges' Choice, Contestants' Choice, and Clive's Choice	44%
5	2	Songs previously performed by Contestants/Original Song for American Idol 5	17%
6	12	Diana Ross	100%
6	11	British Invasion - Peter Noone and Lulu	9%
6	10	No Doubt and Songs by Singers who inspired Gwen Stefani	20%
6	9	American Classics - Tony Bennett	0%
6	8	Latin - Jennifer Lopez	0%
6	7	Country - Martina McBride	0%
6	6	Inspirational Songs - Bono	17%
6	5	Bon Jovi - Jon Bon Jovi and David Bryan	0%
6	4	Songs written by Barry Gibb	0%
6	3	Judges' Choice, Contestants' Choice, and Producers' Choice	44%
6	2	Contestants' Choice, Song previously performed by Contestants, and Winning Song of the American Idol Song Writer Contest	33%
7	12	Lennon/McCartney Songbook	0%
7	11	The Beatles	0%
7	10	Songs from Birth Year	30%
7	9	Dolly Parton	0%
7	8	Inspirational Songs	13%
7	7	Mariah Carey	100%
7	6	Andrew Lloyd Webber	0%
7	5	Neil Diamond	0%
7	4	Rock and Roll Hall of Fame	25%
7	3	Judges' Choice, Contestants' Choice, and Producers' Choice	22%
7	2	Clive's Choice, Contestants' Choice, and Contestants' Choice from the American Idol Songwriting Contest 2008	0%