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**FROM APPRENTICE TO PRESIDENT?
ENTERTAINMENT TV AND US
ELECTIONS**

Karsten Mueller and Carlo Schwarz

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Abstract

This paper studies whether Donald Trump's role as host of the popular TV show "The Apprentice" increased his vote share in the 2016 and 2020 elections. We find a positive correlation between TV ratings of The Apprentice and the county-level Republican vote share, but this correlation vanishes once we control for pre-existing voting and NBC viewership patterns. This null effect is robust to different model specifications, measures of exposure to The Apprentice, and an extensive investigation of heterogeneous effects. Viewership of The Apprentice is also unrelated to Congressional election results and support for Trump in survey data or the Republican primaries.

JEL Classification: L82, D72

Keywords: Elections, Entertainment TV, The Apprentice

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From Apprentice to President? Entertainment TV and US Elections*

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November 1, 2022

Abstract

This paper studies whether Donald Trump’s role as host of the popular TV show “The Apprentice” increased his vote share in the 2016 and 2020 elections. We find a positive correlation between TV ratings of The Apprentice and the county-level Republican vote share, but this correlation vanishes once we control for pre-existing voting and NBC viewership patterns. This null effect is robust to different model specifications, measures of exposure to The Apprentice, and an extensive investigation of heterogeneous effects. Viewership of The Apprentice is also unrelated to Congressional election results and support for Trump in survey data or the Republican primaries.

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1 Introduction

There is extensive evidence that television can affect people’s voting decisions. For example, exposure to Fox News has been estimated to increase the vote share of the Republican party since the early 2000s (DellaVigna and Kaplan, 2007; Martin and Yurukoglu, 2017). However, news programs account only for a small fraction of the time people spend watching TV; entertainment programs are much more popular. Previous work has found that entertainment TV can affect outcomes such as family planning (La Ferrara et al., 2012; Kearney and Levine, 2015), school performance (Kearney and Levine, 2019), and consumption choices (Bursztyn and Cantoni, 2016). An important and less studied question is whether it can also swing the outcome of elections (Durante et al., 2019; Xiong, 2021).

We investigate this question using a particularly salient case study: Donald Trump’s surprise electoral victory in the 2016 presidential election. In the aftermath of the election, many political commentators argued that Trump’s role in the popular TV show “The Apprentice”, watched by more than 8% of Americans at its peak, helped his electoral campaign (e.g. Newton-Small, 2016; Littleton, 2016; Rooney, 2016; Perry, 2020; Poniewozik, 2020). This narrative holds that The Apprentice allowed Trump to portray himself as a successful businessman, decisive leader, and powerful real estate magnate, which may have made him more appealing to voters. Additional support for this idea comes from work by Gabriel et al. (2018), who show that people perceive Trump as more trustworthy after watching The Apprentice in an MTurk experiment. However, whether The Apprentice indeed played a role in Trump’s election win remains fundamentally unclear. Given the controversial nature of Trump’s presidency, this case study appears particularly relevant for gauging the importance of entertainment TV in vote outcomes.

We study the link between the county-level Republican vote share in 2016 and 2020 and viewership patterns of The Apprentice in 2015, immediately prior to Trump’s presidential run.¹ A naive regression of The Apprentice viewership on the Republican vote share in the 2016 and 2020 presidential election reveals a positive and significant relationship. However, we show that this correlation is entirely driven by selection of particular counties into watching the show. The positive relationship between election results and The Apprentice disappears completely when we control for the Republican

¹Trump starred in 14 seasons of The Apprentice and The Celebrity Apprentice between 2004 and 2015.

vote share in previous elections and the viewership of other shows on NBC. This suggests that counties where *The Apprentice* was particularly popular likely did not vote for Trump because of the show, but rather because they differ in other characteristics.

After controlling for previous voting patterns and the popularity of other NBC shows with similar broadcasting times, the correlation between viewership of *The Apprentice* and the Republican vote share is statistically insignificant and small in magnitude, independent of other control variables we include. For example, our preferred estimates suggest that a 1% increase in *The Apprentice* Ratings is associated with at most a 0.1% increase in the Republican vote share in the 2016 election (p-value 0.35). The implied persuasion rates is 1.2%. The estimates and persuasion rates for the 2020 presidential election are equally small and insignificant. We also use the approach suggested by Oster (2019) to gauge how large unobservable selection into *The Apprentice* viewership would need to be for the effect on the Republican vote share to be 1%. The resulting Osters- δ of 4.86 for 2016 and 9.56 for 2020 indicate that unobservables would need to be at least an order of magnitude more important than the over 30 control variables we include in our regressions.

We also test extensively for potential heterogeneous effects by splitting the sample at the median for each of our control variables. None of the coefficients in the nearly 60 regressions is statistically significant at conventional levels. Based on these tests, we conclude that the null effect of *The Apprentice* does not appear to be driven by heterogeneous effects (e.g., a positive effect for Republicans and a negative effect for Democrats). Rather, the results suggest that the effect appears to be zero for many relevant sub-populations. Further, we more systematically investigate heterogeneous treatment effects using the Causal Forest algorithm (Athey and Imbens, 2016; Wager and Athey, 2018; Athey et al., 2019), which also suggests no clear evidence for heterogeneous treatment effects.

We also compare viewership to *The Apprentice* directly to other shows on NBC that have slots during similar times. Estimating regressions using a wide array of possible specifications, we find that the average effect of *The Apprentice* is smaller than the estimates for three other shows on NBC that had no relationship to Trump. This further bolsters our interpretation that *The Apprentice* likely had no effect on the 2016 and 2020 elections.

Additionally, we turn to other datasets beyond county-level election results by looking at the Cooperative Congressional Election Study (CCES), the Republican Primaries, and candidate approval data from the Gallup Daily tracker. Although these

datasets measure distinct political outcomes, we find no evidence for a pro-Trump effect in any of them, even for relevant subgroups. We also subject our findings to further robustness checks based on earlier presidential elections, congressional elections, and alternative measures of exposure to The Apprentice exposure. If anything, we find a stronger correlation between The Apprentice and voting in presidential elections *before* 2016, when the presidential candidates had no association with the show.

Taken together, our findings suggest that the effect of The Apprentice on vote outcomes in 2016 and 2020 is likely zero for three reasons. First, if selection into viewing The Apprentice is biasing our estimates, it appears more likely that this should lead to an upward bias: people who like Trump should be more likely to watch The Apprentice, not less. If our estimates are downward biased, this would require that people who dislike Trump are more likely to watch the show. Secondly, any effect of The Apprentice should be at least as strong as that of other TV shows on NBC, and the 2016 and 2020 elections should stand out relative to earlier elections. Both of these do not appear to be the case. Lastly, the Oster δ and extensive testing for heterogeneous treatment effects makes it unlikely that the observed zero effect is due to omitted variable bias.

Literature Review: This paper is related to two main strands of the literature. First, our paper contributes to the growing literature on the effects of entertainment television (e.g. Chong and Ferrara, 2009; La Ferrara et al., 2012; DellaVigna and La Ferrara, 2015; Kearney and Levine, 2015; La Ferrara, 2016; Banerjee et al., 2019) and the vast literature on the electoral effects of media (e.g. DellaVigna and Kaplan, 2007; Enikolopov et al., 2011; Barone et al., 2015; Martin and Yurukoglu, 2017; Martin and McCrain, 2019; Manacorda and Tesei, 2020; Guriev et al., 2020, also see Strömberg (2015); Zhuravskaya et al. (2020) for reviews).

Most closely related is work by Xiong (2021), who studies the impact of Ronald Reagan’s tenure as a host of “General Electric Theater” on presidential vote outcomes. Xiong motivates his study with Trump’s role as host of The Apprentice.² In contrast to Xiong’s finding, our work suggests that not all entertainment television programs appear to have strong persuasive effects, drawing on the particularly salient case study of Donald Trump’s political rise. These differences are interesting because both Reagan’s involvement with “General Electric Theater” and Trump’s role as host of The Apprentice lasted for many years before they ran for public office. As a result, differences in the

²In an online appendix, Xiong (2021) shows a positive correlation between watching The Apprentice and voting for Donald Trump based on a survey.

length of exposure alone are likely not a sufficient explanation for why *The Apprentice* did not sway voters.

Another closely related paper is Durante et al. (2019), who find a positive effect of Silvio Berlusconi’s TV network Mediaset on votes for him in Italy. The major difference to our setting is that Berlusconi owned the entire TV network and was thereby able to shape the program content to spread specific values. Another reason for the different results we find could be the attachment effects Durante et al. (2019) find for Mediaset. For older voters, they argue that Mediaset may have had a “lock-in” effect, where people built trust in the network over time. This, in turn, exposed them more to the network’s pro-Berlusconi bias. Because NBC, where *The Apprentice* was aired, did not have an overall pro-Trump bias, such lock-in effects likely did not occur. This suggests that familiarity with a political candidate and fame alone are unlikely to swing elections, at least in the case of Trump.

Secondly, our paper adds to the growing literature on the influence of media on the 2016 presidential election. Boxell et al. (2017) and Boxell et al. (2018) investigate the role of internet and social media use and find no correlation with pro-Republican voting. Allcott and Gentzkow (2017) look at the spread of fake news. Fujiwara et al. (2021) show that Twitter exposure reduced the Republican vote share in the 2016 and 2020 presidential election but had no impact on early presidential elections or congressional elections. This paper extends this literature by studying the role of entertainment TV with a focus on Trump’s prior television career.

The paper proceeds as follows. Section 2 introduces the main data sources used in our analysis. Section 3 introduces our empirical strategy and discusses the underlying assumptions. Section 4 presents the results. Section 5 concludes.

2 Data

TV Rating Data. Nielsen TV Ratings uses proprietary electronic measuring devices to capture what content viewers are watching on their televisions at home. It collects data from Nielsen’s TV Families, a cross-section of representative homes across each local market in the United States. For each Designated Market Area (DMA), it reports different measures of TV audiences, including ratings (RTG), shares (SHR), and impressions (IMP), as well as information on the genre of the TV program, viewing time and originator. We match the DMAs to counties based on the cross-walk provided

by Gentzkow and Shapiro (2008). The main measure of The Apprentice viewership we use throughout is the rating ($Impressions / Population$). In robustness checks, we also consider the market share ($Impression / TV Viewers$) and $\log(1+Impression)$.

We mainly focus on data for The Celebrity Apprentice in 2015, the last season before the 2016 election. We also collect information on six other TV shows: American Ninja Warrior, The Dateline, State of Affairs, The Blacklist, The Night Shift, and The Voice. These TV shows ran on NBC either in the same time slot as The Apprentice at a later point of 2015 or in the time slots immediately before and after. The Apprentice has run on NBC since 2004; the most recent season aired in 2017. All seasons except the last were hosted by Donald Trump. The show averaged between 6 and 7 million viewers; at its height of popularity in 2004, 28.1 million Americans (or more than 8% of the population) watched The Apprentice. The show earned 8 Emmy nominations.

In Online Appendix Figure A.2b, we plot the geographical distribution of The Apprentice viewership. We further provide histograms for each of the three measures viewership we consider (see Figure A.1) as well as the correlation between them (see Table A.1). Viewership of The Apprentice is clearly correlated with that of other NBC shows (see Table A.2); these correlations range between 0.34 and 0.60.

Election Outcomes. We use Dave Leip’s Atlas of U.S. Presidential Elections for county-level data on presidential election outcomes between 2000 and 2020, as well as for county-level voting data for the Republican and Democratic primaries in 2016 and 2020. We obtained county-level outcomes on Senate and House elections from the MIT Election Lab for the 2000-2020 period, focusing in all the cases on two-party vote shares. Figure A.2a visualizes the Republican vote share in the 2016 presidential elections.

Individual-Level Voting Decisions. To analyze individual-level decisions, we use the Cooperative Congressional Election Study (CCES), a two-wave nationwide survey on voter behavior administered before and after each election that also collects information on a wide set of individual characteristics, such as race, gender, education (in 6 bins), marital status, family income (in 12 bins), political affiliation and interest in the news. Summary statistics weighted by sample weights are provided in Table A.4. The CCES also verifies that respondents have voted using administrative data on turnout records. We focus on votes for Trump in 2016 and 2020.

Presidential Candidate Approval. To investigate Trump’s pre-election approval relative to other candidates (e.g. Clinton or Cruz), we use data from the Gallup Daily Tracker, an individual-level survey that collected information regarding approval of Democratic and Republican candidates during the 2016 presidential campaign. The survey, which provides information on a sample of 1,000 individuals per day since 2009, also includes a rich set of individual characteristics, such as political affiliation, income (in 10 bins), county of residence, age, marital status, gender, and education (in 6 bins). Summary statistics are reported in Table A.5.

Additional County Characteristics Using data from the U.S. Census and the American Community Survey (ACS), we build additional county-level control variables on demographics. We focus on data on population, population shares by age group and ethnicity, poverty rates, and education levels. We also obtained industry-level employment shares and unemployment rates from the Bureau of Labor Statistics (BLS). Additional controls on county media usage patterns come from Simply Analytics. A description of the variables can be found in Appendix Table A.3 .

3 Empirical Strategy

The starting point for our empirical strategy is to relate differences in The Apprentice viewership across US counties to the Republican vote share in the 2016 and 2020 presidential elections. If The Apprentice persuaded people to vote for Donald Trump, we would expect these variables to be positively correlated.

However, two potential sources of bias may invalidate such a naive approach. The first is reverse causality: more Republican-leaning counties could have a higher propensity to watch The Apprentice. To address this, we control for the Republican vote in a county in 2012, the last presidential election before Trump’s presidential run.³ The second potential bias is that unobserved differences across counties may explain both differences in the patterns of NBC viewership and the Republican vote share. We account for this selection by including a control variable for the popularity of other shows on NBC that aired in the same time slot or immediately before/after The Apprentice. Our estimates can therefore be interpreted as the differential effect of The Apprentice, relative to other NBC shows. If Trump’s popularity on entertainment TV affected

³In robustness checks, we show that the choice of the election year to include as control does not make any difference for our findings.

voting decisions, The Apprentice viewership should stand out relative to these other NBC shows.⁴

Specification. This intuition gives rise to the following regression specification:

$$y_c = \alpha + \beta \cdot RTG\ Apprentice_c + \gamma \cdot RTG\ Other_c + \omega \cdot Rep.\ Vote\ Share_c^{2012} + \mathbf{X}_c \delta + \xi_c \quad (1)$$

where y_c are election outcomes in county c (e.g., Republican vote shares). $RTG\ Apprentice_c$ is the rating of the Apprentice in 2015 based on the DMA that county c is located in.⁵ $RTG\ Other_c$ is the equivalently defined control variable for the viewership of other shows on NBC. In our baseline regressions, we control for the first principle component of the ratings of other shows. In robustness checks, we also present results where we control for each show separately. $Rep.\ Vote\ Share_c^{2012}$ is the Republican vote share in the 2012 presidential election. The main coefficient of interest β can be interpreted as a within estimator (i.e. the estimates are the change of the Republican vote share relative to the base year) (see. Angrist and Pischke, 2008). \mathbf{X}_c is a vector of additional control variables (see Table A.3 for an overview). We weight observations by turnout (total number of votes cast) in the 2012 presidential election and cluster standard errors at the state level.⁶

4 Results

We begin our analysis with the 2016 and 2020 presidential elections. Figure 1 shows a positive relationship between the rating of The Apprentice in 2015 and the Republican vote shares in these elections. However, this relationship disappears once we control for the vote share in the 2012 presidential election results and the ratings of other NBC shows. The fact that the relationship disappears after we take these obvious confounders into account suggest that the positive relationship in the raw data is driven by selection into watching NBC.

⁴As we are investigating the impact of a specific show rather than the impact of a TV channel as a whole, we cannot use instruments for TV viewership based on channel positions (e.g., Martin and Yurukoglu, 2017). We instead exploit differences in viewership between shows on the *same* network.

⁵We consider the TV market share and the number of impressions as alternative exposure measures in the appendix.

⁶We consider unweighted regressions and other standard errors using the methods described in Colella et al. (2019) for robustness.

This finding is also confirmed in a regression specification, which we report in Table 1. Even in specifications that only control for population, Census division fixed effects, the first principal component of other NBC shows, and the 2012 Republican vote share (columns 1 and 7), the coefficient of The Apprentice viewership is statistically insignificant and quantitatively small. The magnitude in column 1 suggests that a 1% percent increase in the rating of The Apprentice is associated with 0.1 percentage point *decrease* in the Republican vote share in 2016. When we include additional controls, the estimates either become more negative or, where they turn positive, they are far away from conventional levels of statistical significance. In columns 6 and 12, we use the double-selection LASSO proposed by Belloni et al. (2014) to select the set of control variables most predictive of the outcome. In this exercise, we also allow for all possible interactions of the control variables. This procedure confirms our baseline result of no systematic link between The Apprentice and the Republican vote share.⁷ For the 2020 presidential election, the estimates are very similar in size but slightly smaller.

To gauge the magnitude of the estimated coefficients, we calculate the implied persuasion rates. Following DellaVigna and Gentzkow (2010), the persuasion rate can be approximated as $\theta \cdot \frac{t}{e(1-y)}$, where θ is the regression estimate, e is the share of Americans exposed to The Apprentice, y is the Republican vote share, and t is voter turnout. Based on the regression estimates in columns 6 and 12, which most flexibly account for observable characteristics, the implied persuasions rates are 1.2% and 1.4% in 2016 and 2020, respectively.⁸ These persuasion rates are likely an upper bound because the underlying coefficient estimates are not statistically different from 0, and several estimates are in fact negative.

Compared to other estimates in the literature, these persuasion rates are small. Xiong (2021) estimates a persuasion rate of 11.84% for the effect of Ronald Reagan’s role in “General Electric Theater” on election results. DellaVigna and Kaplan (2007) estimate a persuasion rate of 11.6% for Fox News, while Martin and Yurukoglu (2017) find persuasion rates of Fox News between 27% and 58%. (Fujiwara et al., 2021) found that the social media platform Twitter had a pro-Democratic persuasion rate of 8.6% and 9.4% in the 2016 and 2020 elections, respectively. These comparisons suggests that,

⁷Note that these Lasso regressions are estimated without weighting.

⁸The calculation is based on $\theta = 0.001$, $y = 0.46$, $t = 0.55$ in 2016, and $\theta = 0.001$, $y = 0.47$ and $t = 0.62$ in 2020. When it comes to the share of Americans exposed to The Apprentice (e), we have to make some assumptions because the viewership of The Apprentice varied widely by season. To be conservative, we base the value of e on the 28.1 million the show received at its peak (see here). The resulting value is $e = 28.1/325 = 0.086$.

even if we take the statistically insignificant estimates at face value, The Apprentice likely did not matter for the outcome of the 2016 and 2020 presidential election.

Using the approach suggested by Oster (2019), we can also gauge how likely it is that this result is due to unobservable county characteristics. To this end, we calculate how important unobservable selection would need to be for the true effect to imply a 1% vote share change. The resulting Oster δ of 4.86 for 2016 and 9.56 for 2020 indicates that unobservables would need to be significantly more important than the over 30 control variables we already include in our regressions.

Robustness In the Online Appendix, we subject our findings to a battery of robustness checks. First, Figure A.3 and Figure A.4 report specification curves in which we show regression estimates using all possible combination of control variables. Almost all regression coefficients are statistically insignificant. The coefficients are quite stable independent of the control variables. Our preferred estimates are somewhere in the middle of the estimated coefficients.

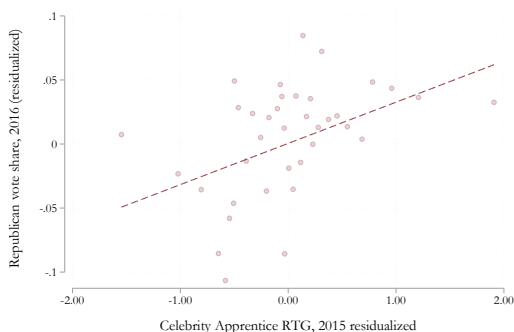
Further, we show in Table A.9 that the coefficient of The Apprentice is zero independent of which NBC TV shows we use to control for differences in NBC viewership across counties. In particular, we control for interest in “Ninja Warrior” and “The Voice”, both of which aired in the same year in the same time slot as The Apprentice, or for TV shows that aired in time slots before and after. Independent of the TV show control, the coefficient for The Apprentice is always statistically indistinguishable from zero. In Figure 2, we also run a direct horse race of The Apprentice coefficient to the size of the coefficient of other shows on NBC. It is easy to see that the average The Apprentice estimate is in the middle of the distribution for the other shows. The largest estimates come from other shows. In fact, The Apprentice is not even among the three shows with the highest average coefficients. This is hard to square with a distinctive persuasion effect of entertainment TV on votes cast for Trump.

Next, we investigate if the null effect we find could potentially be driven by potential treatment effect heterogeneity. This could be the case if, for example, there was a positive effect of The Apprentice in some counties but a negative effect in others. Ex-ante, there are good reasons to expect such heterogeneous effects. Models of Bayesian persuasion (e.g., Kamenica and Gentzkow, 2011) would suggest that only people with sufficiently weak priors are subject to being persuaded. The results on the effect of entertainment TV for the US by Xiong (2021) or for Italy by Durante et al. (2019) both suggest heterogeneous effects.

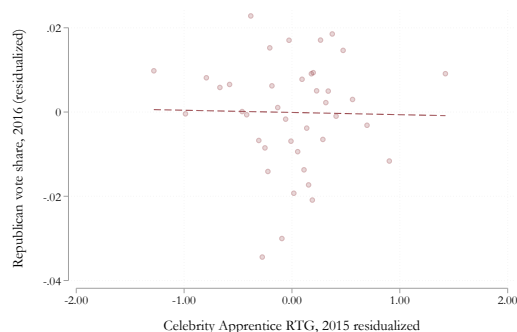
Figure 1: Ratings of The Apprentice and the Republican Vote Share

2016 Presidential Election

(a) No Controls

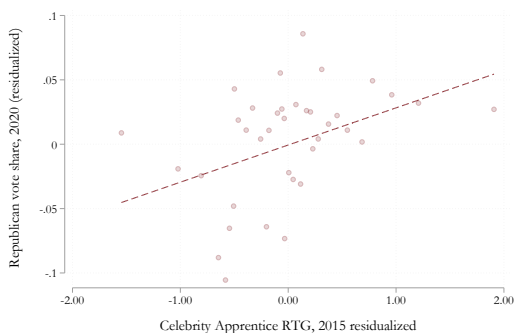


(b) With Controls

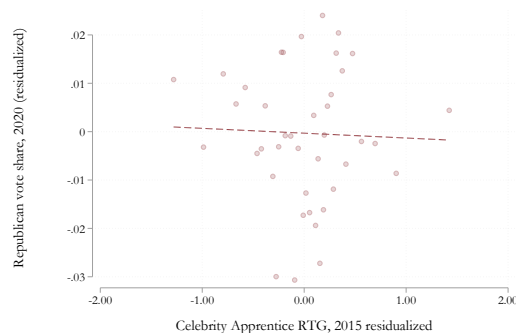


2020 Presidential Election

(c) No Controls



(d) With Controls



Notes: These figures present binned scatter plots summarizing the relationship between the Republican vote share in the 2016 and 2020 presidential elections and the popularity of The Apprentice (proxied by the show's ratings in 2015). *With controls* refers to specifications where the variables are residualized with respect to population deciles, Census region fixed effects, viewership of other NBC shows, and 2012 election control variables. The figures are constructed by dividing the x-axis variable into 40 equal-sized bins and plotting the average values of the y-axis variable in each bin. The fitted line is estimated using the unbinned data.

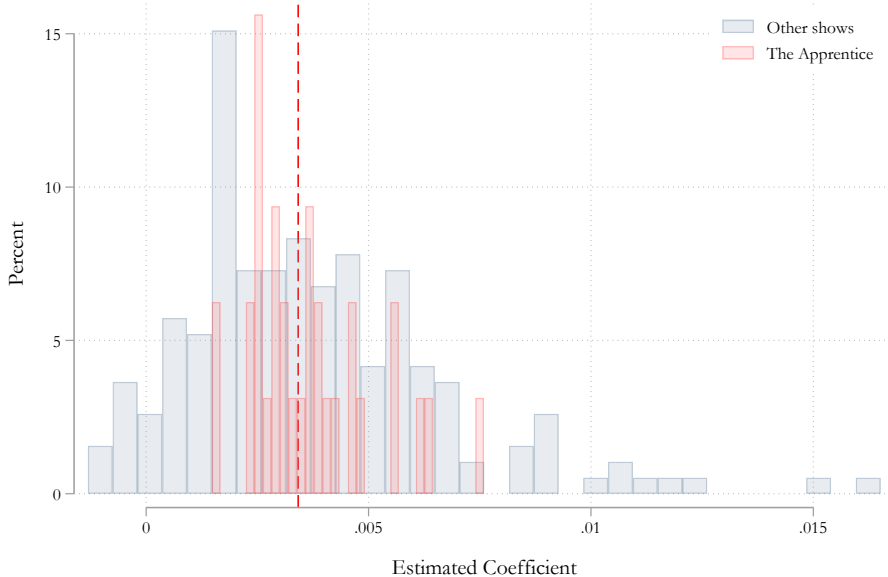
Table 1: The Apprentice and the 2016/2020 Republican Vote Share

	Dep. var.: Republican vote share in 2016					Dep. var.: Republican vote share in 2020						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Apprentice Rating	-0.001 (0.003)	-0.004* (0.002)	-0.002 (0.002)	0.001 (0.002)	0.002 (0.002)	0.001 (0.001)	-0.001 (0.003)	-0.005* (0.003)	-0.003 (0.003)	0.000 (0.002)	0.001 (0.002)	0.001 (0.001)
Other NBC shows (1st PC)	0.006*** (0.002)	0.005*** (0.001)	0.003** (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.005** (0.002)	0.004*** (0.001)	0.003** (0.001)	0.001 (0.001)	0.000 (0.001)	0.000 (0.001)
Population deciles	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Census division FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2012 election control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographical controls		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Socioeconomic controls				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
China shock controls				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Media controls				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls chosen by LASSO						Yes						Yes
Observations	2,982	2,982	2,982	2,982	2,982	2,982	2,982	2,982	2,982	2,982	2,982	2,982
Mean of DV	0.46	0.46	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.47	0.47

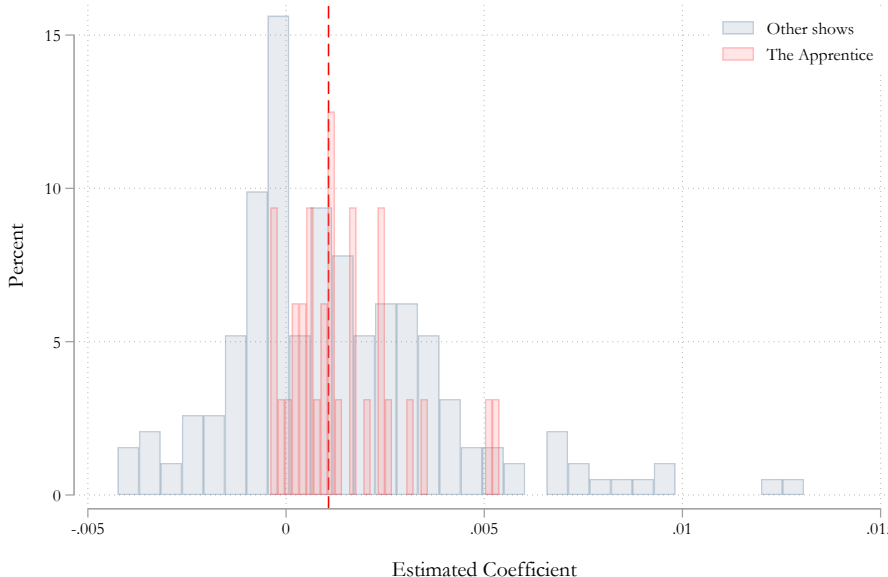
Notes: This table plots estimates of Equation (1) where the dependent variable is the Republican vote share in the 2016 or 2020 presidential elections. *Apprentice Rating* is the number of impressions of the NBC show *The Apprentice* in 2015 divided by a county's population. *Other NBC shows* is the first principal component of the rating of other NBC shows (defined equivalently to that of *The Apprentice*) with a time slot equivalent or close to *The Apprentice* (Ninja Warrior, The Voice, Date Line, State of Affairs, Nighthift, and The Blacklist). Regressions include the indicated control variables (see the Online Appendix for their descriptions). Observations are weighted by turnout in the 2012 presidential election. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Figure 2: Placebo – The Apprentice vs. Other NBC Shows

(a) 2016 Election



(b) 2020 Election



Notes: This figure plots the correlation between the viewership of different NBC shows and the Republican vote share in 2016 or 2020 based on versions of eq. (1). In each regression, we only include the ratings of one of the NBC shows, either *The Apprentice* (*RTG Apprentice*) or one of the other shows. For each show, we plot the coefficient for the ratings of all specifications in the specification curves.

In Online Appendix Figure A.5, we thus run our baseline regression but split the sample at the median value of each observable county characteristic we have data on. For example, we test if there is a significant effect for counties above the median of the Republican vote share in the 2012 presidential election. Interestingly, we find no statistically significant positive estimate in all of the 58 regressions we consider, and the coefficients do not vary in a systematic way for related characteristics.⁹ Based on these exercises, we conclude that our estimates do not appear to be hiding relevant treatment effect heterogeneity. Rather, it appears that there is no “legacy effect” of The Apprentice even in relevant sub-samples.

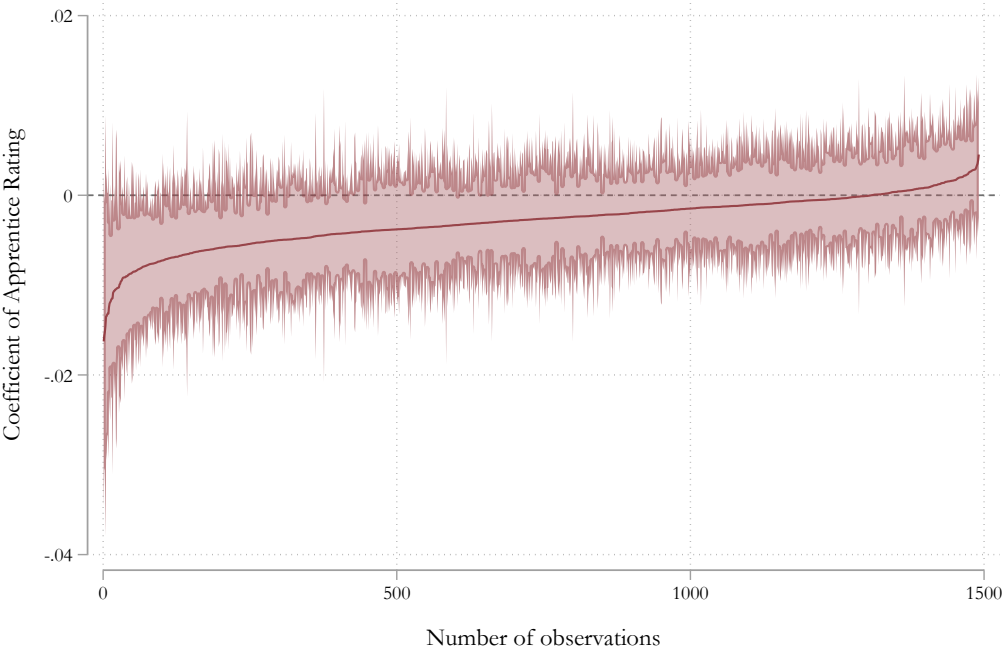
To more systematically investigate heterogeneous treatment effects, we use the Causal Forest algorithm (Athey and Imbens, 2016; Wager and Athey, 2018; Athey et al., 2019). This algorithm uses a large number of tree classifiers to partition the data based on treatment effect heterogeneity. In particular, we train 10,000 trees using the EconML Python package developed by Microsoft research (Syrkanis et al., 2021). The minimum number of observations per leaf is set to 5 and we use the mean squared error criterion. As is standard, we split our data equally into a training and a test sample. We include all control variables in the causal forest. Finally, we retrieve the predictions of the treatment effect and the variance estimates for the hold-out sample.

The results from this exercise are shown in Figure 3. While the causal forest finds some treatment effect heterogeneity, the confidence intervals overlap with zero. The full range of estimates suggests that the average treatment effect interval is centered around zero and, if anything, slightly negative. We take this exercise as further confirmation that the absence of an “Apprentice effect” is not easily explained by treatment effect heterogeneity.

In further robustness checks, we repeat our analysis using alternative standard errors (see Table A.6) and other regression specifications (see Table A.7). More specifically, we show that the findings are similar without regression weights, using other transformation of the main regressors, and with state fixed effects. We also show that our findings are not driven by the fact that our controls are at the county-level while the Apprentice viewership is measured at the DMA-level. Aggregating all control variables to the DMA level yields similar results. Further, we conduct additional robustness checks using alternative measures of exposure to The Apprentice based on the market share and the number of impressions (see Appendix A.3.), or controlling for other

⁹In unreported results we also investigated splits at the 75th and 90th percentile, which results in similar findings.

Figure 3: Causal Forest Estimate



Notes: This figure shows the predicted treatment effects from the Causal Forest algorithm for the around 1,500 observations in the hold-out sample. The coefficients are ordered by magnitude. Whiskers refer to 95% confidence intervals based on an infinitesimal jackknife (see Wager and Athey, 2018, for more details).

earlier presidential elections (see Table A.8). These exercises leave our previous findings unchanged.

We also compare our estimates for the 2016 and 2020 elections to the estimates for earlier presidential elections (see Figure A.6) or congressional elections (see Figure A.7). Before 2016, The Apprentice had no clear association with presidential candidates, and Trump played no significant political role either. As a result, the estimates give us an indication if 2016 and 2020 stand out relative to previous periods, which could be a sign of potential omitted variable bias. However, we do not observe a significant effect for earlier presidential elections, neither for vote shares nor turnout. We also do not observe systematic effects for Congressional elections. More importantly, the coefficients for earlier elections are similar and sometimes even larger than the estimates in 2016 and 2020. This is inconsistent with the idea that The Apprentice boosted Trump’s vote share.

Individual-level Evidence Next, we turn to individual-level survey data to investigate if there is an “Apprentice effect” for voters of a particular political ideology. In Table 2, we use data from the CCES.¹⁰ Column 1 again shows a small and statistically insignificant relationship between The Apprentice viewership and the decision to vote for the Republican party. In columns 2-4, we then split CCES respondents by their self-identified political affiliation. While there is some heterogeneity in the estimated coefficients, none of them are statistically different from zero, and several are negative.

In Online Appendix Table A.10, we consider additional heterogeneity splits for other sub-groups. In particular, we focus on splits by age, gender, and TV viewership. First, we estimate a regression for the CCES respondents under 40.¹¹ This split is motivated by the fact that “The Apprentice” was particularly popular with this subgroup. Durante et al. (2019) also find heterogeneous effects of entertainment TV depending on people’s age. In our case, we again find no significant effect of exposure to The Apprentice.

Next, we focus on male respondents, given that Trump had greater electoral success with men than women. Again, none of the coefficients are statistically significant. Lastly, we also find no effect on respondents who report they regularly watch TV.

¹⁰The CCES data unfortunately do not contain any information on whether a respondent watches The Apprentice. We instead investigate if respondents in counties with high Apprentice viewership exhibit different response patterns.

¹¹In unreported results, we also considered other age splits with similar results.

Table 2: Apprentice Ratings and Individuals' Vote Decisions

	<i>Dep. var.: Voted for Trump in ...</i>			
	Full Sample	Dem.	Indep.	Rep
	(1)	(2)	(3)	(4)
Panel A: 2016 Election				
Apprentice Rating	-0.017 (0.023)	-0.025 (0.031)	-0.047 (0.038)	-0.010 (0.025)
Other NBC shows (1st PC)	0.054*** (0.012)	0.046*** (0.014)	0.038** (0.016)	0.031** (0.013)
Observations	143,609	73,605	13,351	55,232
Mean of DV	0.491	0.061	0.610	0.950
<i>Marginal effect</i>	[-0.006]	[-0.003]	[-0.016]	[-0.001]
Panel B: 2020 Election				
Apprentice Rating	0.002 (0.026)	-0.080* (0.041)	-0.057 (0.073)	0.031 (0.051)
Other NBC shows (1st PC)	0.048*** (0.012)	0.011 (0.021)	0.033 (0.021)	0.030* (0.017)
Observations	42,806	22,583	4,355	15,447
Mean of DV	0.474	0.036	0.515	0.947
<i>Marginal effect</i>	[0.001]	[-0.006]	[-0.021]	[0.003]

Notes: This table presents individual-level probit regressions where the dependent variable is a dummy for survey participants in the CCES who indicated voting for Donald Trump in the 2016 presidential elections (and 0 for those who voted for Hillary Clinton). *Apprentice Rating* is the number of impressions for the NBC show *The Apprentice* in 2015 divided by a county's population. We control for *Other NBC shows*, the first principal component of the rating (defined equivalently to that of *The Apprentice*) of other NBC shows with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). All regressions further control for log(age), a female dummy, and bins of family income, education, marital status, and interest in news. Observations are weighted by survey weights. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Primary Election We also investigate if the popularity of The Apprentice might have helped Trump in the Republican primaries. The results can be found in Appendix Table A.11. The coefficient for The Apprentice ratings is negative and statistically insignificant. We also find no evidence for an effect on the primary vote share of any of the other Republican candidates.

These findings are also confirmed using survey data from the Gallup Daily Tracker. As part of this survey, respondents were asked about their approval of the primary candidates in the 2016 presidential election. As we show in Table A.12, we repeatedly find null results for the approval of Trump and other primary candidates. These findings also hold independent of the political leaning of the respondents.

Interpretation of Results. Overall, none of the presented findings suggest a positive persuasion effect of The Apprentice. An important question is whether these estimates can be interpreted as the causal effect of The Apprentice viewership on the Republican vote share. To interpret the estimate of β as the causal effect, we formally require that $E[RTG\text{ Apprentice}_c \cdot \varepsilon_c] = 0$. In words, this implies that, conditional on the viewership of other NBC shows ($RTG\text{ Other}_c$), the 2012 Republican vote share ($Rep.\text{ Vote Share}_c^{2012}$), and other controls, there is no omitted variable that correlates with the outcome (y_c) as well as Apprentice viewership ($RTG\text{ Apprentice}_c$). Because people watching other entertainment TV shows on NBC immediately before or after the time slot of The Apprentice are likely highly similar to those watching this particular show, we believe that this assumption likely holds.

Four pieces of evidence support the idea that omitted variable bias is unlikely to explain our findings. First, if selection into viewing The Apprentice is biasing our estimates, it appears more likely that any such bias should lead us to *overestimate* the effect of the show. This is because people who like Trump should also be more likely to watch The Apprentice. A downward bias, in turn, would require that people who dislike Trump are more likely to watch the show. We also provide direct evidence against such a negative selection of NBC viewership by looking at the correlation between the popularity of other TV shows on the same channel with the Republican vote share. The correlation between the viewership of these shows and the Republican vote share is always positive, not negative. If shows on NBC would be heavily selected in favor of the Democrats, we should observe it in these regressions. A possible selection bias would be that viewers who strongly dislike Trump are more likely to watch The Apprentice,

but not any of the NBC shows in the time slots immediately around it, but this seems unlikely.

Second, we use the Oster’s δ (Oster, 2019) to investigate how important unobservables would need to be to explain our zero findings. Here, we confirmed that the effect of unobservable factors would need to be implausibly large compared to the observables characteristics we include in our regressions.

Third, we find no systematic and statistically significant effects of The Apprentice viewership in any of the heterogeneity splits we are estimating. This makes it highly unlikely that heterogeneous treatment effects are masking a true causal effect of The Apprentice. We additionally investigate heterogeneous treatment effects using the Causal Forest algorithm (Athey and Imbens, 2016; Wager and Athey, 2018; Athey et al., 2019).

Lastly, the estimates we find for the Republican vote shares in the 2016 and 2020 elections are statistically indistinguishable from the coefficients for 2008 and 2012. However, a positive causal effect of The Apprentice should increase the likelihood of voting for Trump compared to earlier presidential elections, where the candidates had no connection with any of the NBC shows we consider.

5 Discussion and Conclusion

Can entertainment TV swing elections? We study this question by analyzing the particularly salient case study of The Apprentice, the NBC reality TV show that introduced Donald Trump to large parts of the American public. In contrast to the case of Ronald Reagan and “General Electric Theater” studied by Xiong (2021), we show that support for Trump was not greater in counties with a higher viewership of The Apprentice. This holds true for presidential, primary, and Congressional elections, and also holds using survey data and extensive sample splits to test for heterogeneous effects.

Apart from providing evidence on a particularly relevant episode, we believe our findings have potentially wider implications for understanding the effects of TV on electoral outcomes. Above all, they suggest that the political effects of entertainment television differ considerably across settings. Although The Apprentice was aired for over a decade before Trump started his presidential campaign in 2015, we find no evidence that it shifted people’s willingness to vote for him. In line with the findings in Xiong (2021), our results suggest that name recognition and fame alone are insufficient for

political success. Xiong (2021) argues that his findings are driven by a more positive perception of Ronald Reagan among the viewers of “General Electric Theater.” It is possible that, given the nature of *The Apprentice*, Trump was either unable to create a positive perception of himself among the show’s viewers or that today’s extensive coverage of the presidential election dominated any potential initial impression based on entertainment television. We hope that future research, perhaps aided by field experiments, might be able to more clearly isolate when entertainment television can persuade voters.

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A Online Appendix

A.1. Additional Details on the Data

Figure A.1: Histogram of Exposure Variables

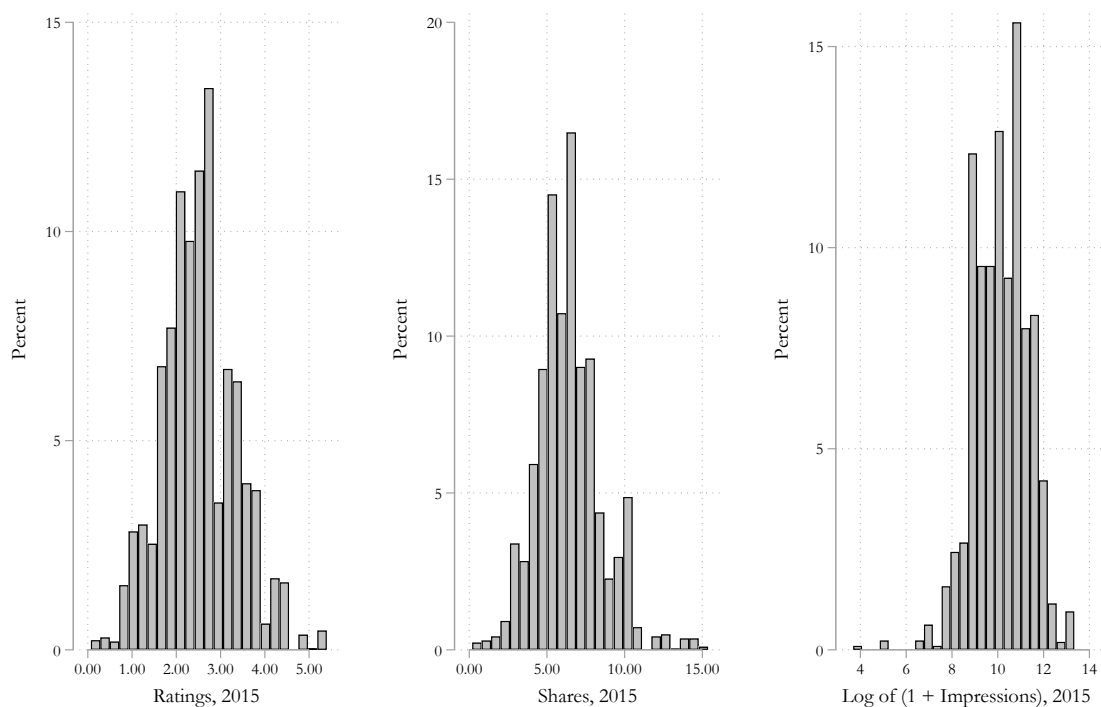


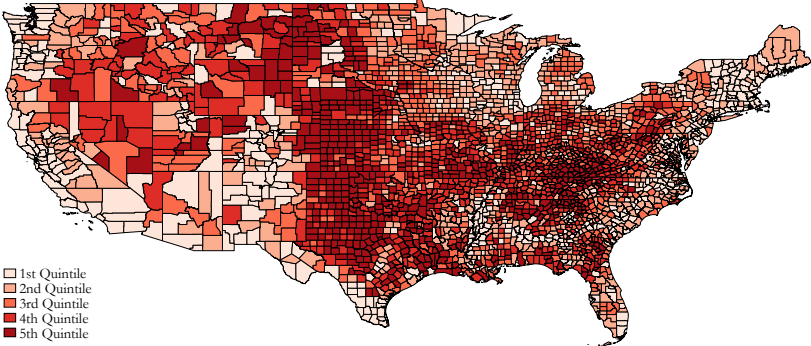
Table A.1: Correlation of Exposure Variables - The Apprentice 2015

	Ratings, 2015	Shares, 2015.	Log of (1 + Impressions, 2015)
Ratings, 2015	1.000		
Shares, 2015	0.899	1.000	
Log of (1 + Impressions, 2015)	0.477	0.303	1.000

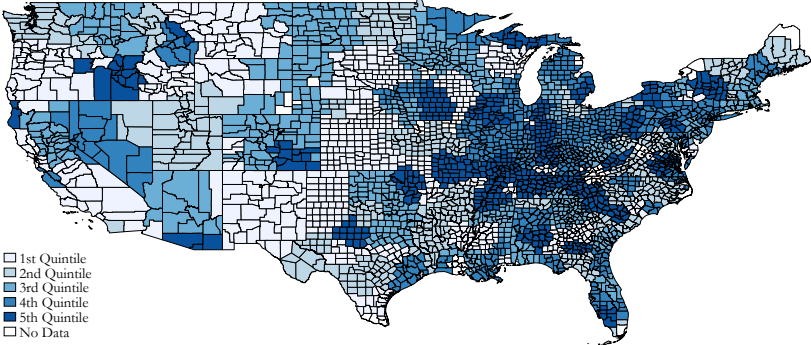
Notes: This table shows the correlation of the popularity of The Apprentice using different measures. *Ratings* is the number of impressions relative to a county's population. *Shares* is the number of impressions relative to a county's TV viewers.

Figure A.2: Republican Vote Share and The Apprentice Viewership

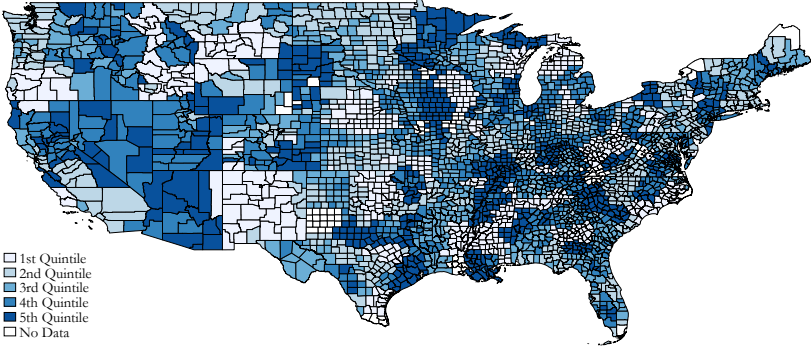
(a) Republican Vote Share 2016



(b) The Apprentice Viewership



(c) The Apprentice Viewership (Residualized)



Notes: This map plots the share of the Republican party in the 2016 election and a measure of The Apprentice viewership based on the show's ratings in 2015. Ratings are defined as the number of impressions divided by a county's population.

Table A.2: Correlation with Other TV Shows

	Apprentice	1 st PC	Voice	N. Warrior	Datel.	St. of Aff.	Nights.	Blackl.
The Apprentice	1.0000							
1 st Princ. Comp.	0.5427	1.0000						
The Voice	0.4562	0.8811	1.0000					
Ninja Warrior	0.3963	0.8033	0.6491	1.0000				
Dateline	0.6048	0.8229	0.6724	0.5734	1.0000			
State of Affairs	0.4275	0.6801	0.5005	0.4161	0.4693	1.0000		
Nightshift	0.3933	0.8525	0.7668	0.6018	0.6640	0.4646	1.0000	
Blacklist	0.3365	0.9000	0.7404	0.7289	0.4621	0.4680	0.6828	1.0000

Notes: This table shows the correlation of the popularity of different NBC entertainment shows across US counties, measured using the number of impressions relative to population (“rating”). 1st *Princ. Comp.* is the first principal component of all shows other than The Apprentice.

Table A.3: Summary Statistics (County-Level)

	Mean	Std. Dev.	Min.	Median	Max.	N
Vote outcomes and TV ratings data						
Apprentice Rating	2.60	0.72	0.07	2.60	5.40	2,982
Other NBC shows (1st PC)	-0.89	1.76	-5.71	-0.91	5.00	2,986
Republican two-party vote share (2016)	0.46	0.17	0.04	0.45	0.95	2,986
Change in Republican two-party vote share, 2000-2016	-0.02	0.10	-0.33	-0.03	0.45	2,985
Republican two-party vote share (2020)	0.47	0.17	0.05	0.45	0.96	2,986
Change in Republican two-party vote share, 2000-2020	-0.02	0.10	-0.34	-0.03	0.48	2,985
Republican two-party vote share (2012)	0.47	0.15	0.07	0.47	0.96	2,986
Geographical controls						
Population density	1864.68	6083.01	0.10	505.10	69468.40	2,986
Log(County area)	6.72	0.94	3.26	6.64	9.91	2,986
Demographic controls						
% aged 20-24	0.07	0.02	0.01	0.06	0.27	2,986
% aged 25-29	0.07	0.01	0.03	0.07	0.15	2,986
% aged 30-34	0.07	0.01	0.03	0.07	0.12	2,986
% aged 35-39	0.06	0.01	0.03	0.06	0.10	2,986
% aged 40-44	0.06	0.01	0.02	0.06	0.10	2,986
% aged 45-49	0.06	0.01	0.02	0.06	0.09	2,986
% aged 50+	0.36	0.06	0.11	0.35	0.75	2,986
Population growth, 2000-2016	0.16	0.21	-0.43	0.11	1.32	2,986
% white	0.65	0.21	0.03	0.68	0.98	2,986
% black	0.12	0.13	0.00	0.08	0.85	2,986
% native American	0.01	0.03	0.00	0.00	0.85	2,986
% Asian	0.05	0.06	0.00	0.03	0.37	2,986
% Hispanic	0.15	0.15	0.01	0.09	0.96	2,986
% unemployed	5.29	1.42	1.80	5.10	24.10	2,986
Socioeconomic controls						
% below poverty level	14.97	5.34	1.50	15.00	48.70	2,986
% employed in IT	0.02	0.02	0.00	0.02	0.21	2,986
% employed in construction/real estate	0.07	0.03	0.00	0.07	1.00	2,986
% employed in manufacturing	0.10	0.08	0.00	0.08	0.72	2,986
% adults with high school degree	27.76	7.30	8.30	27.20	54.80	2,986
% adults with college degree	21.10	3.63	8.70	21.00	35.60	2,986
China shock controls						
Exposure to Chinese import competition	2.63	2.09	-0.63	2.05	43.08	2,986
Share of routine occupations	31.89	2.30	22.23	32.07	36.66	2,986
Average offshorability index	0.00	0.50	-1.64	0.13	1.24	2,986
% watching Fox News	0.26	0.01	0.23	0.26	0.30	2,986
% watching prime time TV	0.43	0.01	0.40	0.43	0.47	2,986
Log(Twitter users)	8.27	1.93	0.00	8.46	12.35	2,986
Apprentice Rating	2.60	0.72	0.07	2.60	5.40	2,982
Log of (1 + Impressions, 2015)	11.10	1.20	3.69	11.28	13.34	2,982
Shares, 2015	6.45	1.72	0.19	6.40	15.37	2,982

Notes: This table presents descriptive statistics for the main estimation sample, weighted by the turnout in the 2012 presidential elections.

Table A.4: Summary Statistics (2016 CCES Individual-Level)

	Mean	Std. Dev.	Min.	Median	Max.	N
Vote outcome						
Voted for Trump 2016	0.49	0.50	0.00	0.00	1.00	141,805
Voted for Trump 2020	0.49	0.50	0.00	0.00	1.00	33,505
TV ratings data						
Apprentice Rating	2.62	0.71	0.07	2.63	5.40	141,805
Other NBC shows (1st PC)	-0.85	1.75	-5.71	-0.88	5.00	141,805
Individual control variables						
Log(Age)	3.89	0.37	2.89	4.01	4.61	141,805
Family income dummies	7.14	3.65	1.00	7.00	13.00	141,805
Female dummy	1.52	0.50	1.00	2.00	2.00	141,805
Education dummies	3.55	1.54	1.00	3.00	6.00	141,805
Marital status dummies	2.36	1.71	1.00	1.00	5.00	141,805
Interest in news dummies	1.60	0.97	1.00	1.00	7.00	141,805

Notes: This table presents descriptive statistics for the CCES estimation sample, weighted by survey weights.

Table A.5: Summary Statistics (Gallup Individual-Level)

	Mean	Std. Dev.	Min.	Median	Max.	N
Candidate approval outcomes						
Approve of Trump?	0.34	0.48	0.00	0.00	1.00	62,997
Approve of Kasich?	0.60	0.49	0.00	1.00	1.00	8,494
Approve of Rubio?	0.50	0.50	0.00	1.00	1.00	6,040
Approve of Cruz?	0.41	0.49	0.00	0.00	1.00	11,208
Approve of Sanders?	0.57	0.50	0.00	1.00	1.00	26,414
Approve of Clinton?	0.43	0.50	0.00	0.00	1.00	35,383
TV ratings data						
Apprentice Rating	2.58	0.72	0.07	2.60	5.40	62,997
Other NBC shows (1st PC)	-0.86	1.77	-5.71	-0.91	5.00	62,926
Individual control variables						
Income dummies	7.00	2.38	1.00	7.00	10.00	62,997
Female dummy	1.50	0.50	1.00	2.00	2.00	62,997
Education dummies	3.59	1.60	1.00	4.00	6.00	62,997
Marital status dummies	1.98	0.94	1.00	2.00	5.00	62,997
Age deciles	4.45	2.68	1.00	4.00	10.00	62,997

Notes: This table presents descriptive statistics for the Gallup estimation sample, weighted by survey weights.

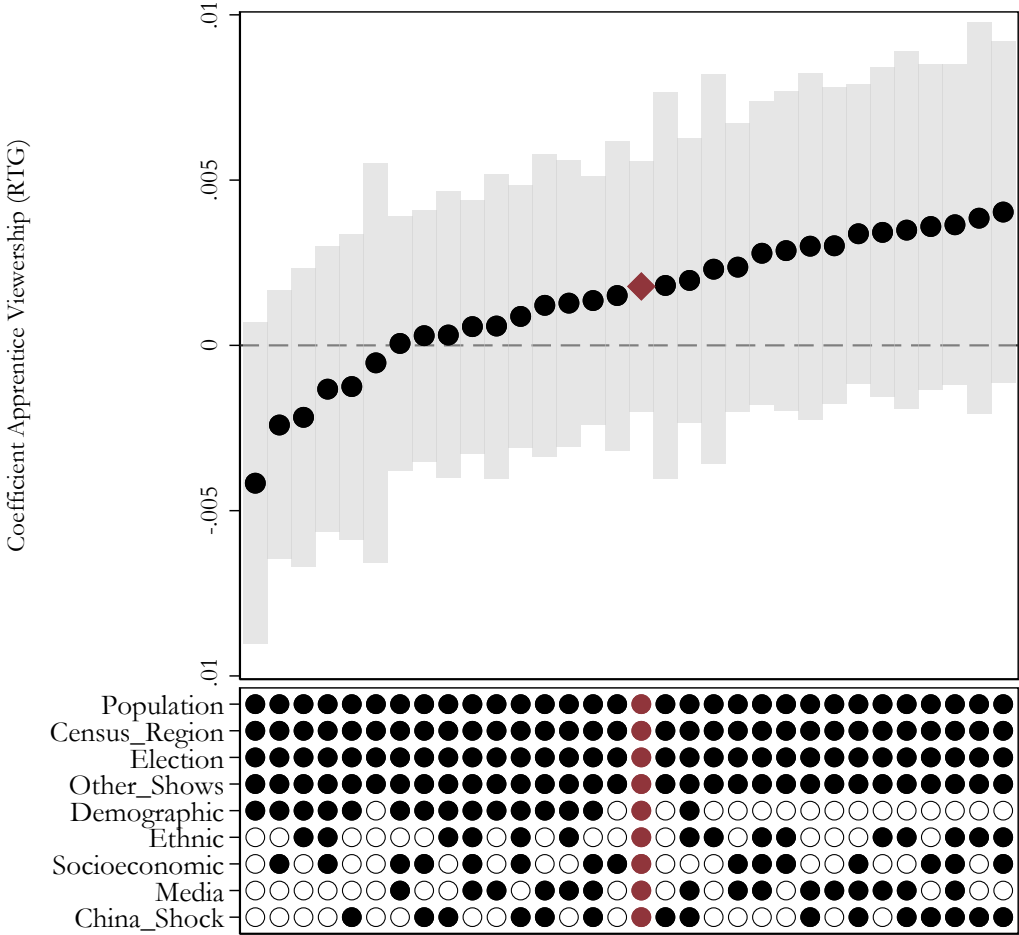
A.2. Additional Results

Table A.6: Alternative Standard Errors

	<i>Dep. var.: Republican Vote Share in Presidential Election</i>					
	Cluster County (1)	Cluster State (2)	Cluster DMA (3)	Conley 100km (4)	Conley 500km (5)	Conley 1000km (6)
Panel A: 2016 Election						
Apprentice Rating	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)
Observations	2,981	2,981	2,981	2,981	2,981	2,981
Mean of DV	0.46	0.46	0.46	0.64	0.64	0.64
Panel B: 2020 Election						
Apprentice Rating	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)	0.000 (0.002)	0.000 (0.002)	0.000 (0.002)
Observations	2,981	2,981	2,981	2,981	2,981	2,981
Mean of DV	0.47	0.47	0.47	0.65	0.65	0.65

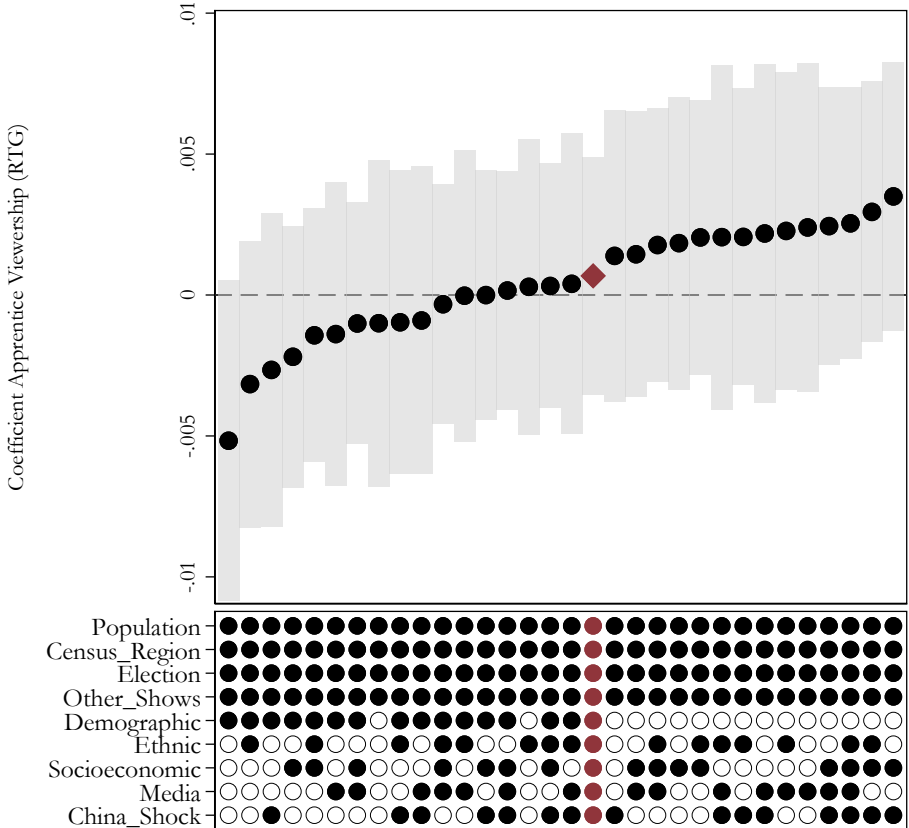
Notes: This figure plots estimates of *Apprentice Rating* from eq. (1) where the dependent variable is the Republican vote share in the 2016 presidential elections. All regressions include the control variables as in column 5 of Table 1, including the first principal component of the rating of other NBC shows (defined equivalently to that of *The Apprentice*) with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). Standard errors are clustered by the variable in the second row in columns 1 through 3, and constructed using the methods described in Colella et al. (2019) with differing cutoffs in columns 4 through 6. Observations are weighted by turnout in the 2012 presidential election. Standard errors are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Figure A.3: The Apprentice Ratings and 2016 Presidential Elections – Specification Curves



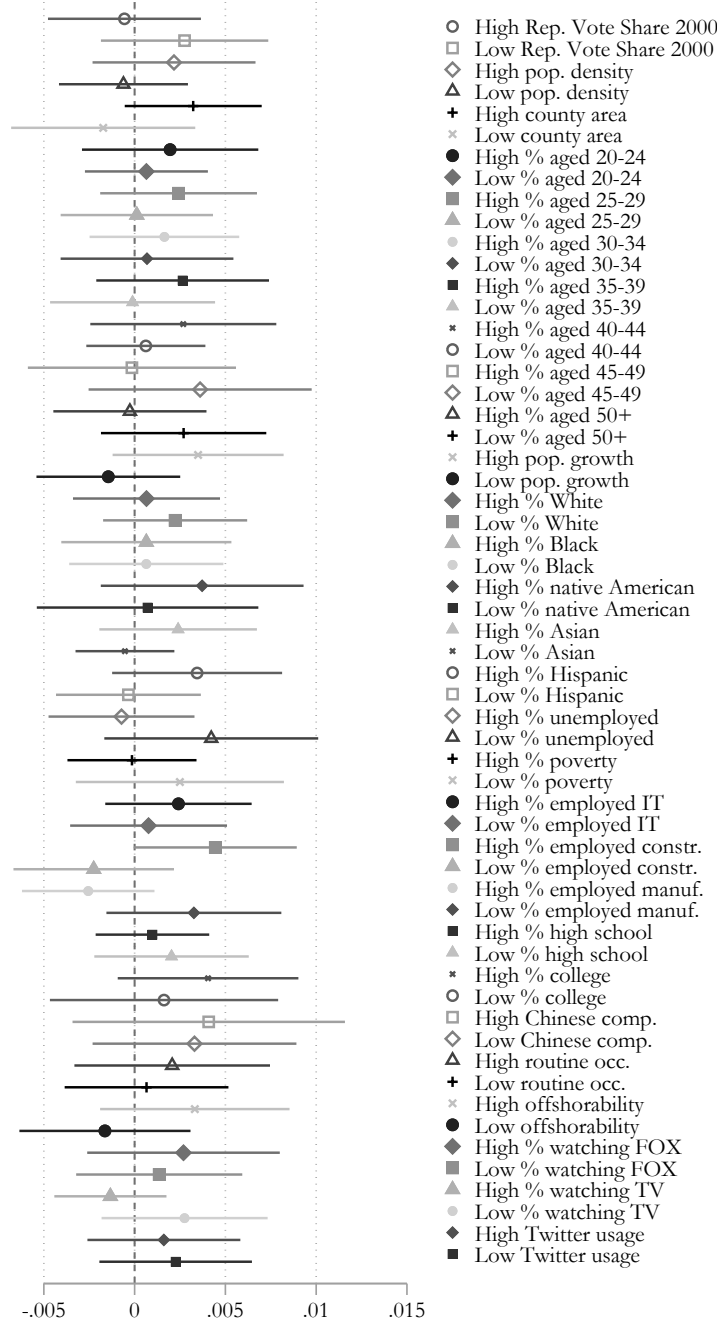
Notes: This figure plots estimates of *Apprentice Rating* from eq. (1) where the dependent variable is the Republican vote share in the 2016 presidential elections. We consider a range of different control variable sets. All regressions include population decile fixed effects, Census region fixed effects, as well as the 2012 Republican vote share and the first principal component of the rating of other NBC shows (defined equivalently to that of *The Apprentice*) with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). Observations are weighted by turnout in the 2012 presidential election. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Figure A.4: The Apprentice Ratings and 2020 Presidential Elections – Specification Curves



Notes: This figure plots estimates of *Apprentice Rating* from eq. (1) where the dependent variable is the Republican vote share in the 2020 presidential elections. We consider a range of different control variable sets. All regressions include population decile fixed effects, Census region fixed effects, as well as the 2012 Republican vote share and the first principal component of the rating of other NBC shows (defined equivalently to that of *The Apprentice*) with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). Observations are weighted by turnout in the 2012 presidential election. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

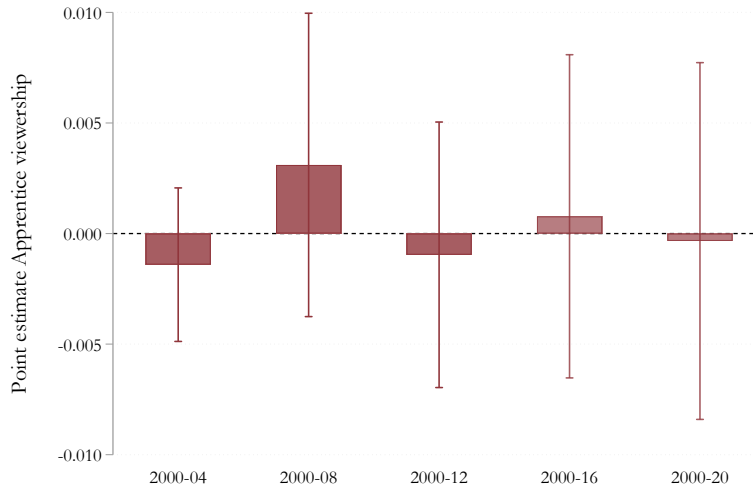
Figure A.5: Effect Heterogeneity



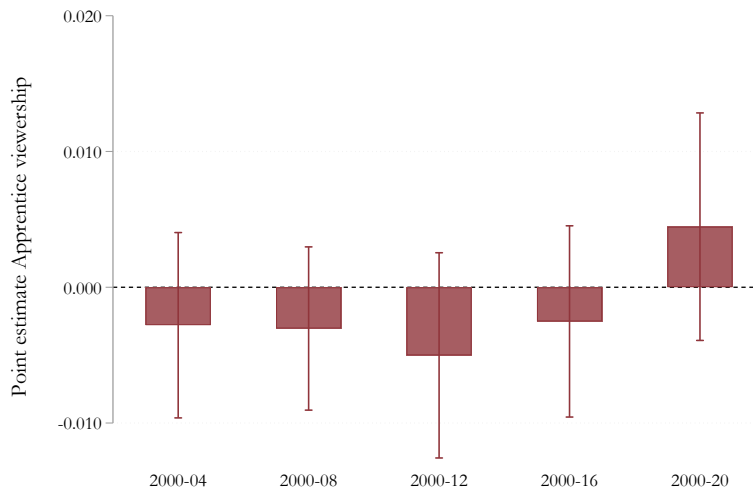
Notes: This figure plots the $\hat{\beta}$ coefficients from estimating eq. (1) where the sample is split at the median value of different characteristics. Each row refers to a separate regression; whiskers refer to 95% confidence intervals.

Figure A.6: Twitter and Presidential Elections – Reduced Form

(a) Changes in Republican Vote Share

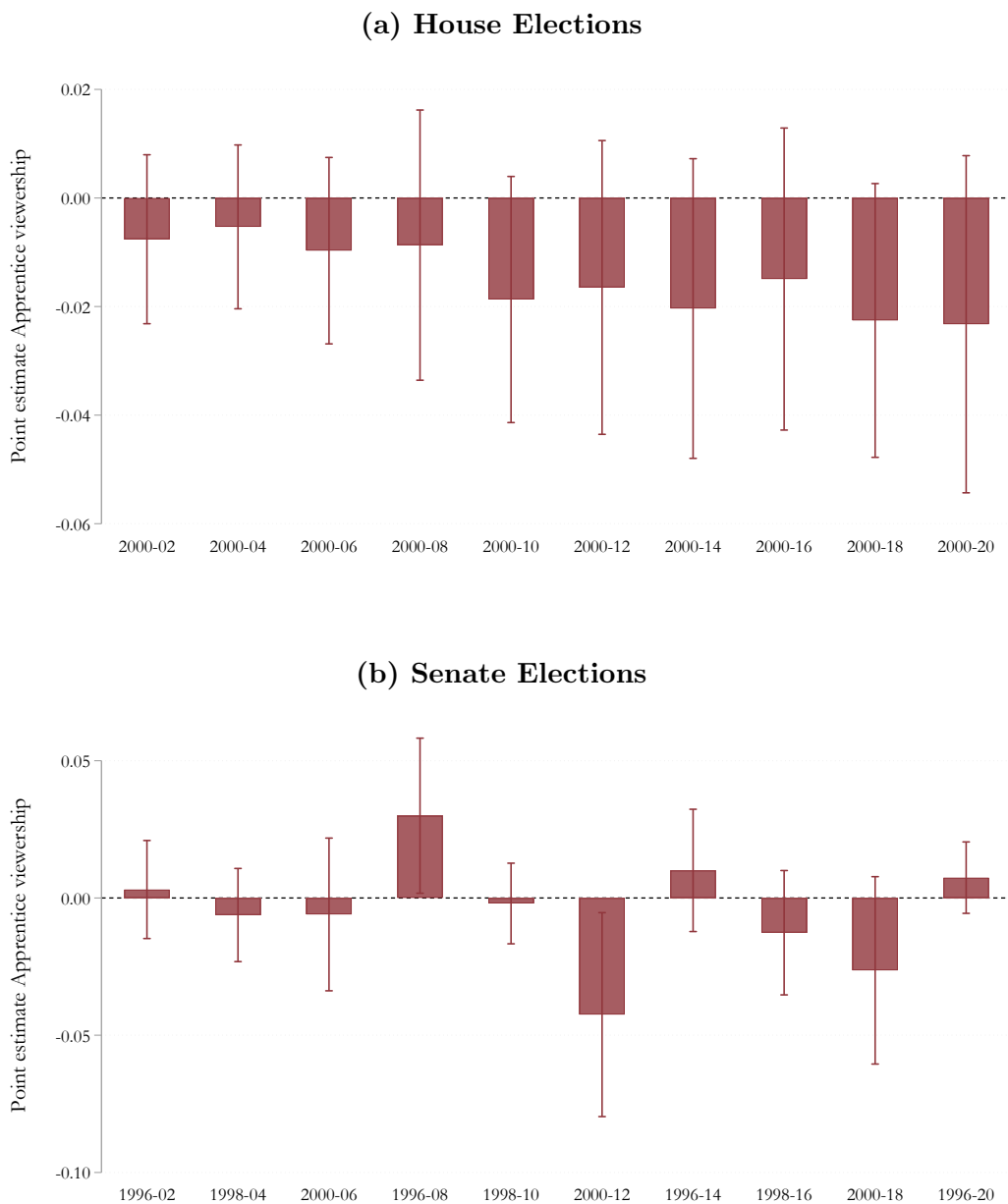


(b) Change in Voter Turnout



Notes: These figures plot estimates of *Apprentice Rating* from eq. (1) for different years where the dependent variable is the change in the Republican vote share in Panel A and voter turnout in Panel B relative to 2012. All regressions control for the full set of controls, as in column 5 of Table 1, including the first principal component of the rating of other NBC shows (defined equivalently to that of *The Apprentice*) with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). Observations are weighted by turnout in the 2012 presidential election. Whiskers refer to 95% confidence intervals based on standard errors clustered by state.

Figure A.7: The Apprentice Viewership and Congressional Election Results



Notes: These figures plot estimates of *Apprentice Rating* from eq. (1) for different years where the dependent variable is the change in the Republican vote share in House and Senate elections relative to the indicated base year. All regressions control for the full set of controls, as in column 5 of Table 1, including the first principal component of the rating of other NBC shows (defined equivalently to that of *The Apprentice*) with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). Observations are weighted by turnout in the 2012 presidential election. Whiskers refer to 95% confidence intervals based on standard errors clustered by state.

Table A.7: Alternative Specification

	<i>Dep. var.: Republican Vote Share in Presidential Election</i>					
	No Weights (1)	2016 Weights (2)	Percentile Ratings (3)	Percentiles Dep. Var (4)	State FE (5)	DMA-level Controls
Panel A: 2016 Election						
Apprentice Rating	0.002 (0.002)	0.002 (0.002)		-0.004 (0.452)	0.000 (0.002)	0.001 (0.004)
Apprentice Rating (deciles)			0.000 (0.001)			
Observations	2,981	2,981	2,981	2,981	2,981	2,981
Mean of DV	0.63	0.46	0.46	23.22	0.46	0.46
Panel B: 2020 Election						
Apprentice Rating	0.002 (0.002)	0.001 (0.002)		-0.129 (0.452)	0.001 (0.002)	-0.001 (0.004)
Apprentice Rating (deciles)			0.000 (0.001)			
Observations	2,981	2,981	2,981	2,981	2,981	2,981
Mean of DV	0.65	0.47	0.47	21.60	0.47	0.47

Notes: This figure plots estimates of *Apprentice Rating* from eq. (1) where the dependent variable is the Republican vote share in the 2016 presidential elections. All regressions include the control variables as in column 5 of Table 1, including the first principal component of the rating of other NBC shows (defined equivalently to that of *The Apprentice*) with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). Column 1 omits weights. Column 2 uses turnout in the 2016 presidential election as weight. Column 3 discretizes ratings into 25 bins. Column 4 discretizes the vote share into 25 bins. Column 5 adds state fixed effects. Column 6 collapses the controls at the DMA level. Observations are weighted by turnout in the 2012 presidential election in columns 3 to 5. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.8: Controlling for Alternative Earlier Elections

	Dep. var.: Republican vote share in 2016			Dep. var.: Republican vote share in 2020				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel B: Reduced form								
Apprentice Rating	0.004 (0.004)	0.004 (0.003)	-0.001 (0.002)	0.002 (0.002)	0.003 (0.004)	0.003 (0.003)	-0.002 (0.002)	0.001 (0.002)
Other NBC shows (1st PC)	-0.000 (0.002)	-0.000 (0.001)	0.002* (0.001)	0.001 (0.001)	-0.001 (0.002)	-0.001 (0.001)	0.001 (0.001)	0.000 (0.001)
Population deciles	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Census division FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2000 election control	Yes				Yes			
2004 election control		Yes				Yes		
2008 election control			Yes				Yes	
2012 election control				Yes				Yes
Geographical controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Socioeconomic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
China shock controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Media Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,981	2,982	2,982	2,982	2,981	2,982	2,982	2,982
Mean of DV	0.46	0.46	0.46	0.46	0.47	0.47	0.47	0.47

Notes: This figure plots estimates of *Apprentice Rating* from eq. (1) where the dependent variable is the Republican vote share in the 2016 and 2020 presidential elections. The regressions vary in the control variable for previous election results. Otherwise, all regressions include the control variables as in column 5 of Table 1, including the first principal component of the rating of other NBC shows (defined equivalently to that of The Apprentice) with a time slot equivalent or close to The Apprentice (Ninja Warrior, The Voice, Date Line, State of Affairs, Nightshift, and The Blacklist). Observations are weighted by turnout in the 2012 presidential election. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.9: Control for Other NBC Shows Separately

	<i>Dep. var.: Republican Vote Share in Presidential Election</i>						
	Apprentice 2017 (1)	Ninja Warrior (2)	The Voice (3)	Date Line (4)	State of Affairs (5)	Nightshift (6)	The Blacklist (7)
Panel A: 2016 Election							
RTG Apprentice 2015	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)	0.001 (0.002)	0.002 (0.002)	0.002 (0.002)	0.002 (0.002)
RTG Apprentice 2017	-0.004 (0.003)						
RTG Ninja Warrior 2015		-0.002 (0.003)					
RTG The Voice 2015			-0.000 (0.003)				
RTG Date Line 2015				0.004 (0.005)			
RTG State of Affairs 2015					-0.001 (0.003)		
RTG Nightshift 2015						0.005 (0.004)	
RTG The Blacklist 2015							-0.004 (0.004)
Observations	2,981	2,981	2,981	2,981	2,803	2,981	2,981
Mean of DV	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Panel B: 2020 Election							
RTG Apprentice 2015	0.001 (0.002)	0.000 (0.002)	0.001 (0.002)	0.000 (0.002)	0.001 (0.002)	0.002 (0.002)	0.001 (0.002)
RTG Apprentice 2017	-0.001 (0.003)						
RTG Ninja Warrior 2015		-0.004 (0.003)					
RTG The Voice 2015			-0.001 (0.002)				
RTG Date Line 2015				0.003 (0.005)			
RTG State of Affairs 2015					-0.001 (0.003)		
RTG Nightshift 2015						0.009** (0.004)	
RTG The Blacklist 2015							-0.003 (0.003)
Observations	2,981	2,981	2,981	2,981	2,803	2,981	2,981
Mean of DV	0.47	0.47	0.47	0.47	0.47	0.47	0.47

Notes: This figure plots estimates of *Apprentice Rating* from eq. (1) where the dependent variable is the Republican vote share in the 2016 and 2020 presidential elections. The regressions vary in the control variable for the ratings of other NBC shows (defined equivalently to that of The Apprentice) with a time slot equivalent or close to The Apprentice (Ninja Warrior, The Voice, Date Line, State of Affairs, Nightshift, and The Blacklist). Observations are weighted by turnout in the 2012 presidential election. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.10: CCES Heterogeneity Splits

	<i>Dep. var.: Voted for Trump in ...</i>			
	Full	Dem.	Indep.	Rep
	Sample	(1)	(2)	(3)
Panel A: Age ≤ 40				
Apprentice Rating	-0.023 (0.033)	0.005 (0.054)	-0.003 (0.069)	0.014 (0.044)
Other NBC shows (1st PC)	0.058*** (0.014)	0.024 (0.020)	0.055** (0.027)	0.032* (0.019)
Observations	39,676	24,489	3,320	11,073
Mean of DV	0.385	0.066	0.465	0.907
<i>Marginal effect</i>	[-0.008]	[0.001]	[-0.001]	[0.002]
Panel B: Males				
Apprentice Rating	-0.029 (0.028)	0.007 (0.044)	-0.032 (0.068)	-0.042 (0.049)
Other NBC shows (1st PC)	0.055*** (0.013)	0.025* (0.015)	0.042* (0.025)	0.034* (0.018)
Observations	64,498	29,154	7,184	27,746
Mean of DV	0.541	0.075	0.651	0.953
<i>Marginal effect</i>	[-0.011]	[0.001]	[-0.011]	[-0.004]
Panel C: TV				
Apprentice Rating	-0.007 (0.022)	-0.008 (0.054)	0.021 (0.054)	-0.052 (0.044)
Other NBC shows (1st PC)	0.043*** (0.010)	0.050*** (0.018)	0.004 (0.027)	0.016 (0.021)
Observations	30,115	15,447	3,107	11,221
Mean of DV	0.492	0.083	0.634	0.937
<i>Marginal effect</i>	[-0.003]	[-0.001]	[0.007]	[-0.006]

Notes: This table presents individual-level probit regressions where the dependent variable is a dummy for survey participants in the CCES who indicated voting for Donald Trump in the 2016 presidential elections (and 0 for those who voted for Hillary Clinton). *Apprentice Rating* is the number of impressions for the NBC show The Apprentice in 2015 divided by a county's population. We control for *Other NBC shows*, the first principal component of the rating (defined equivalently to that of The Apprentice) of other NBC shows with a time slot equivalent or close to The Apprentice (Ninja Warrior, The Voice, Date Line, State of Affairs, Nightshift, and The Blacklist). All regressions further control for log(age), a female dummy, and bins of family income, education, marital status, and interest in news. Observations are weighted by survey weights. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.11: The Apprentice and Vote Shares in the 2016 Republican Primaries

	<i>Dep. var.: Vote share in Republican Primary of...</i>				
	Trump (1)	Cruz (2)	Rubio (3)	Bush (4)	Kasich (5)
Apprentice Rating	-0.006 (0.014)	0.008 (0.009)	0.006 (0.006)	0.002 (0.003)	-0.010 (0.007)
Other NBC shows (1st PC)	0.002 (0.007)	-0.006 (0.006)	0.001 (0.003)	0.000 (0.001)	0.001 (0.003)
Observations	2,753	2,753	2,753	2,753	2,753
Mean of DV	0.48	0.23	0.10	0.01	0.15

Notes: This table plots estimates of Equation (1) where the dependent variable is Trump’s vote share in the 2016 Republican primaries. *Apprentice Rating* is the number of impressions for the NBC show The Apprentice in 2015 divided by a county’s population. *Other NBC shows* is the first principal component of the rating (defined equivalently to that of The Apprentice) of other NBC shows with a time slot equivalent or close to The Apprentice (Ninja Warrior, The Voice, Date Line, State of Affairs, Nightshift, and The Blacklist). Regressions include the indicated control variables (see the Online Appendix for their descriptions). Observations are weighted by turnout in the 2012 presidential election. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

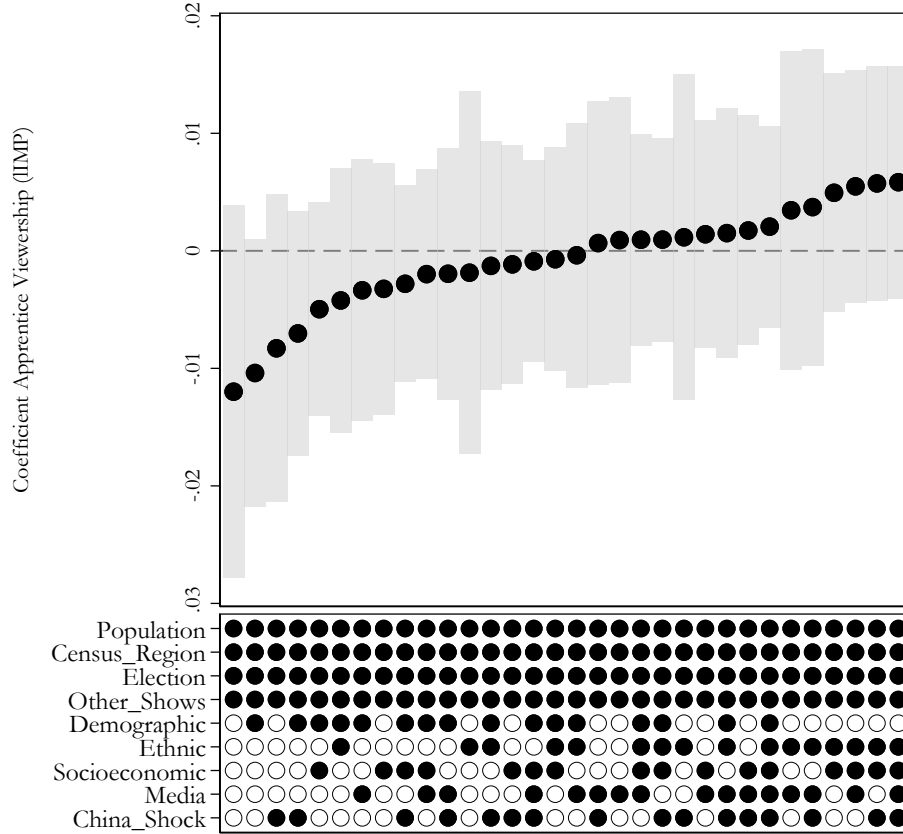
Table A.12: The Apprentice and Candidate Approval during the 2016 Primaries

	<i>Dep. var.: Approved of candidate during primaries</i>					
	Trump	Cruz	Rubio	Kasich	Sanders	Clinton
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Republicans						
Apprentice Rating	0.020 (0.027)	-0.027 (0.031)	-0.020 (0.037)	0.012 (0.025)	0.040 (0.030)	0.051 (0.033)
Observations	19,618	11,760	8,196	8,840	15,807	20,579
Mean of DV	0.648	0.698	0.779	0.666	0.237	0.090
<i>Marginal effect</i>	[0.007]	[-0.009]	[-0.006]	[0.004]	[0.012]	[0.008]
Panel B: Independents and Leaners						
Apprentice Rating	0.018 (0.024)	-0.007 (0.026)	-0.006 (0.037)	-0.064** (0.027)	-0.002 (0.022)	0.014 (0.028)
Observations	22,457	11,939	7,943	8,153	17,085	23,392
Mean of DV	0.329	0.392	0.515	0.581	0.595	0.379
<i>Marginal effect</i>	[0.006]	[-0.003]	[-0.002]	[-0.024]	[-0.001]	[0.005]
Panel C: Democrats						
Apprentice Rating	-0.045 (0.030)	0.024 (0.052)	0.018 (0.038)	-0.036 (0.035)	-0.028 (0.027)	0.028 (0.035)
Observations	20,501	10,898	7,330	7,432	15,810	21,077
Mean of DV	0.106	0.193	0.270	0.501	0.808	0.807
<i>Marginal effect</i>	[-0.008]	[0.006]	[0.006]	[-0.014]	[-0.007]	[0.007]

Notes: This table presents individual-level probit regressions where the dependent variable is a dummy for survey participants of the Gallup Daily Poll that approved of a candidate during the 2016 Republican primaries. *Apprentice Rating* is the number of impressions for the NBC show *The Apprentice* in 2015 divided by a county's population. We control for *Other NBC shows*, the first principal component of the rating (defined equivalently to that of *The Apprentice*) of other NBC shows with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). All regressions further control for income, education, and marital status dummies, a dummy for females, and age decile fixed effects. Observations are weighted by survey weights. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

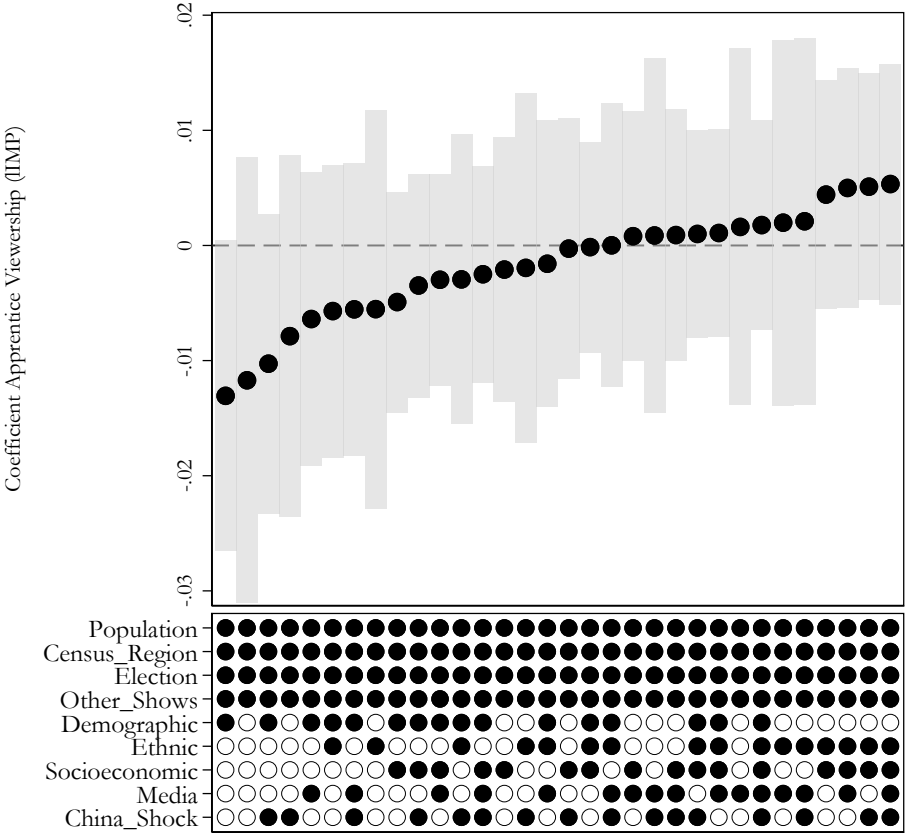
A.3. Alternative Apprentice Exposure Measures

Figure A.8: Specification Curve Log(The Apprentice impressions), 2016 Election



Notes: This figure plots estimates of $\text{Log}(\text{The Apprentice impressions})$ from eq. (1) where the dependent variable is the Republican vote share in the 2016 presidential elections. We consider a range of different control variable sets. All regressions include population decile fixed effects, Census region fixed effects, as well as the 2012 Republican vote share and the first principal component of the impressions of other NBC shows (defined equivalently to that of The Apprentice) with a time slot equivalent or close to The Apprentice (Ninja Warrior, The Voice, Date Line, State of Affairs, Nightshift, and The Blacklist). Observations are weighted by turnout in the 2012 presidential election. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

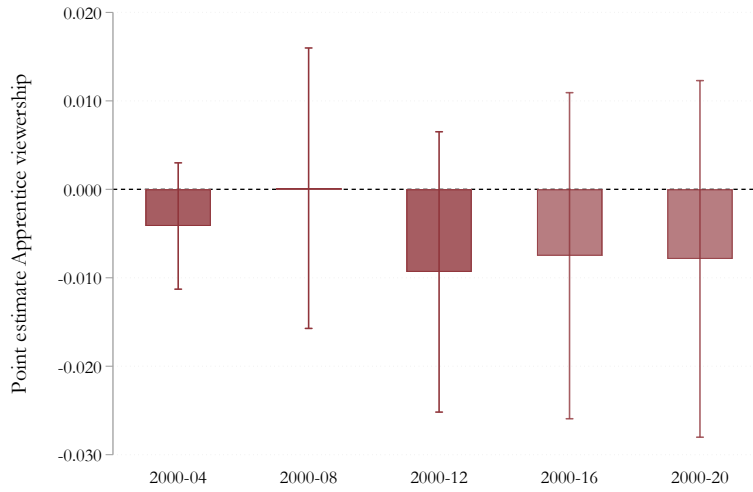
Figure A.9: Specification Curve Log(The Apprentice impressions), 2020 Election



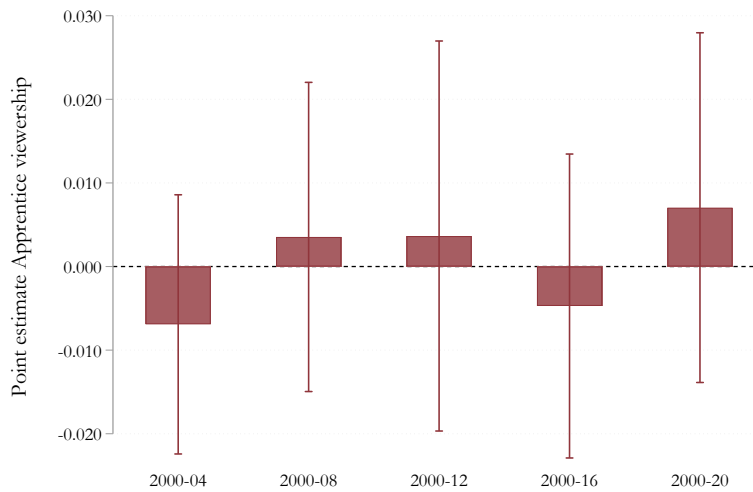
Notes: This figure plots estimates of $\text{Log}(\text{The Apprentice impressions})$ from eq. (1) where the dependent variable is the Republican vote share in the 2020 presidential elections. We consider a range of different control variable sets. All regressions include population decile fixed effects, Census region fixed effects, as well as the 2012 Republican vote share and the first principal component of the impressions of other NBC shows (defined equivalently to that of The Apprentice) with a time slot equivalent or close to The Apprentice (Ninja Warrior, The Voice, Date Line, State of Affairs, Nightshift, and The Blacklist). Observations are weighted by turnout in the 2012 presidential election. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Figure A.10: Log(*The Apprentice* impressions) and Presidential Elections

(a) Changes in Republican Vote Share

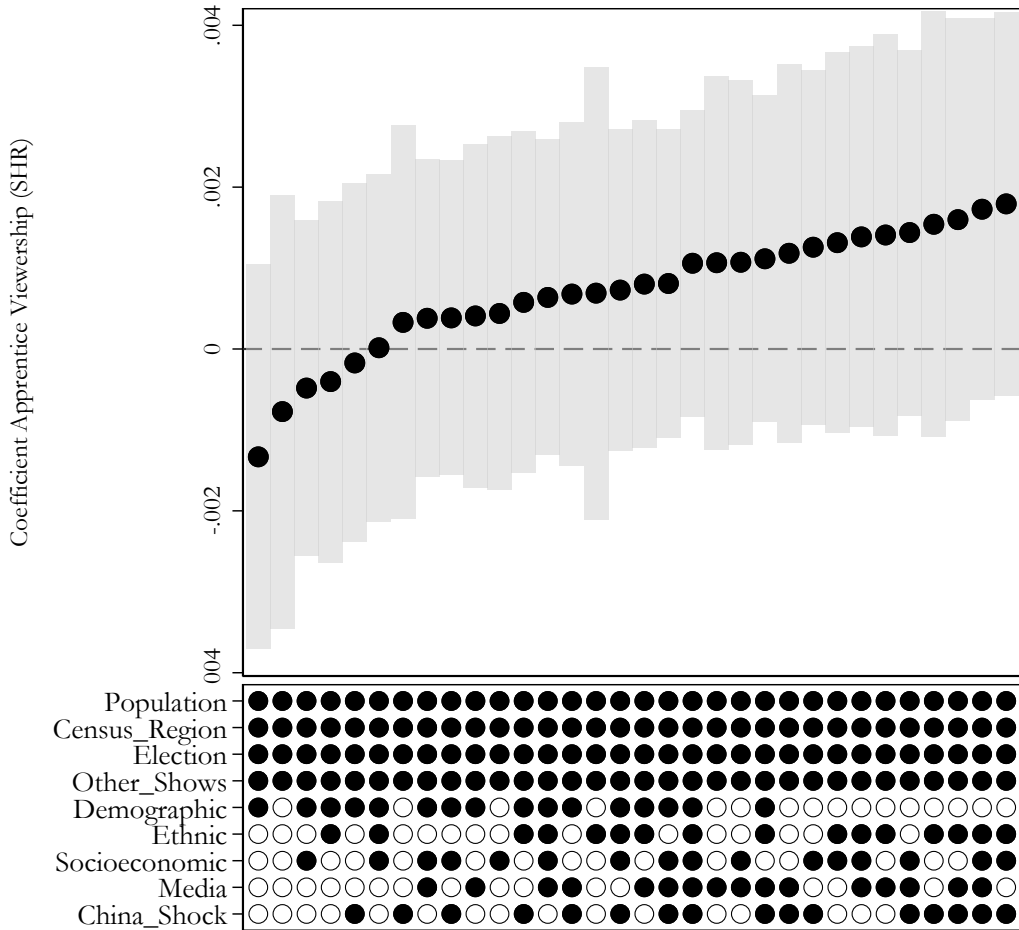


(b) Change in Voter Turnout



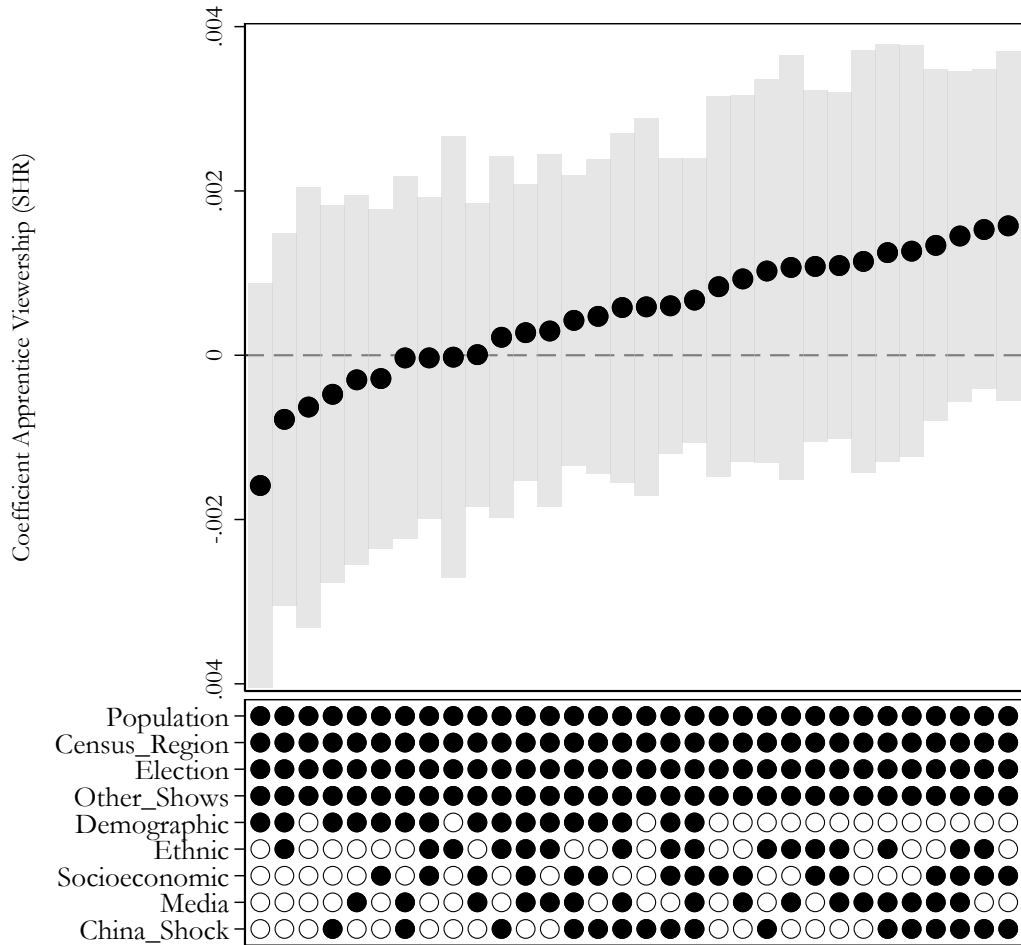
Notes: These figures plot estimates of $\text{Log}(\textit{The Apprentice impressions})$ from eq. (1) for different years. The dependent variable is the change in the Republican vote share in presidential elections in Panel A and the change in voter turnout in Panel B. All regressions control for the full set of controls, as in column 5 of Table 1, including the first principal component of the rating of other NBC shows (defined equivalently to that of *The Apprentice*) with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). Observations are weighted by turnout in the 2012 presidential election. Whiskers refer to 95% confidence intervals based on standard errors clustered by state.

Figure A.11: Specification Curve The Apprentice Share, 2016 Election



Notes: This figure plots estimates of *The Apprentice viewership share* from eq. (1) where the dependent variable is the Republican vote share in the 2016 presidential elections. We consider a range of different control variable sets. All regressions include population decile fixed effects, Census region fixed effects, as well as the 2012 Republican vote share and the first principal component of the viewership share of other NBC shows (defined equivalently to that of *The Apprentice*) with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). Observations are weighted by turnout in the 2012 presidential election. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

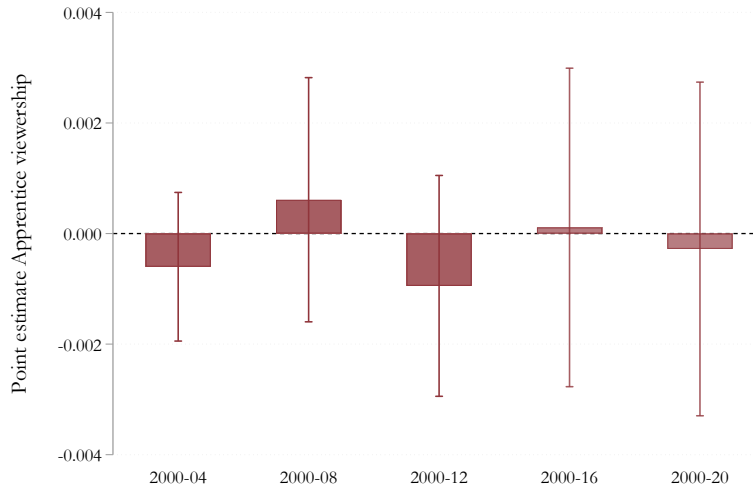
Figure A.12: Specification Curve The Apprentice Share, 2020 Election



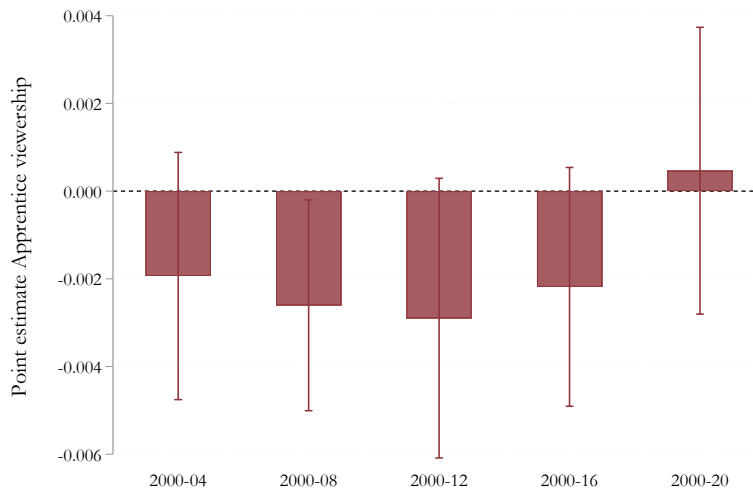
Notes: This figure plots estimates of *The Apprentice viewership share* from eq. (1) where the dependent variable is the Republican vote share in the 2020 presidential elections. We consider a range of different control variable sets. All regressions include population decile fixed effects, Census region fixed effects, as well as the 2012 Republican vote share and the first principal component of the viewership share of other NBC shows (defined equivalently to that of *The Apprentice*) with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). Observations are weighted by turnout in the 2012 presidential election. Standard errors in parentheses are clustered by state. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Figure A.13: The Apprentice Viewership Share and Presidential Elections

(a) Changes in Republican Vote Share



(b) Change in Voter Turnout



Notes: These figures plot estimates of *The Apprentice Viewership* from eq. (1) for different years. The dependent variable is the change in the Republican vote share in presidential elections in Panel A and the change in voter turnout in Panel B. All regressions control for the full set of controls, as in column 5 of Table 1, including the first principal component of the rating of other NBC shows (defined equivalently to that of *The Apprentice*) with a time slot equivalent or close to *The Apprentice* (*Ninja Warrior*, *The Voice*, *Date Line*, *State of Affairs*, *Nightshift*, and *The Blacklist*). Observations are weighted by turnout in the 2012 presidential election. Whiskers refer to 95% confidence intervals based on standard errors clustered by state.