How Cable News Reshaped Local Government[☆]

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Abstract

Partisan cable news broadcasts have a causal effect on the size and composition of budgets in U.S. localities. Utilizing channel positioning as an instrument for viewership, we show that exposure to the conservative Fox News Channel shrinks local government budgets, while liberal MSNBC enlarges them. Revenue changes are driven by shifts in property taxes, a key tool for local redistributive policy. Expenditure changes are driven by public hospital expenditures, an important discretionary public good provided by local governments. We also find evidence that Fox exposure increased privatization (while MSNBC decreased it). An analysis of mechanisms suggests that the results are driven by changes in voter preferences, but not by changes in partisan control of city governments.

[☆] We are grateful to Stefano DellaVigna, Mirko Draca, Ruben Durante, Tore Ellingsen, Benny Geys, Massimo Morelli, Suresh Naidu, Giovanni Pica, Carlo Schwarz, Alex Stremitzer, and Alois Stutzer for helpful suggestions. We have also benefited from comments by participants at the "Causes and Consequences of Populism workshop" in Bocconi (Milan), "Workshop on Political Economy" at the IEB (Barcelona), "Swiss Workshop on Local Public Finance" (Lugano), "Petralia workshop" (Petralia), EEA-ESEM conference (Manchester) and seminars at the University of Lugano, ETH Zürich and IAE-CSIC (Barcelona). We are grateful to Christian Dippel for sharing his data on city elections and to Greg Martin for sharing data on Nielsen ratings. David Cai, Romina Jafarian, Selina Lorusso, and Matteo Pinna provided excellent research assistance. *This version: September 2019 (First version: April 2019)*

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1. Introduction

An extensive empirical literature has documented that greater exposure to partisan television news can influence voting. This effect has been observed when looking at U.S. presidential elections (DellaVigna and Kaplan, 2007; Martin and Yurukoglu, 2017), as well as elections in Italy (Barone et al., 2015) and Russia (Enikolopov et al., 2011). But little evidence is available on whether these voting shifts are also associated with concrete shifts in enacted public policies (see Clinton and Enamorado, 2014; Arceneaux et al., 2016). The main studies highlighting effects of media on policies look at changes in messaging technology, rather than the political bias of messaging to which citizens are exposed (Besley and Burgess, 2002; Strömberg, 2004; Gavazza et al., 2018; Ellingsen and Hernæs, 2018).

The goal of this paper is to provide some new insights on how exposure to partisan media influences policy outcomes, in the context of local fiscal policies in the United States. The analysis uses detailed information on county and city government finances, paired with data on cable news viewership at the county level. We concentrate our attention on two national news channels which are commonly perceived to be biased towards opposing sides: the conservative Fox News Channel and the liberal MSNBC.

Our hypothesis is that in areas where there is a relatively higher viewership for Fox News Channel compared to MSNBC, local governments will pursue more conservative policies. Conversely: in areas where there is a relatively higher viewership for MSNBC compared to Fox News Channel, local governments will pursue more liberal policies. Since these channels pay attention to national rather than local politics, the null hypothesis would be that they have no effect.

In the empirical analysis, the use of an OLS model where fiscal outcomes are regressed on news channels' viewership would provide biased estimates. There would be endogeneity issues due to both omitted variable bias and reverse causation – namely, in localities that are historically more conservative, fiscal policies will be more conservative and Fox News will be more popular (and vice versa for MSNBC). To confront this problem, we follow Martin and Yurukoglu's (2017) and exploit the quasi-random variation in channel positioning across counties. Due to historical channel placement, there are wide differences in channel ordering across media markets. For instance, Fox News is located in different positions, sometimes in the low 20s, and sometimes closer to 100. This is also true for MSNBC. Therefore, because channel surfers generally start at channel 1

and click upward until they find something they like, the position of a news channel can have a big influence on whether people watch it. We confirm this argument by showing a strong correlation between the average news channel lineup position and its ratings at the county level.

To isolate exposure to conservative vs. liberal slant, we focus on the difference in ratings between Fox News and MSNBC. In our first stage, the ratings difference is significantly correlated with the difference in positions in the lineup. Importantly for our identification, we document that our instrument is not related to pre-existing markers for conservative/liberal politics, such as past fiscal policies (in trends or levels) or historical Republican vote shares. Further, the instrument is uncorrelated with pre-existing demographic characteristics that are predictive of fiscal policy.

We use the prediction from the first stage to estimate local average treatment effects (LATEs) of exposure to biased news channels on local government financing in a two-stage least squares framework. We find that an exogenous increase in Fox News exposure is associated with more conservative fiscal policies – specifically, a decrease in both revenues and expenditures per capita. Conversely, an exogenous increase in MSNBC exposure expands revenues and expenditures.[1]

The effect is economically significant. A hypothetical one standard deviation (S.D.) increase in the channel differential between Fox News and MSNBC would reduce revenue by 1.4% and expenditure by 0.7%. To put it differently, if 10% of Fox viewers changed to MSNBC, revenues would increase by 2.7%. On a back-of-the-envelope calculation, this would imply a $103 per capita increase in annual taxes.

The reduction in revenues is mainly driven by a significant decrease in real property taxation, the main component of local tax revenues. We also see significant decreases in charges (fees for government services), which may reflect lower government service provision or privatization. The decline in expenditures is driven by a decrease in public goods expenditures, especially spending on local public hospitals. These results are robust to the inclusion of controls for demographics, for other aspects of fiscal policy, and for the positioning/ratings of CNN (the other important cable news network). Additional evidence of privatization is that we see an increase in the number of private security firms

[1]We find qualitatively similar results in a fixed-effects specification based on DellaVigna and Kaplan (2007) that compares changes in fiscal policy to changes in the population share exposed to partisan news channels (Appendix Tables A.11 and A.12).

and private schools in response to higher Fox News exposure.

There are two basic mechanisms that can explain our findings. First, biased news might change vote shares in local partisan elections and select for more Republican or Democrat officials. This would in turn lead to changes in local policies. We use a sample of local mayoral elections and show that national news channels do not affect the probability of a party running candidates, nor of winning these elections. Therefore we can rule out candidate selection due to local partisan politics as a mechanism for our findings.

The second basic mechanism is that national news might work not through party politics, but through shifting local preferences and changing policies regardless of the party in power. Using data on ballot referendums in Texas we show that higher Fox News exposure relative to MSNBC increases the shares of voters in favor of fiscally conservative positions. This evidence supports the voter-preferences channel.

Further support of this mechanism is that our main effects are larger in municipalities than counties or special districts. Municipalities tend to be run by relatively more democratic institutions that are more responsive to changes in voters preferences. Counties and special districts tend to be less democratic and more bureaucratic, insulated from voter preference shifts. That we see no effect under more bureaucratic institutions tends to rule out the possibility that our results are due to a direct effect of cable news on policymakers' preferences.

To summarize: we can establish that political ideology in media is an important causal factor in driving choices on local redistributive policies. This is some of the best evidence, relative to existing literature, for a causal effect of partisan media on policy outputs. While the previous literature has shown effects on voters (DellaVigna and Kaplan, 2007; Martin and Yurukoglu, 2017) and on legislators (Clinton and Enamorado, 2014; Arceneaux et al., 2016), there isn't much evidence on the resulting policies, and none on a local level. In addition, ours is the first paper on partisan media to show an effect for the liberal network (MSNBC) as well as the conservative network (Fox News).

What potentially makes these results more surprising is that the national news channels are focusing on national politics, rather than local politics. The viewers in these localities are learning about (and hearing opinions about) the actions of the federal government, yet that information and those opinions are applied to local policies and causally shift them in the intended ideological direction. Therefore we have better evidence of a durable change in political attitudes, compared to the previous papers showing changes

along the margins explicitly recommended by media messaging. In particular, the fact that we don't see changes in local party influence suggests a change in *policy preferences*, rather than *partisan loyalty*. These media outlets are having a more deep-seated impact than what the previous literature had suggested.

More generally, this paper builds a bridge between the literatures on media politics and public finance. To begin, a number of studies have looked at political impacts of the quantity of newspaper coverage. Studying U.S. newspapers, Gentzkow et al. (2011) show that higher media coverage due to random variation in overlap between newspaper markets and congressional districts positively influence voters' turnout in presidential and congressional elections. Snyder Jr and Strömberg (2010) show that this variation affects the behavior of congressmen while in office. At the local level, Gao et al. (2019) show in the cross section that municipal borrowing costs are higher in areas where local newspapers have closed down. In the case of India, Besley and Burgess (2002) show that local governments are more responsive to disaster relief in areas with a higher newspaper circulation. Drago et al. (2014) provide evidence from Italy suggesting that entry of newspapers positively affects turnout in municipal elections and the efficiency of the municipal government.

Another strand of papers has analyzed the history of radio, television, and internet. Strömberg (2004) finds that New Deal programs were substantially larger in U.S. counties with a higher share of population with access to radio. Gentzkow (2006) shows a decrease in voter turnout after the introduction of television in the 1950s, while Campante and Hojman (2013) find an associated reduction in the polarization of congressional votes as measured by DW-NOMINATE. Durante et al. (2019) suggests that differential exposure to entertainment programs in Italy made some people more amenable to the political messaging of populist parties. Moving to cable TV, Ellingsen and Hernæs (2018) show that higher cable penetration in Norway significantly reduced turnout in municipal elections and also reduced public spending (while increasing the share spent on education). Most recently, Gavazza et al. (2018) suggest that local-government expenditures (and taxes) are lower in areas with greater internet penetration.[2]

A closer set of papers have established effects of partisan media on voters' behavior, with a focus on Fox News Channel in the United States. Using a diff-in-diff strategy,

[2]An emerging literature has begun to analyze how social media contributes to political polarization (Boxell et al., 2017; Allcott and Gentzkow, 2017).

DellaVigna and Kaplan (2007) show that the introduction of Fox News in the U.S. cable market had a positive effect on both turnout and vote share for Republicans in the 2000 Presidential election.[3] This result has been replicated in an instrumental variables framework and extended to later elections by Martin and Yurukoglu (2017). Schroeder and Stone (2015) show that exposure to Fox News is associated with greater knowledge about political issues that tend to favor Republicans.

The closest papers to this one have compared changes in Fox availability across congressional districts and changes in congressman position-taking as expressed in roll call votes. Using data from 35 states, Clinton and Enamorado (2014) show that congressmen from districts that adopted Fox News early tended to vote against the position favored by President Clinton in the 1999-2000 session (but not the 1997-1998 session). Arceneaux et al. (2016) re-analyze this dataset and find that Fox's diff-in-diff effect occurs only for congressmen whose districts have substantial Republican vote share, and only for roll calls in close proximity to an election. The research design in these papers does not permit confident conclusions about whether these shifts were pivotal for policy, in the sense that Fox caused some bills to be enacted or not.

Beyond the literature on media, our paper contributes to the work on the determinants of local fiscal policies. Pettersson-Lidbom (2008) shows that mayor partisanship influences local expenditures and revenues in the Swedish context, while Ferreira and Gyourko (2009) find no effect for U.S. localities (see also Dippel, 2019). Looking to institutional factors, Coate and Knight (2011) find that spending is lower when mayor and city council are both elected by voters, compared to when an elected city council selects a manager. Hinnerich and Pettersson-Lidbom (2014) provides further evidence on how institutions shape fiscal polices as they find that Swedish municipalities with town meetings spend 40–60 percent less on public welfare than municipalities with city councils (see also Galletta, 2018).

The stage has now been set for the following sections. Section 2 provides background information and describes the data. Section 3 presents the empirical strategy. Section 4 reports the main results, while Section 5 provides checks on the mechanisms. Section 6 concludes.

[3] Hopkins et al. (2014) obtain similar findings in surveys asking about vote intentions.

2. Background and Data

2.1. Cable news in the U.S.

There are three main competitors in the U.S. cable news market: CNN, introduced in 1980, Fox News Channel (FNC), and MSNBC (both introduced in 1996). Each channel provides program schedules and content that are the same nationwide, but their availability has varied across localities. This is due to the geographically fragmented market of cable providers.[4] Most of the time, national media producers have to reach separate agreements with local cable companies in order to make their channel available to the final users. As these procedures might start, and also end, at different times depending on the area of interest, it occurred that channel accessibility varied significantly by localities and time (DellaVigna and Kaplan, 2007).[5]

Similarly, the lineup positions assigned to each channel crucially depended on the time in which it joined the system, as new channels were most of the time positioned sequentially. It was also common for local cable providers to put channel with a similar genre into adjacent or very close positions.[6] Moreover, channel positions are generally stable over time with the rationale that changes might confuse customers. Therefore, the numerical order of the channels varies depending on the cable system considered. Martin and Yurukoglu (2017) provide detailed evidence that confirm the overall process by which channel positions are assigned.

The conventional wisdom that FNC is a politically conservative force has been borne out by empirical research in economics. DellaVigna and Kaplan (2007) show that in towns where FNC was introduced in the late 1990s, Republicans received more votes in the 2000 presidential election compared to towns where FNC had not been introduced. Martin and Yurukoglu (2017) replicated and extended this finding to later years, showing that higher FNC viewership increased the presidential vote share for republicans in 2004 and 2008. The authors provide also some limited evidence on the negative effect of

[4] In the United States, both cable and local broadcast stations are privately owned, and in general there may be just one publicly owned channel in a market.

[5] For instance, FNC had its first big agreement with TCI (https://www.nytimes.com/1996/06/25/business/the-media-business-tci-reaches-deal-with-fox-to-carry-all-news-channel.html). Differently, MSNBC started by replacing a former NBC channel, America's Talking (https://www.nytimes.com/1996/06/03/business/bitterness-and-posturing-as-rivalries-resurface-in-fight-for-cablenews.html).

[6] Other variation to the channel lineup could occur if channel capacity expanded or some channel went out of business.

MSNBC viewership on Republican votes.

To understand better the potential language differences when addressing issues related with the public budget, we trained word embeddings on the transcripts for each of the three major cable networks, obtained from Lexis.[7] Using the trained model, we computed the most similar words to "tax" for each network. We then scored each term by the similarity for each network, relative to the similarities in the other two networks. Word clouds illustrating these weights are reported in Figure 1 Panels (a) and (b). We can see that on MSNBC (Panel a), there are issues related to progressive taxation: "progressivity", "wealthy", and "high-income". There are complaints about "give-aways" (presumably to rent-seeking corporations) and "budget-busting" austerity policies. On the other hand, Fox speakers complained about the redistributive earned income tax credit (EITC),[8] and about tax rights.

In addition, Figure 1 Panel (c) displays how frequently the phrase "public service" is mentioned compared to "tax" in the two networks from 1999 through 2007. Overall it seems that MSNBC is generally more likely to talk about public services than FNC, and interestingly this dynamic has strengthened over time.

There is already some cross-sectional evidence that this messaging might have an impact on the fiscal policy views of Fox News viewers. An October 2018 survey, in particular, compared Fox-viewing Republicans to non-Fox-viewing Republicans on a range of attitudes.[9] They found that the policy where Fox Republicans diverged the most was in their strong opposition to a wealth tax on assets greater than $100 million. This speaks to conservative (anti-redistribution) views among this group (although it would at least partly be driven by selection).

To measure FNC and MSNBC channels' position and ratings, we use the same data as Martin and Yurukoglu (2017). Information about the channel positions are based on the Nielsen FOCUS database which provides the channel lineup for all the U.S. broadcast systems and the served locations at the zip code level. Our measure of television viewership is also provided by Nielsen and includes the share of individuals tuned in to each channel by zip code, for the years 2005 through 2008. Because fiscal data are not

[7] We used the Word2Vec implementation in the Python package gensim, with 300 dimensions and window size 5.

[8] For example, "IRS paid more than $110 billion in improper tax credits" (May 24, 2016).

[9] John Ray, "The Fox New Bubble," available at www.dataforprogress.org/blog/2019/3/23/the-fox-news-bubble.

zip-code-specific, we aggregate ratings and channel position values at the county level. Specifically, we create county average channel positions weighting the observations by the number of TV-watching households in the zip code as estimated by Nielsen. Similarly, we weight ratings by the number of survey individuals in the zip code according to Nielsen. Note that our sample consists of 2334 counties in which both FNC and MSNBC are accessible by at least one zip code in the year 2006. Table A.1 in the Appendix reports the summary statistics of the just described variables for the year 2006.

2.2. Local fiscal policy

In the United States, levels of revenue and expenditure vary across local governments (see Figure A.1 in the Appendix). Each locality has its own mix of sources of revenue and categories of spending, which depend on the specific structure of taxes and expenditure programs. There are five types of local government: counties, municipalities, townships, special districts (e.g., water supply and electric power), and school districts. These entities generate revenue mainly through taxes on property and fiscal transfers from upper levels of government, while expenditure is for the main part devoted to education and health, as well as transportation and public safety (i.e., police and correctional facilities).

We use information that comes from the local government finances census. This is a survey of all local governments administered every five years starting from 1972. Overall, local governments account for 30% of total government spending and 10.5% of GDP. Table A.2 in the Appendix provides insights on the composition of both the revenue and spending side of the local budget. These measures represent the sum of the amounts reported in the annual budget by each local government located in a given county. By using these aggregate measures, we abstract from two levels of heterogeneity (and potential sources of measurement error) that apply when studying state and local governments in the United States. First, there is heterogeneity in the assignment of public tasks. For instance, it could be that in certain areas specific public services are provided by the county governments, while in others the same public services are assigned to township governments. Second, in each local government the institutional structure of decision-making process can be different. For instance, there are cities where the mayor is elected directly by voters, while in others there is a city council that selects a professional administrator.

Given that the information on cable news exposure is available for the period 2005-

2008, we use as outcome variables budget components for the year 2007, and include the 1997 values as control.

2.3. Additional data sources

To supplement data on media exposure and fiscal policy, we collected demographic controls from the 2000 U.S. decennial census. They include the general demographic and economic composition of each county such as: race, gender, age, income, income inequality, education, urban/rural and sector of occupation (summary statistics in Table A.1 in the Appendix). We also have the Republican presidential share of the county in 1996. Moreover, we collect data for statewide ballot measures in Texas from the Secretary of State website.[10] Data on the number of firms by county are from the County Business Patterns (CBP) dataset. Finally, data on mayoral elections comes from Ferreira and Gyourko (2009) and Dippel (2019) (summary statistics in Appendix Table A.3).

3. Estimation Strategy

This section describes our empirical strategy. We are interested in the relationship between biased cable news viewership and local budgets. Given the data at our disposal, we conduct a cross-sectional analysis that focuses on the 2007 local budget and 2006 ratings for FNC and MSNBC. We account for a one-year lag between these two measures because fiscal decisions are usually approved during the previous year.[11]

The standard approach to our research question would be to estimate the following linear regression for county i in state s:

$$Y_{is} = \alpha + \gamma_s + \rho V_i + \beta X_i + \epsilon_{is} \tag{1}$$

where Y_{is} is a 2007 local fiscal policy variable, notably log revenue collections per capita or log expenditures per capita.[12] V_i is the main regressor, which is operationalized as the difference between FNC and MSNBC viewership (ratings) in 2006. Importantly, using the difference in TV consumption (rather than one or the other network individually)

[10] https://elections.sos.state.tx.us/index.htm

[11] In unreported estimates we consider the average ratings of the years 2005, 2006 and 2007 as a main regressor. The results using this approach are similar to that used here.

[12] To allow for zeros when looking at specific categories of expenditure and revenue, our outcomes are transformed as $Y = log(1 + F/P)$ where F is the nominal dollar value (revenues or expenditures) and P is population. Results were not sensitive to alternative transformations.

captures better the relative exposure to conservative vs. liberal slant in a given area. For completeness, we report in the Appendix Tables A.4 and A.5 the effect of FNC and MSNBC separately using a specification that is closer to the one proposed by Martin and Yurukoglu (2017) (i.e., we instrument viewership of one channel controlling for the other channel position and viewership).

X_i includes covariates, namely, demographic controls, pre-treatment fiscal policy choices (i.e., Y_{is} from 1997), and pre-treatment political preferences, while γ_s are state fixed effects. The error term ε_{is} includes unobservable factors and randomness, while ρ gives the effect of interest. The same equation can be applied to all components of the budget.

Inferring causality from OLS estimates requires strong assumptions about the absence of omitted confounders. In particular, historically more conservative (liberal) areas might have more conservative (liberal) policies as well as higher popularity of Fox News (MSNBC). Thus, to provide causal estimates we follow Martin and Yurukoglu (2017) and instrument the endogenous regressor using channels' position in the system lineup.

We define the first-stage equation as:

$$V_{is} = \alpha + \gamma_s + \gamma Z_i + \beta X_i + \eta_{is} \tag{2}$$

where in addition to the previously defined elements we now also have Z_i, which is the 2006 difference between MSNBC and FNC channel position in the system lineup in county i. Finally, the second-stage equation is:

$$Y_{is} = \alpha + \gamma_s + \delta \hat{V}_i + \beta X_i + \eta_i \tag{3}$$

where $\hat{V}_i$ are the fitted values from equation (2).

The key identifying assumption of our strategy is that the distance between channel position of MSNBC and FNC is orthogonal with respect to counties' preferences for fiscal policies. Martin and Yurukoglu (2017) provide a lengthy discussion and set of checks along these lines. In particular, they emphasize that channel positions have an important arbitrary/historical component, with significant inertia and path dependence. This implies that television companies have a limited role in affecting the channel position and adapting it to local conditions.

In Section 4.3 we provide a number of checks to test the identification assumption.

We show that in our data the instrument is not related to pre-treatment (before 1996) local fiscal policies nor to demographic characteristics predicting fiscal policies and news channel viewership. In addition, the instrument is not correlated with past Republican vote shares.

We provide initial evidence of instrumental relevance in Figure 2 Panel A which shows graphically the first stage relationship. There is a clear uptrend, with higher ratings for FNC compared to MSNBC when there is a higher difference between channel numbers (i.e., FNC is in a lower position compared to MSNBC). Regression Table 1 in Section 4 gives the F-statistics of the excluded instruments for each regression; the relationship is strong and stable with and without the inclusion of controls.

Under exogeneity, two-stage least squares procures consistent estimates for ρ if the instrument satisfies an exclusion restriction and monotonicity. That is, the channel position affects budget decisions only through its effect on cable news viewership, and the channel never has a reverse effect. We feel these assumptions are reasonable in this context.

Standard errors are adjusted for clustering at the state level to account for correlation in the error terms of counties belonging to the same state. Regression estimates are weighted by county population in light of large heterogeneity in population and our interest in per capita impacts. To facilitate the interpretation of the coefficients, we standardized the instrument and the endogenous variable by dividing the original values by the respective standard deviations.

For completeness we also estimated a fixed-effects model based on DellaVigna and Kaplan (2007). Details on the specification, and associated results, are reported in Appendix A.2. The model compares changes in county fiscal policy to changes in the population share exposed to partisan news through channel availability, conditional on county fixed effects and state-year fixed effects. The identification assumption for these regressions is the absence of time-varying confounders (parallel trends). The fixed-effects analysis produces similar results to the instrumental-variables analysis.

4. Results

In this section, we begin our presentation of the results by reporting evidence about the effect of partisan news on local public revenues and expenditures. Next we provide identification checks.

4.1. Effects on revenues

First we look at local governments' revenues. Panel A of Table 1 reports the baseline results. There is zero effect of cable news on local fiscal policies in OLS (Column 1-2). The first stage (Columns 3-4) confirms that the instrument is sufficiently strong both with and without the inclusion of demographic controls. The size of the coefficient increases from 0.056 to 0.088 once controls are included. As seen in Column 6, there is a negative and significant effect in the reduced form of channel position, suggesting that relatively lower (higher) channel position for conservative (liberal) media reduces (increases) revenues.[13] In the reduced form, the coefficient remains substantially unchanged after the introduction of demographics as control.

Table 2 reports the results of the 2SLS estimates, for a variety of specifications. We confirm a negative and significant effect on revenues for all the specifications when looking at total revenue (columns 1 to 3). The inclusion of additional controls, which are likely to be correlated with fiscal policy, reduces the size of the coefficient. Once the full set of controls is included, the coefficient of interest is equal to -0.160 (s.e.=0.056) and statistically significant at the 0.1% level.[14] On this estimate, one S.D. increase in the difference between FNC and MSNBC ratings would decrease revenue by 16%. This seems like a large effect, but this variation in ratings is unlikely to occur in practice. For example, we know from the first-stage that a one S.D. increase in the instrument (i.e., around 14 positions) would increase viewership by about 10% of its standard deviation. Therefore, one can look at the reduced form effect as a more conservative interpretation of the results: a one S.D. increase in the instrument would decrease revenue by 1.4%. Another way of interpreting the magnitudes is to say that, if 10% of Fox viewers changed to MSNBC in the average county, revenues would increase by 2.7%. A back-of-the-envelope calculation implies a $103 per capita increase in annual taxes.

This is a local average treatment effect and therefore identified by those counties

[13]In unreported analysis, we estimate the reduced form coefficients for each of the fifty top-rated channels in the data separately. Fox News had the second-largest negative effect on revenue among all channels after Nickelodeon, followed by A&E, ABC Family, Disney Channel, and Cartoon Network. MSNBC had the third-largest positive effect on revenue among all channels after ESPN and Food Network, followed by Discovery, Lifetime, and the Outdoor Channel. Our results hold when including five principal components from the matrix of channel positions for all other cable networks.

[14]In unreported analysis we find that including as a control variable the difference in the number of years since FNC and MSNBC have been introduced in a county does not affect our results. This is true for different definition of years of exposure. We use three different definitions considering the number of years since, alternatively, at least 25%, 50% and 75% of the population had access to FNC and MSNBC.

where ratings are particularly influenced by the difference in channel position (i.e., compliers). Such counties are likely composed of individuals with relatively weak predetermined political preferences. This possibly explains the difference between the 2SLS results and the OLS estimate of zero reported in Column 2 of Panel A of Table 1. OLS equally weights observations.

What revenue components are driving this effect? We can see that the main result is mostly driven by a significant negative effect on property taxes (Column 4), which is the largest source of local revenues. The property tax is also an important local wealth tax, so a decrease in property taxes can be understood as a regressive policy favoring those with relatively high real property wealth.[15]

Additional effects are present when focusing on license taxes (Column 5) and charges (Column 7). The effect on charges is interesting because these are generally fees for government services.[16] A decrease in charges is consistent with lower government service provision, which is a key policy interest for small-government conservatives. Decreased charges could mean that these services are no longer provided, or that they have been privatized. We provide evidence coherent with this argument in section 5.4.

Column 6 shows that there is no effect on sales tax. This is intuitive because sales tax rates are set primarily at the state level with little discretion for localities to change it. In addition, it means cable news messaging is not significantly affecting the local retail market. In Column 8 we show that there is no effect on intergovernmental revenues from state government. Therefore these reductions in expenditures are not being compensated by revenues from state government, and do not seem to be correlated with some change in intergovernmental political processes.

Finally, Appendix Table A.4 reports the results by looking at FNC and MSNBC separately. Overall, the sign of the coefficients are consistent with the results of the main regressions. FNC has a negative and significant effect on total revenue, while MSNBC has a positive and also significant effect on total revenue. The effect of FNC seems to be driven by a reduction in charges, while MSNBC by an increase on taxes.

[15]It is worth noting that our time period (2006-2007) is in the run-up to the housing bubble and housing crisis of 20008-2009. So the external validity of the effects on property taxes should be interpreted in that light. We can show that our results are not driven by housing prices, for example by including median housing value as a covariate.

[16]We also perform regressions that use as dependent variable the share of local revenue devoted to each component and we do not identify any significant effect (Appendix table A.6).

4.2. Effects on expenditures

Next we look at effects on expenditures. Panel B of Table 1 confirms the overall results about the OLS, first-stage, and reduced form effects that we already mentioned when focusing on revenues. Table 3 reports the 2SLS results. We see similar results to the effect for revenue, although the magnitude is lower and the coefficients are significant at the 10% rather than 0.1% level. In the preferred specification (Column 3), the coefficient of interest suggests that more viewership for FNC, adjusted by MSNBC ratings, has a causally negative effect on expenditures. To interpret the size of the effect: a one S.D. increase in a viewership differential between FNC and MSNBC would decrease general local expenditures by 8.5%, about half of the effect on revenues. Therefore, a one S.D. increase in the instrument would decrease expenditure by nearly 0.7% (=0.085*0.087).[17]

Again we look at the components of the change. We have negative coefficients across all categories. These effects are consistent with smaller government in response to conservative ideology. The effect is significant for spending in police and hospital. Hospital and Police are important public goods provided by local governments.[18] Interestingly, we confirm an effect on hospitals when using as dependent variable the share of local expenditure devoted to this category (of the total local budget, Appendix Table A.7).

When looking at results of FNC and MSNBC separately (Appendix Table A.5), the sign of the coefficients for aggregate expenditure are consistent with the main results (i.e., FNC has a negative and MSNBC a positive effect) but not statistically significant. Yet, there are significant effects when looking at the dis-aggregated components of the local budget. MSNBC has a positive and significant effect on education, hospital and corrections, while FNC has a negative and significant effect on expenditure in policing.

[17] In Appendix Table A.8 we report results on further relevant outcomes. First, we use as alternative dependent variables the number of public employees and their total amount of salary both in per capita term. In both cases we do not find any significant effects. We also do not find a significant effect if we use as a dependent variable either local public debt per capita or a proxy for county-level GDP (total wages paid by local establishments).

[18] Is worth mentioning that only 743 counties have expenditure on hospital. If we estimate the model using only this sample of counties the effect is smaller and not statistically significant at a conventional level. However, we find a strong and significant effect if we replace the outcome variable and use instead a dummy identifying the presence of spending in hospital (coeff=-0.915, st. err=0.344). This evidence suggests that the results about hospital expenditure are mainly explained by an extensive margin effect.

4.3. Identification checks

In this section we provide a set of tests to support the validity of our estimation approach. Specifically, we want to rule out the possibility that cable channel positions are systematically correlated with contemporaneous or past local conditions which could be related with local fiscal policies. We report these checks in Table 4.

First, we would like to assess whether the channel position is selected to demographics in a way that would predict changes in ratings or outcomes. We produce the predicted values – using as covariates demographics and state fixed effects – for ratings, expenditures, and revenues, using OLS. We then regress this predicted value on channel position: Columns 1 through 3 of panel A show that there is zero statistical relation. This excludes the possibility that the difference in channel position between MSNBC and FNC is systematically related to relevant demographic characteristics.

Next, Columns 4 and 5 show that the difference in channel position is not correlated with local fiscal conditions immediately prior to the start of treatment, such as expenditure and revenue in 1992. Column 6 confirms that the instrument is not correlated with previous political preferences in presidential elections.

Finally, to synthesize the evidence on confounding pre-trends, we ran the reduced-form regressions using 2006 channel positions for difference in budget outcomes and population at a ten-year interval from 1977 to 2007. These regression results are reported in panel B of Table 4. It is reassuring that our instrument is not correlated with trends in local fiscal policies before the entry of FNC and MSNBC in 1996.[19] Interestingly, columns 3 and 6 confirm our main results using an alternative specification of the dependent variable (i.e., using the 1997-to-2007 differences as outcomes, instead of 2007 level and include 1997 as a control).

5. Mechanisms

In this section we seek to understand the mechanisms underlying our findings.

5.1. Effect on elections

One possibility is that partisan news influences local election results – that is, FNC exposure makes electing a Republican mayor more likely, while MSNBC exposure will

[19] We also find no correlation between the instrument and population changes both before and after 1996.

make a Democrat mayor more likely. This change in partisan power would then affect local policies. One reason to be skeptical of this hypothesis is the evidence in Ferreira and Gyourko (2009), who find that fiscal policy in U.S. local governments is not influenced by partisan affiliation of the mayor. Yet, Dippel (2019) presents results suggesting that Democratic mayors might favor larger pension benefit for public employees. Here we ask the complementary question of whether cable news affects partisan affiliation of elected mayors.

To investigate this channel, we perform the analysis at the city level and merge the data from Ferreira and Gyourko (2009) and Dippel (2019) with our data on cable news. We end up with a sample of 680 city elections during the years 2005-2008 in which at least one candidate is either Republican or Democrat.[20]

We estimate reduced-form regressions of candidates' party and electoral results on our instrument measured at the city level. Table 5 reports the results. In Column 1 we use as a dependent variable a dummy on whether there is a Republican candidate, in Column 2 a Democrat candidate, and in column 3 the electoral results identified by a Republican candidate winning the election. Across specifications, we see that cable news does not affect partisan outcomes in local elections.

5.2. Effect on preferences

A second mechanism besides party affiliation of city government is that cable news exposure could influence citizen's preferences for fiscal policies. These preferences would then affect local budget policies regardless of which political party holds office. To analyze this channel we look at a clean signal of voter preferences: voting on ballot for fiscal policies.[21] Specifically, we are considering legislatively referred constitutional amendments.

For this analysis, we collect results on state-wide ballots for the 254 counties in the state of Texas. Texas is the second largest state in the U.S. by both area and population and also the one with the largest number of counties.[22] We select those ballots taking place in 2007 and 1997 that have clear fiscal consequences. Specifically, we consider three

[20] Some cities had elections more than once in the period in analysis. The total number of cities considered is 551.

[21] Galletta (2018) uses a similar approach to study the effect of direct democratic institutions on fiscal preferences in Switzerland.

[22] We have executed a similar analysis for California, the most populated US state. Unfortunately, given the reduced number of counties (52), the instrument was performing poorly.

votes from 2007: *Appraisal Values for Taxes – Proposition 3*, *Limitations on Municipal Taxes – Proposition 5*, and *Tax Exemptions for Motor Vehicles – Proposition 6*; and three votes from 1997: *Tax Valuations of Residence Homesteads – Proposition 2*, *Tax Exemptions for Water Conservation – Proposition 3*, *Property Tax for Fire Prevention – Proposition 9*.

We use as an outcome the vote share for the fiscally conservative position (that is, reducing taxes) on each of these ballots. This is the "yes" position on all ballots except 1997 Prop. 9. We estimate county-level two-stage least squares regressions including all controls, so this is the same specification as Column 4 from Tables 2 and 3. Given the sample is composed of counties belonging to the same state, we use robust standard errors rather than clustering by state.[23]

Table 6 provides these results, where each column refers to a separate ballot vote. For all three propositions from 2007, the results indicate that higher viewership of FNC compared to MSNBC due to channel positioning is associated with higher vote share for the conservative option (although the F-stat is somewhat low). However, when looking at the 1997 ballots, the coefficients are either not significant, or if anything show the opposite effect (Column 8). This is supportive of the view that cable news is having a prospective causal effect on fiscal policy referendum votes, rather than channel numbers being selected into areas with different pre-existing political views on fiscal policy. Column (4) and (8) report results where we consider jointly ballots from the same year. Not surprisingly, we have a positive effect for 2007 ballots, and no effect in 1997. Specifically, the coefficient from column (4), significant at the 1% level, implies that a one S.D. increase in the difference in ratings would increase the share of voters in favor of a reduction in taxes by 8 percentage points.[24] Overall, this evidence supports the idea that cable news affects fiscal policy through influencing voter preferences.

5.3. Results by type of government

To further validate the proposed mechanism, we study the presence of heterogeneous effects depending on the level of influence that citizens can have on politicians' behavior. One should expect that changes in preferences will pass to fiscal policies when citizens

[23]Because not all counties avail both FNC and MSNBC, and for some other counties covariates are missing, the regressions are restricted to a sample of 130 counties.

[24]In the reduced form we have that coeff=.0178 and st.err=0.006. Therefore, a one S.D. increase in the instrument would increase the share of voters in favor of a reduction in taxes of 1.7 percentage points.)

have more control over policymakers, and that the effect will be marginal if budget decisions are not sensitive to citizens' requests.

While our main results are estimated using the aggregate fiscal decisions of multiple types of government belonging to the same geographical area, here we conduct our analysis by considering each type of government separately. We look at three types of government: municipalities (including townships), counties, and school/special districts. We would expect that if our effect goes through voter preferences, and the consequent reaction of local officials, then there may be a larger effect for municipalities than counties and special districts. Municipalities are "closer to citizens" compared to counties and this has been suggested to allow a better matching between enacted policies and resident preferences, as well as higher political accountability (Lockwood, 2002; Besley and Coate, 2003; Persson and Tabellini, 2002). In addition, municipalities tend to be run by relatively democratic institutions: city councils and mayors. Counties and school/special districts tend to have less direct forms of governance, such as county commissions, and are more administrative.[25]

Appendix Table A.9 reports results on revenue and Appendix Table A.10 on expenditure. For municipality revenues, we see quite similar effects to the aggregated results reported previously. For county revenues, though, we see only insignificant estimates and for school/special district we find a significant effect only for license taxes. The story is similar for expenditures. Overall, the effects of cable news are mostly driven by changes in budget decisions taken by municipalities, rather than counties. One interesting additional result for this analysis is that there is a statistically negative effect on education spending when looking at municipalities. Education is an important public service provided by municipality governments, and conservative news tends to decrease provision.

These heterogeneous effects by type of government are inconsistent with an alternative interpretation of our findings: that cable news is having a direct effect on policymakers through their own news consumption. If there were this direct effect, we would see the same effects in the less democratic forms of local government. Whether cable news has a direct effect on the attitudes and policy decisions of policymakers is an interesting

[25]The 2007 "Form of Government Survey" of the International City/County Management Association (ICMA) find that more than 30% of counties are governed by a commission, while only 1% of municipalities are. This varies somewhat across states.

area for future research.

5.4. Evidence on privatization

As discussed in the previous sections, we have evidence of a decrease in charges (fees for government services). In terms of expenditures, we saw a decrease in police, hospital services, and education spending (in municipalities). These decreases in public service provisions might be compensated by increases in private provision. In this section we seek evidence on privatization.

We test this hypothesis using data from the 1998 and 2007 editions of the County Business Patterns (CBP) dataset. This census dataset contains information on the number of establishments by county and year, separately by NAICS industry code. Given our main results, we focus on the sectors identifying Educational Services (NAICS 61), Healthcare and Social Assistance (NAICS 62) and Security Guards and Patrol Services (NAICS 561612).[26]

We take the log of the number of establishments by sector as our outcome. This implies that we have in sample only counties that have at least one firm of a specific sector. That is, we are looking at intensive-margin effects.

Table 7 reports the results. We replicate our previous estimation strategy, including now the 1998 value of the dependent variable as control.[27] The estimates suggest that the reduced provision of public goods is potentially compensated by the private sector through opening of new establishments. Education services increase (Column 1), consistent with a move toward private schools from public schools. Health care establishments increase in number (Column 2), consistent with the opening of private hospitals. Finally, and largest in magnitude, there is an increase in the number of establishments in private security, consistent with privatization of publish police forces. Meanwhile, Column 4 shows that the numbers of firms belonging to other sectors is not affected, meaning that there is no effect of cable news on the economy at large.

[26] NAICS 62 includes also public owned hospitals. Therefore, in light of our previous results (i.e., a negative effect of our treatment on hospital expenditure), the estimate reported about Healthcare and Social Assistance are to be considered downward-biased.

[27] 1998 is the earliest year of CBP with NAICS (rather than SIC) codes.

6. Conclusion

Political media affects polices. The evidence is consistent with a causal effect of exposure to politicized news on local fiscal policies. In our context, Fox News served to make local governments more fiscally conservative, while MSNBC served to make them more fiscally liberal. This has resulted in substantial changes to revenues and expenditures in these localities.

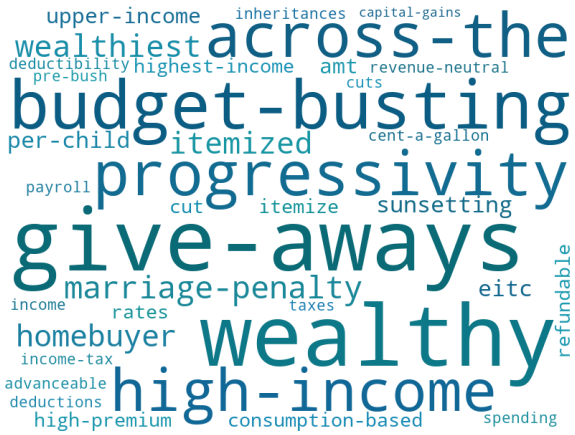
Regarding the potential mechanisms, our evidence suggests that the effect is more likely to be driven by changes in individuals preferences for fiscal policies rather than the consequence of an effect on political selection. Further, we show that there is a substitution effect in service provision between the public and the private sector. In future work, we will analyze whether these television effects are mitigated or amplified by internet access or by local print media.

We cannot make strong claims about the welfare impacts of how media affects policy. While we find that revenues and expenditures on public goods decrease (increase) in response to conservative (liberal) news, they might have been inefficiently high (low) in the first place. More work could be done to understand the incidence of these effects across the income and wealth distributions. In addition, future work might attempt to distinguish the short-term from longer-term effects of partisan media.

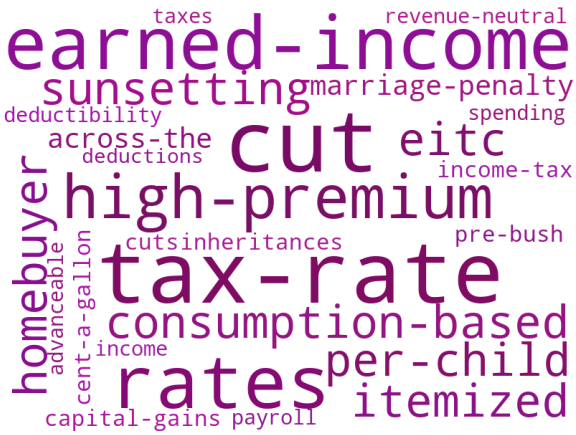
Still, this is some of the best evidence so far in the literature on whether media affects policies. The previous work has shown effects on voters, and some less robust effects on the actions of legislators. But this is the first paper to show that partisan media has substantial effects on local policy outputs. We now have evidence for a concrete link between political media and political action. That evidence could be useful for future research and policy-making in this area.

Figure 1: Language differences

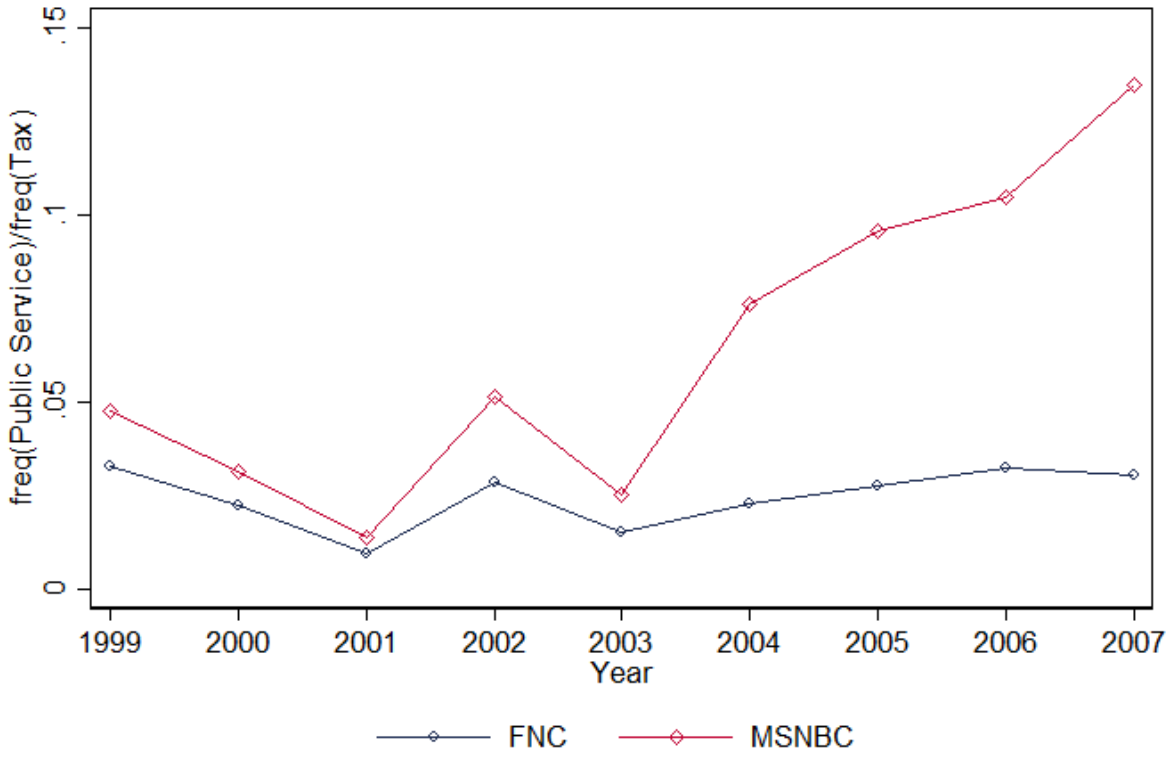
(a) Words Associated with "Tax", MSNBC



(b) Words Associated with "Tax", Fox News



(c) Relative Frequency "public service" Vs. "tax"

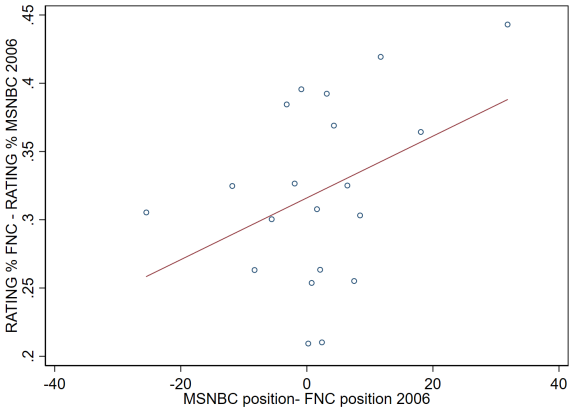


Notes:: Illustrations for cable news language. The word-clouds at the top show the words most associated with "tax", compute from a word2vec model, on MSNBC transcripts (a) and FNC transcripts (b). The graph at the bottom (c) reports the relative frequency of the phrase "public service" compared to "tax" for MSNBC and FNC in the period 1999-2007.

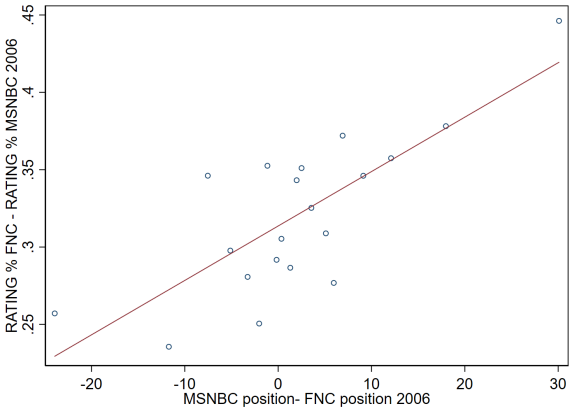
Figure 2: First Stage and Reduced Form

Panel A. First stage

(a) No controls

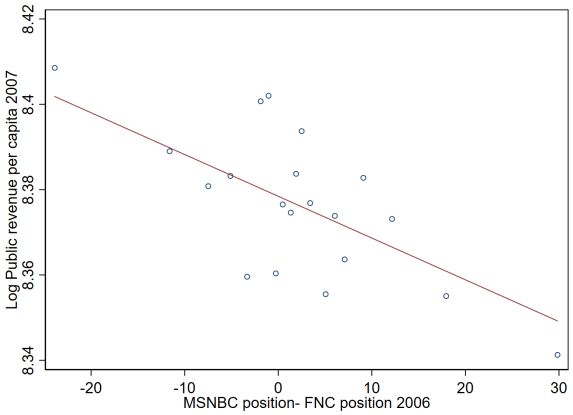


(b) With controls

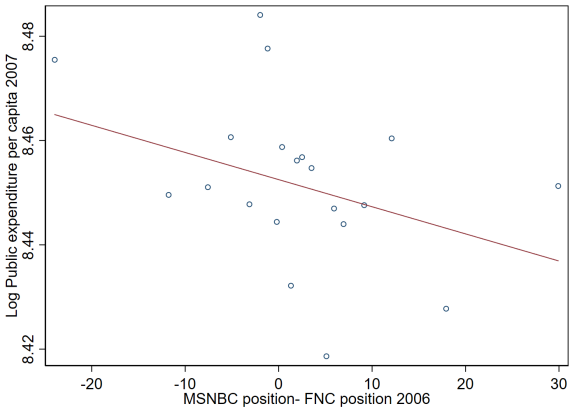


Panel B. Reduced Form

(a) Effect on 2007 Revenues



(b) Effect on 2007 Expenditures



Notes: Binscatter diagrams for the first stage and the reduced form effect. Panel A displays first stage binscatters without controls (a) and with controls (b). Panel B displays reduced form effect, when the full set of controls is included, of Channel position (MSNBC - FNC) in 2006 on 2007 log revenues per capita (a) and on 2007 log expenditures per capita (b).

Table 1: Cable News and Fiscal Policy

	OLS		First stage		Reduced Form	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Impact on Revenue						
Ratings (FNC - MSNBC)	-0.007	-0.006				
	(0.006)	(0.006)				
Channel position (MSNBC - FNC)			0.056***	0.088***	-0.013***	-0.014***
			(0.015)	(0.015)	(0.003)	(0.004)
F-stat			13.639	33.320		
N observations	2334	2334	2334	2334	2334	2334
	OLS		First stage		Reduced Form	
	(1)	(2)	(3)	(4)	(5)	(6)
Panel B. Impact on Expenditure						
Ratings (FNC - MSNBC)	-0.008	-0.004				
	(0.006)	(0.006)				
Channel position (MSNBC - FNC)			0.059***	0.087***	-0.009*	-0.007^{+}
			(0.015)	(0.015)	(0.004)	(0.004)
F-stat			16.034	33.074		
N observations	2334	2334	2334	2334	2334	2334
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes	Yes	Yes
Dep. variable in 1997	Yes	Yes	Yes	Yes	Yes	Yes
Additional controls	No	Yes	No	Yes	No	Yes

Notes: The dependent variable is the Log(Total revenue per capita) in 2007 in columns (1-2) and (5-6) of panel A and the Log(Total expenditure per capita) in 2007 in columns (1-2) and (5-6) of panel B. In columns (3-4), the dependent variable is Ratings (FNC - MSNBC) in 2006 in both panels. All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Further controls include racial, gender, age, income, educational, occupational, urban/rural composition of the county and the share of vote for the republican candidate in the 1996 presidential election. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. $+$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

Table 2: Effects on Revenues

	2SLS							
				Taxes			Total	State
	Total			Property	License	Sales	Charges	Transfers
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ratings (FNC - MSNBC)	-0.234***	-0.156***	-0.160***	-0.173*	-0.606*	-0.115	-0.342*	-0.054
	(0.089)	(0.054)	(0.056)	(0.078)	(0.235)	(0.296)	(0.166)	(0.050)
F-test	13.639	28.504	33.320	32.880	32.086	33.684	33.027	32.712
N observations	2334	2334	2334	2334	2334	2334	2334	2334
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dep. variable in 1997	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Republican vote shares in 1996	No	No	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the Log(Total revenue per capita) in 2007 in columns (1) to (3), and the Log(revenue per capita) in 2007 for each of the sources listed in the column head in columns from (4) to (8). Ratings (FNC - MSNBC) is instrumented by Channel position (MSNBC - FNC). All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$. and *** $p < 0.001$.

Table 3: Effects on Expenditures

	2SLS									
	Total			Education	Health	Hospital	Police	Welfare	Corrections	Highways
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Ratings (FNC - MSNBC)	-0.150*	-0.084^{+}	-0.085^{+}	-0.046	-0.166	-1.981*	-0.146^{+}	-0.164	-0.553	-0.032
	(0.073)	(0.045)	(0.048)	(0.046)	(0.324)	(0.858)	(0.076)	(0.460)	(0.419)	(0.158)
F-stat	16.034	28.334	33.074	34.310	33.022	32.337	34.088	31.834	33.215	33.867
N observations	2334	2334	2334	2334	2334	2334	2334	2334	2334	2334
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dep. variable in 1997	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Republican vote shares in 1996	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the Log(Total expenditure per capita) in 2007 in columns (1) to (3) and the Log(expenditure per capita) in 2007 for each of the function listed in the column head for columns from (4) to (10). Ratings (FNC - MSNBC) is instrumented by Channel position (MSNBC - FNC). All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. $+$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

Table 4: Identification checks

	Reduced form					
	Δ Rating Pred.	Tot. Rev. Pred.	Tot. Exp. Pred.	Tot. Rev. 1992	Tot. Exp. 1992	Share Rep. 1996
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A. Level						
Channel position (MSNBC - FNC)	-0.008	-0.001	-0.000	-0.003	0.009	0.002
	(0.005)	(0.005)	(0.005)	(0.006)	(0.009)	(0.003)
N observations	2334	2334	2334	2334	2334	2334
	Reduced form					
	Total revenue			Total expenditure		
	Δ 87-77	Δ 97-87	Δ 07-97	Δ 87-77	Δ 97-87	Δ 07-97
	(1)	(2)	(3)	(4)	(5)	(6)
Panel B. Trends						
Channel position (MSNBC - FNC)	-0.003	-0.006	-0.013**	-0.007	-0.006	-0.007^{+}
	(0.007)	(0.007)	(0.004)	(0.007)	(0.006)	(0.004)
N observations	2334	2334	2334	2334	2334	2334
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Republican vote shares in 1996	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the predicted difference in ratings between FNC and MSNBC in column (1), the predicted level of revenue in 2007 in column (2) and the predicted level of expenditure in 2007 in column (3). The predictions are derived from regressions that include the full set of demographic controls. Log(Total revenue per capita) in 1992 in column (4), Log(Total expenditure per capita) and share of vote for the republican candidate in the 1996 presidential election in column (6). All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. $+$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

Table 5: Effects on Mayoral election

	Reduced form		
	Rep. Cand (1)	Dem. Cand (2)	Rep. Win (3)
Channel position (MSNBC - FNC)	-0.009	-0.033	-0.171
	(0.042)	(0.044)	(0.136)
N observations	678	678	97
State FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes

Notes: The dependent variable is in column (1) a dummy identifying whether a republican candidate is running for office, in column (2) a dummy identifying whether a democratic candidate is running for office and in column (3) a dummy identifying whether a republican candidate won the election. In column (3) the sample consider only election in which there are a republican and a democratic candidate. All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county in which the city is located. The observations are weighted by city population. Standard errors clustered at the state level in parenthesis. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.01$.

Table 6: Ballot results (Texas)

	2SLS							
	2007				1997			
	Prop. 3	Prop. 5	Prop. 6	Prop. 3/5/6	Prop. 2	Prop. 3	Prop. 9	Prop. 2/3/9
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ratings (FNC - MSNBC)	0.070*	0.115**	0.068*	0.084**	0.002	-0.071	-0.082	-0.051*
	(0.032)	(0.039)	(0.029)	(0.030)	(0.031)	(0.054)	(0.051)	(0.021)
F-test	8.680	8.680	8.680	10.757	6.762	6.762	6.762	8.379
N observations	130	130	130	390	130	130	130	390
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Republican vote shares in 1996	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the share of the conservative position in the proposition defined in each column heading. Ratings (FNC - MSNBC) is instrumented by Channel position (MSNBC - FNC). All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. Standard errors clustered at the county level in parenthesis. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

Table 7: Private sector, Number of firms

	Education (1)	Health (2)	Security (3)	Others (4)
Ratings (FNC - MSNBC)	0.274**	0.073^{+}	0.542**	0.048
	(0.089)	(0.043)	(0.191)	(0.030)
F-stat	26.118	31.515	25.082	31.196
N observations	1935	2328	780	2332
State FE	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes
Dep. variable in 1998	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes
Republican vote shares in 1996	Yes	Yes	Yes	Yes

Notes: The dependent variable is the Log(num. of firms in NAICS 61) in 2007 in column (1), Log(num. of firms in NAICS 62) in column (2), Log(num. of firms in NAICS 561612) in column (3) and Log(total num. of firms) from the remaining sectors in column (4). Ratings (FNC - MSNBC) is instrumented by Channel position (MSNBC - FNC). All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

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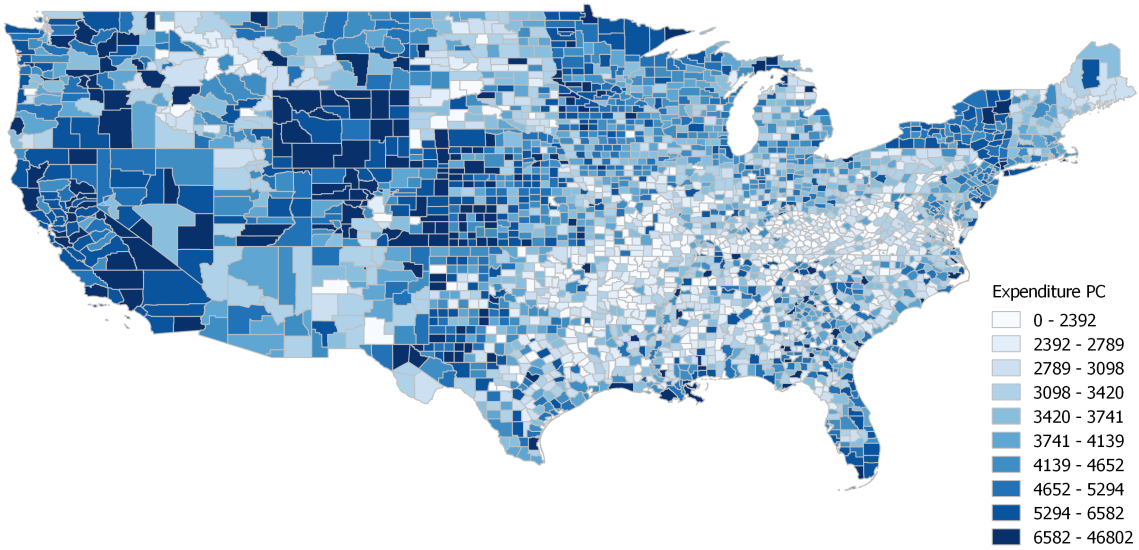
How Cable News Reshaped Local Government

ONLINE APPENDIX

A. Appendix

A.1. Appendix - Additional Figures and Tables

Figure A.1: Public Expenditure, by county (2007)



Notes: This map reports the amount of local public expenditure per capita by county in 2007.

Table A.1: Summary statistics I

Variable	Mean	Std. Dev.	Min	Max	N
News channels					
Ratings % Fox News 2006	0.509	0.555	0	7.75	2334
Ratings % MSNBC 2006	0.094	0.188	0	6.75	2334
Ratings % CNN 2006	0.286	0.404	0	8.1	2334
Fox News channel position 2006	42.154	13.015	2	85	2334
MSNBC channel position 2006	44.359	13.683	4	145	2334
CNN channel position 2006	29.814	11.579	1	70	2334
Share pop. access to Fox News 2006	0.981	0.081	0.075	1	2334
Share pop. access to MSNBC 2006	0.936	0.174	0.008	1	2334
Share pop. access to CNN 2006	0.999	0.023	0.201	1	2334
Ratings (% Fox News - % MSNBC) 2006	0.415	0.576	-6.667	7.75	2334
Position (MSNBC- Fox News) 2006	2.204	14.309	-54	89.924	2334
Demographic					
County population 1977	86586.093	295518.297	1248	7481613	2334
County population 1982	91937.941	300082.321	1145	7477421	2334
County population 1987	97832.881	319343.321	1093	8296118	2334
County population 1992	101219.853	331058.774	1010	8863164	2334
County population 1997	108052.575	343838.993	864	9127751	2334
County population 2002	114673.3	366086.232	859	9519338	2334
County population 2007	122248.295	385282.407	734	9948081	2334
White	0.858	0.147	0.189	0.993	2334
Black	0.083	0.133	0	0.795	2334
Asian	0.01	0.022	0	0.463	2334
Hispanic	0.055	0.11	0.002	0.973	2334
Male	0.494	0.016	0.433	0.638	2334
Age 10-19	0.162	0.017	0.087	0.325	2334
Age 20-29	0.121	0.033	0.046	0.335	2334
Age 30-39	0.141	0.018	0.076	0.23	2334
Age 40-49	0.151	0.013	0.061	0.213	2334
Age 50-59	0.116	0.013	0.034	0.177	2334
Age 60-69	0.083	0.017	0.023	0.173	2334
Age 70-79	0.066	0.018	0.012	0.172	2334
Age 80-89	0.039	0.014	0.003	0.121	2334
Urban	0.467	0.286	0	1	2334
Population density	199.493	791.373	0.339	29947.453	2334
Area	436.327	628.472	1.768	9193.737	2334
High school	0.346	0.067	0.111	0.527	2334
College	0.265	0.053	0.108	0.43	2334
Bachelor	0.115	0.05	0.028	0.397	2334
Postgraduate	0.059	0.034	0.013	0.31	2334
Median income	46467.691	10720.943	24460	108756	2334
Gini index	0.431	0.037	0.315	0.604	2334
Occ. management and professional	0.284	0.061	0.159	0.655	2334
Occ. service	0.156	0.029	0.079	0.319	2334
Occ. sales and office	0.238	0.032	0.136	0.326	2334
Occ. farming, fishing and forestry	0.017	0.019	0	0.249	2334
Occ. construction, extraction and maintenance	0.114	0.027	0.023	0.245	2334

Table A.2: Summary statistics II

Variable	Mean	Std. Dev.	Min	Max	N
Public expenditure per capita 2007	4044.109	1882.039	858.913	35527.898	2334
Education	1729.536	529.452	0	8490.530	2334
Hospital	291.776	636.930	0	6871.932	2334
Health	90.059	130.113	0	2519.059	2334
Police	160.861	85.795	1.672	1378.715	2334
Welfare	96.907	172.733	0	3716.58	2334
Correction	59.016	142.442	0	4740.711	2334
Highway	230.199	181.123	0	1502.665	2334
Public expenditure per capita 1997	2581.092	1048.36	344.364	22036.871	2334
Education	1141.869	341.928	0	8222.634	2334
Hospital	173.821	338.326	0	2871.385	2334
Health	53.773	69.127	0	847.393	2334
Police	95.754	51.991	0	554.987	2334
Welfare	65.586	110.095	0	2184.482	2334
Correction	27.942	36.301	0	727.820	2334
Highway	157.187	120.721	0	1187.5	2334
Public revenue per capita 2007	3792.392	1531.484	830.852	18512.906	2334
Property taxes	980.073	687.704	78.769	12564.136	2334
License taxes	36.027	46.896	0	803.739	2334
Sales taxes	194.623	219.524	0	3297.202	2334
Charges	651.723	695.022	21.762	6130.909	2334
State transfers	1397.073	560.587	0	8081.708	2334
Public revenue per capita 1997	2420.368	891.037	367.788	13822.917	2334
Property taxes	645.355	463.694	32.41	12296.296	2334
License taxes	4.936	10.331	0	199.982	2334
Sales taxes	103.611	137.615	0	2211.95	2334
Charges	405.17	376.007	11.812	3320.391	2334
State transfers	909.698	329.695	0	3989.556	2334

Table A.3: Summary statistics III

Variable	Mean	Std. Dev.	Min	Max	N
Presidential elections					
Vote share Republican cand. pres. election 1996	0.443	0.099	0.093	0.79	2334
Mayoral elections					
Republican candidate	0.34	0.474	0	1	680
Democrat candidate	0.363	0.481	0	1	680
Republican win	0.454	0.5	0	1	97
Ballot in Texas					
Share yes, appraisal values for taxes (proposition 3, 2007)	0.306	0.061	0.185	0.516	130
Share yes, limitations on municipal taxes (proposition 5, 2007)	0.345	0.065	0.12	0.566	130
Share yes, tax exemptions for motor vehicles (proposition 6, 2007)	0.254	0.052	0.106	0.403	130
Share yes, tax valuations of residence homesteads (proposition 2, 1997)	0.253	0.058	0.128	0.476	130
Share yes, tax exemptions for water conservation (proposition 3, 1997)	0.431	0.087	0.207	0.737	130
Share yes, property tax for fire prevention (proposition 9, 1997)	0.509	0.082	0.269	0.767	130
Number of firms (establishments)					
Educational Services (NAICS 61) 2007	34.62	119.861	0	3268	2332
Health care and Social Assistance (NAICS 62) 2007	311.482	962.611	1	27686	2332
Security Guards and Patrol Services (NAICS 561612) 2007	3.546	16.094	0	536	2332
Others (NAICS total - 61/62/561612) 2007	2709.468	8110.301	13	221514	2332
Educational Services (NAICS 61) 1998	25.749	89.415	0	2426	2332
Health care and Social Assistance (NAICS 62) 1998	257.83	797.358	0	22550	2332
Security Guards and Patrol Services (NAICS 561612) 1998	2.578	11.149	0	367	2332
Others (NAICS total - 61/62/561612) 1998	2469.34	7365.235	22	194590	2332

Table A.4: Effects on Revenues, by Cable News Channel

	2SLS					
		Taxes			Charges	Transfers
	Total	Property	License	Sales	Total	State
	(1)	(2)	(3)	(4)	(5)	(6)
	Fox News Channel					
Ratings FNC	-0.216*	-0.094	0.047	-0.200	-0.524^{+}	-0.123
	(0.106)	(0.106)	(0.345)	(0.298)	(0.287)	(0.084)
F-stat	14.089	13.966	13.724	14.066	14.335	13.712
N observations	2334	2334	2334	2334	2334	2334
	MSNBC					
Ratings MSNBC	0.099*	0.168**	0.762**	0.043	0.194	0.009
	(0.045)	(0.058)	(0.259)	(0.287)	(0.123)	(0.043)
F-stat	21.067	20.638	20.903	21.285	21.157	22.014
N observations	2334	2334	2334	2334	2334	2334
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes	Yes	Yes
Dep. variable in 1997	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Republican vote shares in 1996	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the Log(Total revenue per capita) in 2007 for each of the function listed in the column head. FNC Ratings is instrumented by FNC Channel position, while MSNBC ratings is instrumented by MSNBC channel position.. All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). MSNBC position (2006) and Ratings % MSNBC (2006) are included when FNC is the main regressor, instead FNC position (2006) and Ratings % FNC (2006) are included when MSNBC is the main regressor. Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. $+$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

Table A.5: Effects on Expenditures, by Cable News Channel

	2SLS							
	Total (1)	Education (2)	Health (3)	Hospital (4)	Police (5)	Welfare (6)	Corrections (7)	Highways (8)
				Fox News Channel				
Ratings FNC	-0.126	0.028	-0.509	-1.922	-0.173^{+}	-0.159	0.059	0.097
	(0.082)	(0.059)	(0.530)	(1.284)	(0.093)	(0.546)	(0.504)	(0.228)
F-stat	13.999	15.480	14.023	13.699	14.328	13.586	13.955	14.966
N observations	2334	2334	2334	2334	2334	2334	2334	2334
				MSNBC				
Ratings MSNBC	0.047	0.070^{+}	-0.012	1.588*	0.097	0.144	0.737*	0.080
	(0.040)	(0.042)	(0.250)	(0.801)	(0.078)	(0.427)	(0.356)	(0.142)
F-stat	21.137	22.087	21.242	21.085	21.054	21.182	20.413	20.944
N observations	2334	2334	2334	2334	2334	2334	2334	2334
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dep. variable in 1997	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Republican vote shares in 1996	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the Log(Total expenditure per capita) in 2007 for each of the function listed in the column head. FNC Ratings is instrumented by FNC Channel position, while MSNBC ratings is instrumented by MSNBC channel position. All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). MSNBC position (2006) and Ratings % MSNBC (2006) are included when FNC is the main regressor, instead FNC position (2006) and Ratings % FNC (2006) are included when MSNBC is the main regressor. Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. $+$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

Table A.6: Effects on Revenue, by Source (share)

	2SLS				
	Taxes			Charges	Transfers
	Property	License	Sales	Total	State
	(1)	(2)	(3)	(4)	(5)
Ratings (FNC - MSNBC)	0.004	-0.004	-0.000	-0.021	0.029
	(0.017)	(0.004)	(0.012)	(0.021)	(0.020)
F-stat	33.806	32.513	32.432	32.554	31.775
N observations	2334	2334	2334	2334	2334
State FE	Yes	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes	Yes
Dep. variable in 1997	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes
Republican vote shares in 1996	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the share of the source of revenue listed in the column head of the total revnue. Ratings (FNC - MSNBC) is instrumented by Channel position (MSNBC - FNC). All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

Table A.7: Effects on Expenditures, by Category (share)

	2SLS						
	Education (1)	Health (2)	Hospital (3)	Police (4)	Welfare (5)	Corrections (6)	Highways (7)
Ratings (FNC - MSNBC)	0.029	0.002	-0.043*	-0.004	-0.004	-0.008^{+}	-0.000
	(0.023)	(0.007)	(0.020)	(0.005)	(0.006)	(0.004)	(0.008)
F-test	33.328	32.890	32.648	34.070	33.577	33.497	33.215
N observations	2334	2334	2334	2334	2334	2334	2334
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dep. variable in 1997	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Republican vote shares in 1996	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the share of the category of expenditure listed in the column head of total expenditure. Ratings (FNC - MSNBC) is instrumented by Channel position (MSNBC - FNC). All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. $+$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

Table A.8: Additional results

	2SLS			
	Public Employees (1)	Public Payrolls (2)	Public Debt (3)	Total Wages (4)
Ratings (FNC - MSNBC)	0.142	0.285	-0.032	0.008
	(0.192)	(0.628)	(0.181)	(0.049)
F-stat	32.812	33.096	31.991	31.740
N observations	2334	2334	2334	2316
State FE	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes
Dep. variable in 1997	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes
Republican vote shares in 1996	Yes	Yes	Yes	Yes

Notes: The dependent variable is the Log(number of employees per capita) in 2007 in column (1), the Log(public payrolls amount per capita) in 2007 in column (2), the Log(public debt per capita) in 2007 in column (3) and the Log(total wages per capita) in 2007 in column (4). Ratings (FNC - MSNBC) is instrumented by Channel position (MSNBC - FNC). All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

Table A.9: Effects on Revenue, by Type of Government

	2SLS					
		Taxes			Charges	Transfers
	Total	Property	License	Sales	Total	State
	(1)	(2)	(3)	(4)	(5)	(6)
	Municipalities and towns					
Ratings (FNC - MSNBC)	-0.158*	-0.218*	-0.933**	0.064	-0.088	0.118
	(0.076)	(0.094)	(0.283)	(0.243)	(0.222)	(0.240)
F-stat	29.764	29.719	30.251	31.174	30.474	30.163
N observations	2306	2306	2306	2306	2306	2306
	Counties					
Ratings (FNC - MSNBC)	-0.036	-0.143	0.151	0.009	0.018	0.190
	(0.111)	(0.105)	(0.321)	(0.463)	(0.365)	(0.219)
F-stat	32.231	32.458	33.949	31.628	32.560	32.426
N observations	2256	2256	2256	2256	2256	2256
	School and special districts					
Ratings (FNC - MSNBC)	-0.133	-0.034	-0.183*	-0.420	-0.490	0.004
	(0.114)	(0.103)	(0.087)	(0.782)	(0.356)	(0.114)
F-stat	30.927	31.117	30.967	28.809	29.996	29.722
N observations	2294	2294	2294	2294	2294	2294
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes	Yes	Yes
Dep. variable in 1997	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes
Republican vote shares in 1996	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the Log(Total expenditure per capita) in 2007 for each of the function listed in the column head. Ratings (FNC - MSNBC) is instrumented by Channel position (MSNBC - FNC). All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. + $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

Table A.10: Effects on Expenditures, by Type of Government

	2SLS							
	Total (1)	Education (2)	Health (3)	Hospital (4)	Police (5)	Welfare (6)	Corrections (7)	Highways (8)
Municipalities and towns								
Ratings (FNC - MSNBC)	-0.150^{+}	-0.870*	0.098	-1.263^{+}	-0.207^{+}	-0.143	0.344	-0.203
	(0.088)	(0.404)	(0.339)	(0.681)	(0.117)	(0.666)	(0.248)	(0.165)
F-stat	29.976	27.466	30.136	31.854	28.802	29.998	31.166	31.282
N observations	2306	2306	2306	2306	2306	2306	2306	2306
Counties								
Ratings (FNC - MSNBC)	-0.065	-0.449	0.299	-0.418	-0.072	-0.012	-0.972*	0.529
	(0.127)	(0.343)	(0.319)	(0.607)	(0.288)	(0.362)	(0.445)	(0.331)
F-stat	32.543	33.428	32.984	31.903	35.882	31.108	32.212	34.076
N observations	2256	2256	2256	2256	2256	2256	2256	2256
School and special districts								
Ratings (FNC - MSNBC)	-0.093	0.045	0.070	0.105	0.118	-0.299^{+}	0.125	0.425
	(0.094)	(0.048)	(0.318)	(0.423)	(0.084)	(0.154)	(0.096)	(0.756)
F-stat	30.705	31.102	30.208	30.197	30.967	31.578	30.967	31.429
N observations	2294	2294	2294	2294	2294	2294	2294	2294
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cable system controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dep. variable in 1997	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Republican vote shares in 1996	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the Log(Total expenditure per capita) in 2007 for each of the function listed in the column head. Ratings (FNC - MSNBC) is instrumented by Channel position (MSNBC - FNC). All estimates include as cable system controls: CNN position (2006), Ratings % CNN (2006), proportion of people with access to CNN (2006), proportion of people with access to FNC (2006), proportion of people with access to MSNBC (2006). Demographic controls include racial, gender, age, income, educational, occupational and urban/rural composition of the county. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. $+$ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$.

A.2. Appendix - Estimation à la DellaVigna and Kaplan (2007)

In this section we report results that follow more closely the intuition and empirical strategy from DellaVigna and Kaplan (2007). We focus on the early period, 1997-2002, when Fox and MSNBC were just being introduced. Using within-county variation over time, we compare how local policies evolved in areas more or less exposed to partisan news in terms of channel availability.

As above, the main outcomes are budget features (revenue/expenditure) from the local government finances census, reported for the years 1997 and 2002. Because the 1997 budgets were decided in 1996 (the same year that Fox and MSNBC were introduced), that can be seen as a pre-treatment level. In turn, the within-county budget change between 1997 and 2002 gives our differences-in-differences variation.

Following this pre/post logic, we set channel availability to zero for the 1997 observations. For 2002, we measure the availability of FNC (MSNBC) in a county as the share of county population that lives in ZIP codes where at least one cable provider gives access to FNC (MSNBC). Consistent with the main analysis, we use as the treatment variable the difference in availability between FNC and MSNBC.

Formally, we estimate the following equation:

$$Y_{ist} = \delta_i + \gamma_{st} + \rho Diff Exp_{it} + \epsilon_{ist} \tag{4}$$

where Y_{ist} is a local fiscal policy variable of a county i from state s in year t. $Diff Exp_i$ is our measure of differential exposure, δ_i and γ_{st} are county and state-year fixed effects, and ϵ_{ist} is the error term. As in the main analysis, standard errors are clustered by state, regression estimates are weighted by county population, and the treatment regressor is standardized.

Table A.11 and A.12 display our results. The higher the share of people reached by FNC compared to MSNBC, the lower the level of spending and revenue. The effect on revenue (Table A.11) seems to be driven by a reduction in property tax. We see a negative and significant effect on charges and, different from the IV results, a positive effect on license taxes.

For expenditures (Table A.12), we again see a negative effect from higher relative availability of Fox. The effect on expenditure is larger in magnitude than the one on revenues. In terms of components, negative coefficients are significant for education and welfare. Spending on hospitals has the largest coefficient, though insignificant.

Consistent with parallel trends, we obtained almost identical results when including as covariates the budget variables from 1992 interacted with year fixed effects.

Overall, the estimates are in line with the evidence of our main strategy. Places with greater early adoption of Fox News implemented more conservative fiscal policies, while early adoption of MSNBC meant more liberal policies. The consistent results with a different empirical strategy lend supporting evidence to our main findings.

Table A.11: Effects on Revenue, Δ 1997-2002

		Taxes			Total	State
	Total	Property	License	Sales	Charges	Transfers
	(1)	(2)	(3)	(4)	(5)	(6)
Share pop. exposed (FNC - MSNBC)	-0.008**	-0.007^{+}	0.052**	-0.027	-0.020**	-0.005
	(0.003)	(0.004)	(0.019)	(0.022)	(0.007)	(0.004)
N observations	6268	6268	6268	6268	6268	6268
N counties	3134	3134	3134	3134	3134	3134
County FE	Yes	Yes	Yes	Yes	Yes	Yes
State X Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the Log(revenue per capita) for each of the function listed in the column head. *Share pop. exposed (FNC - MSNBC)* is the difference between the share of population reached by FNC and MSNBC. The observations are weighted by county population. Standard errors clustered at the state level in parenthesis. + p < 0.1, * p < 0.05, ** p < 0.01 and *** p < 0.001.

Table A.12: Effects on Expenditures, Δ 1997-2002

	2SLS							
	Total	Education	Health	Hospital	Police	Welfare	Corrections	Highways
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share pop. exposed (FNC - MSNBC)	-0.015**	-0.014*	-0.003	-0.050	-0.003	-0.041^{+}	0.025	-0.008
	(0.005)	(0.005)	(0.016)	(0.031)	(0.006)	(0.024)	(0.021)	(0.008)
N observations	6268	6268	6268	6268	6268	6268	6268	6268
N counties	3134	3134	3134	3134	3134	3134	3134	3134
County FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State X Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the Log(expenditure per capita) for each of the function listed in the column head. *Share pop. exposed (FNC - MSNBC)* is the difference between the share of population reached by FNC and MSNBC. Standard errors clustered at the state level in parenthesis. + p < 0.1, * p < 0.05, ** p < 0.01 and *** p < 0.001.