

What did you
use a diff'ndit
design?
What is the advantage
of your approach?

	Points	Max Points
Introduction	4	5
Literature Review and Theory	13	18
Research Design (15 points)	13	65
Data Description (10 points)	9-10	
Analyses (10 points)	9-10	
Results (30 points)	25-24	
Concluding Discussion	5	7
References	5	5
	81 - 84 p.	100

explicitly state
what is your
research design
- observational?
- randomized control trials?
- cross sectional? Before
and after, diff'ndit
diff'ndit design?

B+

Overall very good project!

Final Project

use substance
time.

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Abstract

The conservative news channel Fox News was founded in 1996 and gradually implemented in various US cities. This led to the situation that in the year 2000 there was a presidential election in which a significant proportion of the US population already had access to this TV channel for several years and other cities had no access at all at the time of the election. The used dataset includes among control variables the vote shares for the Republicans of the Presidential election in 1992, 1996 and 2000. Furthermore the share of Fox News subscribers in 2000 among cities. The available data make it possible to ask the question to which extent had the implementation of Fox News affected the US voting behavior in the presidential elections between 1996 and 2000? The analysis yields revealing results, but the idea of the highly influential TV channel, the so-called 'FOX NEWS EFFECT', had to be revised, as the analysis showed no significance in this area.

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1 Introduction

The media landscape has changed dramatically in the last few decades. Media have an increasingly important role in our modern society where access to information is not a privilege anymore. As a consequence of media's constant presence in citizen's life, the effects of media and to what extent media bias can influence people's party choices have also become a crucial question. This research paper aims to focus on the potential influence of media on people's party choices. To examine the problem the research paper will focus on the presence of Fox News in cities in the US and how it influenced people's support for the Republican party. Therefore, the research question will be the following: to what extent had the implementation of Fox News affected the US voting behavior in the presidential elections between 1996 and 2000? In the case of our research and our available data, we categorize the variables about the socioeconomic background of the people as personality traits and the exposure to media via the existence or non-existence of Fox News. Therefore, the research question will be answered through two hypotheses: H1: Fox news and the socioeconomic background effect the behavior of the electorate. H2: Just socioeconomic background affects the behavior of the electorate.

Good

excellent!

✓ Do you
do a replication
of DellaVigna
and Kaplan 2007?
what is your
contribution?

provide a short summary of
your research design & findings. It is included in the

2 Literature Review

In recent decades, there has been increasing attention on the role of media during political campaigns and its effects on the actual outcomes of elections. It is more widespread to include factors beyond the traditional social and economical models. However, it is still debated within academia to what extent news media influence the behavior of the electorate. A potential answer to the question is that news media does not have an actual effect on people's voting behavior. It is called the sociological model of voting behavior which states that people's voting behavior is determined by long-term factors.

This theory is supported by Lazarsfeld, Berelson, and Gaudet's (Lazarsfeld, Berelson, and Gaudet 1968) research analysis whose results show that the effect of media on electoral decisions is minimal but people belonging to different social groups is what determines their voting behavior. Kriesi, Grande, and Lachat (Kriesi et al. 2008) also argue people's voting behavior is determined by their belonging to different cleavages. However, instead of the old cleavages, there is a new social division within society that defines people's voting behavior which is the distinction between the winners and losers of globalization (Kriesi et al. 2008). Losers of globalization feel that their social status is protected by the nation-state and therefore they are strongly connected and identify themselves with the national community and that is what determines their voting behavior (Kriesi et al. 2008). In contrast, the winners of globalization benefit from open borders, they have more opportunities and therefore they vote differently (Kriesi et al. 2008). However, some scholars argue that media has a relatively insignificant, but not at all inherent effect on voting behavior (Alotaibi 2013).

3 Hypotheses

Therefore, based on the existing literature the two hypotheses of the analysis, as mentioned above, will be the following:

HP1: Fox news and the socioeconomic background affects the behavior of the electorate.

Sociological model of voting Kriesi's (Kriesi et al. 2008): People's voting behavior is just shaped by long-term factors (socialization).

HP2: Just socioeconomic background affects the behavior of the electorate.

4 General Overview Over the Data

This paper uses data that was collected in 1992, 1996 and 2000. The dataset (DellaVigna and Kaplan 2007) contains town-based data on two-party vote share for the Republicans, socio-cultural details and share of

There is a lot of literature
that can be helpful here

Why could media
influence vote share

elaborate the
logic behind the
hypotheses. How and
good. explain
how and
why?

Fox news subscribers.

✓

provide a proper table
or maybe plot with state
names - May be even compare
the margin of win for republicans
between 1992 - now

```
##          Ri          Hi          Ma          Ct          Ca          Nj          Vt          Ar
## 0.3782243 0.3866320 0.3949739 0.4390149 0.4471664 0.4674222 0.4708586 0.4947215
##          Tn          Ia          Wi          Nh          Mn          Sc          Ny
## 0.5017892 0.5105959 0.5268057 0.5291817 0.5294599 0.5317263 0.5318809 0.5400148
##          Mi          Al          Va          Pa          Mo          Oh          Ak          Nd
## 0.5464333 0.5633230 0.5649642 0.5663298 0.5778050 0.5817919 0.6168280 0.6742668
##          Mt          Id          Wy          Ut
## 0.6749542 0.7337415 0.7495900 0.7981762
```

✓

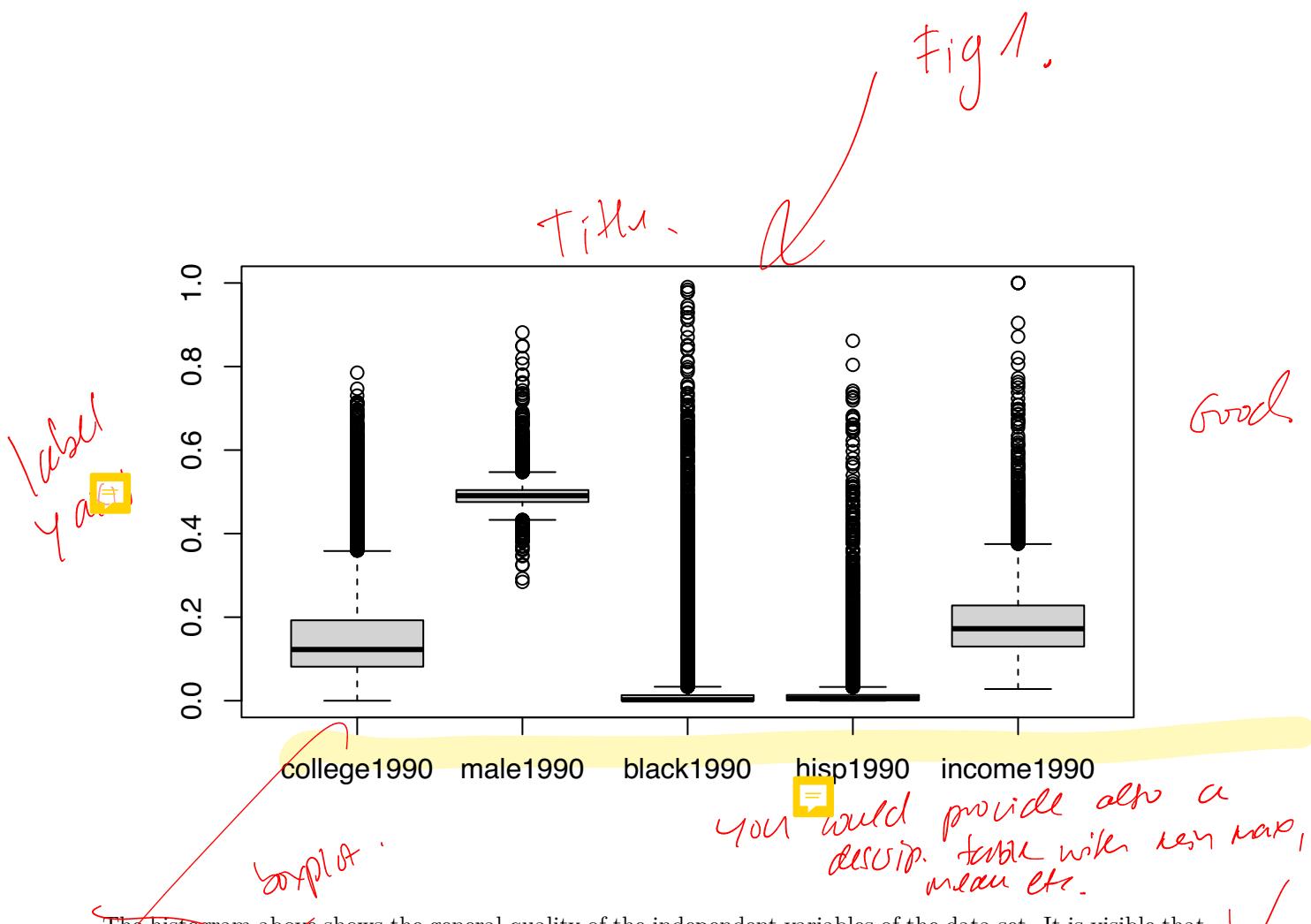
From these values it is already obvious that there is quite a big variation between the two-party vote share for the Republicans in different states (highest and lowest being Utah (0.7981762) and Rhode Island (0.3782243) respectively). *Be clear what Republican vote is your DV.*

4.1 Socio-Cultural Descriptors of the Data Set

As an initial step, since most descriptive values are measured in the range of [0, 1], the *income1990* variable is normalized in the same region as well. In our hypotheses the independent variables are the different socio-cultural descriptors such as the education level, the ethnic composition and the income share.

```
#normalizing income to the range of [0, 1] (was originally in [0, 15])
data[7] <- data[7]/15

boxplot(data[,c(3, 4, 5, 6, 7)])
```



The histogram above shows the general quality of the independent variables of the data set. It is visible that the mean of male population in the towns are around 0.5, however there are more towns where there are an extremity towards a high male population share than to women. The black and Hispanic population of the towns in the study is generally low, but there are cases with especially high rate from both ethnic groups. The mean of education and the income is below 0.2 and the later one has a higher expansion.

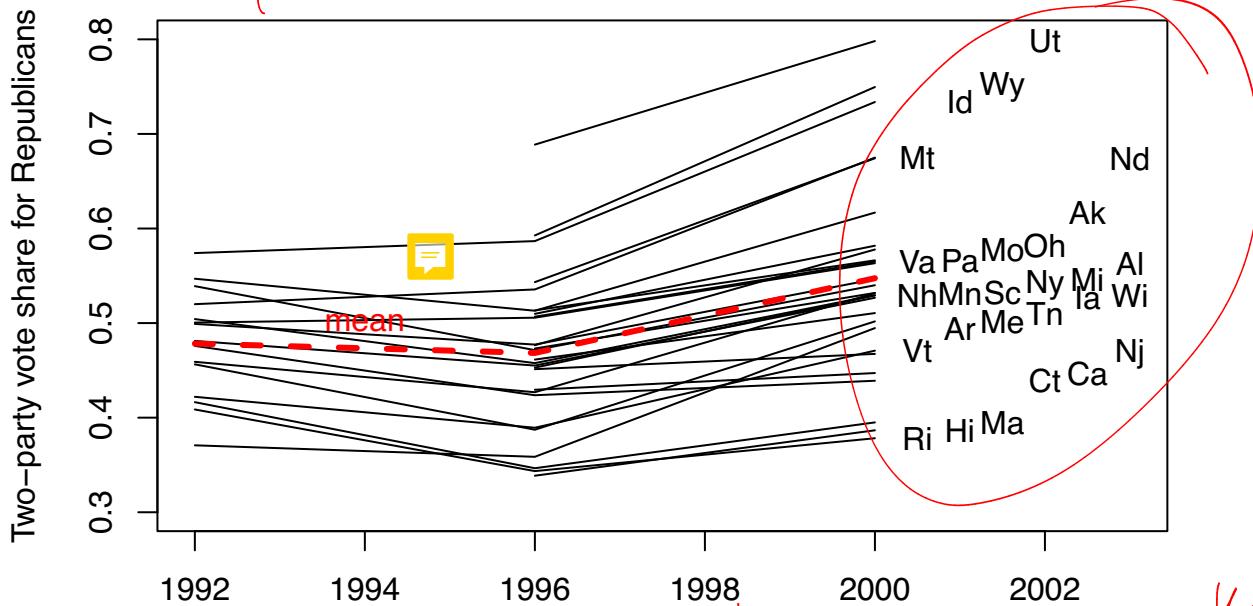
4.2 Change of Vote-Share Over Time

To have a more detailed overview, the two-party vote share is calculated for the other two measurement time points as well and the trends are illustrated on a plot below.

proper formal
your (abel), here
you are variable
name)

You can show the
same trend for
those with and without Fox
news
not very
readable

Change of two-party vote share for Republicans over time



Maybe a different graph would show this better? e.g. histogram of changes (1992-2002)?

Obviously this graph is not intended to clearly show the variance of each state, rather the general trends in the different states over time. From this plot it is clear that on average there has been a slight decrease in republican vote share in the period of 1992 and 1996, however there has been differences in different region. For example Maine experienced a huge drop while in Idaho a slight increase is visible.

How many towns do you have? How were they selected?

On the other hand in the time period of 1996 and 2000 there has been a strong increase (on average from 0.468436 to 0.5474526). An important note is that there has been no single state where the republican vote share has decreased in this time period.

Never report values by variable names used in your data.

Use informative names.

4.3 Correlation Analysis

The dataset contains various measures of the towns in question. In order to get a sense what could influence the vote share a the correlation of these factors and the vote share is calculated.

```
##          college1990 male1990 black1990 hisp1990 income1990
## gopvoteshare2000 -0.09908543 0.1813037 -0.3313195 -0.2289881 0.01933208
```

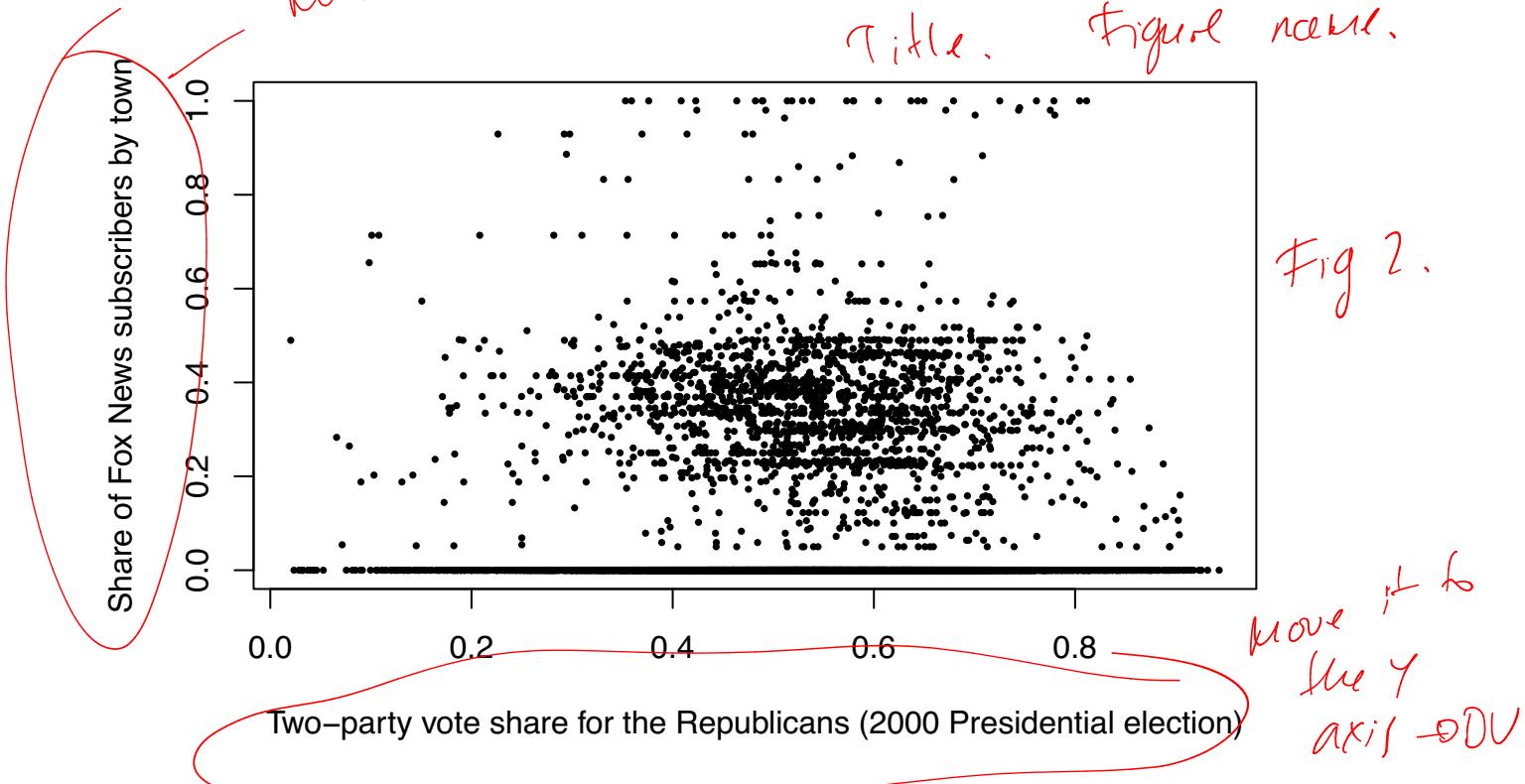
The correlation analysis suggest that there are a few factors that have an insignificant connection to the two-party vote share for the Republicans, such as the income or the education level. The share of males in the population has a direct relationship and the share of different ethnic categories (Hispanic or black) in the population has an inverse relationship to the vote share. The most meaningful correlation is between the black population and the vote share (-0.331).

how do you see this? explain.

discuss what does this number mean?

provide a formatted correlation matrix

4.4 Fox News Subscribers in Different Towns

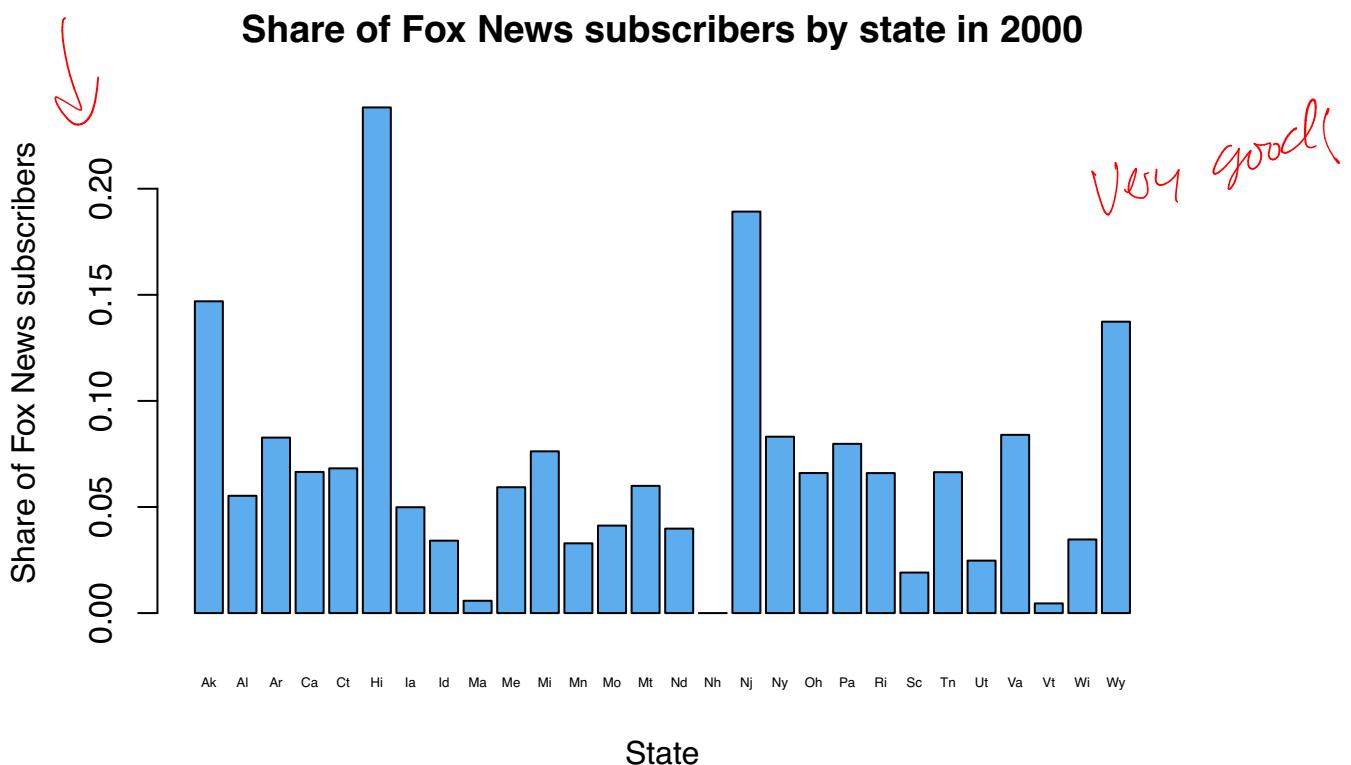


This scatter plot gives an first overview between the share of Fox News subscribers by town and the share for republicans in the presidential election in 2000.Three fundamental things, which are a basis for further analysis, can be read from the scatterplot: (1) no clear direction of the data is discernible at first glance; (2) cities that did not have access to Fox News in 2000 range across the spectrum of Republican support, from no Fox News and low support for Republicans to no Fox News and very high vote share for Republicans. (3) it looks like (purely visual 'first analysis') the majority of cities are around the cut point (0.5/0.4), which means there are a lot of cities that are relatively split between Democrats and Republicans and between having or not having Fox News. Since most of the data is expressed in proportions, this also means that there will be many values in the middle.

wouldnt you want to
present a change in Republican
vote share from 1996 - 2000
or 1992 - 2000

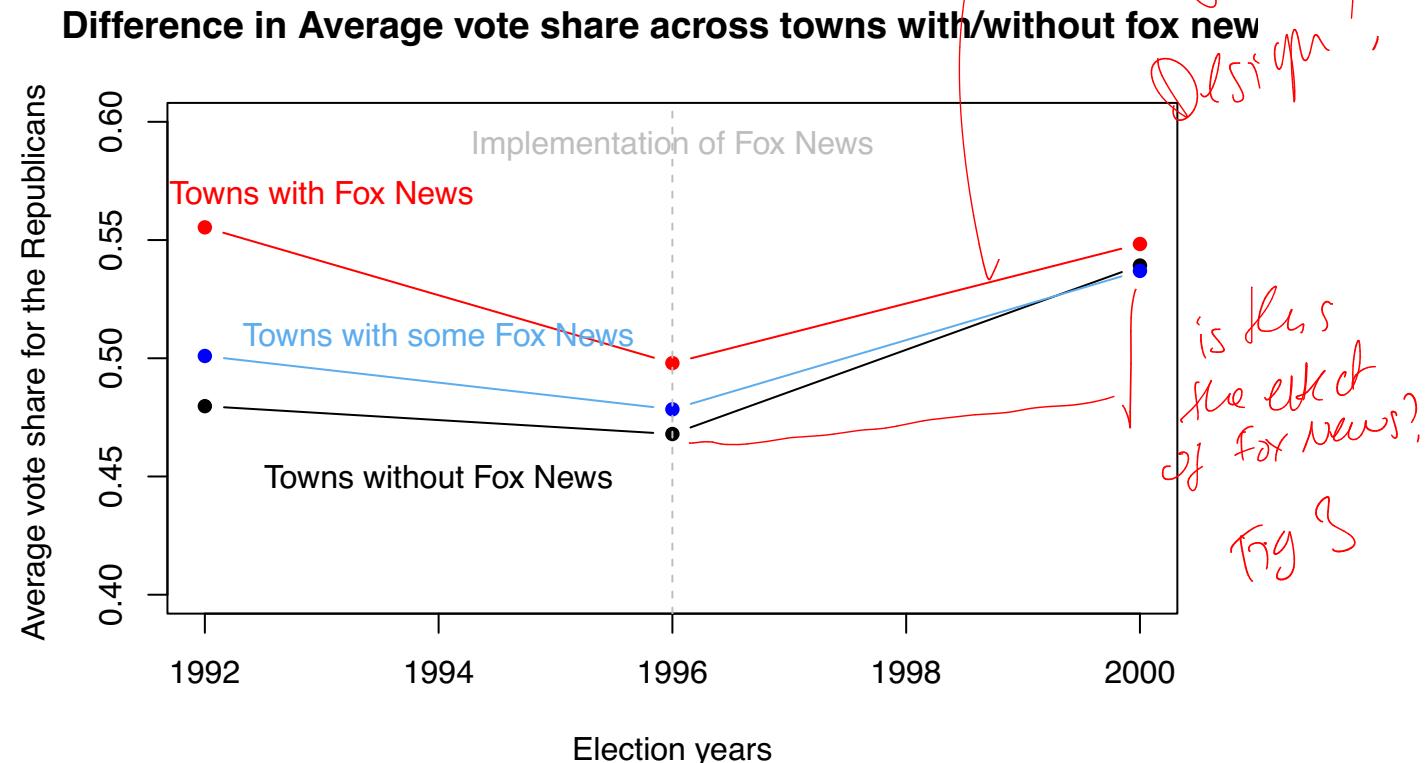
for different values of Fox
news subscribers by town?

more y axis range bigger



To get a better picture of the implementation of Fox News in the USA, the share of Fox News subscribers by state in 2000 got plotted. The differences are immense. New Hampshire does not have any access to Fox News in 2000 yet, also in Vermont, Massachusetts and South Carolina is the access ratio to the Fox News Channel almost non existence. On the other hand is the channel already very accessible in states like New Jersey, Wyoming and Alaska. According to the bar plot has the biggest proportion of Fox News subscribers. However, due to the fact, that the bar plot does not represents the number of Fox News subscribers, only the the proportion of citizens with a subscription per town it does not mean that Hawii does have the highest amount in a quantitative sense.

5 The Fox News Effect



To Test the hypotheses of the research and to measure the effect of the treatment, it is crucial to define the independent variable of the paper: the access to Fox News by the year 2000. As mentioned above Fox News got implemented in 1996. Therefore, the cities without any access to Fox News in 2000 got characterized as 'Towns without Fox News'. Cities who have a share of Fox News subscribers over 0.75 got defines as 'Towns with Fox News', due to the fact, that 75% of the inhabitants is a clear majority, especially when we consider that people live in households with other persons. The data set does not elaborate the information whether children or other people who are not allowed to vote in the states (like prisoners) are included or not, however a threshold of 0.75 this circumstance cushions instead a threshold of 1. The third subset will be 'Towns with some Fox News', in particular all towns between the 0 and 0.75 will be part of it.

The graph illustrates that in all cities, no matter how much access to Fox News the various cities had, there was an increase in Republican voters in 2000, compared to the 1996 presidential election. Nevertheless, a staggered effect of the different groups can be seen, even if it is small. Cities with Fox News voted for the Republican president by a larger percentage in both 1996 (the year Fox News was implemented in some cities) and the 2000 presidential election. Cities without any Fox News access were the least likely to vote in favor of Republicans, even though the percentage of Republican voters nevertheless increased in 2000.

5.1 Sample average treatment effect ('Fox News Effect') among socioeconomic variables

Our hypotheses stating, that it might be possible that socioeconomic backgrounds like education and race of people influence a potential 'Fox News Effect' differently. It could be also possible that voters with different incomes get effected differently by the input of Fox News.

what is the effect of Fox News?
why?
This would be
a separate hypothesis

Good! But include such conditional hypotheses in your theory section. How did you find the SATE?

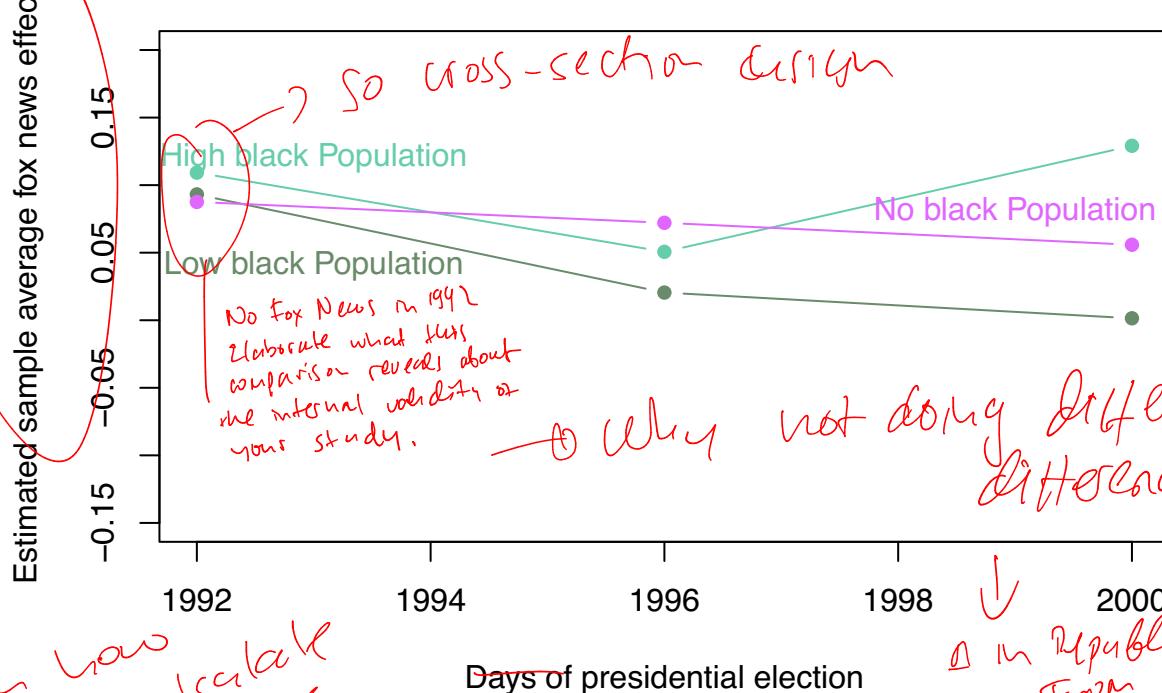
We will evaluate whether these hypotheses are supported by finding the differences in sample average treatment effects by education, race and income in towns with access to Fox News and towns without access to Fox News.

Furthermore, the average change of votes for republican (during presidential elections) among towns before and after the availability of Fox News could be a crucial indicator to understand the effect, therefore is computed.

explain how you calculated this

so before-after design

Trends in Fox News Effects among black population



Dif behavior with Fox News and without Fox N

↓
in Republican support
From 1996 – 2000
in Treatment and control.

The first thing we looked at was whether the introduction of Fox News had a bigger/smaller impact on black people in the USA. The cities were divided into subsets, to take into account different proportions of black people in the cities. For the subdivision of cities and their black population, the different quantiles were not looked at, which is the case in the following SATE calculations. Due to the white majority population in the states, the third quantile of the proportion of black people would have been 0.013411 but the maximum would have been 0.990427. The difference between 1% and 99% would have been too serious to categorize all cities in between as having a high black population. That's why cities with a percentage above 0.40 were considered to have a high black population. As can be seen in the plot, only the line from the cities with a high black population share has a similar shape to the lines in the plot with the general trend effect. In the cities with a low proportion or none at all, the estimated treatment effect goes in a negative direction.

Dif in diff:

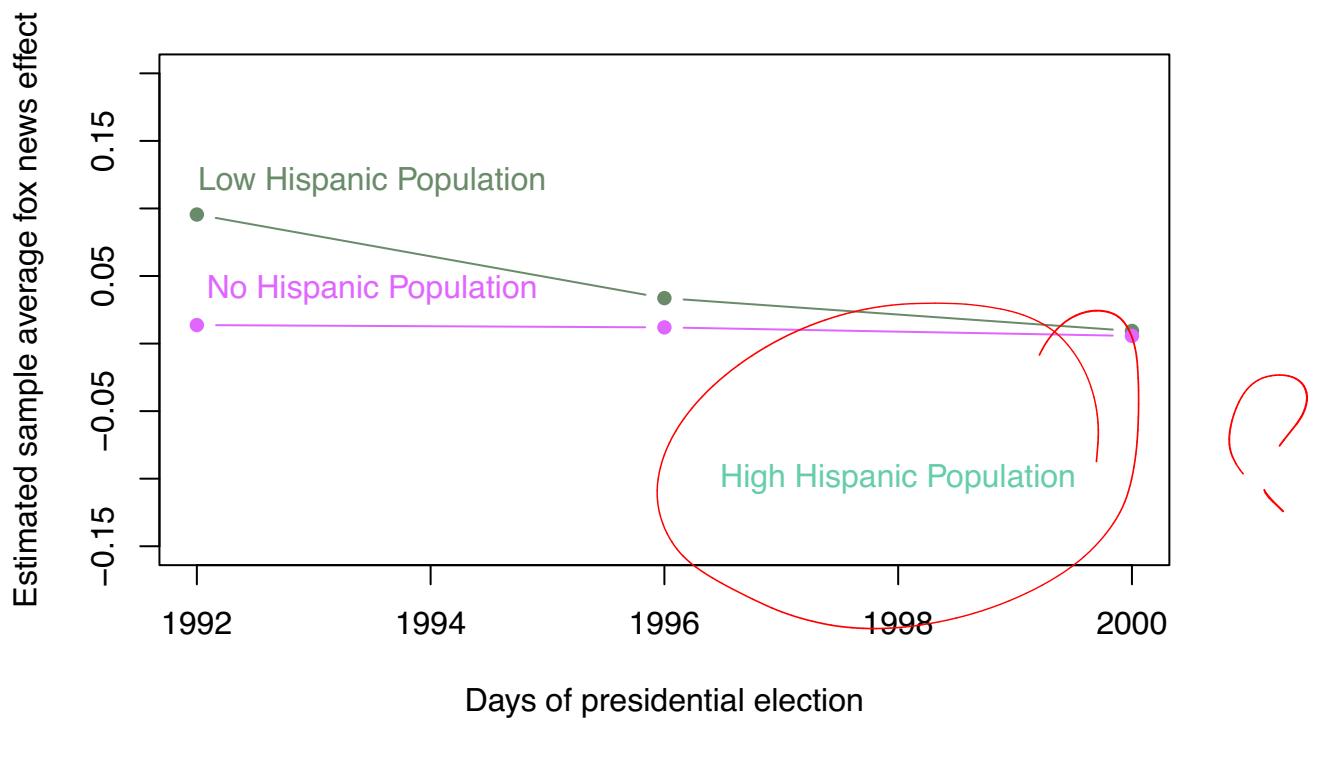
$$(T_2 - T_1) - (C_2 - C_1)$$

$(T_2 - T_1) - (C_2 + C_1)$ Now did you calculate the treatment effect?

Why do you care whether there is a similar trend?

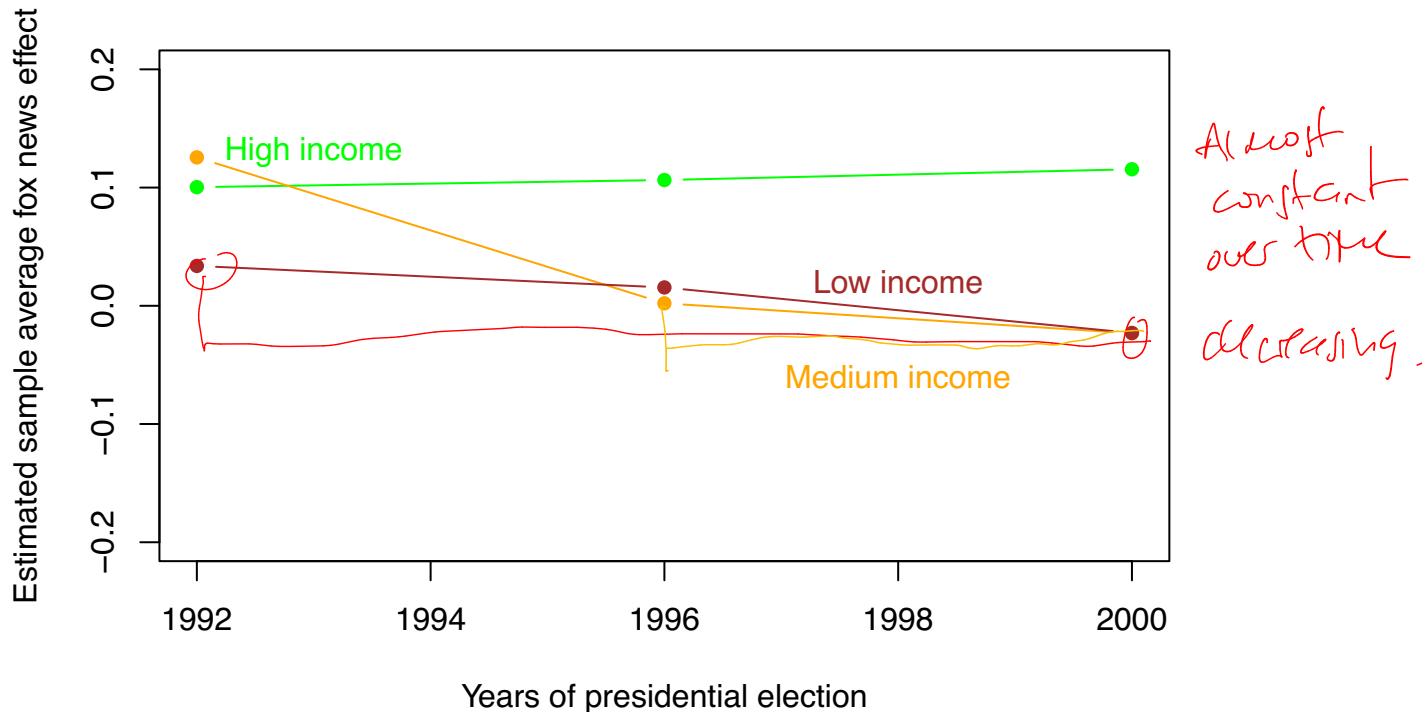
- Discuss the trend!
- time trend!
- diff-in-diff

Trends in Fox News Effects among black population



This figure is not
discussed in
the text.

Trends in Fox News Effects among income



Looking at income and the potential sample average treatment effect we can see, that only for persons with high income (towns where the average income is over or equals 3.420\$) the estimated sample average Fox News effect is increasing and more rich people voted for republicans but on the other hand the vote share for Republicans among rich people normally quite high anyways. Therefore it is hard to argue, that the implementation of Fox News is the main reason. Towns with a medium income or low income have decreasing sample average treatment effect.

elaborate
does this
for your
what
implies
hypothetical.

You are interested
whether there is
a difference between those
with and without Fox News
→ in 1996 and 2000
around high income
people.

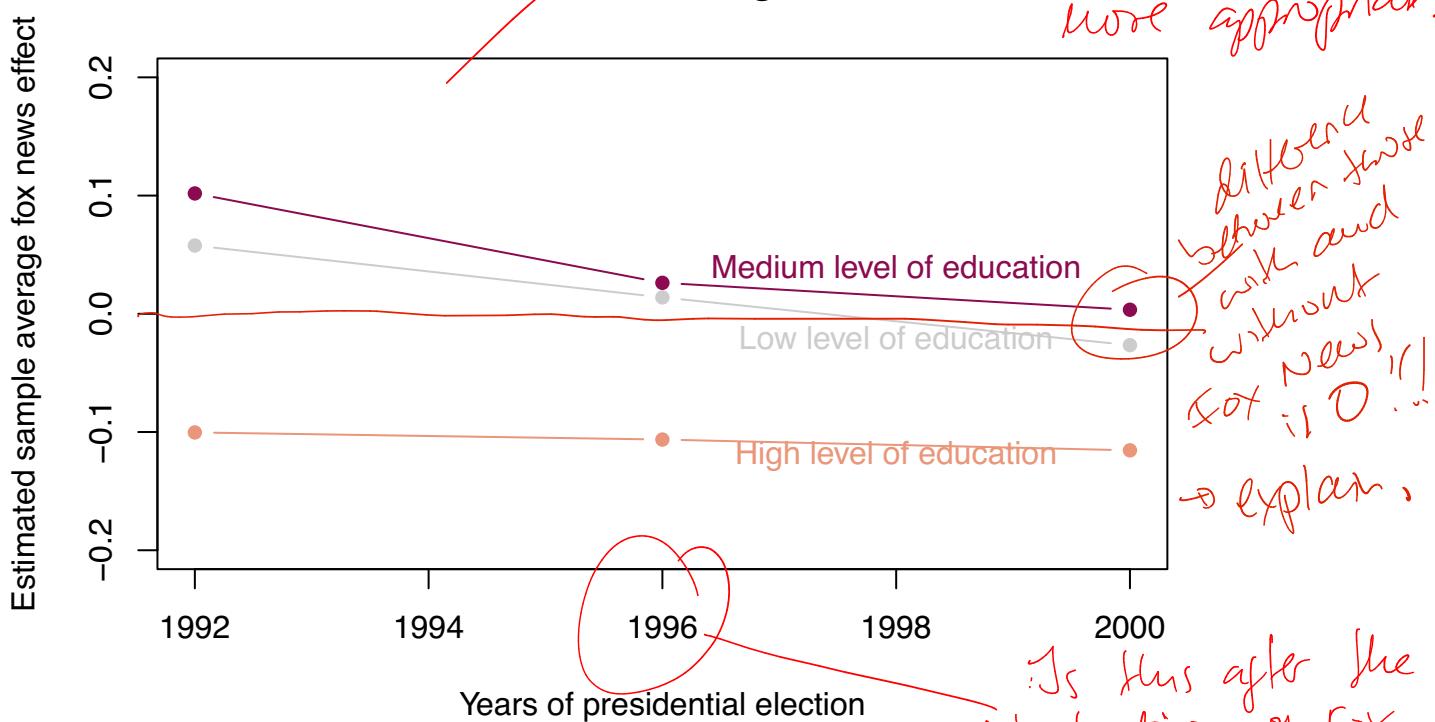
The difference between those with
or without Fox News is the
same in 1992, 1996, 2000
→ explain this.

¹¹ the introduction of Fox News does
not seem to matter for those with high income.

What determines who has Fox News and who does not?

The right be a general trend!
→ differences and differences design more appropriate,

Trends in Fox News Effects among the level of education



The last measurement of finding the differences in sample average treatment effects by socioeconomic backgrounds is SATE for different levels of education. Here it is visible, that high educated regions are less likely to vote for republicans and have lower starting position. Looking at a medium or low level of education a decrease of the potential effect is visible, even though is a very small one.

In summary, a sample average treatment effect was not found to be salient and decisive on the basis of various socio-economic criteria and thus no 'Fox News effect' was found. There have been changes that seem reasonable and appropriate, but it would be presumptuous to relate these to a Fox News effect, as the changes have always been marginal.

6 Regression analysis

6.1 Linear models

We already tested above the influence of different socioeconomic factors effects on people's support for the republican party and how the presence of Fox News in some cities changed people's party choices. However, we are also interested in to what extent socioeconomic factors or the potential effect of Fox News' presence in some cities influence people's vote for the Republican party. To answer this questions we will test H1 (Fox news and the socioeconomic background affects the behavior of the electorate) and H2 (just socioeconomic background affects the behavior of the electorate) through regression analysis. First, we will test to what extent socioeconomic factors affect people's vote for the Republican party. We included in the analysis the proportion of inhabitants who have a college degree, the median income, and the proportion of black or Hispanic people in every city. Black and Hispanic people stand for minorities in the analysis because these are the two most significant minorities and only these two minorities were included in the data set.

Cross sectional
or before and
after design

You could include Fox News to run multiple regression in table 1 and compare the new adj R² to see which model is with or without Fox News subscribers has higher adj R²

```
## Please cite as: ## Hlavac, Marek (2022). stargazer: Well-Formatted Regression and Summary Statistics Tables. ## R package version 5.2.3. https://CRAN.R-project.org/package=stargazer
```

Table 1: Effect of socio-economic factors on voting

Dependent variable:	
Two party vote share for Republicans	
Intercept	0.566*** (0.003)
Income	0.151*** (0.019)
Share of Hispanic or black people	-0.442*** (0.010)
Education level	-0.206*** (0.014)
Observations	10,126
R ²	0.172
Adjusted R ²	0.171
Residual Std. Error	0.118 (df = 10122)
F Statistic	699.144*** (df = 3; 10122)
Note:	
*p<0.1; **p<0.05; ***p<0.01	

The results of the analysis show that in cities where the proportion of minorities (Hispanic and Black people) is higher the support for the Republican party is lower than in other cities. Therefore, from the socioeconomic factors that were included in the regression analysis race (-0.4418) has the strongest effect on support for the Republican party in American cities. The proportion of people who have a college degree is also an important explanatory factor to explain vote for the Republican party in a city. In cities where the proportion of those who have a college degree is higher citizens -0.20627 are less likely to vote for the Republican party. Moreover, the median income in cities does not seem to have an effect on support for the Republican party.

In the following, we will test the influence of Fox News subscribers (in cities) on people's support for the Republican party. First, we will only test only the effect of Fox News subscribers on people's proportion who voted for the Republican party. Second, the proportion of Fox News subscribers will be added to the socio-economic factors to check what explains better people's vote for the Republican party.

```
## Call:  
## lm(formula = gopvoteshare2000 ~ subrf2000, data = data)  
##  
## Coefficients:  
## (Intercept)    subrf2000  
##          0.54012      -0.01888
```

Here you
 do a cross sectional
 design \rightarrow comparison
 between treatment
 and control.
 ## [1] 0.0004145752
 ## Call:
 ## lm(formula = gopvoteshare2000 ~ income1990 + hisp_or_black +
 ## college1990 + subrf2000, data = data)
 ##
 ## Coefficients:
 ## (Intercept) income1990 hisp_or_black college1990 subrf2000
 ## 0.567277 0.143589 -0.440242 -0.206280 -0.008145
 ## [1] 0.171275

Not a correlation ~~and creer~~

On what do
you base your
conclusion?

The analysis shows that there is no real correlation (-0.019) between Fox News subscribers and the support for the Republican party. Therefore, the proportion of Fox News subscribers does not explain citizens' support for the Republican party. Furthermore, when the proportion of Fox News subscribers was added to the regression the influence of Fox News subscribers on people's support for the republican party became even weaker which means that socioeconomic factors better explain their support for the Republican party than Fox News subscribers.

However, the results can be misleading because there are much more towns in the data set where there is no access to Fox News or it is very limited. The over-representation of these cities can have an effect on the results. Therefore, we created two subgroups. The first group includes cities where more than half of the inhabitants have access to Fox News and the second group includes those towns where less than half of the population have access to Fox news. The cities were divided into two groups based on where less than 50% and more than 50% of the people because in towns where more than half of the population have access to Fox News that means that the channel is well known by more than half of the population.

```

##  

## Call:  

## lm(formula = gopvoteshare2000 ~ subrf2000, data = foxnews_present)  

##  

## Coefficients:  

## (Intercept) subrf2000  

## 0.49679 0.03746
##  

## Call:  

## lm(formula = gopvoteshare2000 ~ subrf2000, data = foxnews_not_present)  

##  

## Coefficients:  

## (Intercept) subrf2000  

## 0.5402 -0.0186
  
```

which towns were included
in the data set? How
were they selected?

present regression
results in a table.

What do these coefficient
mean substantively?

The regression analysis shows that the effect of access to Fox News is still very marginal 0.037. In cities where more than half of the population have access to Fox News people are more likely to support the republican party compare to those towns where less than half of the population have access to Fox News. Therefore, the results show that socioeconomic factors are the important drivers that define people's party choice and the effect of the presence of Fox News is minimal compared to people's socioeconomic background.

Why do you think this would be the case?

→ Discuss the internal validity
of this model.

→ Are the treatment and control
groups comparable?
 → who got Fox News subscription?
 → random?

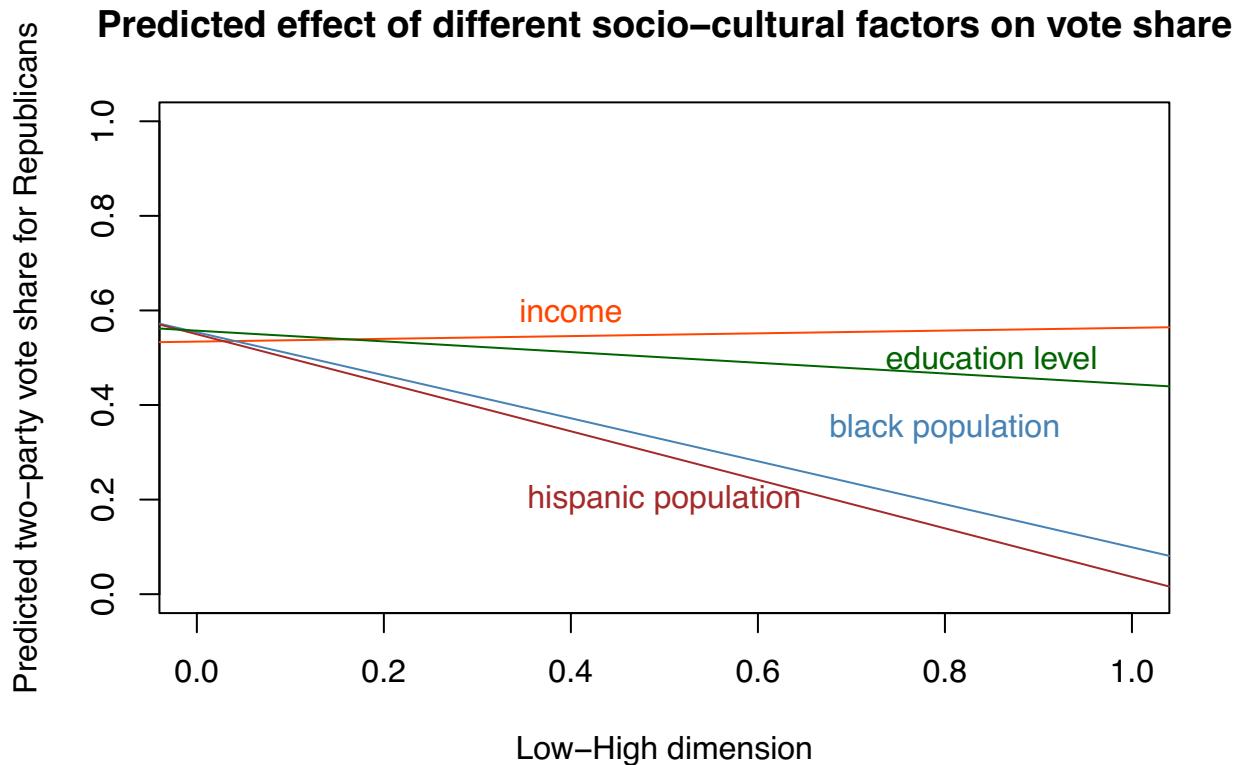
OK.

6.2 Prediction

Using similar models to the ones in the previous section, predictions are made on vote share on different hypothetical setups in 2000. The varying dimension is the so-called “low-high dimension” which describes that 0 - 100 per cent of the population is black or Hispanic, the whole population has low or high income or education level. To all values along this dimension a two-party vote share is predicted and the results are plotted below.

which models do you use for
your predictions?

Given your ~~pred~~ file you seem to run
~~simple~~ models for each predictor
edu-
race
etc.



The results show a slight positive relationship between income and vote share for Republicans. With the increasing share of the ethnic groups within the population has a negative effect on Republican vote share and education level has generally a low impact.

Della Vigna and
Kapoor 2007
find an effect.
I wonder why.

7 Discussion & Conclusion

After the analysis, it can be summarized that ‘a Fox News Effect’ is not clearly visible and verifiable. Thus, the first hypothesis of the paper must also be refuted, as there is no clear evidence that Fox News together with socioeconomic background affects the behavior of the electorate in 2000. This was evident from the results of the regressions ‘foxnews_2000’ and ‘foxnews_present_effect’ which showed no significance or clear correlation. It was also evident from the sample average treatment effect studies that all of the effects shown can only be described as minimal.

The reasons why an effect is only so minimally visible can be manifold. First of all, it must be mentioned that a new channel may take a while to be added to a cable provider’s lineup because of the talks negotiations during the implementation. Due of this, contrary to popular belief, Fox News was unable to establish itself as the first player in conservative media markets. This means that people who live in cities without fox news are still influenced by conservative TV channels, but are not recorded as such in this data set because they

go to conservative towns
15.1.9. Fox News might have been strategic in which towns to be present first

? What are external
and internal variables?

Good!
watch a different conservative channel. Furthermore, it is important to note that while there is a small effect, covering the external and internal variables that influence an election is extremely difficult. Third, the heavily conservative states of New Jersey and Wyoming would be the perfect example of this, ranking second and third, respectively, among the states with the largest vote share. This would mean that the effect could be weakened, since people have already voted conservatively anyway.

→ so ceiling effects!

This would mean that the effect could be weakened, since people have already voted conservatively anyway. However, even if the aforementioned external problems were not present and the internal validity is flawless, it is possible that the Fox News effect would only play a minor role. As the theories and also the regression results have shown, socioeconomic factors play an important role. Thus, the second hypothesis of the paper can be confirmed, namely that socioeconomic factors are crucial for voting in the American two-party system. In particular, the factors of race and the level of education were the most decisive influences. Lastly, another potential explanation to the general increase of support for the Republican party in most of the states is that the US had a democratic president (Bill Clinton) during this time period who had an impeachment. These external factors could have a more important positive effect on people's support for the Republican party than the influence of watching Fox News.

| This is why
| difference
| in
| differences
| design would
| be more
| appropriate!

But you compare
those with and
without Fox News
in the same Town

Discuss what you
mean by internal
validity.

Was access to Fox News
random?

5 / 7 points

→ Discuss the limitation
of your study related to
your internal validity!
Can you claim that your
design allows you to test causal
relationship¹⁶ between
media (Fox News)
and vote choice?

References

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