Problem Set #2

MACS 30200, Dr. Evans

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Critical review computational approach to answering research question

(a)

Research question: how trends in political polarization relate to respondents' propensities to obtain news or information online or from social media.

(b)

The survey data used in the research comes from American National Election Studies (ANES) 1948 to 2012 Time Series Cumulative, 2008 Time Series Study, and 2012 Time Series Study data sets.2 The ANES is a nationally representative, face-to-face survey of the voting-age population that is conducted in both pre- and post-election rounds and contains numerous demographic variables and political measures. And also the microdata from the Pew Research Center to plot trends in social media use from 2005 to 2012.

(c)

Researchers used nine past measures of polarization that have been used in the past literature. These are main theory reference for their research, including:

(1) Partisan affect polarization

(2) Ideological affect polarization

These two measures from Iyengar et al. (2012) and Gentzkow (2016) capture the difference in the warmth or coldness respondents feel toward those of their own and the opposite party or ideology.

(3) Partisan sorting: measures the extent to which partisan identity is correlated with self-reported ideology. Developed by Mason (2015), and also used by Davis and Dunaway (2016).

(4) Straight-ticket: survey-weighted proportion of respondents who report voting for the same party in both the presidential and House elections, aka. the frequency with which individuals split their votes across parties in an election, from Hetherington

(2001)

(5) Issue consistency: examine the similarity of ideological positions across issues, from Abramowitz and Saunders (2008)

(6) Issue divergence: the average correlation between these same seven questions and party affiliation for respondents who are not strictly independents, similar to Abramowitz and Saunders (2008)

(7) Partisan-ideology polarization: examines the extent which the self-reported ideological affiliation of Republicans and Democrats differ, outlined in Abramowitz and Saunders (2008, 547).

(8) Perceived partisan-ideology polarization: the extent to which individuals perceive there to be ideological differences between the Republican and Democrat parties, from Davis and Dunaway (2016, 283).

(9) Religious polarization: similar to Abramowitz and Saunders (2008).

(d)

Identification paper. Based on the hypothesis that Internet is a primary driver of rising political polarization, the researchers used demographics to represent the usage of Internet and try to map to the polarization degree to find their relationship.

(e)

This paper computationally constructed ten measurement equations of polarization out of the survey data and produced tables and figures. They compared the measures among different demographics group(age and Internet access) and find that growth in polarization in recent years is largest for the demographic groups least likely to use the Internet and social media. Based on that, they denied the null hypothesis and proved that using of social media and Internet did not contribute to the polarization.

(f)

The paper looks like a prototype to me, suggesting their research is still in the former stages. They want to test their hypothesis that the growth of polarization is positively influenced by the usage of Internet of social media. However, the paper did not specify the reason to build their regression model, and they piled almost every influencing factors into one regression, which is good for exploratory analysis but bad

to present the relationship between major demographics, like age group. I suggest an improvement for the "by age" inference would be to introduce Error Correction Model into this inference, and make use of our survey data as panel data across years and different age groups. From the regression result the education also have a influence so researchers may also want to consider this factor into the ECM and test the significance of influence on the index of polarization. A simple regression might be a good start but the inference shall not end here.

The second problem is with inference process. It can be that using Internet did not contribute to the polarization, but also remains the possibility of selection bias where only neutral people would go on Internet to voice their opinions, and leave us the assumption that maybe polarized opinion would have a larger influence if all of these polarized people speak on the Internet. It would be better if the researchers could include the discussion about such concern. when did not seek any further statistical tests to avoid such concern.