# Economic Interests, Worldviews, and Identities

## Theory and Evidence on Ideational Politics*

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**Abstract**

We distinguish between ideational and interest-based appeals to voters on the supply side of politics, integrating the Keynes-Hayek perspective on the importance of ideas with the Stigler-Becker approach emphasizing vested interests. In our model, political entrepreneurs discover identity and worldview "memes" (narratives, cues, frames) that invoke voters' identity concerns or shift their views of how the world works. We identify a potential complementarity between worldview politics and identity politics and illustrate how they may reinforce each other. Furthermore, we show how adverse economic shocks (increasing inequality) lead to a greater incidence of ideational politics. We use these results to analyze data on 60,000 televised political ads in U.S. localities over the years 2000 through 2018. Our empirical work quantifies ideational politics and provides support for key model implications, including the impact of higher inequality on the supply of both identity and worldview politics.

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# 1 Introduction

Interest-based politics – revolving around the economic interests of elites, lobbies, rent-seeking groups, or voters at large – lies at the cornerstone of political economy. The emphasis on vested interests has provided economists and other social scientists with a powerful conceptual lens, enabling them to shed light on policy formation, institutional change, and the persistence of inefficient policies in a variety of contexts.[1] For example, such frameworks help us understand how industrial lobbies shape trade policies (Grossman and Helpman 1993), how financial interests have helped push through the repeal of the Glass-Steagall Act (Johnson and Kwak, 2010), and how the threat of expropriation by the masses has historically provided elites the incentive to democratize in some parts of the Western world (Acemoglu and Robinson, 2006).

However, an exclusive emphasis on interests would leave many important political economy questions unanswered. Political debates and struggles in the real world rarely rely solely on naked appeals to material interests. Instead, political leaders often seek support by trying to persuade the public of a particular view of how the world works – a view that enhances the desirability of the candidates' preferred policies. Alternatively, they may appeal to voters' identities, values, or some overarching normative principles (such as fairness or freedom). In one form or another, what we might call "ideational politics" seems at least as important as interest-based politics.[2]

Ideas have played a prominent role in institutional and policy transformations throughout history. Illustrations include not only such dramatic cases as the prohibition of the slave trade, the rise of the suffragettes, the civil rights movement, or the collapse of the socialist model the world over, but also more specific policy changes such as welfare reform, de-regulation, tax cuts, privatization, and trade liberalization since the 1980s under what has come to be called "neoliberalism" or the "Washington Consensus." More recently, both Brexit in Britain and the victory of Donald Trump in the 2016 U.S. presidential election have been linked to a particular brand of identity politics that appeals not to voters' pocketbooks but to their sense of who they are and their latent aversion to "outsiders" (racial minorities or immigrants).

Indeed, the focus on economic interests in contemporary political economy is of

[1] see Stigler (1971) and Becker (1983). See also Buchanan and Tullock (1965) for an early account and Persson et al. (2000) and Acemoglu (2003)for good surveys.

[2] See Rodrik (2014) for an informal treatment of these issues and a variety of illustrations.

rather recent vintage. It was not just classical economists such as Ricardo and Marx, but also Keynes (1936) and Hayek (1949), who considered ideas to be important drivers of political change. Keynes (1936) famously observed "it is ideas, not vested interests, which are dangerous for good or evil."

Our conceptual framework allows us to think about ideas as a political vehicle distinct from and in addition to interests. We consider a standard political economy model where policy is driven ex ante by the preferences of a median voter who is low-income. However, ideational politics broadens the range of possibilities. Hence we allow the challenger to allocate resources towards the search and discovery of "memes" that catalyze ideational politics.[3] Memes are the concrete vehicle that enable politicians to channel ideas in the political marketplace.[4]

We highlight two different types of ideational politics in particular: "worldview politics" and "identity politics." Worldview politics refers to efforts to shape voters' understanding of how the world works, thereby altering their perceptions of the mapping from policies to outcomes. Examples include the Mont Pelerin Society's successful marketing of a particular type of economic liberalism, investments made by the Koch brothers in libertarian think tanks and research institutes, and the financial sector convincing regulators as well as a broader segment of the public that "what is good for Wall Street is good for America."[5] These illustrations come closest to what Keynes and Hayek had in mind when they wrote about the importance of ideas in driving policy.

Identity politics refers to efforts to make particular latent identities (such as ethnicity, religion, race, etc.) more salient, rendering voters' utility more congruent with members of the relevant identity group (Sen 2007). Political actors can render a particular identity more or less salient by valorizing particular racial or ethnic attributes, sending messages about who is a native or an outsider, disseminating stereotypes about minorities, emphasizing patriotism and national identity, or by framing policy issues

[3]The notion of a meme was introduced by Dawkins (1976) when discussing how some cultural ideas and rituals spread very easily among anyone exposed to them — be it through rhetoric, slogans, speech, or gestures.

[4]Consider for example the politics of austerity. According to Skidelsky and Fraccaroli (2017), one reason why fiscal austerity and balanced budgets resonate with the public is that "people think of the government's finances very much as they think of their own household's finances. Since every household knows that it has to balance its books," so do they presume for the government. See also Farrell and Quiggin (2011), for a discussion of the politics of austerity in Germany.

[5]On the efforts of Koch brothers and other libertarian business leaders, see Mayer (2017). The argument that the financial sector cognitively captured policymakers' and elites' worldviews has been advanced by Johnson and Kwak (2010) as well as Buiter et al. (2014).

in such terms.[6] Examples are ubiquitous in current political discourse, ranging from the Republican Party's white identity politics to the Black Lives Matter movement.

Correspondingly, we have two kinds of memes. If a meme affects a voter's belief about how the world works, we label it a "worldview meme" producing *worldview politics*. If a meme affects a voter's sense of who he or she is, we label that an "identity meme" that triggers *identity politics*. We examine the conditions under which political parties invest in one or both of these types of memes and giving rise to the possibility of "full-spectrum ideational politics," on both the policy and identity dimension.[7]

This theoretical approach is notable in three respects. First, at a high level, we clarify the analytical distinction between ideas and interests, integrating the Keynes-Hayek perspective on the importance of ideas with the standard political-economy frameworks that typically emphasize material interests. A frequent contention of social constructivists is that the role of ideas in shaping interests renders formal rational-choice models of the type that economists and many political scientists work with irrelevant or inappropriate (see Ruggie, 1998; Cerulo, 1997). Our model shows that there is in fact no incompatibility between constructivist arguments and formal or rational-choice modeling. Second, we show how ideas and interests can feed into each other. On the one hand, economic interests drive the kind of ideas that politicians put forward; as Shepsle and Noll (1985) puts it, ideas can be regarded as "hooks on which politicians hang their objectives and further their interests." However, ideas also shape interests – by altering voter preferences ex post and/or shifting their worldviews, in both cases changing rankings over policies. Third, we show that identity and worldview politics are each variants of a broader category, which we call ideational politics.[8] Furthermore, in providing a simple way to integrate as well as distinguish between

[6]There is a large literature in other disciplines on identity construction in a variety of contexts. See Wendt (1999), Ruggie (1998) and Anderson (1976) in political science, and the survey by Cerulo (1997) in sociology. Haidt (2012) reports on research from biology suggesting that individuals have a 'hive switch' that helps make identities salient and bind an individual to a particular group.

[7]An example of a meme that combines both is Donald Trump's statement, "I will build a great, great wall on our southern border, and I will make Mexico pay for that wall." This meme combines elements of a policy response, while also emphasising identity (natives versus immigrants). Similarly, during the 2006 Venezuelan election Manuel Rosales attempted to unseat President Chavez by promising to issue a *Mi Nigra* (i.e., "my dark-skinned woman") card that would directly transfer oil revenues to the poor – combining policy and identity memes in one initiative.

[8]The fact that identity may be politically constructed draws on a large literature in the social sciences, much of it discussed in Fearon and Laitin (2000). Similarly, the role of political entrepreneurs in shaping worldviews has been recognized as far back as Lenin (1902), Downs (1957), and recently formalized by Bénabou (2008).

identity and worldview politics, we show how a natural complementarity may arise between these forms of ideational politics.

We use this framework to motivate an empirical analysis of U.S. political advertising, and more specifically the impact of greater inequality on ideational politics messaging. In our framework, a rise in inequality increases the reward to the rich from this type of political messaging. An increase in income gaps correspondingly increase the incentives to the rich from altering worldviews to persuade the median voter that (for example) lower taxes are in the interests of not only the rich, but also the low-income median voter. Similarly, ideational politics that catalyzes identity around issues such as gay marriage, women's rights, and immigration can serve as a "wedge" that gives low-income voters a reason to vote for the high-income party when economic interests would normally pull them in the opposite direction.[9]

Accordingly, we examine the impact on political advertising arising from the exogenous variation in employment and inequality from Chinese import competition in the United States (Autor et al., 2020). To analyze political messaging, we use microdata on advertising for the years 2000-2018, where we have detailed information on the sponsoring politicians, the locations of airings, and the issue content of the advertisements.

Our empirical analysis produces evidence consistent with the model's key implications. We find evidence for an increase in ideational politics in areas that were worst hit by the China trade shock. In particular, Republicans intensify messaging on moral values like abortion as well as gun rights, a response that would be difficult to explain without a model of ideas. Further, we find that in response to the China trade shock, there is more frequent advertisements by Republicans that jointly invoke identity issues (abortion and morality) and worldview issues (taxes and deficits). That is some suggestive evidence in line with the the model's predictions about possible complementarity of the two types of ideational politics.

The main empirical findings are robust to a variety of checks for specification and sampling. Consistent with the exogeneity of the instrument, the aforementioned shifts in ideational advertising occurred only after the employment shocks in the mid-2000s

[9]See the related analysis of Hacker and Pierson (2020). As Ashok et al. (2015) have noted: "despite the large increases in economic inequality since 1970, American survey respondents exhibit no increase in support for redistribution . . . demand for income redistribution in the U.S. has remained flat by some measures and decreased for others." See also Luttmer (2001).

(starting 2008-2010); they are not observed in the earlier period (2000-2002). Further, we can rule out that these effects are just increases in polarization across all partisan priorities. Finally, we use data on Gallup's "Most Important Problem" survey to show that the effects are not driven by changes in voter preferences about identity-based issues. Overall, the evidence is more consistent with a change in the supply, rather than demand, for ideational politics.

These theoretical and empirical results add to the economics literature on ideas, narratives, and identity politics. On the theory side, Bénabou et al. (2015) examines how political economy concerns affect a government's incentive to affect the evolution of religious beliefs and allow scientific progress and growth. Shayo (2009) presents a model where individuals care about group status and are willing to sacrifice income to vote for identity.[10] Grossman and Helpman (2021) develop a model in which cultural associations of lower-skill individuals are driven by the conflict between identifying with "the nation as a whole," a category which includes the high-skilled individuals, and the cognitive-dissonance cost that arises to the extent their material circumstances differ from the national average. They show that an adverse economic shock can induce a change in social and cultural identification patterns whereby lower-skill individuals begin to see themselves as members of a narrower group. Bonomi et al. (2021) analyze how policy conflicts can heighten individuals' attachments to their identity groups. Finally, our notion of the role of memes as the vehicle of ideas is related to recent work on the economics of narratives by Akerlof and Snower (2016), Collier (2016), and Shiller (2017).

Empirically, this paper adds to the burgeoning literature on the power of ideas in policymaking. There is a large literature on how media messaging influences votes (e.g. Strömberg, 2015), with a smaller literature on how it influences enacted policies (Galletta and Ash, 2021). Ash et al. (2020) show that a training course for judges in economics – a bundle of worldview memes – caused the judges to take a more conservative approach in their rulings and to use more economics reasoning in their opinions. The closest papers have looked at the political effects of the China Shock. Autor et al. (2020) show that the China shock increased support for Republicans and

[10]Two equilibria emerge in Shayo's paper: a high redistribution equilibrium in which class is salient and a low redistribution equilibrium in which national identity is salient. While the issues that motivate the present paper are broader, we show, as in these papers, that there is a close relationship between attitudes towards redistribution and the salience of non-materialistic identities (religion or nation).

viewership of Fox News Channel. Cerrato et al. (2018) find that the China Shock causes more negative attitudes toward immigrants and minorities, while opinions about free trade are not affected. Similar effects have been documented in a number of European countries (see Rodrik, 2020). Our empirical analysis complements these previous papers with a focus on the supply side of ideational politics. Rather than looking at the effects on citizens, we look at how meme production among politicians shifts in response to the state of higher inequality triggered by China import competition.

The plan of the paper is as follows. In Section 2 we set up the various elements of our conceptual framework and analyze comparative statics in equilibrium. Section 3 describes and reports the empirical analysis. Section 4 concludes.

# 2 Theoretical Framework

This section presents a minimal political economy framework with democratic political institutions where the interests of the median voter (who is poor) drive the incumbent's choice of policy in favour of the status-quo. The basic structure is a game of political competition between a political entrepreneur of the right (representing the economic interests of the higher-income rich) and one of the left (representing the economic interests of the lower-income *median* voter). In order to appeal to the (low-income) median voter, the right-wing political challenger has two options: first, engage in identity politics by appealing for votes on the basis of non-economic identity (e.g. ethnic, religious); and second, engage in worldview politics by persuading the low-income voter that right-wing economic policies are in their economic interest. In contrast, the left-wing politician would prefer to suppress the identity dimension and make class salient to help market (re)distributive left-wing policies.

***Income and Policymaking.*** Politicians can directly affect perceived payoffs associated with policy choices by introducing ideas that shift beliefs about the state of the world. Policymakers have a choice between two state-contingent policies – either retaining the status-quo policy $a_0$ or adopting the new policy $a_1$. Payoffs from the policies are state-contingent, with the underlying state of the world being either $S_0$ (the status-quo) or $S_1$, where the prior of state $S_0$ is $\mu = P(S_0)$. While the true state of the world is unknown, each voter receives a signal $s_i$ of reliability $q = P(s_i|S_i)$ that

the state is $S_i$, where $i \in \{0, 1\}$.

There are two income groups in society, where a minority fraction $n_R$ of the population is rich and the remainder $n_P$ are poor, with $n_P > 1/2$. The policymaker's dilemma is that there is a distributional conflict between the rich and the poor in some states of the world (i.e. $S_0$) and not others (i.e. $S_1$) (see Appendix Table A.1). The poor benefit from the adoption of the new policy $a_1$ if it is correctly matched with the state $S_1$ and earn an income of $1 + g$, with a per capita gain $g > 0$. Similarly, if the underlying state is $S_0$ is correctly matched with $a_0$, the low income voter earns a payoff that equals 1. However, adoption of $a_1$, when the state is $S_0$ results in the low income voter being worse off with a payoff of $1 - g$. Meanwhile, the adoption of $a_1$ benefits the rich in *all* states of the world, generating an income $x$. Therefore, it is only in state $S_1$ that *both* the rich and the poor are better off with the adoption of the new policy $a_1$. We build in individual-specific heterogeneity in the impact of these state-contingent policies on income by assuming that all individuals are subject to an individual-specific random shock $\tau_j$ where i.e. $\tau \sim U[-\frac{1}{2\phi_k}, \frac{1}{2\phi_k}]$ with $\phi_k$ being the density of income group $k \in \{R, P\}$.

***Preferences and Identity Markers.*** There are a unit mass of citizens, each of whom obtains utility from not just income, but also from their identity. In particular, each individual is endowed with a vector of identity-based 'markers' that may affect his/her payoff - such as ethnicity/race, religion, or nationality. For simplicity, all individuals belong to *one* such identity marker that can be either $A$ or $B$. Accordingly, an individual's payoff in any period is:

$$v_j = y_j + \lambda\theta_m \tag{1}$$

Here, individual $j$ obtains income $y_j$ and an identity utility $\theta_{jm}$ from membership to group $m$, where $m \in \{A, B\}$. However, we allow an individual's payoff from group identity to be more important in state $S_H$ (i.e. $\lambda = 1$) and of much lower importance when the state is $S_L$ (i.e. $\lambda = 0$). For instance, an individual with the majority (religious or ethnic) identity group $A$ may perceive to be under threat in state $S_H$. When under threat, those of identity $A$ may prefer having in power a politician who shares their identity (i.e. $\theta_A = \theta$). By the same token, in the same state $S_H$ those who belong to the minority group $B$ are worse off with a government in power who

does not share their identity (i.e. $\theta_B = -x$). Similarly, in other states of the world (i.e. $S_L$), identity does not matter and citizens do not care about the politician's identity marker.[11] We assume that priors for the identity-relevant state are given by $P(S_L) = \mu$.[12] As in the case of the policy relevant state, the identity relevant state is unknown. However, each voter receives an informative signal $s_i$ of reliability $q = P(s_i|S_i)$ that the state is $S_i$, where $i \in \{L, H\}$.

Finally, we assume that a majority $n_A$ of the population have the $A$ identity marker, with $n_A > 1/2 > n_B$.

***Information Manipulation, Memes and Ideational Politics.*** In order to alter the political status-quo, the political challenger (from the right or the left) may have an incentive to engage in "ideational" politics. We capture this as political advertising that helps in the discovery of a meme that manipulates a voter's information about the underlying state. This meme is broadly construed: It is some combination of cues, narratives, symbols or targeted communication that alters beliefs about the underlying state of world.

Identity memes can shift voter beliefs about the importance of their group identity (e.g. in state $S_L$) and catalyze *identity politics*. Alternatively, worldview memes can shift beliefs about the underlying state of the world towards $S_1$ and trigger *worldview politics*. Rather than privilege a particular channel in how we formally capture memes, we take a simpler route and assume that a meme "blocks" the private signal that would otherwise shift posteriors about the underlying state of the world. Specifically, the political challenger allocates effort $(i, w)$, where $i$ is the effort to identity memes and $w$ is the effort to worldview memes. He then blocks the signal $s_1$ with probability $w$ and the signal $s_L$ with probability $i$.

The discovery of memes is an uncertain and costly process. A high-income right-wing political entrepreneur who expends resources $e_R(i_R, w_R)$, will discover an identity meme with probability $i_R$ and a worldview meme with probability $w_R$ where $e_R(i_R, w_R) = \frac{\beta[i_R+\varphi w_R]^2}{2}$. Correspondingly, a left-wing political entrepreneur will ex-

[11] We elaborate on this payoff structure in Appendix Table A.1:B. A more flexible specification to these payoffs is described in Mukand and Rodrik, 2018 that also describes other instances under which individuals may obtain utility from their identity.

[12] For notational simplicity, we have assumed that the prior on both the identity and policy relevant states is identical $P(S_L) = P(S_0) = \mu$. For simplicity, we also assume that the policy and identity relevant states are uncorrelated with each other.

pend resources $e_L(i_L, w_L)$. The technologies of discovering identity and worldview memes are similar and a function of the prevailing structural conditions captured by $\beta$ and the relative cost of discovering worldview memes, as captured by $\varphi$. We also assume that if both right- and left-wing memes have been simultaneously discovered, one of them is randomly chosen to become operational and the other is suppressed. Finally for simplicity, we assume that once a meme is used, it can remain operational till the next electoral cycle, so long as additional advertising resources $i$ or $w$ are expended.

In the absence of ideational politics, a political candidate can still prevail over an incumbent by chance. We define a random variable $\delta$ that captures the relative charisma of the left-wing politician, where $\delta \sim [-\frac{1}{2\psi}, \frac{1}{2\psi}]$.[13] Accordingly, voters compare their expected payoffs from the incumbent and the challenger and vote for the politician under whom their payoff is higher. The elected politician adopts his preferred policy in the final period.

***Timing of Decision Making.*** In period $t = 0$, Nature moves and determines for each political constituency its inherited history. This history includes (i) the political affiliations of the incumbent and the challenger (i.e. their income and identity marker), (ii) the prior $\mu$ on the state, the local structural conditions $\varphi$, and (iii) the prevailing inherited memes and associated prevailing political status quo with class or identity being salient.

In the first period $t = 1$, the political incumbent makes a decision to allocate resources $(\hat{i}, \hat{w})$ to keep any inherited memes in play, in order to minimize the chance of the status quo being overturned. The political challenger observes structural conditions and the incumbent's decision, and then allocates resources $(i, w)$ towards the discovery of an identity and/or a worldview meme with the potential to alter the political status-quo. If a new meme is discovered, it has an even chance to displace the political incumbent's set of pre-existing memes and block the corresponding private signal. If the political challenger's memes are successful in displacing the political status-quo, there is a shift in the salience of identity and/or worldviews.

The second period $t = 2$ begins with the realisation of the political incumbent's relative popularity shock (e.g. charisma) given by $\delta$. Elections take place with each

[13]These distributional assumptions will ensure closed-form solutions, so long as the distributional 'support' for $\delta$ is not too 'narrow' compared to $\tau$.

citizen voting for the candidate who maximises their expected payoffs.

In the last period $t = 3$, the winner of majority of votes is announced and implements the policy that maximises his or her payoff. Voter payoffs are also realised.

***Implications of Full-Spectrum Ideational Politics.*** We have described above a minimal framework that gives rise to full-spectrum ideational politics – with both the right and the left expending resources on political advertising to influence the nature of politics in order to secure their economic "interests". This is a finite period probabilistic voting game (as in Lindbeck and Weibull, 1997) that is adapted to incoporate ideational politics. Both the right and the left will allocate resources towards political advertising in order to catalyze ideational politics on terms that is advantageous to them. We summarise this in what follows.

PROPOSITION 1. *There exists a political equilibrium with ideational politics such that:*

*(i) there is "identity politics", where political party R allocates $i_R^*$ towards political advertising that helps discover memes that make identity salient, while political party L allocates $i_L^*$ towards political advertising that discovers memes that suppress identity and make class salient.*

*(ii) there is "worldview politics", where political party R allocates $w_R^*$ towards political advertising that helps discover memes that persuade the citizens that the underlying state is $S_1$ and adoption of $a_1$ is in the economic interest of all voters; while party L allocates $w_L^*$ towards the discovery of memes that persuade citizens that the underlying state is $S_0$ and adoption of $a_0$ is in the economic interest of the low-income voter.*

The above proposition demonstrates that the political challenger and the incumbent both engage in political advertising on ideational politics; the equilibrium analysis is described in Appendix A.2. This may give rise to both identity and worldview politics, even if there is likely to be heterogeneity in its occurrence across time and space, depending on underlying structural conditions.[14]

In the case that political advertising helps discover an effective meme that makes identity salient, we will be in a world of *identity politics*. Here individual attitudes

[14]For instance, a history of racial animosity in the United States or religious conflict in India, makes it much easier for political advertising to make elections revolve around the identity politics of race and religion. In contrast, as pointed out first by Dornbusch and Edwards (1990), structural conditions in Latin America over the past several decades have made it much easier for political entrepreneurs to discover memes that shift populist worldviews in favour of populist economic policies.

towards policy are often mediated through identity (see Akerlof and Kranton (2000)). In this case an individual obtains a payoff from taking actions (or preferring policies) that are consistent with this identity. For example, even if it is against his economic interest, a lower-income voter may well support (pro-rich) policy $a_1$, simply out of a sense of solidarity with the group with which he shares a tribal identity marker (i.e. the relatively rich group $A$). Therefore, by catalyzing identity, the politician of the rich can generate political support for a policy amongst the poor, that (on purely income grounds) would be absent.[15]

Alternatively, political advertising may alter voter conceptions of the nature of the policymaking environment, i.e. *worldview politics*. In this case, discovery of a worldview meme shifts beliefs about the underlying state in favor of $S_1$ (i.e. lower $\mu$), such that adoption of $a_1$ now benefits both the rich *and* the poor. By altering low-income voter beliefs about the underlying state of the world, such a worldview meme is effective in making policy $a_1$ politically viable; it can now be argued that in this state of the world, policy $a_1$ (e.g., low taxation) is good not just for the rich but also for the poor. For example, Reagan's use of the Laffer Curve to 'market' his low tax argument helped make it politically viable with the low income median voter (see Prasad, 2012).[16] In contrast, the economic interests of the left will continue to emphasize that the state of the world is $S_0$, and emphasize the redistributive, zero-sum nature of any policy choice.

It is worth emphasising that in our framework, optimally chosen left-wing memes will make class salient and drive a wedge between the rich and the poor. In contrast, the right wing politician will benefit from making identity salient, so long as it helps drive a wedge between the poor and makes class less pivotal.

We now describe some of the key implications of the above proposition for ideational politics, that informs the empirical analysis that follows.

[15]To take one example, Campbell (2002) argues that "efforts to reform, if not dismantle, U.S. welfare policies during the 1970s and 1980s were led by politicians who reframed means-tested welfare programs as stipends and services that were being provided to African Americans and other minorities, but paid for by allegedly exorbitant taxes on working-class whites. The idea was to frame the issue of welfare reform in such a way as to divide the working class along racial lines and generate support among white voters for reform (Quadagno et al., 1994)."

[16]Arthur Laffer's argument was that "if you tax something, you get less of it, If you subsidize something, you get more of it. We tax work, growth, investment, savings and productivity, while subsidizing non-work, consumption and debt". Arthur Laffer's argument was a classic policy meme in that it was simple, catchy and plausible.

***Complementarity in Ideational Politics.*** Our formal analysis also suggests that full-spectrum ideational politics may be more effective than the sum of its two parts (identity and worldview politics). To see the underpinnings of this complementarity, consider the example of a right-wing political entrepreneur successfully discovering an identity meme. This makes the low-income individual take pride in sharing an identity with the higher income (and status) group A – an "association" effect. In this case, observe that if the relative income of the $A$ 's is higher when the state is perceived to be $S_1$ (and policy $a_1$ adopted) rather than when the state is $S_0$ (and the status-quo policy $a_0$ retained). This means that a worldview meme, by persuading the voter that the state is $S_1$, can also increase the group based identity payoff to the $A$ group. This higher group-based identity payoff to the lower-income voter reduces the sting of lower redistributional benefits from the low tax policy. Therefore, in the presence of the "association" effect on identity, it is optimal for the political entrepreneur to invest more in discovering a worldview meme. For example, low-income white voters may be willing to support a policy that benefits a rich minority (e.g. financial deregulation), if its adoption gives them an indirect bump in utility – through tribal association with other (now very) rich white beneficiaries of this policy.

This association effect is reinforced by an additional consideration. Remember that if voters perceive that the underlying state is $S_0$, then the adoption of policy $a_1$ has a negative impact on the income of the poor. Nevertheless, *once identity is made salient*, a subset of the poor will support this policy for reasons of loyalty to the identity group, even though supporting this policy has a negative impact on their income.

***Inequality and Ideational Politics.*** To fix ideas about the impact of inequality on ideational politics, consider the impact on a specific policy in our context - namely, taxation. Here we assume that under the status-quo state $S_0$, the preferred policy of the median voter (who is poor) is greater redistribution through adoption of the high tax policy $a_0$. In contrast, the rich prefer the lower tax policy $a_1$.

We now consider the impact of an exogenous shock that results in higher inequality in *both* states of the world – captured in the the form of an increase in $x$ (i.e. the wages of the rich). Given that the median voter is low-income, the impact of a rise in inequality will, ceteris paribus, increase tax rates on the rich. The prospect of higher taxes directly provides the right-wing political party that represents the economic interests of the rich

with an incentive to engage in ideational politics. First, the direct income benefits to a high income political challenger from adoption of $a_1$ (i.e. lower taxes) are higher when inequality is higher.[17] Therefore, under higher inequality, the rich challenger has a higher incentive to discover a worldview meme that persuades the low income median voter that the state is $S_1$ (i.e., that low taxes are also in the interest of the poor).

Second, higher inequality also gives rise to a higher incentive to engage in identity politics. The rise in inequality disproportionately benefits the identity group $A$, who constitute most of the rich. This gives rise to an ideational complementarity through the "association effect". In particular, if identity becomes salient, then the poor obtain utility from identifying with the rich with whom they share an identity $A$. In this case, the increase in inequality becomes more palatable to the poor by providing some associative tribal utility. Together, both these effects increase the likelihood that with an increase in inequality, there is both more intense identity polarization as well as greater prevalence of worldview memes. Of course, this greater incentive to engage in ideational politics by the right will result in a contemporaneous reaction by the political left. The left has an incentive to engage in ideational politics to suppress right-wing identity and worldview memes. This will help increase the likelihood that the lower-income voter does not get distracted and the attention remains on issues of class and income.[18]

To summarise, an increase in inequality:

(i) will result in an overall increase in ideational politics as well as its individual components - be it identity politics or worldview politics;

(ii) will result in greater identity politics by both political parties with: (a) the party representing the economic "interests" of the rich, engaging in political advertising that makes identity salient and helps drive a wedge within the coalition of the low-income median voters; (b) the party representing the "interests "of the lower income median

[17] In particular, the payoff to the rich challenger (captured by the rents $\mathcal{R}$) from being elected goes up with higher inequality.

[18] It can be argued that the political-ideational complex has played an important role in strengthening this 'association effect' by persuading citizens to buy into a worldview (and/or identity) that makes it easier to justify and live with prevailing high inequality. This is consistent with Piketty's (2014) conclusion that there has been a "huge change in the social representation of inequality" (pp. 419). Piketty draws on examples from popular culture to argue that they offer a "hymn to a just inequality, based on merit, education and the social utility of elites." This is corroborated by Carlsson et al. (2016), who provide empirical evidence that suggests that worldviews about what is fair, just, and meritocratic can be shaped by political entrepreneurs.

voter engaging in political advertising that makes class salient;

(iii) may be accompanied by the contemporaneous presence in any political constituency of increased political advertising that aims to influence *both* worldview and identity politics.

We now use these ideas to empirically analyze ideational politics through the lens of economic inequality.

# 3 Empirical Analysis of Ideational Politics

So far, we have emphasised the interdependence of ideas and economic interests. However, since both ideas and economic interests are endogenous, it is difficult to tell them apart empirically. Indeed, this is a problem with much of the case-based political economy literature highlighting the role of one or the other. This literature typically does not specify how an interest-based argument would be distinguished from an ideas-based one, leaving the conclusions open to alternative interpretations.[19] If an economic interest or political party pushes a particular policy, is that because they have a vested interest in that policy or because of ideational forces that shaped their understanding of where their economic interests lie?

Thus, any empirical exercise that examines both ideational and interest-based politics faces an initial measurement challenge in distinguishing "ideas" from economic "interests" as defined above. First, we need a plausible way to classify identity memes and distinguish them from worldview meme-messages. Second, there should be a reasonable measure of resource allocation towards the discovery of memes. We tackle these challenges of measurement of ideational politics by focusing on political advertising. We collect information on the variety of issues that politicians talk about in their political advertising, allowing us to document both the quantity *and* the variety of ideational politics.

[19]For example, Calomiris and Haber (2014) argue that the financial crisis of 2008-2009 was the product of an alliance of interests between big banks and community groups. The former wanted lax regulation while the latter wanted cheap housing credit for low-income groups. As such, the argument seems to be about vested interests. But one is left wondering why community groups such as ACORN bought into a worldview that favored leveraging poor households with excessive amounts of debt that they might not be able to service down the line. Conversely, ideas-based accounts of Germany's advocacy of austerity policies in the euro zone (e.g. Blyth, 2013) downplay the structural role of Germany as a creditor nation with little economic slack -- leaving the country with much to gain and little to lose from such policies.

In addition to the challenge of measurement of ideational politics, there is the additional challenge of endogenous selection of messaging types in political campaigns. A variety of factors may plausibly contribute to variations in the nature and volume of political advertising. Accordingly, we examine the power of our model using a natural experiment. In particular, we shed light on the mechanisms underlying ideational politics by examining it through the prism of *inequality*. Our conceptual framework suggests that an increase in unemployment and/or inequality will have different impacts on the nature and quantity of political advertising across the political parties representing the interests of the rich versus the poor. Accordingly, we analyze the China import shock as a natural experiment for this purpose.

## 3.1 The China Shock and Ideational Politics

We examine the effects of increased exposure to trade and foreign competition following China's accession to the WTO – the so-called "China Shock" (Autor et al., 2016). As documented in a series of papers, local labour markets in the U.S. with industries more exposed to trade with China had a rise in unemployment, factory closures, and wage declines for all workers, increasing wage inequality (Acemoglu et al., 2016; Autor et al., 2014; Galle et al., 2017; Caliendo et al., 2019; Autor et al., 2020). We examine the impact of this geographical variation in unemployment and inequality on the supply of political messages in *local media markets* by the two main political parties – the Republican and the Democratic Party, representing the economic interests of the rich and the poor respectively.

To organize ideas, say there are two types of local labour markets – those that were more exposed to competition (and the resultant economic dislocation and wage inequality) from China (the CS regions) and those that were not (non-CS regions). In this context, the "China Shock" – by increasing unemployment and wage inequality – would sharpen class conflict and increase the demand for higher taxes and redistributive transfers. Our conceptual framework suggests that there would be a relatively greater shift towards ideational politics in CS regions compared to non-CS regions. More concretely:

*(a)* *Rise of Ideational Politics in CS regions.* There will be an overall increase in ideational politics in CS regions (i.e. "China shock") as compared to non-

CS regions. This intensity of ideational politics can be measured in terms of both the number of messages as well as their variety/distinctiveness.

(*b*) *The Republican Party and Identity Politics.* The Republican party should have more of an incentive to engage in "identity politics" that drives a wedge within the lower-income voters in CS regions as compared to non-CS regions. This will result in the greater production and dissemination of identity memes/messages that distract the low-income median voter from seeking policies to address adverse economic shocks by making other aspects of identity salient. In particular, the share of political advertising from the Republican party should be higher on identity issues such as gay marriage, women's rights, and immigration. Political advertising by the Democrats should emphasise the salience of class/income issues.

*(c)* *Inequality and Worldview Politics.* Our conceptual framework suggests that while both parties will engage in worldview politics, the Republican party has more of an incentive to disseminate messages that minimize the role of income/class in policy choices in CS regions as compared to non-CS regions. In particular, the Republican party should invoke worldview politics that emphasises the congruence of the interests of both the rich and the poor when 'prudent' policy choices are adopted, such as budget balance, austerity, and low taxes.

*(d)* *Inequality and Ideational complementarity.* Our framework suggests that political messages using both identity and worldview memes are likely to be higher in Republican political advertising in CS-regions than non-CS regions.

These predictions motivate the subsequent analysis. We examine the impact of the China shock on political messaging over the period 2000 through 2018. We compare differences in the nature of political advertising by Democrats and Republicans across media markets that have been more strongly exposed to the China shock.

## 3.2 Political Advertising Data

The main dataset is on political television advertisements (hereafter "ads"). The Wesleyan Media Project (WMP) database (previously called the Wisconsin Ads Project) has rich data on political advertising over the last two decades.[20] In particular, WMP has data on over 60,000 unique political advertisements for election years from 2000 through 2018. The data for 2000 through 2008 include congressional (house and senate), gubernatorial, and presidential election ads. The data starting in 2010 include local (mayor, city council) elections. In addition, the sample expanded from the top 75 media markets to the top 100 markets in 2004, with all 200 markets starting 2008.[21]

Beyond the differences in the sample of races, the variables collected have varied somewhat across years. We undertook extensive cleaning and pre-processing to make the data as consistent as possible (see Appendix B.1). Appendix Figure B.1 shows illustrative Democrat and Republican ads from the database.

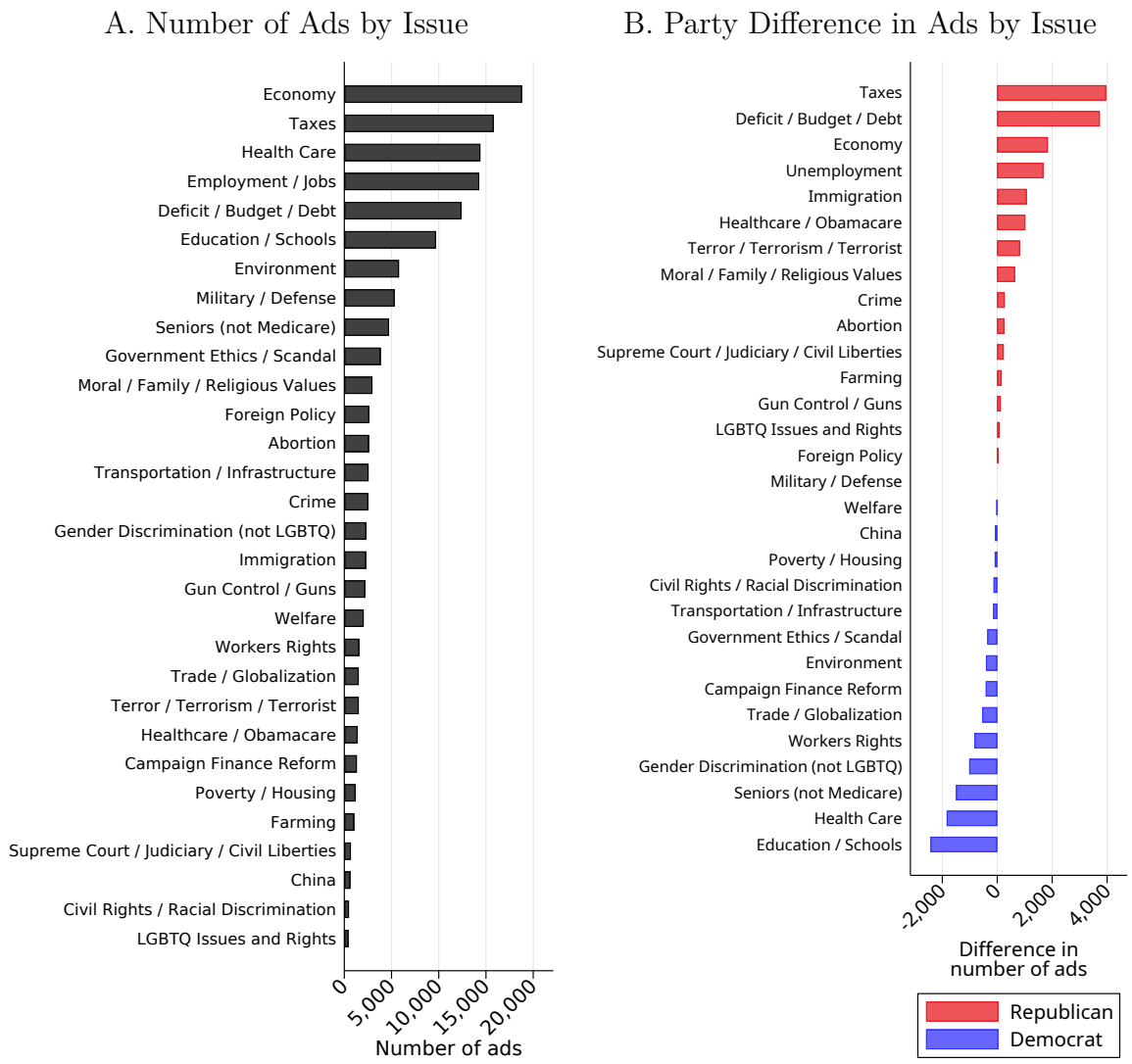
The WMP annotators use a total of 84 issue tags when labeling the ads. The full list is shown in Appendix Table B.1. Many of these issues are closely related to each other, and some are quite rare. Therefore we merged the closely related issues with each other, and we produced a shorter list of 30 issue categories. The merging of issues is detailed in Appendix Table B.2. For example, "Taxes" includes both "Taxes" and "2017 Tax Reform Bill".

The number of ads for each issue is shown in Figure 1 Panel A. First, we see that, unsurprisingly, issues related to economic interests, such as economy, taxes, healthcare, jobs, and education, are commonly invoked. Yet other issues with a central ideational component, such as moral values, foreign policy, abortion, and gun control, are also often discussed in advertising. As a stylized fact, then, we can establish that ideational politics are plentiful in political advertising. Certainly, interests are commonly invoked, but a lot of political messaging has to do with things that are not related to material interests.

[20] This data has been used in a range of previous research. Fowler et al. (2018) use the data for a book-length descriptive analysis of U.S. political advertising. A noteworthy paper, Sides et al. (2021), use a border discontinuity design to demonstrate a causal effect of advertising exposure on local election vote shares. Galletta and Ash (2021) shows that in areas with higher exposure to conservative news, candidates shift advertising content away from welfare issues toward taxes and deficits.

[21] Appendix Figure B.2 shows the number of distinct ads across the different election types, separately by party. Appendix Figure B.3 shows the number of ads in the database by party over time.

Figure 1: Ad Counts By Issue and Party




*Notes.* Panel A shows the number of ads aired by issue, ranked from most to least. Panel B shows the difference between Republicans and Democrats in the number of ads aired, sorted from most Republican to most Democrat. Summary statistics in table format are reported in Appendix Table B.3.

Next, Figure 1 Panel B shows the differences by issue between the political parties in their allocation of ads across issues. The differences in ads intuitively reflect the differences in the policy priorities of the parties. Republicans tend to allocate time to taxes and deficits, for example, while Democrats spend more ad time on education and healthcare. Some of these differences are in the ideational domain, with Republican time spent on deficits a notable example of partisan worldview politics. Further, Republicans tend to air more ads about immigration, terrorism, moral values, abortion, and gun control. Meanwhile, Democrats have different ideational priorities on gender discrimination and trade.

In the results reported below, for brevity and clarity we focus on eleven issues out of the thirty: taxes, deficits, moral values, abortion, immigration, gun control, welfare, trade, terrorism, Obamacare, and China. These eleven issues were picked based on what has been highlighted in the previous literature on ideas, polarization, and populism (e.g. Rodrik, 2020). They are relatively frequent in the ads, relatively easy to interpret in terms of their place on the left-right ideological spectrum, and have relevance to ideational politics – whether about worldview or about identity. Focusing on issue categories where the ideational versus material-interests distinction can be made more clearly allows for a cleaner empirical exercise. In the appendix we report results with all issues, and the qualitative implications are the same.[22]

## 3.3 Identifying Unemployment shocks

This section describes the empirical strategy and estimation approach. We start by accounting for the data and how the China shock treatment is linked to the advertising issue outcomes. Then the regression specification is given and the identification assumptions are specified. We use notation that differs from the notation used above in the theoretical model.

The dataset is indexed geographically by county $c$, which are linked to commuting zone $z$, and media market area $m$. The data are indexed temporally by biennium $t$, corresponding to each two-year election cycle (1999-2000, 2001-2002, etc.). An observation corresponds to a county-biennium.

The empirical approach is instrumental variables, using the data and design from

[22]Further, some ads do not mention any policy issues. Those are left out of the analysis. Our main results are robust to controlling for the share of non-issue ads.

Autor et al. (2016). In the first stage, the endogenous regressor $D_z$ is a measure of local trade exposure to the sectors operating in commuting zone $z$. Formally, it is the weighted average sectoral change in China exports to the U.S. (rather than non-U.S.) between 1991 and 2011, weighted (multiplied) by the initial share of $z$'s employment in that sector. In turn, the instrument $Z_z$ is the sector-weighted predicted within-commuting-zone shift in trade exposure in $z$ due to Chinese import competition. It is a shift-share instrument, where the shift is the change in China exports to non-U.S. countries in a sector, and the share is the share of $z$'s employment in that sector. Notably, because the instrument is first-differenced within commuting zone, the design adjusts for any time-invariant confounders by commuting zone. We normalize the instrument to standard deviation one to assist with interpreting reduced-form coefficients.

The ads dataset contains information about how many times each ad is aired on television in media market (DMA, for designated market area) $m$ during election year $t$. For each issue-DMA-biennium, we count the number of unique ads aired and the total number of ad airings. We then define $Y_{mt}^{pk}$ as the share of ads (or airings) by party $p$ (Democrat or Republican) in market $m$ on issue $k$ during election year $t$.

Commuting zones and media markets do not overlap perfectly. However, each county can be assigned to a unique commuting zone and a unique media market. Therefore, we build our dataset at the county level, where we assign to each county $c$ the China-shock variables for the associated commuting zone $z$ and the advertising variables for the associated media market $m$. The outcome for the regression is indexed as $Y_{cmzt}^{pk}$.

The regression is at the county level, using the values from the associated commuting zone. Formally, the first stage is

$$D_z = \alpha_t + \gamma Z_z + \boldsymbol{X}'_{ct}\beta + \eta_{cmzt}$$

where $\alpha_t$ is a year fixed effect and $\boldsymbol{X}_{ct}$ includes other county-level time-varying covariates to be enumerated below. Standard errors are clustered by commuting zone. The first stage is visualized as a binscatter diagram in Appendix Figure B.5. We obtain a Kleibergen-Paap First-Stage F-statistic of 87.3, indicating a strong first stage. Verifying the large effect of trade exposure on local labor markets, Appendix Figure B.6 shows the reduced-form effect of the instrument on the local unemployment rate from

2009 (in percentage points). A one-standard-deviation increase in the instrument is associated with a 1.2 percentage point increase in unemployment, relative to a mean of 9 percent.

The baseline results use the reduced form, with the advertising outcome directly regressed on the instrument:

$$Y_{cmzt}^{pk} = \alpha_t + \phi Z_z + \boldsymbol{X}'_{ct}\beta + \nu_{cmzt} \tag{2}$$

where other terms are as before. In the appendix, we report two-stage-least squares (2SLS) results using

$$Y_{cmzt}^{pk} = \alpha_t + \psi D_z + \boldsymbol{X}'_{ct}\beta + \varepsilon_{cmzt}$$

with $D_z$ instrumented by $Z_z$. We cluster standard errors by commuting zone, but we show below that the results are robust to other clustering units, e.g. two-way clustering by commuting zone and DMA.

As mentioned, the term $\boldsymbol{X}_{ct}$ includes additional covariates. To adjust for new DMA's entering the sample over time (by availability of ads data), we include a fixed effect indicating the number of years that a county is in the estimation sample. We will also show robustness to inclusion of other covariates: state fixed effects, local demographics, political variables, and pre-1991 local economic characteristics.[23]

Autor et al. (2016) provide an extensive discussion of the exogeneity of the instrument. Given the similarity of our analysis to that paper and to Autor et al. (2020), we have some reassurance about the validity of the research design. We have undertaken additional diagnostics to assess selection in the advertising issue shares. We do not see any evidence that the estimated China-shock effects on ideational politics are driven by pre-existing differences that are correlated with the instrument.[24]

Exogeneity is sufficient for consistent estimates in the reduced form. Consistency of 2SLS requires additionally that the data satisfy the exclusion restriction – that the China shock instrument only influences advertising through its effect on trade exposure.

[23]Because we don't observe the outcome (ad issue shares) far back enough in time for most DMAs, we cannot include county fixed effects. However, we report a robustness check that includes controls for the 2000/2002 ad shares, which produces a diff-in-diff for a reduced sample, and the results hold.

[24]Appendix Figure B.10 shows the main result coefplot for the first two electoral cycles, 2000/2002. The issues where we see effects in the main sample (Figure 3) do not already have an effect in this early period. Further, our results are robust to controlling for a DMA's 2000/2002 advertising shares (Appendix Figure B.11).

That restriction is somewhat strong, so the reduced form is our preferred estimating specification. We report 2SLS results in the appendix.

## 3.4 China Shock Effect on Ad Messaging

This section reports the main results for the effects of the China shock on advertising content. We report estimates from the reduced form equation (2) for the years 2008 through 2018. These regressions summarize the party-specific effects of the China shock instrument on the shares of ads about each issue in this time period.

**Main Results.** First, we look at the reduced-form effects on broad issue categories expressed in the TV ads, with the original categories coded by the data provider WMP. Coefficient plots for these regressions are shown in Figure 2, where Panel A shows results for Democrats and Panel B shows results for Republicans. Both parties shift to economic issues in response to the China shock, as expected. But on top of that, Republicans shift substantially to social issues. Meanwhile, both parties decrease ads about the environment.

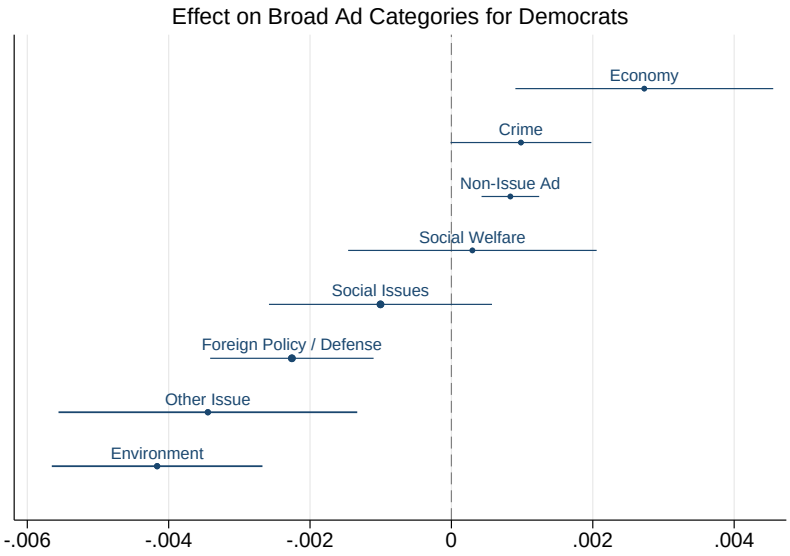
Zooming in to the set of thirty policy issues, we report more granular results for all of them in Appendix Figures B.7 and B.8. The noteworthy yet unsurprising result from looking at all issues is that both parties increase advertising about (un)employment/jobs, reflecting responsiveness to local economic problems and that economic interests remain an important driver of political priorities. Here in the main text, we focus on eleven selected issues for clarity and brevity.

Figure 3 reports the main results for the selected issues as coefficient plots with 95% confidence intervals, with the issues sorted by the Republican effect magnitude (most positive to most negative). Republicans increase ads on abortion, moral values, terrorism, gun control, and Obamacare, while decreasing ads about trade. Democrats increase advertising related to taxes, trade, welfare, and China, while reducing ads about immigration.

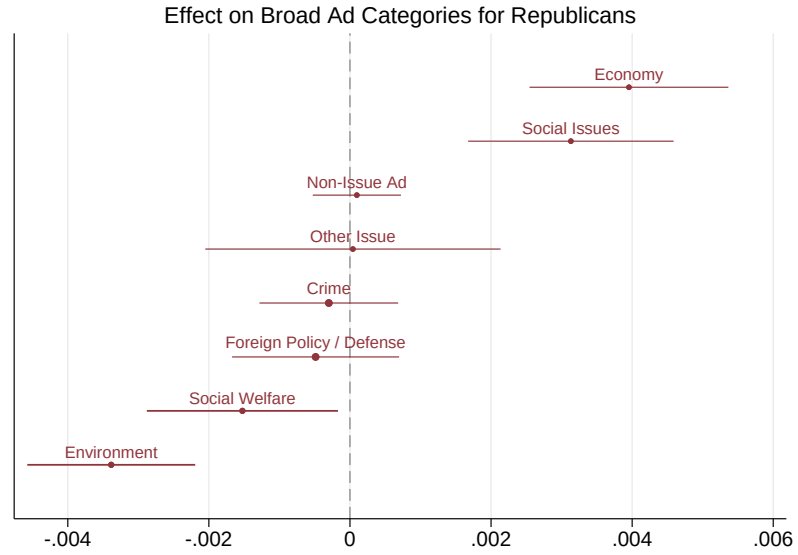
The effect magnitudes and additional regression statistics are reported in Appendix Table B.4. The effects are proportionally meaningful: for example, the coefficient for abortion (0.0029) means that a one-standard-deviation increase in the trade exposure instrument (triggering a 1.2 percentage point increase in unemployment) increases the share of Republican abortion ads by 15.2 percent (from a mean of 0.019). The same

Figure 2: Effect of China Shock on Broad Issue Categories, By Party

A. Democrats

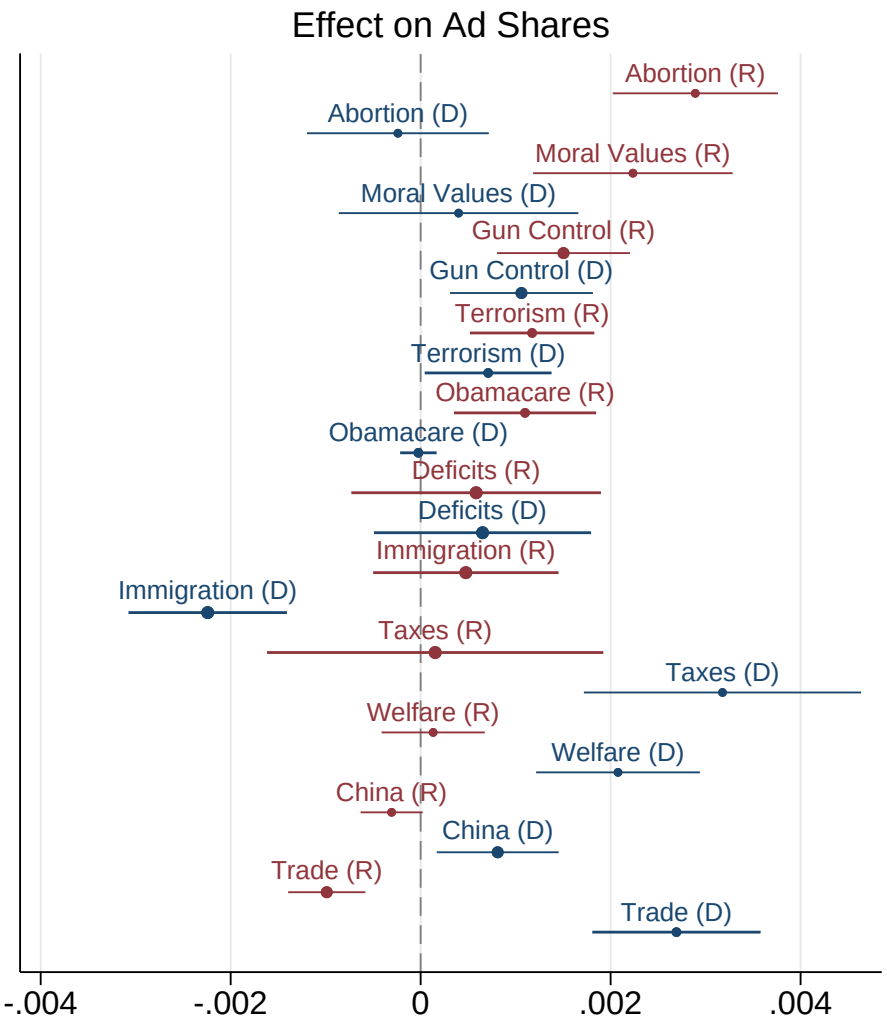



B. Republicans




*Notes.* This figure shows the effect of the China shock on the seven broad issue categories, as categorized by Wesleyan. We see that both parties increase ads about the economy and decrease it about the environment. Republicans increase ads about social issues. Includes elections from 2008-2018.

Figure 3: China Shock Effect on Ad Issue Shares, by Party




*Notes.* This figure shows a coefficient plot from the main reduced-form regression of advertising shares by party on the China shock instrument, for the elections from 2008 to 2018. Red series is for Republicans, while blue is for Democrats. Error spikes give 95% confidence intervals. Coefficients sorted by Republican effect size. See Appendix Table B.4 for the associated regression estimates.

intensity of trade exposure increases the share of Republican ads about moral values by 0.0022, from a mean of 0.028, an 8 percent increase. The respective proportional increase for guns, finally, is 10 percent (.0015 share increase from a mean of .015).

These results highlight the relevance of ideational politics in conditions of economic inequality. Democrats, as the low-income party, focus on the redistributive issues of taxes and welfare. Republicans, on the other hand, increase their focus on identity-related issues like abortion, values, gun control, and terrorism. There are no clear economic-interests-based reasons that higher inequality would mean greater policy focus on these issues. These shifts do make sense, however, in light of an increase in the returns to identity politics.

**Robustness Checks.** Additional supporting results are reported in Appendix B.2. The empirical results are robust to a number of alternative specification choices. First, the main results are not sensitive to other specifications for the outcome variable on advertising (Appendix Figure B.9). The rankings are similar when looking at the share of total airings of ads, instead of the share of unique ads (Panel A). Further, the results are similar when looking at the volume of advertising rather than shares (Panel B), or when standardizing the outcome variables (Panel C). Second, our results are robust to controlling for a DMA's 2000/2002 advertising shares, which is similar to first-differencing the outcome (Appendix Figure B.11). Third, the results are the same when controlling for the share of ads about (un)employment (Appendix Figure B.12). Fourth, the 2SLS results are the same (Appendix Figure B.13).

Appendix Figure B.14 collects a number of additional specification checks. Results are robust to adding state fixed effects (Panel A), controlling for pre-shock local county characteristics – population, Republican vote share, and demographics (Panel B), or controlling for pre-shock local economic characteristics (Panel C).[25] The statistical significance on the main results is similar when clustering by DMA or state rather than commuting zone, or two-way clustering (Panel D).

[25]When adding these controls, the ordering of the ad topics by effect size shifts around slightly, but the main effects for Republicans on ideational topics (abortion, moral values, gun control, terrorism) are always observed. The effects for Democrats on immigration, taxes, welfare, China, and trade are quite sensitive to the inclusion of controls.

**Alternative Mechanisms.** There are two reasonable alternative explanations for these results, aside from our model's focus on changes in supply-side incentives for ideational politics. First, it could be that the effects are due to a simpler explanation – that the China shock works by increasing the partisanship or polarization of debate. That is, rather than reflecting a move to ideational politics, our estimates reflect a move by both parties toward the more partisan issues. We check for this by plotting the China-Shock effect on each issue against the pre-existing partisan preference for each issue. As shown in Appendix Figure B.16, there is no discernible relationship ($p = 0.78$). Hence, we can rule out that our effects can be explained just by increasing polarization. A concept of ideas is needed.

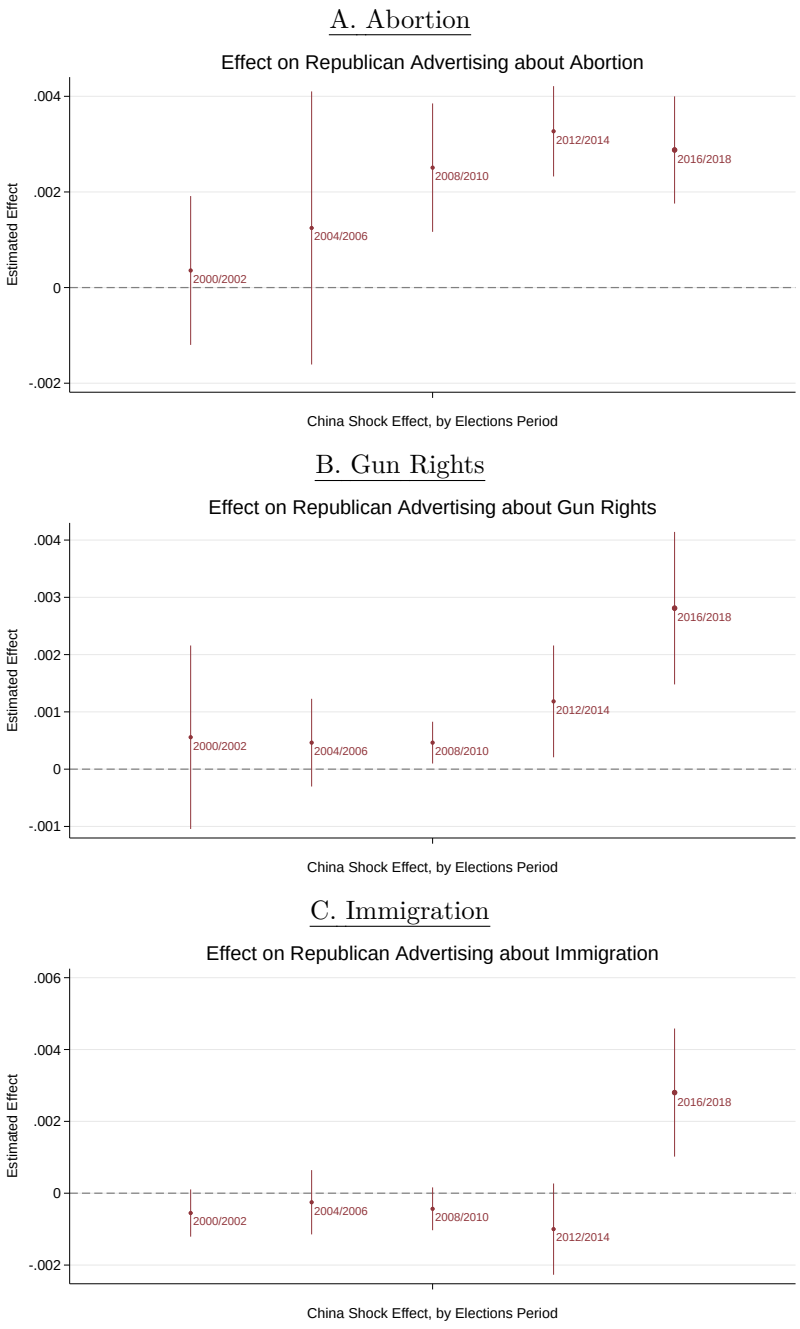
Second, it could be that what we are treating as a supply-side effect is actually a demand-side effect. On this view, the China Shock works by shifting voter preferences, for example through a loss of identity as a worker. The changes in ads that we observe, then, are a pandering response to the change in voter attitudes. The evidence in Autor et al. (2020), showing that the China Shock increased Republican vote share and viewership of Fox News Channel, could be interpreted as supporting a demand-side effect.

Thus we would like to check whether the supply side is also important. To assess the quantitative relevance of the demand-side explanation, we collected survey data from the Gallup Polling Social Series – in particular, the question asked of all respondents about what is currently the "Most Important Problem" (MIP) facing U.S. society. For most of the issue categories from the Wesleyan ads data, we could match them to the corresponding MIP responses (see Appendix Table B.5). We can then estimate the China shock effect on the MIP responses by issue, the same way we have done for the ads.

We are most interested in the dynamics of the effect. If there is a significant effect on the MIP responses before the shift in advertising, that would be consistent with the effect mainly being driven by preferences, with the advertising effect coming later as a follow-on to the preference effect. If, however, there is a shift in advertising before a shift in preferences, that would be inconsistent with demand-side factors being most important, and would be consistent with supply-side responses playing an important role.

First, Figure 4 shows the time series of the main effects on Republican advertising

Figure 4: Dynamics of China Shock Effect on Republican Ads




*Notes.* This figure shows a coefficient plot from the main regression of advertising shares for Republicans by electoral cycle on the China shock instrument. Figures show the evolution of the effect for abortion (panel A), gun rights (panel B), and immigration (panel C). Error spikes give 95% confidence intervals.

for three issues that are central to ideational politics among U.S. Republicans – abortion, gun rights, and immigration.[26] In Panel A and Panel B, we observe a positive and significant effect of the China shock on Republican advertising messaging about abortion and gun rights, starting in the 2008-2010 election cycles. That effect size grows larger over the subsequent years. In Panel C on Republican immigration ads, we see a more delayed effect of the China shock that shoots up drastically with the arrival of Trump in the 2016/2018 election cycles.

We also note that it is empirically reassuring that there is no effect in the first period of the data (2000-2002). That is, there are no endogenous pre-trends in advertising before China import competition had significantly reshaped the manufacturing sector (see also Appendix Figure B.10). That suggests, consistent with Autor et al. (2013), that the instrument is not endogenously higher in places with pre-existing ideational messaging on moral/identity issues.

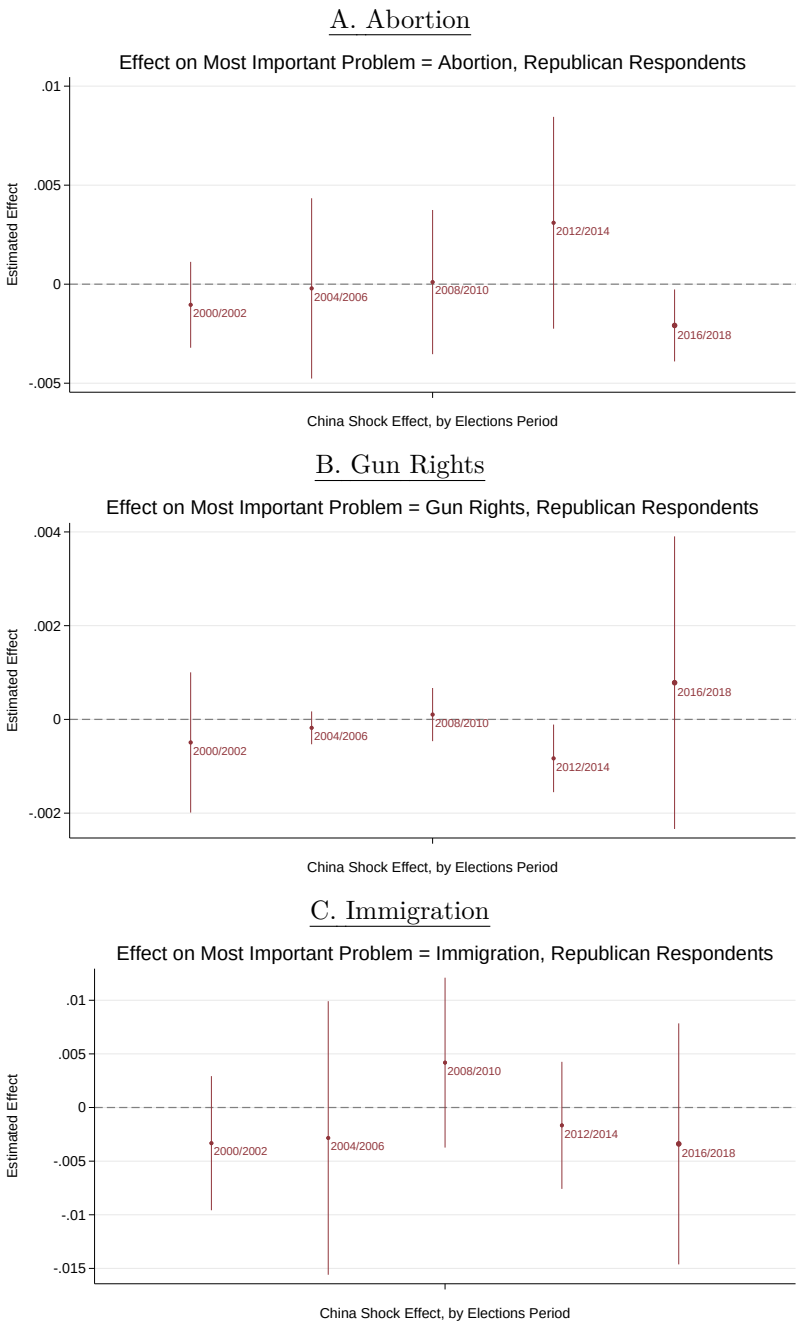
Next, Figure 5 shows the corresponding time series for the demand side. The coefficient plots show the effects on Gallup Most Important Problem responses for Republican survey respondents. For abortion (Panel A), gun rights (Panel B), and immigration (panel C), we see no no corresponding China shock effect in terms of boosting Republican voter priorities on these issues. The coefficient is even negative in some years. These MIP results suggest that our estimated effects on advertising are not primarily driven by demand-side changes in voter attitudes.

Appendix B.2 provides some additional supporting results on the issue of demand-side changes. Overall, there is not much of an effect on the MIP response shares for any of the issues where we saw advertising effects (Appendix Figure B.17). Further, our main regression results are robust to controlling for MIP response shares, suggesting they are not a pivotal mediator for our results (Appendix Figure B.18). While we cannot completely rule out that demand-side effects are operative, our evidence is consistent with the supply-side channel being the main driver of the observed effects.

**Complementarity between Identity and Worldview Politics.** An interesting implication of the model is that there is a potential complementarity in ideational politics. That is, an increase in one type of ideational politics (e.g. identity) would increase the returns to another type of ideational politics (e.g. worldview). A comprehensive

[26] Comparisons of effects by time period for additional issues are reported in Appendix Figure B.15.

Figure 5: Demand Side: Shock Effect on Republican MIP Responses Over Time




*Notes.* This figure shows a coefficient plot from the main regression of Gallup MIP response share for Republicans on the China shock instrument, by electoral cycle. Figures show the evolution of the effect for abortion (panel A), gun rights (panel B), and immigration (panel C). Error spikes give 95% confidence intervals.

analysis of this complementarity is beyond the scope of this paper, but Appendix B.3 explores some evidence in this direction.

In brief, we produce an alternative outcome that measures the share of ads that mention two topics together. For example, an ad that mentions both taxes and abortion combines worldview and identity politics. We run similar regressions as above for the reduced-form effect of the China Shock, but using the joint issue mentions as the outcomes.

Appendix Table B.19 reports a selection of these joint-issue results. For Republican ads (Panel A), we find that there is an increase in the share of ads that jointly mention worldview-related issues (unemployment, taxes, deficits, and immigration) as well as identity-related issues (moral values and abortion). Meanwhile, Panel B shows that Democrats do not produce more joint mentions of worldview and identity issues in response to the China Shock. Again, that is consistent with the model's emphasis on ideational politics in favor of the high-income group.

While suggestive, these results add evidence for a potential complementarity in messaging. The boost to identity politics that we explored above is accompanied by joint messaging that combines identity issues with worldview issues, discussing them together. Future work could explore this issue in more depth.

# 4 Discussion

This paper has developed a conceptual framework that highlights the role of ideas as a catalyst for policy and institutional change. In doing so, the paper integrates the Keynes-Hayek perspective on the importance of ideas with the Stigler-Becker material-interests-only approach to political economy. Within the space of ideas, moreover, we show the relevance of identities and worldviews as distinct message types that reinforce each other.

The model's predictions have proven useful in organizing and analyzing data on how messaging by political parties responds to a shock to labor markets. Our empirical results on advertising are consistent with the model and are difficult to explain without ideational politics. Yet this empirical application is just a starting point. Future work could dig into the text content of ads, or even the audio and video, to get at more granular distinctions in how issues are framed and how policy agendas are pursued.

We should caution against interpreting our model too narrowly. In particular, it could be argued that rather than making a case for ideas, we have simply strengthened the argument for interests. After all, the interests of the political challenger drive worldview and identity memes. However, even though our present model took those interests as given, elites' desired policies could be as much a function of their identity and worldview as is the case for non-elites. Any explanation that runs only off the importance of vested interests begs the question of where powerful groups get their ideas about their interest in the first place.

Our analytical wedge between ideas and interests relies on a distinction between ex-ante versus ex-post salience of identities and worldviews. Interests are determined by identities and worldviews that are salient ex ante. Ideas possibly intervene to transform these ex post. A broader implication of our framework, therefore, is that today's ideas become tomorrow's interests. In the very short run, it is all about interests. In the long run, it is all ideas.

# References


Acemoglu, D. (2003). Why not a political coase theorem? social conflict, commitment, and politics. *Journal of comparative economics*, 31(4):620–652.

Acemoglu, D., Autor, D., Dorn, D., Hanson, G. H., and Price, B. (2016). Import competition and the great us employment sag of the 2000s. *Journal of Labor Economics*, 34(S1):S141–S198.

Acemoglu, D. and Robinson, J. A. (2006). *Economic origins of dictatorship and democracy*. Cambridge University Press.

Akerlof, G. A. and Kranton, R. E. (2000). Economics and identity. *Quarterly Journal of Economics*, 115(3):715–753.

Akerlof, G. A. and Snower, D. J. (2016). Bread and bullets. *Journal of Economic Behavior & Organization*, 126:58–71.

Alonso, R. and Câmara, O. (2016). Persuading voters. *American Economic Review*, 106(11):3590–3605.

Anderson, S. L. (1976). Coconsciousness and numerical identity of the person. *Philosophical Studies*, 30(1):1–10.

Ash, E., Chen, D. L., and Naidu, S. (2020). Ideas have consequences: The impact of law and economics on american justice. *Center for Law & Economics Working Paper Series*, 4.

Ashok, V., Kuziemko, I., and Washington, E. (2015). Support for redistribution in an age of rising inequality: New stylized facts and some tentative explanations. Technical report, National Bureau of Economic Research.

Autor, D., Dorn, D., Hanson, G., and Majlesi, K. (2020). Importing political polarization? the electoral consequences of rising trade exposure. *American Economic Review*, 110(10):3139–83.

Autor, D. H., Dorn, D., and Hanson, G. H. (2013). The china syndrome: Local labor market effects of import competition in the united states. *American Economic Review*, 103(6):2121–68.

Autor, D. H., Dorn, D., and Hanson, G. H. (2016). The china shock: Learning from labor-market adjustment to large changes in trade. *Annual Review of Economics*, 8:205–240.

Autor, D. H., Dorn, D., Hanson, G. H., and Song, J. (2014). Trade Adjustment: Worker-Level Evidence. *Quarterly Journal of Economics*, 129(4):1799–1860.

Becker, G. S. (1983). A theory of competition among pressure groups for political

influence. *The quarterly journal of economics*, 98(3):371–400.

Bénabou, R. (2008). Ideology. *Journal of the European Economic Association*.

Bénabou, R., Ticchi, D., and Vindigni, A. (2015). Religion and innovation. *American Economic Review*, 105(5):346–51.

Benabou, R. and Tirole, J. (2002). Self-confidence and personal motivation. *Quarterly Journal of Economics*, 117(3):871–915.

Blyth, M. (2013). *Austerity: The history of a dangerous idea*. Oxford University Press.

Bonomi, G., Gennaioli, N., and Tabellini, G. (2021). Identity, beliefs, and political conflict. *The Quarterly Journal of Economics*, 136(4):2371–2411.

Breyer, S. G. (1982). Regulation and its reform.

Buchanan, J. and Tullock, G. (1965). *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. University of Michigan Press.

Buiter, W. H. et al. (2014). The role of central banks in financial stability: How has it changed. *The Role of Central Banks in Financial Stability: How Has It Changed*, pages 11–56.

Caliendo, L., Dvorkin, M., and Parro, F. (2019). Trade and labor market dynamics: General equilibrium analysis of the china trade shock. *Econometrica*, 87(3):741–835.

Calomiris, C. W. and Haber, S. H. (2014). *Fragile by design: the political origins of banking crises and scarce credit*. The Princeton economic history of the Western world. Princeton University Press, Princeton, New Jersey.

Campbell, J. L. (2002). Ideas, politics, and public policy. *Annual review of sociology*, 28(1):21–38.

Carlsson, M., Dahl, G. B., and Rooth, D.-O. (2016). Do politicians change public attitudes?

Cerrato, A., Ferrara, F. M., and Ruggieri, F. (2018). Why does import competition favor republicans? *Available at SSRN 3147169*.

Cerulo, K. A. (1997). Identity construction: New issues, new directions. *Annual review of Sociology*, 23(1):385–409.

Collier, P. (2016). The cultural foundations of economic failure: A conceptual toolkit. *Journal of Economic Behavior & Organization*, 126:5–24.

Dawkins, R. (1976). The selfish gene.

Dornbusch, R. and Edwards, S. (1990). Macroeconomic populism. *Journal of Development Economics*, 32(2):247–277.

Downs, A. (1957). *An Economic Theory of Democracy*. Harper, New York.

Enke, B. and Zimmermann, F. (2019). Correlation neglect in belief formation. *The*

*Review of Economic Studies*, 86(1):313–332.

Farrell, H. and Quiggin, J. (2011). Concensus, dissensus and economic ideas: The rise and fall of keynesianism during the economic crisis. Technical report.

Fearon, J. D. and Laitin, D. D. (2000). Violence and the social construction of ethnic identity. *International organization*, 54(4):845–877.

Fowler, E. F., Franz, M. M., and Ridout, T. N. (2018). *Political advertising in the United States*. Routledge.

Galle, S., Rodríguez-Clare, A., and Yi, M. (2017). Slicing the pie: Quantifying the aggregate and distributional effects of trade. Technical report, National Bureau of Economic Research.

Galletta, S. and Ash, E. (2021). How cable news reshaped local government.

Gennaioli, N. and Shleifer, A. (2010). What comes to mind. *The Quarterly journal of economics*, 125(4):1399–1433.

Grossman, G. M. and Helpman, E. (1993). The politics of free trade agreements.

Grossman, G. M. and Helpman, E. (2021). Identity politics and trade policy. *The Review of Economic Studies*, 88(3):1101–1126.

Hacker, J. S. and Pierson, P. (2020). *Let them eat tweets: How the right rules in an age of extreme inequality*. Liveright Publishing.

Haidt, J. (2012). *The righteous mind: Why good people are divided by politics and religion*. Vintage.

Hayek, F. A. (1949). The intellectuals and socialism. *The University of Chicago Law Review*, 16(3):417–433.

Johnson, S. and Kwak, J. (2010). *13 bankers: The Wall Street takeover and the next financial meltdown*. Vintage.

Keynes, J. M. (1936). *Allgemeine Theorie der Beschäftigung, des Zinses und des Geldes*, volume 6.

Lenin, V. I. (1902). *What is to be Done?* Wellred Books.

Levy, G. and Razin, R. (2015). Correlation neglect, voting behavior, and information aggregation. *American Economic Review*, 105(4):1634–45.

Luttmer, E. F. (2001). Group loyalty and the taste for redistribution. *Journal of political Economy*, 109(3):500–528.

Mayer, J. (2017). *Dark money: The hidden history of the billionaires behind the rise of the radical right*. Anchor.

Mukand, S. and Rodrik, D. (2018). The Political Economy of Ideas: on Ideas versus Interests in Policymaking. Technical report, National Bureau of Economic Research.

Mullainathan, S., Schwartzstein, J., and Shleifer, A. (2008). Coarse thinking and persuasion. *The Quarterly Journal of Economics*, 123(2):577–619.

Persson, T., Tabellini, G., et al. (2000). Political economics.

Pinna, M. (2020). Binned scatterplots with marginal histograms: Binscatterhist.

Quadagno, J. S. et al. (1994). *The color of welfare: How racism undermined the war on poverty*. Oxford University Press.

Rodrik, D. (2014). When ideas trump interests: Preferences, worldviews, and policy innovations. *Journal of Economic Perspectives*, 28(1):189–208.

Rodrik, D. (2020). Why does globalization fuel populism?

Ruggie, J. G. (1998). What makes the world hang together? neo-utilitarianism and the social constructivist challenge. *International organization*, 52(4):855–885.

Sen, A. (2007). *Identity and violence: The illusion of destiny*. Penguin Books India.

Shayo, M. (2009). A model of social identity with an application to political economy: Nation, class, and redistribution. *American Political science review*, 103(2):147–174.

Shepsle, K. A. and Noll, R. (1985). Comment of why the regulators chose to deregulate. *Regulatory policy and the social sciences*, pages 231–39.

Shiller, R. J. (2017). Narrative economics. *American Economic Review*, 107(4):967–1004.

Sides, J., Vavreck, L., and Warshaw, C. (2021). The effect of television advertising in united states elections.

Skidelsky, R. and Fraccaroli, N. (2017). *Austerity vs Stimulus*. Springer.

Stigler, G. J. (1971). The theory of economic regulation. *The Bell journal of economics and management science*, pages 3–21.

Strömberg, D. (2015). Media and politics. *economics*, 7(1):173–205.

Wendt, A. (1999). *Social theory of international politics*, volume 67. Cambridge University Press.

# A Model Appendix

## A.1 Summary of Model Payoffs

Table A.1: Summary of Payoffs from Memes

A. Payoffs under the Worldview Meme

| | | Payoffs from Party L (policy $a_0$) | | Payoffs from Party R (policy $a_1$) | |
|---|---|---|---|---|---|
| Income Group | Identity Marker | $S_1$ | $S_0$ | $S_1$ | $S_0$ |
| High-Income (Rich) | A | 0 | 0 | $x$ | $x$ |
| | B | 0 | 0 | $x$ | $x$ |
| Low-Income (Poor) | A | 1 | 1 | $1+g$ | $1-g$ |
| | B | 1 | 1 | $1+g$ | $1-g$ |

B. Payoffs under Identity Memes

| | | Payoffs from Party L (identity not salient) | | Payoffs from Party R (type A candidate) | |
|---|---|---|---|---|---|
| Income Group | Identity Marker | $S_H$ | $S_L$ | $S_H$ | $S_L$ |
| High-Income (Rich) | A | 0 | 0 | $\theta$ | 0 |
| | B | 0 | 0 | -$x$ | 0 |
| Low-Income (Poor) | A | 0 | 0 | $\theta$ | 0 |
| | B | 0 | 0 | -$x$ | 0 |

*Notes:* The payoffs in Panel A are realized when party $R$ is the challenger and operationalises the worldview meme in favor of the state being $S_1$ (and identity is not salient). In contrast, if Party $L$ is elected, the status-quo policy $a_0$ is implemented with payoffs presented. These payoffs are realized under the assumption that Party $R$ adopts policy $a_1$ when in office and political party $L$ adopts the status-quo policy $a_0$.

The payoffs in Panel B reflect the assumption that under the identity payoff to the majority group $A$ is realized and when they share an identity marker with the incoming political party $R$. If the political incumbent from party $L$ remains, then the majority group gets no additional utility since they do not share an identity marker with the political party in power. Mukand and Rodrik (2018) allow for greater flexibility in how payoffs are specified.

## A.2 Model: Sketch of Equilibrium Analysis

This appendix sketches out the probabilistic voting model that incorporates ideational politics. In addition to sketching out for the political equilibrium, we also relax a key assumption of our benchmark model by providing micro-foundations for both identity and worldview memes. Our benchmark model made the very standard assumption that individual payoffs may be state-dependent in that they may get a higher income payoff

in some states of the world than in others. Using a similar logic we also argue that in some states of the world, an individual receives a higher utility from their membership to an identity group than in others. We allow for the possibility that this makes identity salient and gives rise to an incentive for individuals to invest in their group identity. In this appendix we sketch a version of our model that shows how both memes work - essentially by changing beliefs that individuals have about the underlying state of the world (be it income or an identity related state). We elaborate on this below.

*Microfoundations for Worldview and Identity Memes:* As discussed in the text, there are several channels through which the memes can alter beliefs about the state of world and/or get individuals to invest in their (otherwise passive) group identity.[27] Rather than privilege a particular channel we take a different more direct route. In particular, we capture the idea that the political entrepreneur's introduction of a meme makes a voter's private signal less reliable by introducing noise. Accordingly, we assume that the discovery of a meme *'blocks' information* that a citizen receives about the underlying state of the world - i.e., no private signal received.

In our benchmark model we have assumed that policy $a_i$ is state-dependent where the relevant states are $S_j$, where $i, j \in \{0, 1\}$. However, we make an additional assumption and also allow for preferences regarding identity be a function of an underlying (identity-relevant) state which can be either $S_H$ or $S_L$. In particular, we allow an individual's group identity to be much more important in state $S_H$ and of negligible (or much less) importance when the state is $S_L$. Of course, it is entirely possible that the policy relevant states $S_0$ (or $S_1$) are correlated with or even perfectly coincide with the states of the world that determine the magnitude of the identity payoff $S_H$ (or $S_L$). However, for the purpose of the appendix we treat the policy and identity relevant states as uncorrelated. The payoffs in what follows corresponds to the numbers in the square brackets of Table A.1 Panels A through C above.

For simplicity, we assume that priors about both the policy and identity relevant states are such that $P(S_0) = P(S_L) = \mu$.

We assume that each individual obtains a correlated reliable (but imprecise) private signal $s_0$ about the underlying policy relevant state $S_0$, or a signal $s_L$ about the corresponding identity relevant state $S_L$ . The reliability of these correlated private signals equals $P(s_0|S_0) = q = P(s_L|S_L)$. When the political challenger allocates effort $(i, w)$, he blocks the signal $s_0$ with probability $w$ and the signal $s_L$ with probability $i$. Therefore, if the voter does not receive the signal about the underlying state, he

[27]These channels include the role manipulating the media and information by the political entrepreneur by exploiting behavioural biases arising from framing (Breyer, 1982), anticipatory utility (Benabou and Tirole, 2002), coarse thinking (Mullainathan et al., 2008), salience and attention (Gennaioli and Shleifer, 2010), correlated neglect and peer influence heuristics (Levy and Razin, 2015; Enke and Zimmermann, 2019), or Bayesian persuasion as applied to voting (Alonso and Câmara, 2016).

updates using Bayes rule and obtains the following:

$$P(S_1|\text{no signal } s_0) = \mu^w = \mu_1 = \frac{(1-\mu)}{[w+(1-w)(1-q)]\mu + (1-\mu)} \tag{3}$$

Similarly, on not receiving the signal $s_L$ we have

$$P(S_H|\text{no signal } s_L) = \mu^i = \frac{(1-\mu)}{[i+(1-i)(1-q)]\mu + (1-\mu)} \tag{4}$$

These two expressions give us the voter's posterior in the case the memes are discovered and manage to shift a voter's information set by blocking information that the voter may have received. In the case of the policy or identity meme, this results in an updated posterior about the likely success of adopting the new policy or the likelihood that investing in group identity is likely to provide a payoff.

Solution of Political Equlibrium: In order to clearly describe the solution to the political game, we introduce some additional notation. In particular, at the beginning of the game, we define $\mathcal{H}_0$ as the set of all possible histories at the beginning $t = 0$, where one particular history is represented by (for example) the element $h_1 \in \mathcal{H}$. Here each element is a triple $h_1 = \{\mathcal{I}, \hat{i}_k, \hat{w}_k, \}$ where $\mathcal{I}$ is the political identity of the incumbent (i.e. represents the rich/right or poor/left) and $\hat{i}_k, \hat{w}_k$ are the set of inherited, operational memes at the beginning of the period where $k \in L, R$. Together, these determine not just the economic interests of the political candidates, but also whether class or identity is salient at the beginning of the game. $\mathcal{H}_0$ has several elements depending on the precise political history in a particular constitutency. However, broadly, these histories can be classified into the following cateogries: (i) $h_1 = \{\hat{i}_L, \hat{w}_L, \mathcal{I} = L\}$ if the status-quo has a low income incumbent (i.e. from the left) with full-spectrum ideational politics, (ii) $h_2 = \{\hat{i}_R, \hat{w}_R, \mathcal{I} = R\}$ if the status-quo is full-spectrum ideational politics from the right. Other possible histories include $h_3 = \{\hat{i}_L, \hat{w}_R, \mathcal{I}\}$ and $h_4 = \{\hat{i}_R, \hat{w}_L, \mathcal{I}\}$ where the political incumbent can be from the right or the left. For simplicity, in what follows we will completely derive the political equilibrium for $h_1$ - where class is salient and worldviews favor left-wing policies with a left-wing political incumbent. The other cases can be derived using a similar procedure.

Accordingly, in the eventuality that $h_1 = \{\hat{i}_L, \hat{w}_L, \mathcal{I} = L\}$, we solve for the equilibrium backwards. Recollect that if both the left-wing incumbent and the right-wing challenger discover an identity (or worldview) meme, then the status-quo prevails with an even probability. Accordingly, consider the impact on a $W$ voter's payoffs from electing the rich $W$ challenger when both the right-wing identity and worldview meme have been discovered. In this case the low-income $W$ voter prefers to vote for the $R$ challenger rather than the low-income $L$ incumbent so long as the following inequality

holds,

$$\mu^W[(1+g)+\mu^i\theta]+(1-\mu^W)[(1-g)+\mu^i\theta]\geq 1+\tau_j+\delta$$

Rearranging, we get the set of voters with $\tau$'s such that they will vote for the political challenger is given by

$$\tau_j \leq g[2\mu^W-1]+\mu^I\theta-\delta] \equiv \bar{\tau}^{IW}$$

The probability that the $R$ challenger wins is then given by:

$$\pi_R^{IW} = Pr_\delta[n_{RW}+n_{PW}G(\bar{\tau})]$$

$$\pi_R^{IW} = \frac{1}{2}+\psi[g(2\mu^W-1)+\mu^I\theta+\frac{(n_{RW}-n_B)}{2n_{PW}\pi_W}]$$

We can use similar mechanics to derive expressions for $\pi_R^I$ (only right-wing identity politics), $\pi_R^W$ (only right-wing worldview politics) and $\pi^0$ (charismatic right-wing politics). Given these probabilities of getting elected under different circumstances, the right-wing challenger's problem is given by the following expression :

$$\max_{i_R,w_R}[\frac{i_R}{2}(1-w_R)\pi_R^I+\frac{w_R}{2}(1-i_R)\pi_R^W+\frac{i_Rw_R}{4}\pi_R^{IW}+(1-\frac{i_R}{2})(1-\frac{w_R}{2})\pi_R^0]\mathcal{R}-\frac{[\varphi^I i_R+\varphi^W w_R]^2}{2}$$

The first term in the square brackets is the probability of *only* the right-wing identity meme becoming operational (recollect that on being discovered, this identity meme prevails over the status-quo class based identity meme with probability half). Likewise, the second term is the probability of the worldview meme becoming operational and the third is the probability of both the right wing identity and worldview meme become operational. Finally, the fourth term is the scenario if the status-quo left-wing memes remain operational and the right wing driven ideational politics does not get any traction.

Taking first order conditions with respect to $i$ (and for simplicity take $\varphi^I=1$ and $\varphi^W=c$) we obtain (we suppress the subscript that denotes ideological affiliation (i.e. $R$ for right/rich and $L$ for left/poor):

$$[w\pi^{IW}+\frac{iw}{2}\frac{\partial\pi^{IW}}{\partial i}+(1-w)\pi^I+i(1-w)\frac{\partial\pi^I}{\partial i}-w\pi^W-(1-w)\pi^0]R-(i+cw)=0$$

Here we observe that,

$$\frac{\partial\pi^{IW}}{\partial i}=\frac{\partial\pi^I}{\partial i}=\psi\theta\frac{\partial\mu^i}{\partial i}$$

Using the above expression, substituting and simplifying we obtain,

$$\left[\psi\theta\mu^i(1-\frac{iq\mu}{(1-\mu)}\mu^i)+\psi(\frac{n_{RW}-n_B}{2n_{PW}\phi_P}-\frac{n_R}{2n_P\phi_P})\right]R=i+cw. \tag{5}$$

Similarly, we can take first order conditions with respect to $w$ and obtain,

$$[i\pi^{IW} + iw\frac{\partial \pi^{IW}}{\partial w} + (1-i)\pi^{W} + w(1-i)\frac{\partial \pi^{W}}{\partial w} - i\pi^{I} - (1-i)\pi^{0} - i\pi^{I}]R - c(i+cw) = 0$$

Once again observing that

$$\frac{\partial \pi^{IW}}{\partial w} = \frac{\partial \pi^{W}}{\partial w} = 2\psi g \frac{\partial \mu^{w}}{\partial w}$$

Furthermore, observe that

$$\frac{\partial \mu^{W}}{\partial w} = (-)\frac{(\mu^{W})^2}{(1-\mu)} q\mu$$

Once again we use the preceding two expressions to simplify and substitute in the first order condition with respect to $w$ to obtain,

$$2g\psi \left[ (\mu^{w} - \mu) - \frac{wq\mu}{(1-\mu)}(\mu^{w})^2 \right] R = c(i+cw) \tag{6}$$

These pair of first order conditions provide us with two equations and two unknowns. We can solve them to obtain a pair $(i^*, w^*)$.

To illustrate complementarity between the two forms of ideational politics, we substitute for $(i+cw)$ from (5) into (6) and rearranging, we obtain

$$Z(i,w) \equiv c\left[\theta\mu^{i}\left(1 - \frac{iq\mu\mu^{i}}{(1-\mu)}\right) + \frac{n_{RW} - n_{B}}{2n_{PW}\phi_{p}} - \frac{n_{R}}{2n_{P}\phi_{P}}\right] - 2g\left[(\mu^{p} - \mu) - \frac{wq\mu}{1-\mu}(\mu^{p})^2\right] = 0 \tag{7}$$

Now we can use the above expression to obtain

$$\frac{di}{dw} = (-)\frac{\frac{\partial Z(i,w)}{\partial w}}{\frac{\partial Z(i,w)}{\partial i}} \tag{8}$$

Substituting and simplifying gives

$$\frac{di}{dw} = \frac{2g(\mu^{w})^2}{c\theta(\mu^{i})^2} \cdot \frac{[1 - \frac{w.\mu q \mu^{w}}{1-\mu}]}{(1 - i\frac{\mu q \mu^{i}}{1-\mu})} \tag{9}$$

Observe that a sufficient condition for complementarity between identity and worldview memes is that the above ratio is positive. In other words, $di/dw > 0$ iff both $q\mu < 1$ and $\frac{iq\mu\mu^{i}}{1-\mu} < 1$.

Finally, we now turn to decision making by the incumbent. Recollect that we are examining the sub-game given by the history $h_1 = \{\hat{i}_L, \hat{w}_L, \mathcal{I} = L\}$. In this case, the left-wing political incumbent has to make decision of whether to make decision to

invest to keep the left-wing identity (i.e. class) and worldview memes salient. It is easy to see that for a $\pi_R^I$ large enough, it will be optimal for the left-wing incumbent to make an investment of $\hat{i}_L$ to minimize the probability of (right-wing) identity politics becoming salient. Accordingly, $\exists\ \theta > 0$ such that the $\pi_R^I.\mathcal{R}$ is sufficiently large to make it optimal to invest $\hat{i}_L$ at the beginning of the electoral cycle. Using a similar logic, $\exists\ g > 0$ such that $\pi_R^W\mathcal{R}$ is sufficiently large to make it optimal to invest $\hat{w}_L$ in order to suppress right-wing worldview politics.

# B Empirical Appendix

## B.1 Supplementary Materials on the Advertisements Data

The Wesleyan Media Project (WMP) provides data on the content and location of political advertising (ads) content in the United States. It is the continuation of the Wisconsin Advertising Project (1998-2008) who aimed at studying campaign television advertisements in the largest U.S. media markets. For each two-year election cycle, they provide extensive information on political ads broadcast on television for a variety of elections and ballot measures.

The database includes two types of metadata. First, at the ad level, basic metadata includes the associated election and the sponsoring candidate or organization. Second, the database includes detailed records on each time the ad was displayed on television: the number and timing of airings, and the associated media markets. The election races include local (i.e city council and mayors, judges), gubernatorial, Senate, House, and presidential races. In total, there are 69'300 TV ads that have been aired around 10 million times at the media market level.

WMP obtains content of the ads from the Campaign Media Analysis Group (CMAG, Kantar Media). The Wisconsin ads data, up until 2008, include storyboards in PDF format. The storyboards include transcripts of the ad copy, alongside screenshots taken every 4 seconds of the video. For elections after 2008, the database includes the original audio/video files in MP4 format. Figure B.1 shows two example storyboards from the ad archive. We have highlighted mentions of policy issues.

WMP staff watch the ad content and annotate a detailed set of information about each ad. The annotations are generated by filling out a questionnaire on a web-based interface. The annotators are trained undergraduate students from Wesleyan University, and they seek a high degree of confidence and agreement in interpreting ad content. For validation, about 20% of the ads are annotated by two students. Reliability statistics for each variable are provided, including the percentage of mutual agreement between two different answers. This percentage is always above 80%.

The questionnaire provides information on the following types of issues:

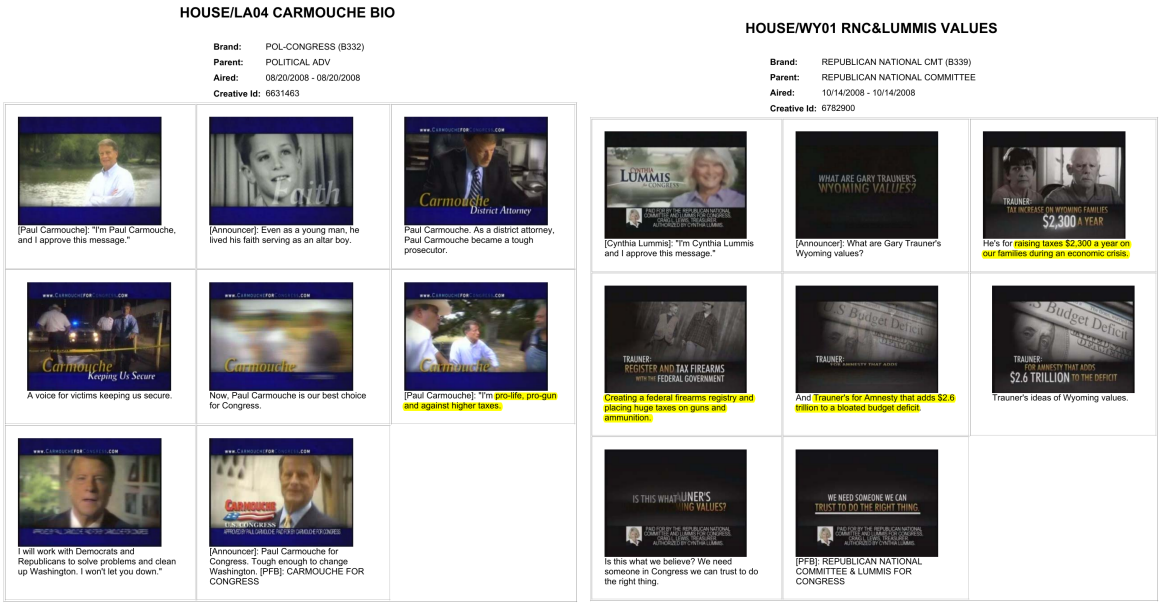
1. the actors involved (entity responsible for the ad, favored candidate, mentions, endorsements);

2. candidate and target characteristics (name, gender, party, approval for the ad);

3. the content of the ad: issues discussed, citations, music, action requested (i.e vote for, elect, support, vote against), mentions of politically relevant words (e.g. Tea Party, God/Faith, Wall Street, Big Government, Fake News);

4. the framing (positive or negative, general tone, emotions involved, voice-overs).

Figure B.1: Example Storyboards for Political Ads

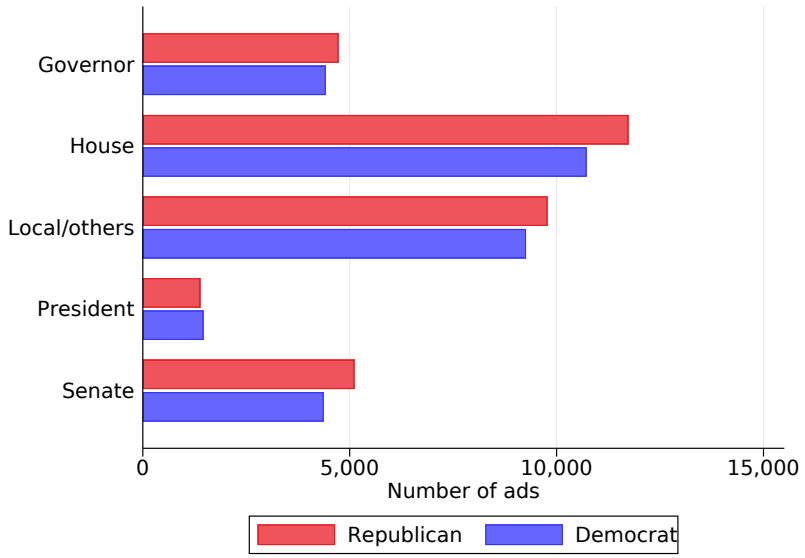



*Notes.* This figure shows two example storyboards from the ad archive, for a Democrat (on the left) and a Republican (on the right).

WMP has striven to maintain a consistent composition of variables over time. The issues have varied somewhat in response to notable events or policies, such as Hurricane Katrina or Obamacare. Ads are annotated for 84 different issues, which were mostly inherited from the Wisconsin ads methodology. The issues are grouped in 7 categories: economic policy, social issues, law and order, social welfare issues, foreign/defense policy, environment/energy, and 'others'.

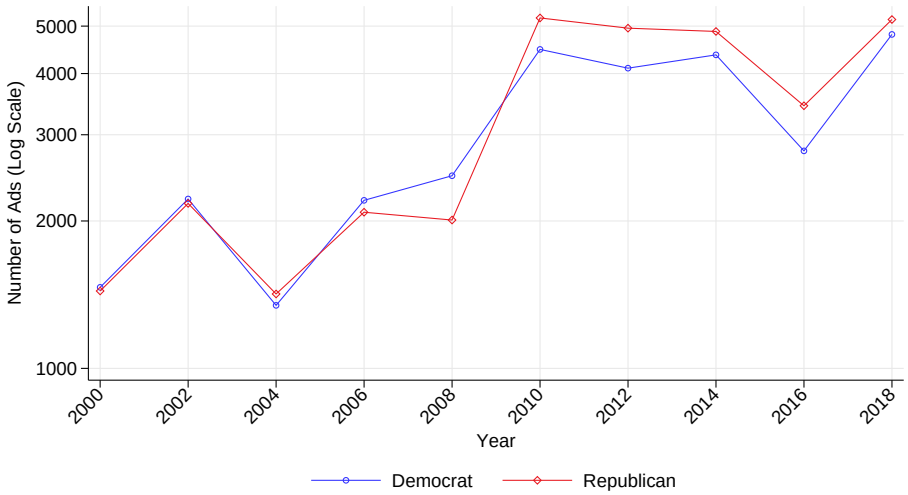
Ads can be annotated for multiple issues. If all issue variables are missing, the ad hasn't been coded. If one/some issue variables are missing, these issue questions were not asked that year. If all issue variables are equal to zero, including the issue_others variable, then the ad does not talk about any issue at all (candidate presents himself/herself without referencing an issue). The dataset also includes some non-issue advertising annotations, such as "mentions big government", or "mentions Trump", or "language is Spanish". We do not use these because they vary a lot more in what is included across years.

Figure B.2: Number of Ads in the Database, by Position and Party



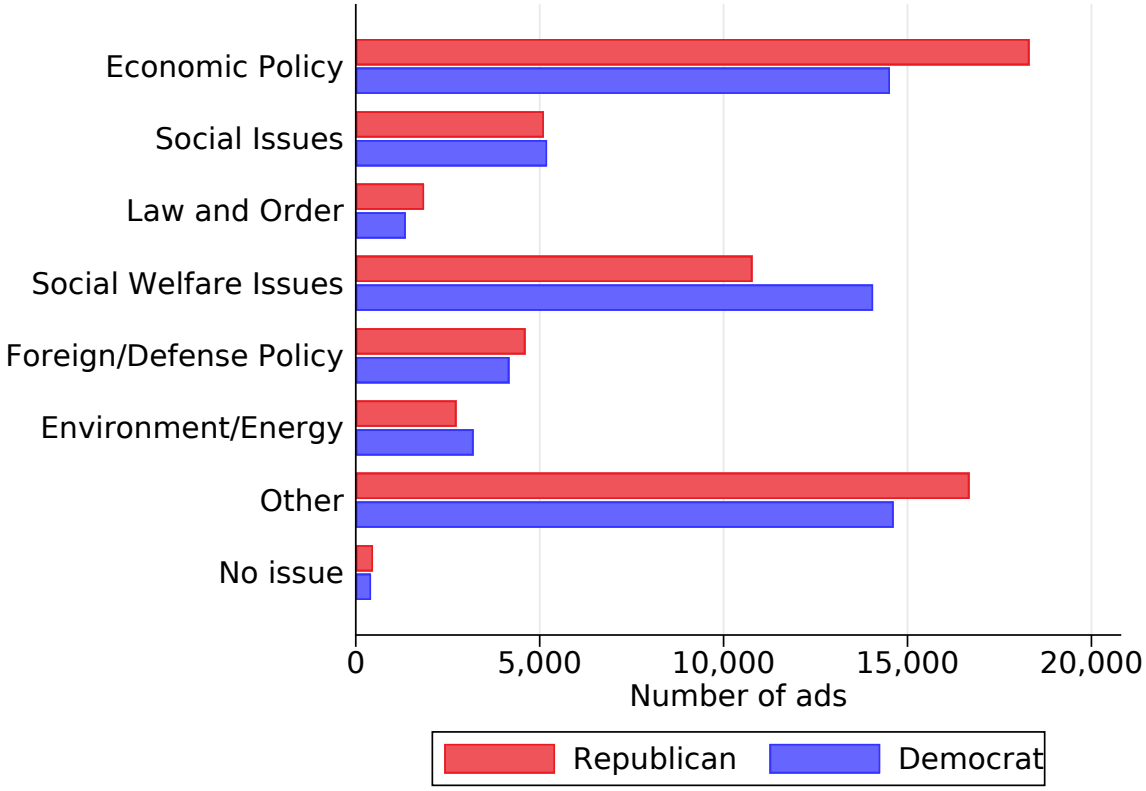

*Notes.* This figure shows the number of distinct ads across the different election types, separately by party.

Figure B.3: The Number of Ads Over Time




*Notes.* This figure shows the number of unique political ads per year, and the total number of airings per year. One can see in particular how local elections are added starting 2010.

Figure B.4: Ad Distribution over Broad Issue Categories, by Party




*Notes.* This figure shows the breakout of the ads by the 7 broad issue categories annotated by Wesleyan. Republicans focus on economic policy, while Democrats focus on social welfare issues. For the other issues, they are quite balanced.

Table B.1: Ad Tabulation: Full List of 84 Ad Issues, By Broad Categories

| **Economic Policy** | | **Social Issues** | | **Social Welfare Issues** | | **Foreign Policy and Defense** | |
|---|---|---|---|---|---|---|---|
| Taxes | 15824 | Moral / Fam Values | 3019 | Health Care | 12713 | Military (generic ) | 2774 |
| Unemployment | 14331 | Abortion | 2604 | Education / Schools | 9698 | Veterans | 2678 |
| Deficit / Budget / Debt | 10558 | Seniors | 2218 | Medicare | 3845 | Foreign Policy | 2471 |
| Business | 4818 | Gun Control | 2211 | Social Security | 3796 | Iraq | 1132 |
| Government Spending | 4604 | Race Relations | 1581 | Prescription Drugs | 2141 | Terrorism | 1090 |
| Economy (generic) | 3392 | Gender Discrim | 952 | Welfare | 2064 | China | 635 |
| Recession / Stimulus | 2007 | LGBTQ Issues | 448 | Obamacar | 1468 | Afghanistan | 281 |
| Trade / Globalization | 1538 | Tax Reform | 305 | Women's Health | 821 | September 11th | 236 |
| Farming | 1050 | Civil Libs / Privacy | 250 | Child Care | 525 | Iran | 232 |
| Housing / Mortgages | 1042 | Gambling | 61 | Health Care Reform | 319 | ISIL / ISIS | 192 |
| Minimum Wage | 884 | Tobacco | 51 | Incarceration | 230 | Nuclear Prolif | 175 |
| Union | 425 | Affirmative Action | 32 | Opioids / Rx Drugs | 229 | Middle East | 152 |
| Disparity / Inequality | 363 | #metoo / #timesup | 3 | Substance Abuse | 204 | Syria | 55 |
| Poverty | 195 | Assisted Suicide | 2 | Lottery for Educ | 58 | Israel | 51 |
| | | | | Marijuana | 14 | Foreign Aid | 38 |
| | | | | | | Russian / Putin | 31 |
| | | | | | | North Korea | 12 |

| **Law and Order** | | **Environment/Energy** | | **Other** | | | |
|---|---|---|---|---|---|---|---|
| Crime | 1896 | Environment | 4231 | Other | 26926 | Corporate Fraud | 618 |
| Narcotics / Illegal Drugs | 788 | Energy Policy | 3436 | Government Ethics | 3418 | Term Limits | 199 |
| Supreme Court / Judges | 532 | Global Warming | 266 | Immigration | 2346 | Emerg Response | 178 |
| Domestic Violence | 275 | Keystone XL Pipeline | 53 | Campaign Finance | 1949 | Govt Shutdown | 168 |
| Capital Punishment | 77 | | | Local Issues | 1709 | DACA / Dreamers | 63 |
| Parkland / Stoneman HS | 24 | | | Gove Regulations | 1024 | Pledge of Allegiance | 36 |
| Police Brutality | 20 | | | Transportation | 1019 | | |

*Notes*. This table shows the full list of 84 raw issue categories annotated in the Wesleyan data. We have the issues grouped by the seven broad issue categories provided in the dataset. In addition, we show the number of ads tagged with each issue.

Table B.2: Merging of Issues to 30 Categories

| | |
|---|---|
| Economy | Economy / Business / Govt Regulation |
| Taxes | Taxes / Tax Reform Bill (2017) |
| Health Care | Health Care / Prescription Drugs / Medicare / Addiction / Opioids / Health Care Reforms |
| Unemployment | Employment / Jobs |
| Deficit / Budget / Debt | Deficit / Budget / Debt / Govt Spending |
| Education / Schools | Education / Lottery for Education |
| Environment | Environment / Global Warming / Energy |
| Military / Veterans | Military / Veterans / Iraq / Afghanistan |
| Seniors (not Medicare) | Seniors (not Medicare) / Social Security |
| Corruption (Govt and Corp) | Government Ethics / Corporate Corruption |
| Moral Values | |
| Foreign Policy | Foreign Policy / Foreign Aid / Nuclear Proliferation / Russia / North Korea |
| Transportation / Local Issues | Transportation / Local Issues |
| Abortion | |
| Crime | Crime / Sentencing / Drugs / Marijuana |
| Women's Issues | Women's Health / Gender Discrimination / Domestic Violence / Childcare / #metoo |
| Immigration | Immigration / DACA / Dreamers |
| Gun Control | Gun Control / School Shootings |
| Welfare | |
| Campaign Finance Reform | |
| Workers Rights | Minimum Wages / Union / Economic Disparity / Income Inequality |
| Race Relations / Civil Rights | Race Relations / Civil Rights / Affirmative Action / Police Brutality / Racial Violence |
| Terrorism / Middle East | Terrorism / Middle East / ISIS / Israel / Syria / Iran |
| Trade / Globalization | |
| Obamacare | |
| Poverty / Housing | Poverty / Housing / Sub-prime Mortgages |
| Farming | |
| Judiciary | Supreme Court / Judiciary / Civil Liberties |
| LGBTQ Issues / Rights | |

*Notes*. This table shows the list of 30 policy issues which we use in the analysis, along with how the 84 specific issue categories are assigned. If an ad is in two of the specific categories, we still count it as matching once for the more generic category.

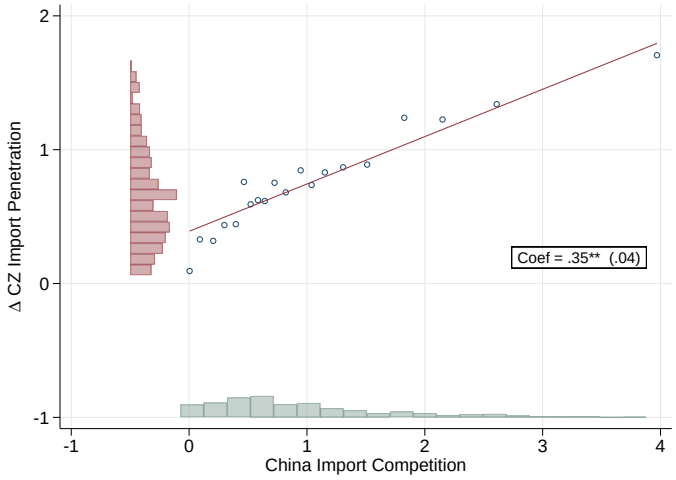
Table B.3: Summary Statistics

| | Republican | | | | | Democrat | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | Std.Dev. | Min | Max | Obs | Mean | Std.Dev. | Min | Max | Obs |
| ***Endogenous Regressor:*** | | | | | | | | | | |
| ΔCZ import penetration | 0.764 | 0.68 | -0.26 | 6.08 | 18,628 | 0.764 | 0.68 | -0.26 | 6.08 | 18,628 |
| ***Instrumental Variable:*** | | | | | | | | | | |
| China Import Competition | 1.059 | 1.00 | -0.47 | 8.62 | 18,628 | 1.059 | 1.00 | -0.47 | 8.62 | 18,628 |
| ***Demographic Variables:*** | | | | | | | | | | |
| Republican Vote Share 2006 | 16.106 | 7.712 | 0.000 | 49.639 | 13,691 | 16.106 | 7.712 | 0.000 | 49.639 | 13,691 |
| Population 2000 | 6.5e+05 | 1.4e+06 | 1208.160 | 1.6e+07 | 15,447 | 6.5e+05 | 1.4e+06 | 1208.160 | 1.6e+07 | 15,447 |
| Black Pop Share 2000 | 8.702 | 13.997 | 0.000 | 86.300 | 13,691 | 8.702 | 13.997 | 0.000 | 86.300 | 13,691 |
| Hispanic Pop Share 2000 | 8.437 | 13.442 | 0.100 | 97.200 | 13,691 | 8.437 | 13.442 | 0.100 | 97.200 | 13,691 |
| ***Economic Variables:*** | | | | | | | | | | |
| Unemployment Rate 2009 | 9.047 | 3.277 | 2.400 | 28.200 | 13,691 | 9.047 | 3.277 | 2.400 | 28.200 | 13,691 |
| Share Manufacturing 2000 | 19.648 | 10.067 | 0.108 | 55.242 | 15,447 | 19.648 | 10.067 | 0.108 | 55.242 | 15,447 |
| Routineness Index 2000 | 29.650 | 2.811 | 22.227 | 36.656 | 15,447 | 29.650 | 2.811 | 22.227 | 36.656 | 15,447 |
| Offshorability Index 2000 | -0.500 | 0.471 | -1.636 | 1.240 | 15,447 | -0.500 | 0.471 | -1.636 | 1.240 | 15,447 |
| ***Share of Ads:*** | | | | | | | | | | |
| Abortion | 0.019 | 0.02 | 0.00 | 0.20 | 18,416 | 0.013 | 0.03 | 0.00 | 0.38 | 18,292 |
| China | 0.007 | 0.01 | 0.00 | 0.10 | 18,416 | 0.008 | 0.01 | 0.00 | 0.11 | 18,292 |
| Corruption | 0.030 | 0.03 | 0.00 | 0.50 | 18,416 | 0.031 | 0.03 | 0.00 | 0.20 | 18,292 |
| Crime | 0.022 | 0.03 | 0.00 | 0.50 | 18,416 | 0.013 | 0.02 | 0.00 | 0.17 | 18,292 |
| Deficits | 0.117 | 0.06 | 0.00 | 0.43 | 18,416 | 0.069 | 0.06 | 0.00 | 1.00 | 18,292 |
| Economic Regulation | 0.146 | 0.12 | 0.00 | 1.00 | 18,416 | 0.155 | 0.16 | 0.00 | 1.00 | 18,292 |
| Education | 0.035 | 0.04 | 0.00 | 0.57 | 18,416 | 0.075 | 0.06 | 0.00 | 0.60 | 18,292 |
| Elderly | 0.009 | 0.01 | 0.00 | 0.33 | 18,416 | 0.031 | 0.04 | 0.00 | 0.50 | 18,292 |
| Electoral Issues | 0.009 | 0.01 | 0.00 | 0.33 | 18,416 | 0.019 | 0.02 | 0.00 | 0.20 | 18,292 |
| Environment | 0.041 | 0.04 | 0.00 | 0.50 | 18,416 | 0.043 | 0.04 | 0.00 | 0.50 | 18,292 |
| Farming | 0.007 | 0.01 | 0.00 | 0.11 | 18,416 | 0.010 | 0.03 | 0.00 | 0.40 | 18,292 |
| Foreign Policy | 0.045 | 0.08 | 0.00 | 0.40 | 18,416 | 0.031 | 0.06 | 0.00 | 0.50 | 18,292 |
| Gay Marriage | 0.003 | 0.02 | 0.00 | 1.00 | 18,416 | 0.002 | 0.01 | 0.00 | 0.12 | 18,292 |
| Gun Control | 0.015 | 0.02 | 0.00 | 0.33 | 18,416 | 0.011 | 0.02 | 0.00 | 0.33 | 18,292 |
| Health Care | 0.073 | 0.05 | 0.00 | 1.00 | 18,416 | 0.091 | 0.07 | 0.00 | 1.00 | 18,292 |
| Immigration | 0.029 | 0.04 | 0.00 | 0.29 | 18,416 | 0.009 | 0.04 | 0.00 | 1.00 | 18,292 |
| Judiciary | 0.009 | 0.02 | 0.00 | 0.17 | 18,416 | 0.003 | 0.01 | 0.00 | 0.11 | 18,292 |
| Military / Veterans | 0.030 | 0.04 | 0.00 | 1.00 | 18,416 | 0.041 | 0.04 | 0.00 | 0.27 | 18,292 |
| Moral Values | 0.028 | 0.03 | 0.00 | 0.50 | 18,416 | 0.032 | 0.05 | 0.00 | 0.50 | 18,292 |
| Obamacare | 0.019 | 0.03 | 0.00 | 0.24 | 18,416 | 0.003 | 0.01 | 0.00 | 0.13 | 18,292 |
| Poverty | 0.009 | 0.01 | 0.00 | 0.17 | 18,416 | 0.009 | 0.01 | 0.00 | 0.25 | 18,292 |
| Race Relations | 0.005 | 0.01 | 0.00 | 0.33 | 18,416 | 0.011 | 0.02 | 0.00 | 0.36 | 18,292 |
| Taxes | 0.118 | 0.06 | 0.00 | 1.00 | 18,416 | 0.087 | 0.06 | 0.00 | 0.75 | 18,292 |
| Terrorism | 0.015 | 0.02 | 0.00 | 0.33 | 18,416 | 0.011 | 0.03 | 0.00 | 0.50 | 18,292 |
| Trade | 0.010 | 0.02 | 0.00 | 0.12 | 18,416 | 0.019 | 0.02 | 0.00 | 0.33 | 18,292 |
| Unemployment | 0.111 | 0.06 | 0.00 | 1.00 | 18,416 | 0.100 | 0.06 | 0.00 | 0.40 | 18,292 |
| Worker Rights | 0.004 | 0.01 | 0.00 | 0.20 | 18,416 | 0.018 | 0.03 | 0.00 | 0.25 | 18,292 |
| Welfare | 0.012 | 0.02 | 0.00 | 0.50 | 18,416 | 0.014 | 0.03 | 0.00 | 0.33 | 18,292 |
| Women's Issues | 0.007 | 0.01 | 0.00 | 0.11 | 18,416 | 0.025 | 0.03 | 0.00 | 0.25 | 18,292 |

## B.2 Supplementary Materials on Main Results

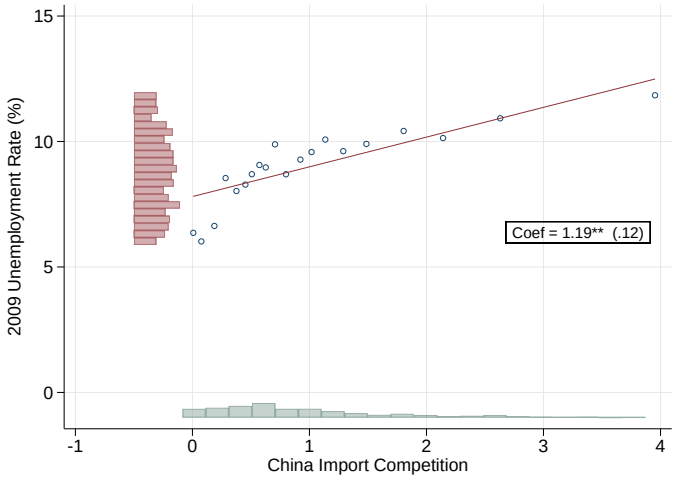
This appendix provides additional results to support the main analysis.

Figure B.5: First Stage Effect of China Import Competition



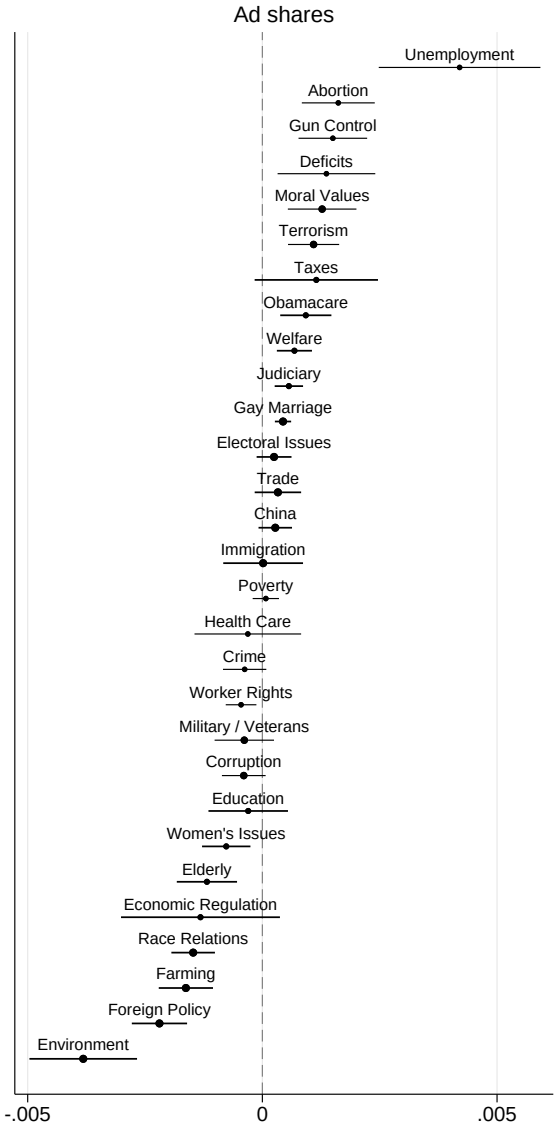

*Notes.* This figure shows a binscatter of the first-stage relationship from trade exposure and the Chinese-import-competition instrument for the main estimation sample (2008-2018). Kleibergen-Paap F-stat is 87.3. Constructed using the package from Pinna (2020).

Figure B.6: Reduced-Form Effect of China Import Competition on Unemployment



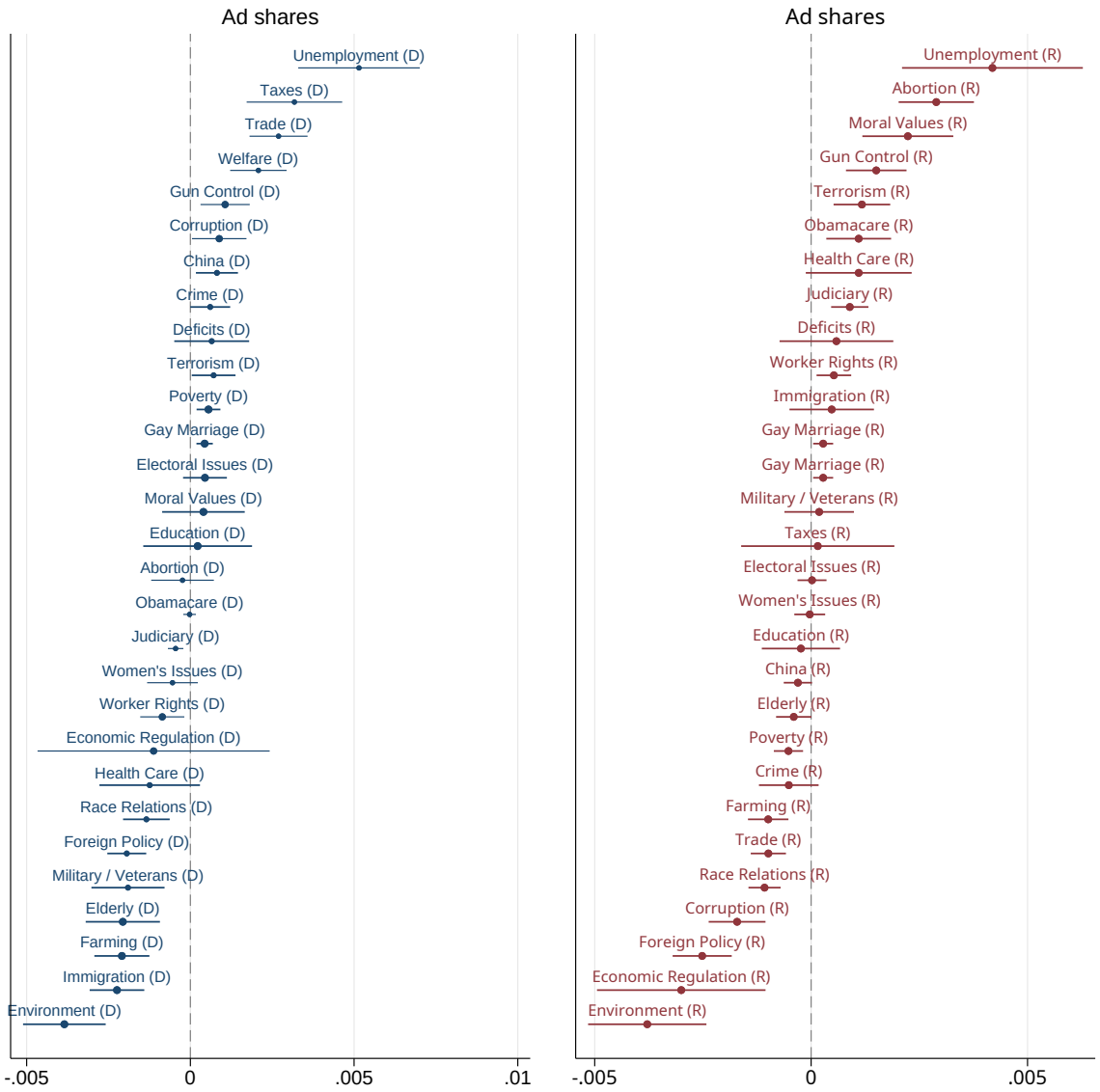

*Notes.* This figure shows a binscatter of the reduced-form relationship between 2009 unemployment (in %, vertical axis) and the Chinese-import-competition instrument, for the main estimation sample (2008-2018). Mean value of unemployment is 9%. Constructed using the package from Pinna (2020).

Figure B.7: Effect of China Shock on All Issues, Overall




*Notes*. This figure shows the effect of the China Shock across the 30 policy issues. There is a big bipartisan increase in ads about unemployment, and a big bipartisan decrease in ads about the environment and economic regulation. Includes elections from 2008-2018.

Figure B.8: Effect of China Shock on All Issues, By Party




*Notes*. This figure shows the effect of the China Shock on all 30 policy issues, but separately by political party. Includes elections from 2008-2018.

Table B.4: Regression Estimates for Effect of China Shock on Ad Content

| | (1) Abortion | (2) Moraluty | (3) Guns | (4) Terror | (5) Obamacare | (6) Debt |
|---|---|---|---|---|---|---|
| *Republicans* | | | | | | |
| Import Comp | 0.0029*** | 0.0022*** | 0.0015*** | 0.0012*** | 0.0011*** | 0.0006 |
| | (0.0004) | (0.0005) | (0.0004) | (0.0003) | (0.0004) | (0.0007) |
| Mean D.V. | 0.0192 | 0.0276 | 0.0154 | 0.0149 | 0.0187 | 0.1172 |
| R - squared | 0.084 | 0.388 | 0.283 | 0.401 | 0.550 | 0.510 |
| Obs | 18,416 | 18,416 | 18,416 | 18,416 | 18,416 | 18,416 |
| *Democrats* | | | | | | |
| Import Comp | -0.0003 | 0.0004 | 0.0011*** | 0.0007** | -0.0000 | 0.0007 |
| | (0.0005) | (0.0006) | (0.0004) | (0.0003) | (0.0001) | (0.0006) |
| Mean D.V. | 0.0128 | 0.0318 | 0.0107 | 0.0106 | 0.0027 | 0.0692 |
| R - squared | 0.059 | 0.565 | 0.049 | 0.352 | 0.108 | 0.247 |
| Obs | 18,208 | 18,208 | 18,208 | 18,208 | 18,208 | 18,208 |

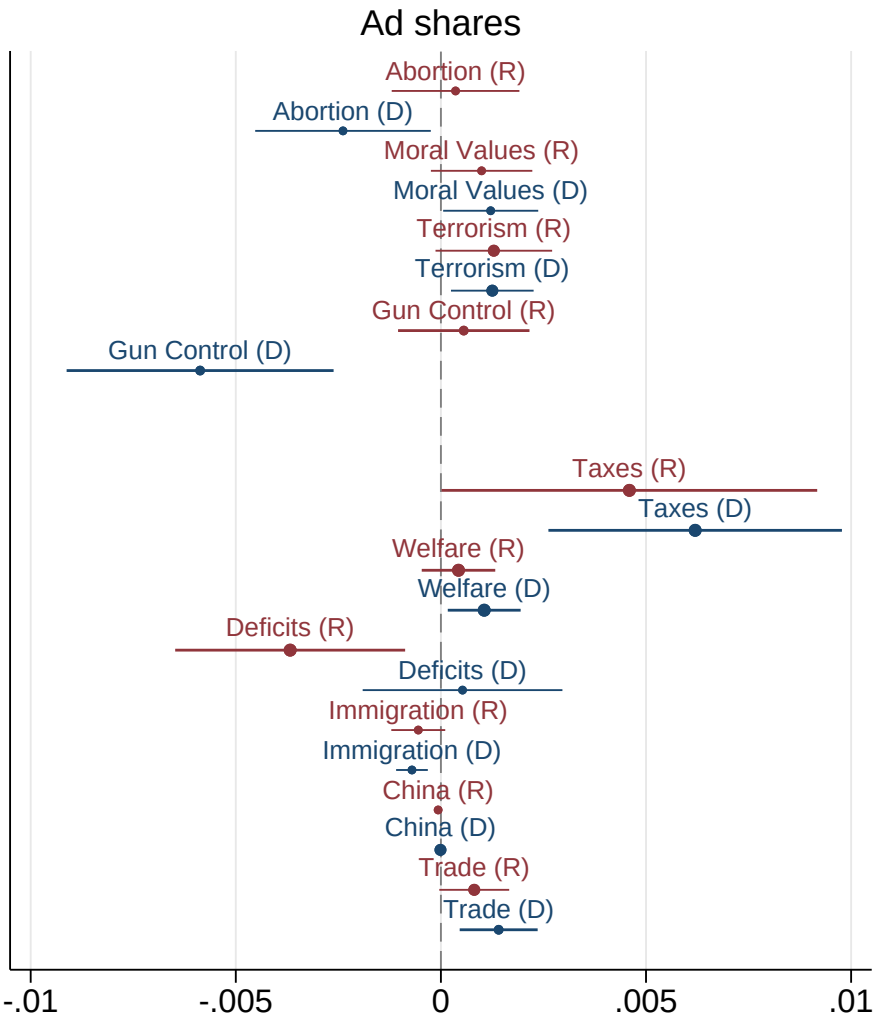
| | (7) Immig | (8) Taxes | (9) Welfare | (10) China | (11) Trade |
|---|---|---|---|---|---|
| *Republicans* | | | | | |
| Import Comp | 0.0005 | 0.0002 | 0.0001 | -0.0003* | -0.0010*** |
| | (0.0005) | (0.0009) | (0.0003) | (0.0002) | (0.0002) |
| Mean D.V. | 0.0291 | 0.1180 | 0.0117 | 0.0072 | 0.0095 |
| R - squared | 0.469 | 0.291 | 0.177 | 0.268 | 0.193 |
| Obs | 18,416 | 18,416 | 18,416 | 18,416 | 18,416 |
| *Democrats* | | | | | |
| Import Comp | -0.0022*** | 0.0032*** | 0.0021*** | 0.0008** | 0.0027*** |
| | (0.0004) | (0.0007) | (0.0004) | (0.0003) | (0.0005) |
| Mean D.V. | 0.0092 | 0.0866 | 0.0144 | 0.0080 | 0.0188 |
| R - squared | 0.026 | 0.294 | 0.155 | 0.036 | 0.079 |
| Obs | 18,208 | 18,208 | 18,208 | 18,208 | 18,208 |

*Notes.* Regression coefficients corresponding to Figure 3 in the main text. All regressions include year fixed effects and controls for how many years the county is in the sample. Standard errors in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$

Figure B.9: China Shock Effect on Republican Ads, Alternative Outcome Specifications

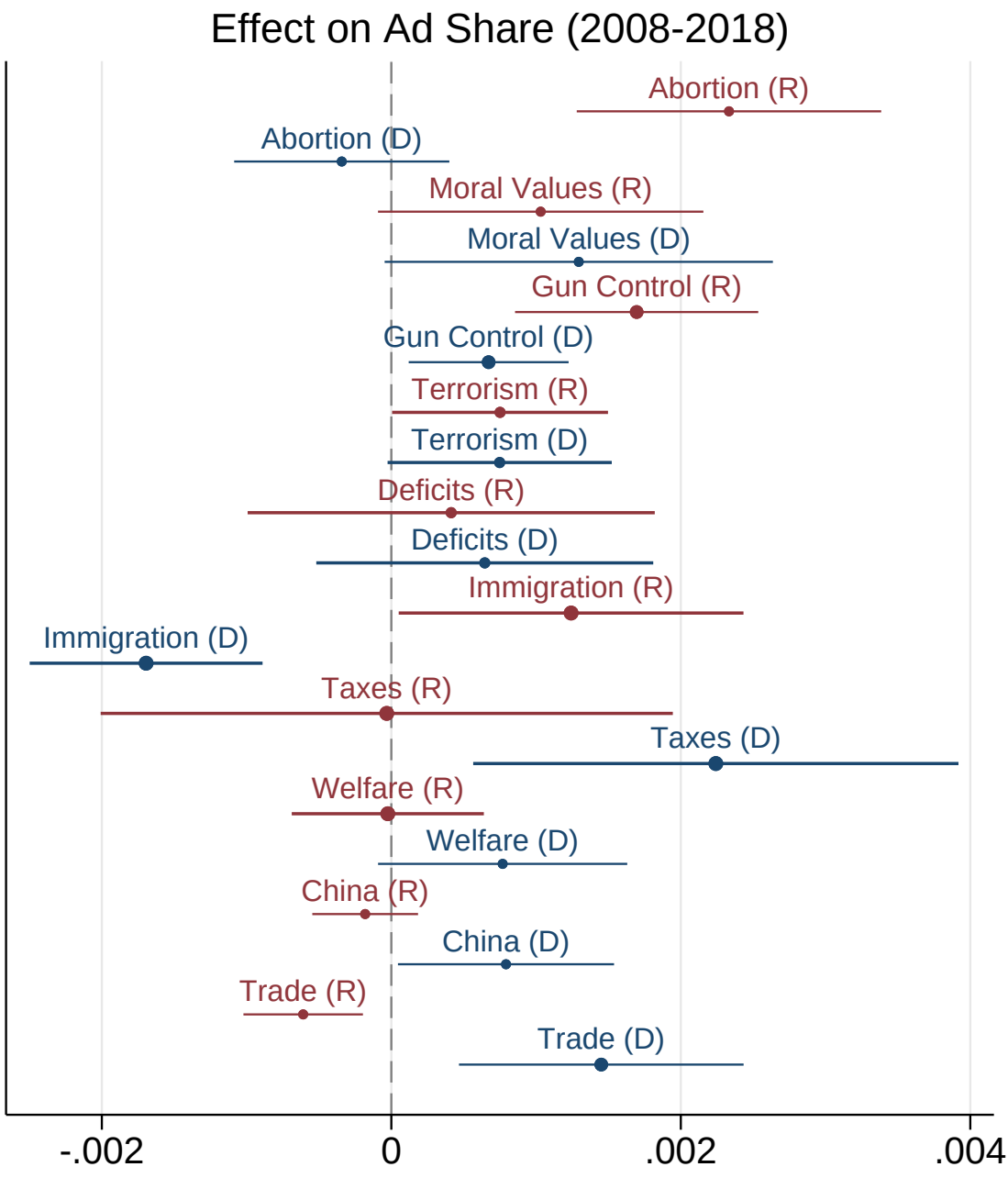

*Notes.* These figures shows a coefficient plot from the main regression of advertising shares by party on the China shock instrument. The panels show alternative outcome specifications, as indicated. Error spikes give 95% confidence intervals. Coefficients sorted by Republican effect size.

Figure B.10: Pre-Treatment Reduced-Form Effect on Ad Shares, 2000/2002



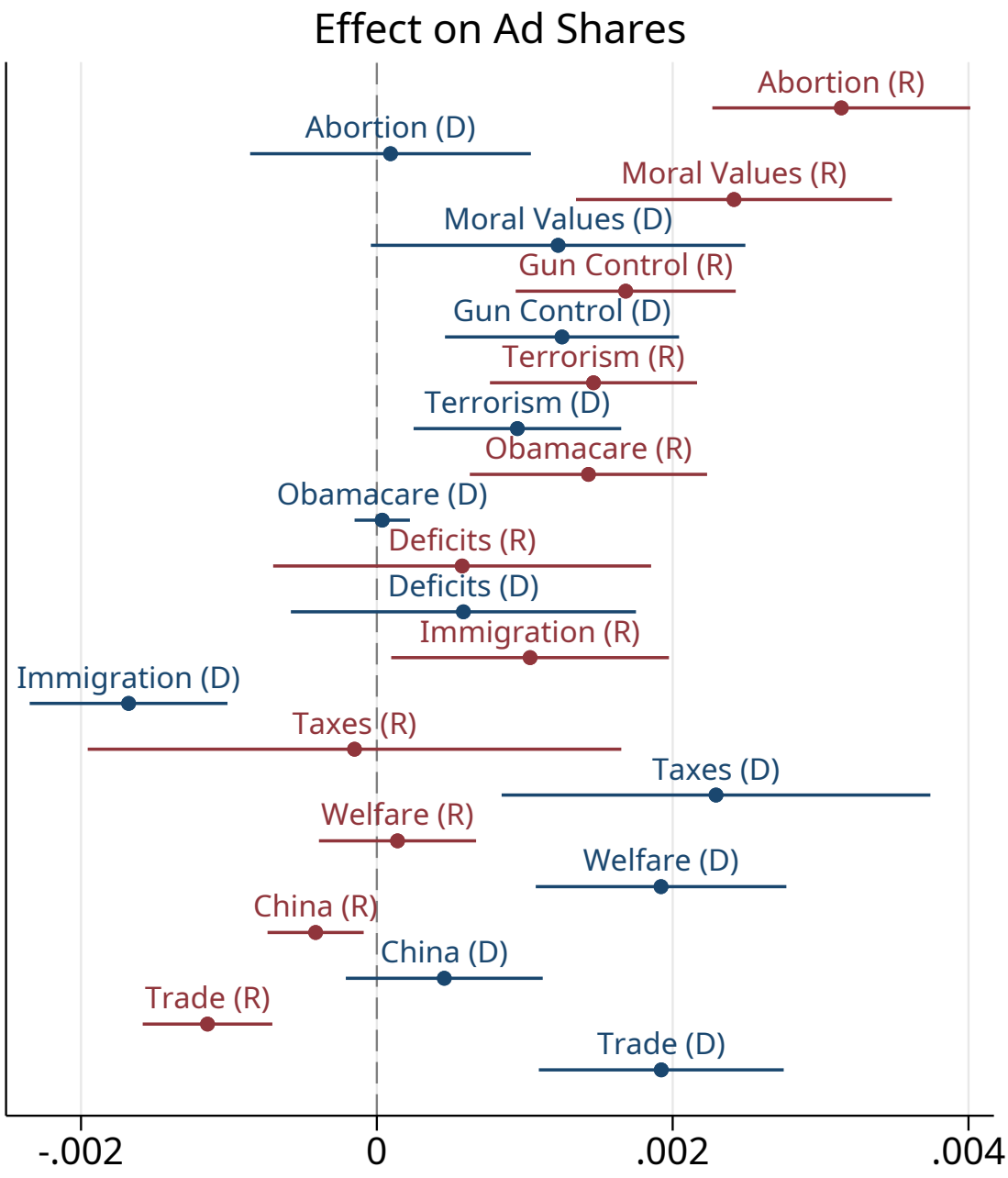

*Notes.* This figure shows a coefficient plot from the main regressions of advertising shares by party on the China shock instrument, for the first two election cycles of the data. Error spikes give 95% confidence intervals. Coefficients sorted as in Figure 3.

Figure B.11: Effect on Ad Shares, controlling for 2000/2002 Ad Shares



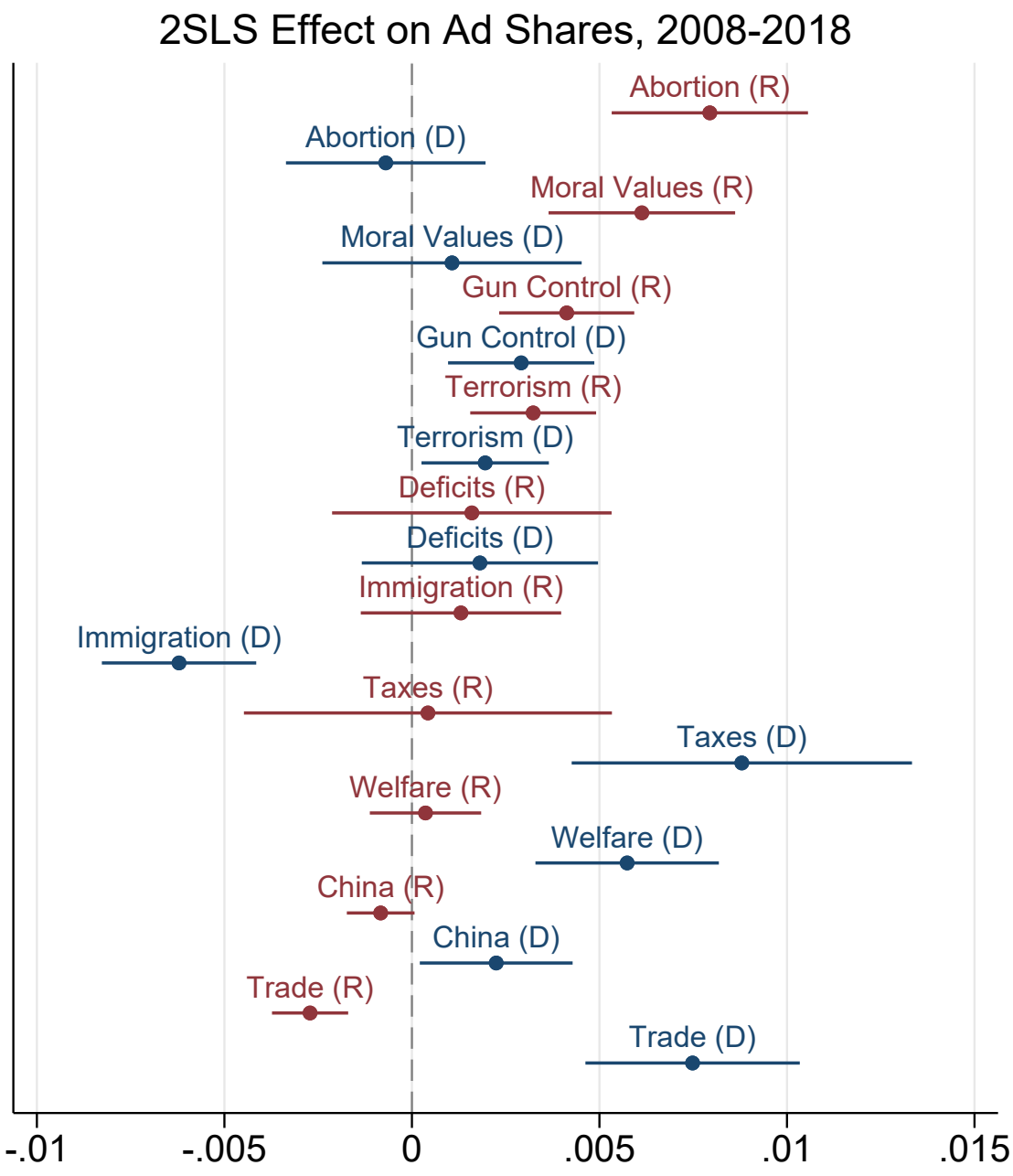

*Notes*. This figure shows a coefficient plot from the main reduced-form regression of advertising shares by party on the China shock instrument, for the elections from 2008 to 2018. Includes controls for the ad shares for the associated issue but from 2000/2002, interacted with year fixed effects. Red series is for Republicans, while blue is for Democrats. Error spikes give 95% confidence intervals. Order of coefficients taken from Figure 3.

Figure B.12: Effect on Ad Shares, controlling for Unemployment Ads Share




*Notes.* This figure shows a coefficient plot from the main reduced-form regression of advertising shares by party on the China shock instrument, for the elections from 2008 to 2018. Includes a control for the share of shares on employment/unemployment by the respective party at that time. Red series is for Republicans, while blue is for Democrats. Error spikes give 95% confidence intervals. Order of coefficients taken from Figure 3.

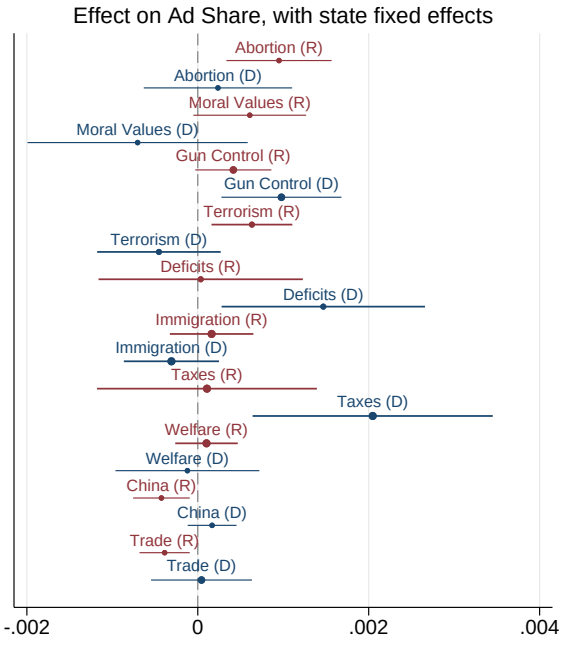
Figure B.13: 2SLS Estimates



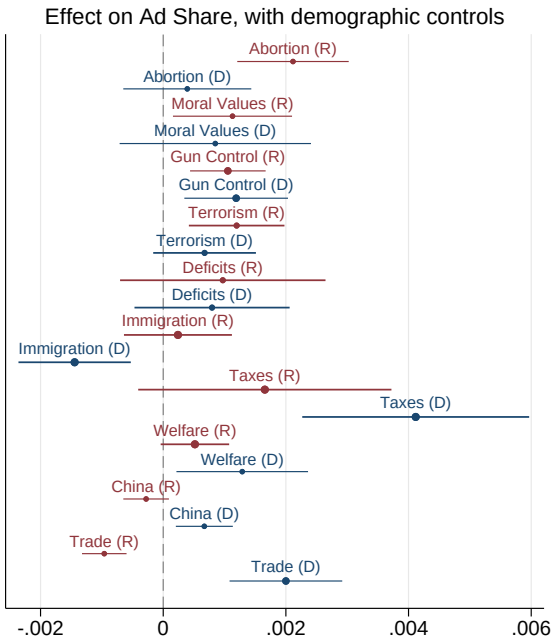

*Notes*. This figure shows coefficient plots from the 2SLS regressions, rather than reduced-form regression, of advertising shares by party on trade exposure instrumented by the China shock instrument, for the elections from 2008 to 2018. Red series is for Republicans, while blue is for Democrats. Error spikes give 95% confidence intervals. Order of coefficients taken from Figure 3.

Figure B.14: Additional Specification Checks

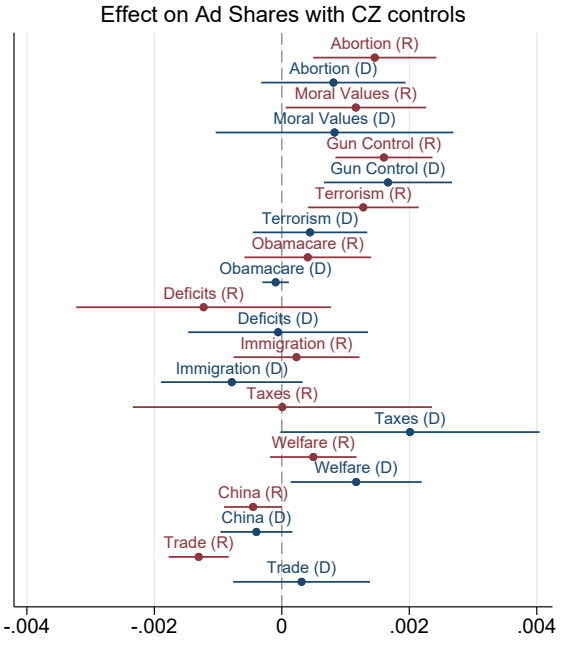
A. State Fixed Effects



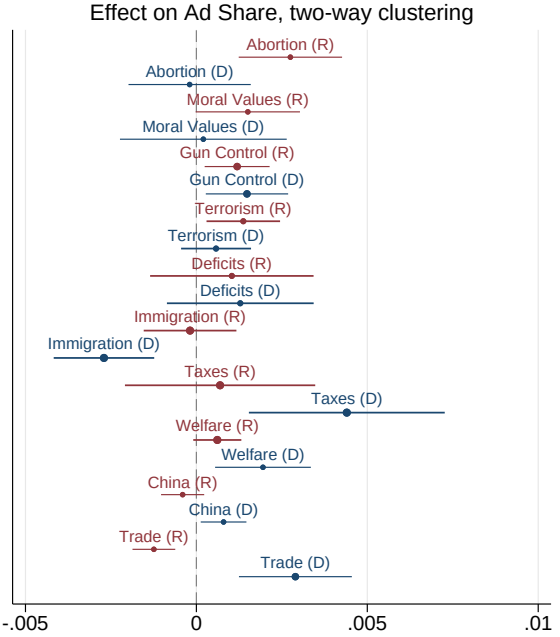

B. Political / Demographic Controls




C. Economic Controls

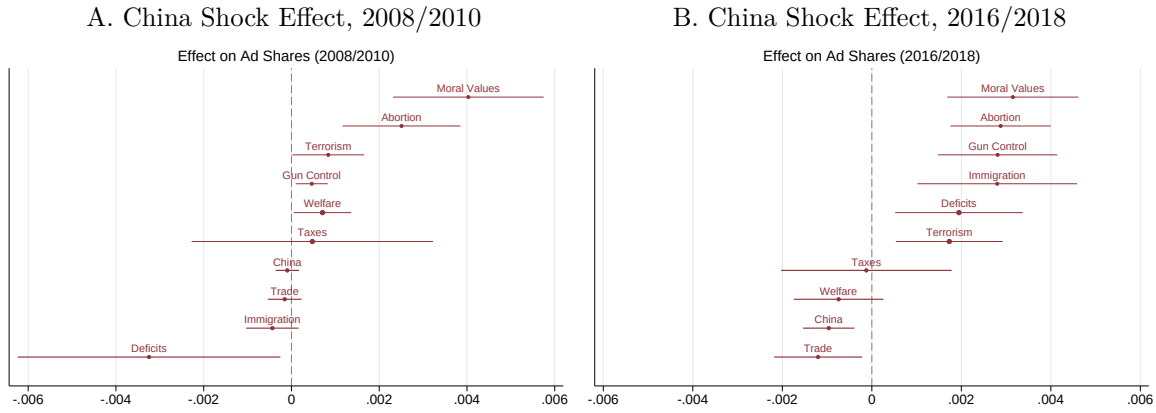



D. Two-Way Clustering




*Notes.* This figure shows coefficient plots from the main reduced-form regression of advertising shares by party on the China shock instrument, for the elections from 2008 to 2018. Red series is for Republicans, while blue is for Democrats. Error spikes give 95% confidence intervals. Order of coefficients taken from Figure 3. Panel A includes state fixed effects. Panel B includes controls for 2006 Republican vote share, 2000 population, black population share, and Hispanic population share. Panel C includes the main local economic variables from Autor et al. (2020): initial-period manufacturing share of employment, routine occupation share of employment, and offshorability index. Panel D uses two-way clustering by commuting zone and media market area.

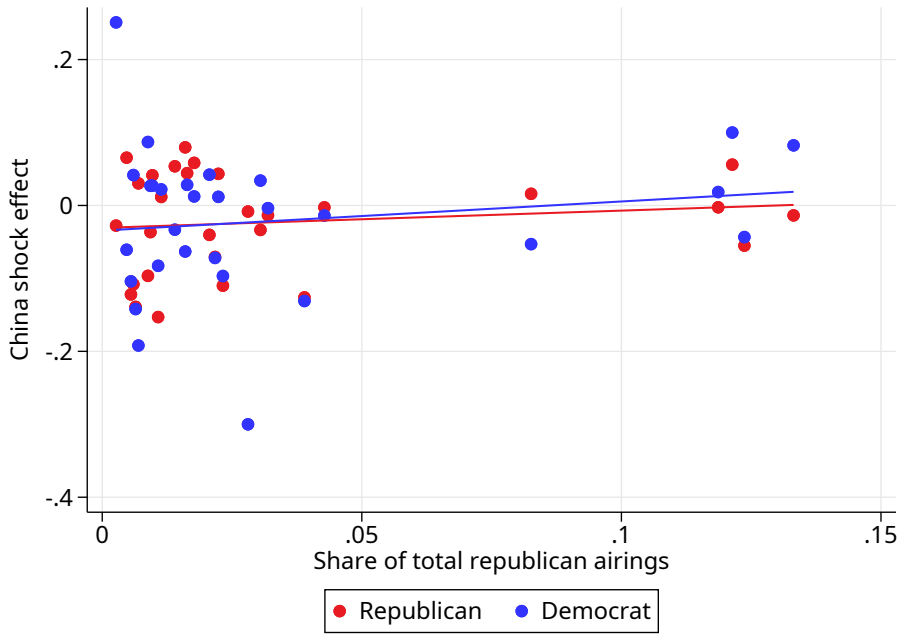
Figure B.15: China Shock Effect on Republican Ad Shares, 2008/2010 vs 2016/2018




*Notes*. These figures shows a coefficient plot from the main regression of advertising shares by party on the China shock instrument. Panel A is from 2008/2010, while Panel B is from 2016/2018. Red series is for Republicans, while blue is for Democrats. Error spikes give 95% confidence intervals. Coefficients sorted by Republican effect size.

Here we show how the effect of the China shock on political messaging changed over time. Appendix Figure B.15 shows equivalent regressions to the one reported in Figure 3, but for subsets of years. We limit to Republicans. The graph shows that most of the relevant issues have a similar China-Shock response in the earlier years (2008/2010) and later years (2016/2018). A particularly striking change is that there is no effect on immigration in 2008/2010s, yet by the last period 2016/2018 there is a large effect on Republican use of immigration language in response to the unemployment shock.

Figure B.16: China Shock is not Polarizing the Parties



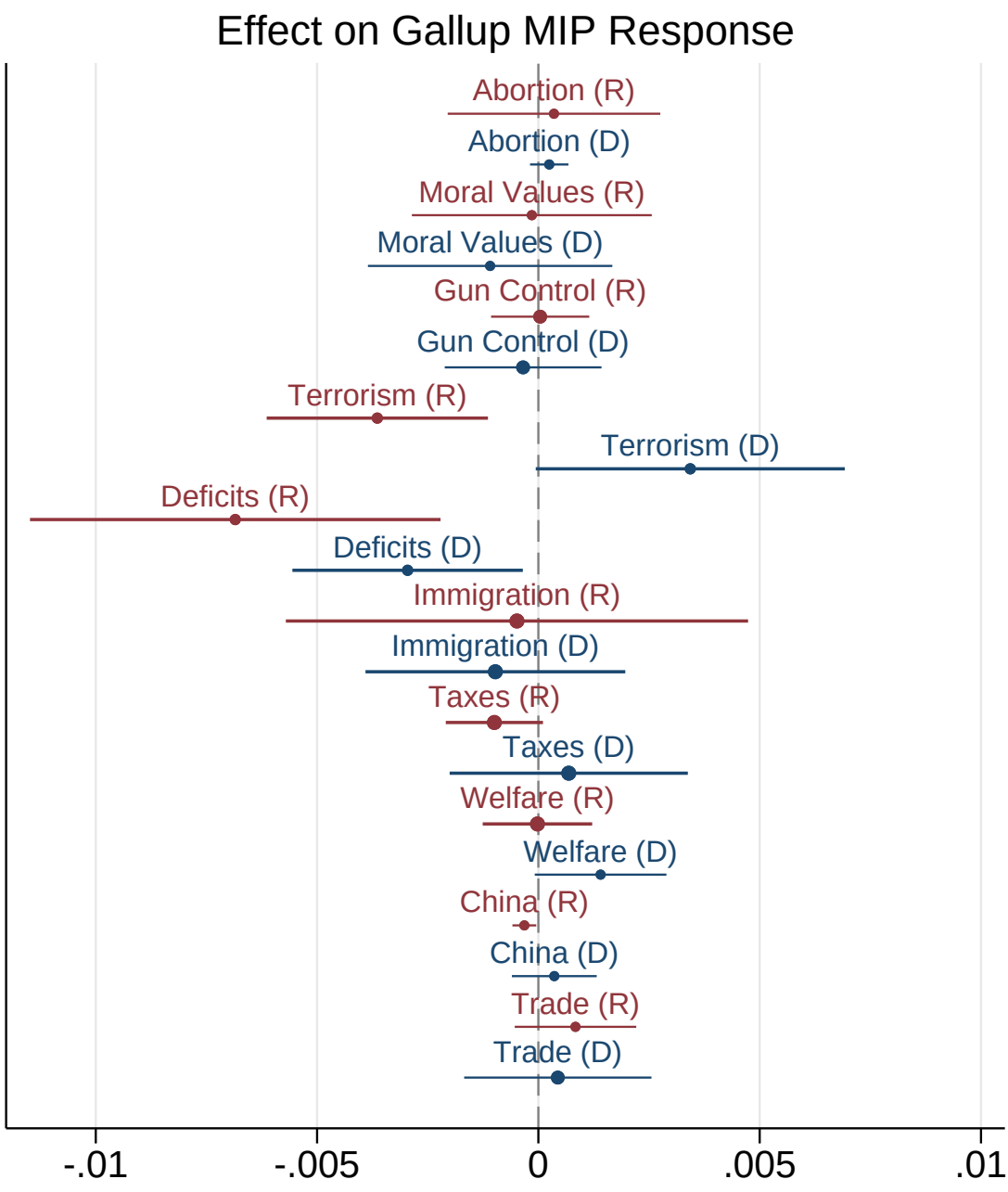

*Notes.* This figure plots the estimated china-shock coefficients by party (vertical axis) against the share of ads by Republicans. If the China shock were increasing polarization, there would be a positive slope for the red series (Republican ads) and a negative slope for the blue series (Democrat ads). neither slope is significantly different from zero. The correlation between the difference in the Republican/Democrat effect, and the Republican ad share, is not significant with p-value = 0.78.

Table B.5: Summary Statistics by Party on Gallup "Most Important Problem" Responses

| Democrats | | Republicans | |
|---|---|---|---|
| Issue | MIP Rate | Issue | MIP Rate |
| Unemployment | 0.106 | Unemployment | 0.077 |
| Terrorism | 0.031 | Immigration | 0.073 |
| Deficits | 0.023 | Terrorism | 0.064 |
| Immigration | 0.022 | Deficits | 0.053 |
| Moral Values | 0.019 | Moral Values | 0.023 |
| Gun Control | 0.007 | Taxes | 0.010 |
| Taxes | 0.005 | Abortion | 0.007 |
| Welfare | 0.004 | Welfare | 0.007 |
| Trade | 0.002 | Gun Control | 0.004 |
| Abortion | 0.001 | Trade | 0.003 |
| China | 0.001 | China | 0.002 |
| Total | 0.22 | Total | 0.32 |

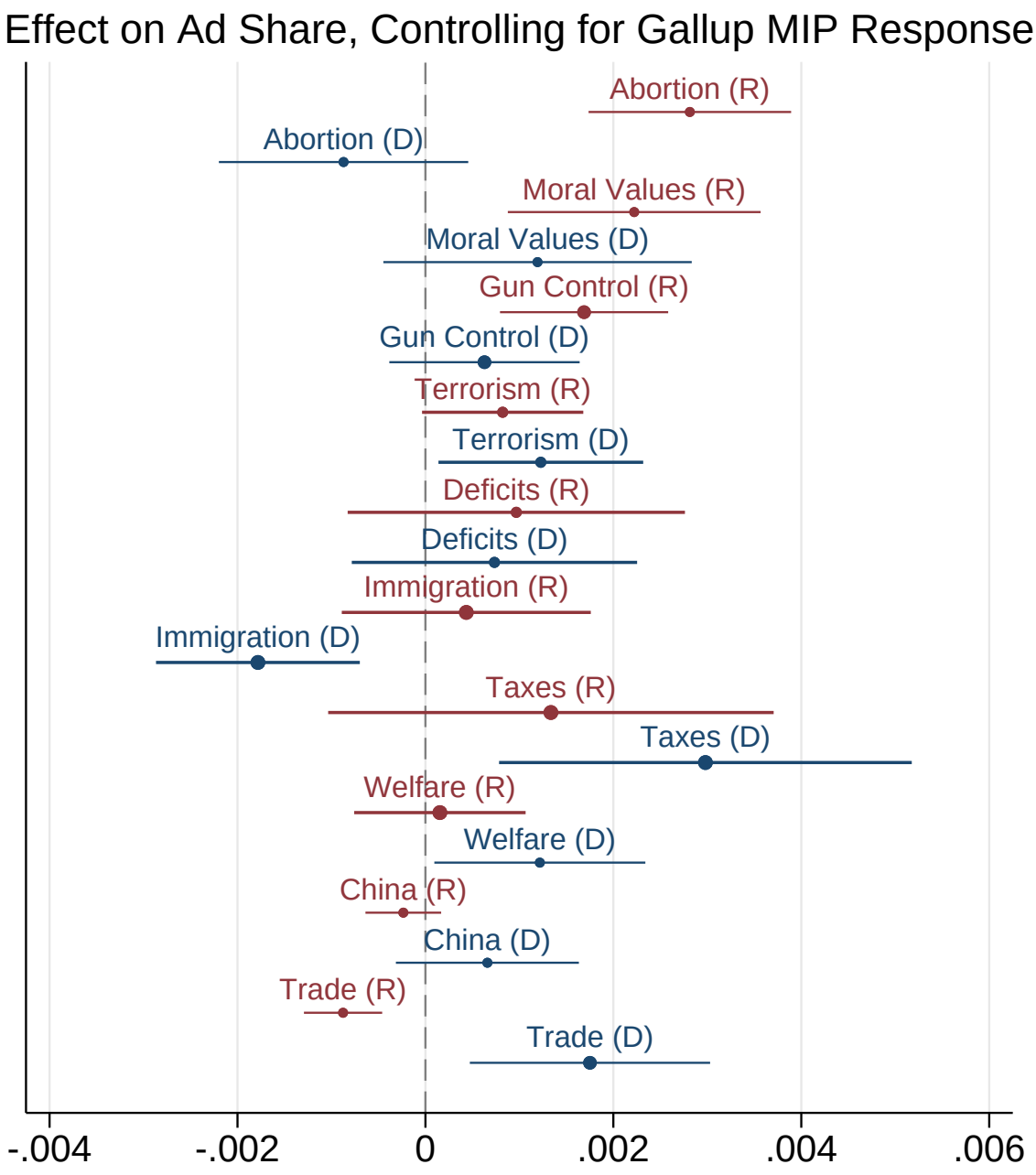
*Notes.* This table shows summary statistics on the Most Important Problem responses, by party.

Figure B.17: China Shock Effect on MIP Responses, 2008-2018




*Notes.* This figure shows the effect of the China shock on the proportion of Republican and Democrat respondents who say the respective issue is the most important problem. Order of issues taken from Figure 3.

Figure B.18: China Shock Effect on Ad Issue Shares, controlling for MIP




*Notes.* This figure shows a coefficient plot from the main reduced-form regression of advertising shares by party on the China shock instrument, for the elections from 2008 to 2018. Includes controls for the MIP response for the associated issue, interacted with year fixed effects. Red series is for Republicans, while blue is for Democrats. Error spikes give 95% confidence intervals. Order of coefficients taken from Figure 3.

## B.3 Complementarity of Identity and Worldview Messages

We produce a new dataset of advertising content outcomes, based on the *joint* appearance of issues within the same ad. Now, we have an outcome $Y_{czmt}^{klp}$ as the share of ads by party $p$ that are about *both* issue $k$ and issue $l$, in media market $m$ at election period $t$. Excluding issue pairs that never appear together, the resulting dataset has 435 outcomes.

We then regress each joint share variable on the China instrument, following the same regression approach as above. With 435 outcomes and two political parties, we have 870 regression estimates for the baseline specification. We focus on a selection of results to make the central points.

Figure B.19 reports regression coefficients from the joint issue regressions for the selected issues, plus (un)employment. Each cell of the matrix shows the reduced-form coefficient for the joint issue indicated by the row and column. The issues are ordered roughly from those related to interests/worldview, to those related to values/identity. The matrix shows our evidence on how China shock affects joint mentions of issue pairs.

Panel A shows the results for Republicans. The visually striking feature of this table is the block of red at the top-right of the matrix, corresponding to the most worldview-oriented issues by row and the most identity-based issues by column. In response to the China shock, there are more ads that mix together worldview-oriented issues (such as employment, taxes and deficits) and identity-oriented issues (such as abortion and moral values). These results are consistent with the model's propositions about a complementarity between worldview and identity modes of meme production. Table B.20 shows the same estimates but with standard errors, indicating that they are statistically significant.

Figure B.19 Panel B shows the corresponding estimates for Democrats. The joint estimates look quite different, with an increase in ads connecting employment and trade, but not employment and moral values or abortion.

Figure B.19: Complementarity: China Shock Effect on Joint Issue Mentions

A. Republicans

| | Taxes | Deficits | Immigration | Trade | Obamacare | Terrorism | LGBTQ | Moral Values | Abortion |
|---|---|---|---|---|---|---|---|---|---|
| Employment | 0.0845 | 0.0325 | 0.0049 | -0.0287 | 0.0071 | 0.0125 | 0.0043 | 0.0499 | 0.0382 |
| Taxes | | -0.0386 | 0.0128 | -0.0128 | 0.0185 | -0.0038 | 0.0042 | 0.0191 | 0.0367 |
| Deficits | | | 0.0143 | -0.0057 | 0.0307 | 0.0128 | 0.0075 | 0.0117 | 0.0502 |
| Immigration | | | | -0.0168 | 0.0285 | 0.0118 | 0.0004 | 0.0234 | 0.0229 |
| Trade | | | | | 0.0010 | -0.0016 | 0.0000 | 0.0033 | 0.0011 |
| Obamacare | | | | | | 0.0135 | 0.0017 | 0.0031 | 0.0156 |
| Terrorism | | | | | | | 0.0004 | -0.0009 | 0.0084 |
| LGBTQ | | | | | | | | 0.0096 | 0.0133 |
| Moral Values | | | | | | | | | 0.0344 |

B. Democrats

| | Taxes | Deficits | Trade | Immigration | Obamacare | Terrorism | LGBTQ | Moral Values | Abortion |
|---|---|---|---|---|---|---|---|---|---|
| Employment | 0.176 | 0.0597 | 0.1060 | -0.0144 | -0.0002 | -0.0041 | 0.0020 | 0.0080 | 0.0073 |
| Taxes | | 0.0810 | 0.0530 | 0.0025 | -0.0016 | 0.0025 | 0.0028 | 0.0298 | 0.0205 |
| Deficits | | | 0.0323 | 0.0018 | 0.0003 | 0.0029 | -0.0008 | 0.0319 | 0.0188 |
| Trade | | | | 0.0015 | -0.0014 | -0.0013 | 0.0000 | 0.0206 | 0.0083 |
| Immigration | | | | | -0.0012 | -0.0006 | -0.0008 | -0.0106 | 0.0004 |
| Obamacare | | | | | | 0.0001 | -0.0001 | 0.0010 | -0.0011 |
| Terrorism | | | | | | | 0.0000 | 0.0120 | 0.0003 |
| LGBTQ | | | | | | | | 0.0113 | 0.0056 |
| Moral Values | | | | | | | | | -0.0174 |

*Notes.* Each cell in the matrix reports the reduced-form coefficient from regressing the indicated joint issue outcome (share of ads mentioning both the row issue and the column issue) on the China shock instrument for Republican ads (Panel A) and Democrat ads (Panel B). Colors indicate coefficient size, with saturated for positive and gray for negative.

Figure B.20: China Shock Effect on Joint Issue Mentions (with SEs)

| | Taxes | Deficits | Trade | Immigration | Obamacare | Terrorism | LGBTQ | Moral Values | Abortion |
|---|---|---|---|---|---|---|---|---|---|
| **Employment** | 0.0845<br>(0.0264) | 0.0325<br>(0.0204) | -0.0287<br>(0.0066) | 0.0049<br>(0.0051) | 0.0071<br>(0.0043) | 0.0125<br>(0.0030) | 0.0043<br>(0.0013) | 0.0499<br>(0.0125) | 0.0382<br>(0.0056) |
| **Taxes** | | -0.0386<br>(0.0311) | -0.0128<br>(0.0038) | 0.0128<br>(0.0064) | 0.0185<br>(0.0058) | -0.0038<br>(0.0026) | 0.0042<br>(0.0030) | 0.0191<br>(0.0076) | 0.0367<br>(0.0088) |
| **Deficits** | | | -0.0057<br>(0.0030) | 0.0143<br>(0.0053) | 0.0307<br>(0.0096) | 0.0128<br>(0.0035) | 0.0075<br>(0.0018) | 0.0117<br>(0.0069) | 0.0502<br>(0.0097) |
| **Trade** | | | | -0.0168<br>(0.0043) | 0.0010<br>(0.0005) | -0.0016<br>(0.0008) | 0.0000<br>(0.0000) | 0.0033<br>(0.0013) | 0.0011<br>(0.0014) |
| **Immigration** | | | | | 0.0285<br>(0.0049) | 0.0118<br>(0.0047) | 0.0004<br>(0.0008) | 0.0234<br>(0.0046) | 0.0229<br>(0.0047) |
| **Obamacare** | | | | | | 0.0135<br>(0.0026) | 0.0017<br>(0.0005) | 0.0031<br>(0.0021) | 0.0156<br>(0.0034) |
| **Terrorism** | | | | | | | 0.0003<br>(0.0006) | -0.0009<br>(0.0069) | 0.0084<br>(0.0023) |
| **LGBTQ** | | | | | | | | 0.0096<br>(0.0028) | 0.0133<br>(0.0037) |
| **Moral Values** | | | | | | | | | 0.0344<br>(0.0086) |

*Notes.* Each cell in this figure reports the reduced-form coefficient from regressing the indicated joint issue outcome (share of ads mentioning both the row issue and the column issue) on the China shock instrument. Includes Republican Ads.