The Political Economy of Subsidy-Giving

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Abstract

Why is subsidy-giving such a popular economic development strategy? I estimate the political benefit of subsidy-giving by combining hand-collected subsidy data, county level election returns, and a new survey of voters in states with recent subsidy deals. I find that the incumbent governor's vote share increases by 2 to 3 percentage points in subsidy-winning counties. Surprisingly, the vote share effect is not correlated with the number of jobs promised at the subsidized establishment. In fact, the effect is only present for deals with news coverage, and the effect is largest when the subsidy is announced during the election year, which means that the governor accrues political benefit before any jobs are created. I provide suggestive evidence that career concerned governors prefer subsidy-giving to more effective job creation policies because of the positive media coverage of these subsidy deals.

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1 Introduction

Local governments regularly offer subsidies to firms – over 75% of total local economic development spending goes to tax credits, tax breaks and subsidies to attract or retain businesses (Bartik, 2019). The size of these subsidies are often debated in policy circles, as the cost per job created is high and the effects on the local economy are uncertain.[1] Moreover, a lack of transparency in the subsidy-setting process raises concerns that subsidies are allocated, in part, for political reasons.

In fact, governors who can run for re-election are more likely to win a subsidy competition and offer larger subsidy deals than their term-limited peers (Table 1). The existence of a political cycle for subsidy-giving suggests that governors anticipate an electoral benefit to winning a subsidy competition for a given firm. Re-election may give governors an incentive to act in the voters' interest and put in more effort to create jobs (Besley and Case, 1995; Poterba, 1994). Alternatively, it may be that subsidy-giving is popular with voters, but not necessarily effective in improving the local economy and creating jobs. In this case, politicians use subsidies to pander to voters, which may crowd out other, more cost effective, job creation strategies.

The question remains whether, and how, subsidy-giving helps incumbent politicians win elections. In this paper I estimate the effect of subsidy-giving on incumbent vote share in the subsidized locality, and explore the mechanisms by which subsidy-giving confers political benefits. I then show that, although incumbent governors are more likely to increase subsidy spending when they face re-election, they are no more likely to increase spending on other, higher benefit-cost, job creation programs.

A lack of detailed data on subsidy-giving has prevented researchers from quantifying the role of politics and the efficiency of the policy more broadly. I hand collect a data set of large discretionary subsidy deals from 2002 to 2017 to fill this gap. For each deal, I have details on the firm receiving the subsidy, its location, the size of the incentive, and the alternative site considered. For example, in 2002 Hyundai received a subsidy worth over $200 million to build their automobile assembly plant in Montgomery County, Alabama. Hyundai promised to create 2,000 jobs at the plant, and had also been considering a site in Kentucky. I pair this subsidy deal data with county-level election returns from Leip (2018) to compare the change in support for incumbent governors in subsidy-winning counties with similar counties in the same state, in a differences-in-differences analysis. I find that support for the incumbent governor increases by 2 to 3 percentage points in subsidy-winning counties. This effect translates to an increase of up to 5,000 votes for the incumbent, which can be an economically significant effect in a tight election. In fact, 2002 was an election year in Alabama, and despite

[1] See, for example, the New York Times "A $2 Billion Question: Did New York and Virginia Overpay for Amazon" in 2018, and "As Companies Seek Tax Deals, Governments Pay High Price" in 2012 (found at `https://www.nytimes.com/2018/11/13/business/economy/amazon-hq2-va-long-island-city-incentives.html` and `https://www.nytimes.com/2012/12/02/us/how-local-taxpayers-bankroll-corporations.html` respectively).

the subsidy for Hyundai, Governor Siegelman lost the election by 3,000 votes.

Given that governors who run for re-election are also willing to pay more for firms than their term-limited counterparts, a back of the envelope calculation implies a cost per vote of about $770. This is at least twice as large as cost per vote estimates in the literature (Bombardini and Trebbi, 2011; Levitt, 1994). However, the literature focuses on cost per vote of campaign spending, and in this the case the governor gains votes from spending the state budget, not their own funds. Surprisingly, I do not find that these votes gained are due to the jobs created or the realized economic impact in the winning county. Instead, I find that it is the salience of the subsidy deal that drives the effect. Positive news coverage of the firm's arrival creates a political benefit for the incumbent before any jobs are realized.

The difference-in-differences empirical strategy allows me to compare subsidy-winning counties to similar counties in the same election, while controlling for the governor's unobserved type. The identifying assumption is that support for the incumbent governor would have continued to move in parallel in treatment and control counties in the absence of a subsidy deal win. This assumption would be violated if the location choice of the subsidized firm is endogenous – governors subsidize firms to locate in counties with the most marginal voters. However, anecdotal evidence suggests that the governor has very little influence on where a firm locates within the state. Also, counties with differential voter turn-out or party affiliation are not more likely to be the locations for subsidy deals.

The second identification challenge is the choice of an appropriate control group. I use the runner-up locations for similar subsidy competitions. For example, take the Hyundai subsidy deal in Montgomery County, Alabama. In 2000, during the same term, Governor Siegelman competed to attract a Nissan plant to a site in Lee County. In the end, Nissan decided to build it's plant in Mississippi. Therefore, Lee County would be the control county for Montgomery. Runner-up counties are attractive because they were chosen by firms as viable plant location, the governor put in effort to compete for a firm in this location, and the locations are similar to winning counties on observables.

However, it may be that the runner-up counties are more or less likely to support the incumbent due to this failed effort to attract a firm. I show that this is not the case with empirical evidence from states that do not win any subsidy competitions, and survey evidence that shows that voters generally know very little about the runner-up "status" of their location. The survey evidence comes from an original survey I conduct of voters in five states with recent subsidy deals. The voters are given a quiz about the recent subsidy deal which asks about the identity of the firm, the size of the incentive, and the number of jobs promised at the new subsidized establishment. Outside of the subsidized county, voters know very little about the impending arrival of a subsidized firm, suggesting that other counties in the same state are unlikely to be treated. Therefore, I can assume there is no effect of the subsidy outside of the commuting zone where the subsidized firm is located,

and use my estimates to calculate the aggregate effect of subsidy-giving, as well as the cost per vote.

Given the baseline estimates of subsidy winning on vote share, I move to the mechanism. Why are voters in subsidy-winning counties more likely to support the incumbent? It may be that the subsidy, by attracting a new firm, creates jobs and improves local economic outcomes for residents, thereby generating incumbent votes. I will call this the "direct effect" of subsidy-giving. Voters may also anticipate the job creation and economic growth from the subsidy deal and recognize that the governor is making an effort to improve economic outcomes in the local area. In this case, voters do not need to have been hired or experienced any economic benefit from the firm's arrival, but they are aware of the impending arrival of the firm due to local news coverage (77% of survey respondents report learning about the subsidy via local news or social media). I will call this the "salience effect."

I use variation in the timing of subsidy deals within the governor's term to test these two hypotheses. The "direct effect" suggests the effect should be larger for subsidy-giving earlier in the term, because this gives time for the firm to arrive and start hiring, improving local economic outcomes. The "salience effect" suggests the effect should be largest for more recent announcements of subsidy deals, which are the most salient to voters, due to their recent memory of media coverage. I find that subsidy deals announced in the start of the term have about one half of the effect of a subsidy announced in the election year, at 1.8 and 3.6 percentage points respectively. Due to the lag between a subsidy announcement and a firm's arrival, the large effect in the election year means that the governor can accrue political benefit before any jobs are actually created. Additionally, the number of jobs promised at the subsidized establishment is not correlated with the change in vote share. These results suggest that the mechanism by which subsidy-giving increases incumbent vote share is the anticipated economic effect rather than a realized improvement in economic outcomes.[2,3]

In order to understand how subsidy-giving could increase the support for the incumbent before the firm even arrives in the state, it is important to understand how local newspapers cover these subsidy deals. Take the case of Caterpillar, a machinery and equipment manufacturer that, in 2012, received a subsidy of about $70 million to build tractors in Oconee, Georgia. The *Atlanta Journal-Constitution* headline on the subsidy read: "Landing Caterpillar plant a major economic victory for Georgia," citing the job creation, revenue, and spillover estimates given by the firm and the state economic development agency (Diamond, 2012). In the same year, the *Charleston Daily Mail* highlights the benefit of possibly winning a Shell plant with the story:

[2]I am not claiming that subsidy deals announced earlier in the term are less salient, but due to memory decay the most recent deals should have the largest effect on the election, all else equal. Angelucci and Prat (2020) measure voters' knowledge of recent news and find that each months passing decreases the probability of knowing a news story by 3-4 percentage points.

[3]One explanation for the large effect of the election year subsidy deals is that these firms and deals are different from subsidies announced in non-election years. However, I find that subsidy deals announced in election years are indistinguishable from non-election year subsidies in terms of jobs promised, investment planned, and subsidy size. In fact, estimates on firm-specific spillovers from Slattery and Zidar (2020) suggest that election-year subsidies have slightly smaller spillovers than deals announced earlier in the term. See Appendix Figure E.1.

"States still hoping to land ethane cracker: Construction of Shell plant in Marcellus Shale will bring hundreds of direct, indirect jobs" (Junkins, 2012). These articles tend to focus on the expected benefit of the firm arrival, the job creation, instead of the potential costs. This is consistent with the survey, which finds that voters are twice as likely to know the jobs promised than the incentive size.

The extensive media coverage of the benefits, but not the costs, of these deals causes them to potentially be much more popular, and thus politically beneficial, than other types of economic development strategies. In fact, using data from ProQuest on the newspaper coverage of each subsidy deal, I find that deals with very little news coverage have no effect on incumbent vote share. Moreover, a sentiment analysis of the article text shows that deals with more positive coverage have larger vote share effects – going from "neutral" coverage to one of positive covered deals in the sample is associated with an additional 0.4 percentage point (17%) increase in vote share. The sentiment analysis and a comparison of the words mentioning costs and benefits in each article aligns with the survey results – voters learn about subsidy deals from the local news, which is generally positive about the deal, and is more likely to mention the benefit of attracting the firm than the cost. Subsidy-giving is a prime candidate for pandering; the benefits are clear but the costs are not.

Lastly, I discuss the implications of my results on other policy decisions of the governor. Should we be worried that this political benefit is distorting the policy choice of a governor? While the election provides an incentive for the governor to put in more effort to create jobs, the positive coverage of large subsidy deals may create an incentive for the governor to prefer subsidy-giving to less salient but more cost-effective job creation efforts, or other public spending. I find that while incumbent governors are more likely to increase subsidy spending before elections, they are no more likely to increase other, higher MVPF, job creation policies (Hendren and Sprung-Keyser, 2020; Bartik, 2019). In fact, there is a negative correlation between the benefit-cost estimates of Bartik (2019) and the probability the governor enacts the policy in the term leading to their election. This suggests that the political benefit of subsidy-giving, which can occur in the absence of any direct economic benefits, may be distorting the policy choice of governors with career concerns.

In a case study, I compare the news coverage of a high benefit-cost policy, small business funding, with the average coverage of a subsidy deal in my sample. Small business funding programs receive less news coverage, and less positive news coverage, than the subsidy deals in my sample. Future work should explicitly consider the governor's trade-off between subsidy-giving and other types of public spending.

Related Literature

The political economy literature has established that politicians with career concerns behave differently than their term-limited counterparts (Barro, 1973). This has been shown to result in a political budget cycle– politicians looking forward to elections are more likely to lower taxes and increase spending (Besley and Case,

1995; Poterba, 1994; Foremny and Riedel, 2014; Alesina and Paradisi, 2017). The policy of interest in this paper, subsidy-giving, is targeted at an individual firm, and therefore the benefits are concentrated to residents in the area surrounding the new establishment. In this way, it is akin to "pork barrel spending", although I will show that the governor does not have much influence of where to distribute the "pork."[4] More broadly, the relationship between firms and government, and the potential for "quid pro quo", is a focus of a rich literature.[5]

Huet-Vaughn (2019) also studies the effect of public spending on the support for an incumbent politician. In his setting the public spending is the infrastructure investment resulting from the American Recovery and Reinvestment Act, and the incumbent politician is President Obama. He finds that in New Jersey, areas that are closer to the public investment projects are more likely to support Obama in the next election. Similarly to the findings in this paper, the results suggest that the mechanism is the salience of the project, which operates through large signage attributing the project to the federal government.

Bartik (2019) discusses the political popularity of discretionary incentives, Kim (2020) estimates substantial political payoffs to politicians attracting firms from across the border in Kansas City, and Jensen and Malesky (2018) provide extensive survey evidence that voters in the United States would be more likely to vote for a governor who uses incentives to attract investment, even if the governor was not successful at attracting the investment. This paper contributes to this growing literature by quantifying the political benefit of subsidy-giving, where the benefit is measured by the votes gained in the subsidized locale.[6]

De Simone, Lester and Raghunandan (2019) study the benefits of targeted tax breaks and subsidies, and find that the aggregate employment and wage effects of these tax breaks are positively associated with counties that have less information about subsidy-giving, and less local news coverage. This relationship between media and subsidy-giving is counter-intuitive, as much of the literature suggests that media play an important role in keeping politicians accountable (Strömberg, 2004; Ferraz and Finan, 2008; Besley and Burgess, 2002). One might expect that areas with a higher supply of local news has better performing subsidies. However, just as changes in the market for news affect political outcomes (Snyder and Strömberg, 2010; Gentzkow, Shapiro and Sinkinson, 2011; Drago, Nannicini and Sobbrio, 2014; Prat and Strömberg, 2013), all of the evidence on the mechanism in this paper suggests that it is the local news coverage of subsidy-giving that affects the political outcomes of incumbents.

[4] See Drazen and Eslava (2006) for more on the intersection of the political budget cycle and pork barrel spending, or, the "pork barrel cycle."

[5] See, to start, Grossman and Helpman (2002) and Bombardini and Trebbi (2020). Examples from finance include Claessens, Feyen and Laeven (2008), Cooper, Gulen and Ovtchinnikov (2010), and Goldman, Rocholl and So (2009).

[6] Aobdia, Koester and Petacchi (2021) specifically study the link between subsidized firms and campaign contributions, and find that subsidized firms are more likely to have given campaign contributions to state politicians. I find no evidence of a link between campaign contributions and subsidy-giving (Appendix D). However, the difference in subsidy samples may be important here, and, given all of the recent work on the non-contribution tools firms have to exert influence (Bertrand, Bombardini, Fisman and Trebbi, 2020), this is a rich area for further work.

2 Background on Subsidy-Giving in the U.S.

In this section I will provide institutional details on subsidy competition in the United States through the lens of one subsidy deal in my data. This will illustrate the subsidy competition process and highlight the potential political considerations and mechanisms at play.

2.1 Alabama wins Hyundai (2002)

> *I'm trying to teach people it's pronounced 'Hyundai' like 'Sunday,' but however you say it, it means thousands and thousands of new jobs.* Governor Don Siegelman (Niesse, 2002)

On the evening of April 1st, 2002, Governor Don Siegelman announced that Hyundai had chosen a site in Montgomery County, Alabama for its new automobile assembly plant. The company planned to invest $1 billion in the plant, hire 2,000 workers, and pay the workers an average annual salary of about $40,000.

The Competition and the Deal

The subsidy deal was the result of months of negotiations between Alabama and the car manufacturer. Hyundai had started with a longer list of potential locations, and after some research assembled a shortlist with the site in Alabama and competing sites in Kentucky, Mississippi, and Ohio. The states on the shortlist started to put together incentive offers, but in February Mississippi and Ohio were dropped from consideration, and competition intensified between Alabama and Kentucky. The negotiations over the incentive packages continued for months, and when the deal was finalized Alabama had put together an incentive package worth about $230 million over 10 years (Lyne, 2002).

Alabama's final subsidy offer for Hyundai was a function of state and local tax credits on corporate income, property, and sales taxes, improvements to the site, and worker training. Kentucky offered at least $123 million in state tax incentives and $30 million in site improvements, but the proposed local incentives were not released to the public. Alabama's team considered not only the 2,000 jobs promised at the plant when determining how much the state would be willing to offer the manufacturer, but other benefits such as increased property values and indirect jobs at suppliers.[7]

[7] Governor Siegelman predicted that Hyundai would have a major economic impact throughout the region, saying: "I think we'll see a cluster of suppliers locating in counties inside that 100-mile radius. ... This gives the families of Alabama a real hope for a better quality of life" (Johnson, 2002).

The Media Coverage

The morning after the announcement the front page of the local newspaper read: "HYUNDAI PICKS MONTGOMERY." This paper, the *Montgomery Advertiser*, ran a multiple page special report about the firm's decision (Figure 1, Appendix Figure H.1). The stories about Hyundai included details about Hyundai's plans, details about the incentive package, coverage on the competition between Alabama and Kentucky, and the involvement of state, city, and county officials. The *Advertiser* also highlighted benefits beyond the promised jobs, including an expected increase in property values for local residents and the windfall for farmers with land at the proposed site.[8]

Figure 1: Local News Coverage of the Hyundai Deal


Three's a crowd in Montgomery County sheriff's race 1B

Montgomery Advertiser

SPECIAL REPORT

HYUNDAI PICKS MONTGOMERY

Coup for city: Montgomery wins $1 billion plant over Glendale, Ky.

2,000 jobs: Hyundai expects plant to begin production in 2005

State's 4th: Hyundai will join Mercedes, Honda and Toyota

Plans dazzle family

Choice ends long fight

Residents applaud Alabama's Hyundai pitch

Israel pushes onward

Maryland wins NCAA

Bar offers breath of fresh air 1D

Notes: This figure is the front page of the *Montgomery Advertiser* on April 2, 2002 (Montgomery, Alabama, 2002). The *Montgomery Advertiser* is a daily newspaper founded in 1829 and headquartered in Montgomery, Alabama. It has the 5th highest circulation of daily newspapers in Alabama (Cision Media Research, 2016).

The coverage continued the next day (Appendix Figure H.1), with another front page story: "Alabama hustles for Hyundai," followed by multiple pages with more details on incentives, the types of jobs Hyundai planned to hire, and predictions about the entry of suppliers to the automobile plant. Headlines read: "Work:

[8]Given the size of the firms in my sample, there is often media coverage throughout the negotiation process, even before the firm has made a decision. Once the deal is finalized the governor will often hold a press conference, or have a ribbon cutting at the site, and this will be covered extensively, as was the case with Hyundai in the *Montgomery Advertiser*.

Facility will begin production in 2005," "Jobs: Rural counties in particular need economic boost," "Parts suppliers expected to change rural economy," and, on the political ramifications of the deal: "Teamwork deserves the credit." This last article lists almost 30 groups that were said to have played critical roles in landing the car plant, ranging from the governor, Don Siegelman, and the state senators, congressmen and legislators, to the state power and gas authorities, and the presidents of the University of Alabama and Auburn University.

The Role of the Governor

The question of who gets "credit" for attracting a firm and creating jobs is central to this paper. In this case, as is typical with the majority of the large incentive deals in the U.S., it is Governor Siegelman who is attributed with attracting Hyundai to Alabama. This is clear from yet another special report on the Hyundai deal in the *Montgomery Advertiser*, covering the groundbreaking ceremony two and a half weeks after the announcement (Appendix Figure H.2). Governor Siegelman is pictured multiple times and is the only Alabama representative on the stage with the President and Chairman of Hyundai.

As soon as there are discretionary incentives involved, i.e. tax credits or other funds that a typical new firm in the state would not expect to receive because it is not part of the tax code or the economic development program, the governor has the ability to determine how much effort he or she wants to make, and is able to approve or deny additional funds. If the governor has their own discretionary fund—a pool of money that they can use to sweeten the deal for firms—then they can do this without any approval from the state legislature.[9] However, if the funds are not already available in the budget, or the tax credit legislation has to be changed for the specific firm, the governor will need to call the legislature into special session and get the incentive bill approved. This was the case with Hyundai. The governor is also usually the face of the state negotiating team, holding meetings with the executives and giving them site tours and hosting dinners.

2.2 Subsidy Competition and Pandering

This section started with a description of how Hyundai contacted the governor of Alabama, but also, those in Kentucky, Mississippi, and Ohio, to let them know that the car manufacturer was interested in locating at a specific site in their state. This spurred a competition for the new assembly plant, with the states as the bidders.

Hyundai's problem is simple, it will locate in the state that gives the highest payoff, which is a function of how profitable the manufacturer will be in that state and the subsidy offer. This competition approximates an English Auction: states will bid, with subsidies, up to their willingness to pay for the plant. The winner then will pay the subsidy that makes Hyundai indifferent between locating in the winning and runner-up location,

[9] These type of funds are usually called "Deal Closing Funds," but the name and structure can vary across states.

as the runner-up will drop out when they reach their willingness to pay.[10]

Therefore, the governor's problem, when contacted by Hyundai, is to determine their willingness to pay for winning Hyundai to the proposed site. Suppose the net benefit to the state is B. I will define the willingness to pay of the state as:

$$WTP_{state} = B.$$

However, the willingness to pay of the governor may diverge from that of the state. If the governor is career-concerned, as was Don Siegelman in Alabama, they might also care about the electoral effect of winning the firm. Call the electoral effect E. I will define the willingness to pay of the career-concerned governor as:

$$WTP_{gov} = B + E.$$

If subsidy-giving is a popular policy, i.e. $E > 0$, then the willingness to pay of the governor will be greater than the willingness to pay of the state.[11] If the state with the career concerned governor wins the subsidy competition the size of the subsidy may be larger than B, the net benefit to the state.

If voters were perfectly knowledgeable about both B and the size of the subsidy it would be difficult to believe that the electoral effect would be positive – why would voters reward the governor for paying more than the state would benefit? However, evidence from the survey will show that while voters are aware of potential benefits, they know very little about the subsidy costs. Furthermore, the benefits are concentrated in one location and costs, borne in the future, will be spread across the state. Both of these factors would allow for governors to offer incentives larger than expected benefits and still garner electoral support. Here, the politician and the voter do agree on the benefits of the policy, but they have differing information on the cost (Ashworth, 2012; Canes-Wrone, Herron and Shotts, 2001). This results in the politican overpaying for a policy that is popular, against the interest of the voter.

I will take the rest of the paper to estimate this electoral effect, E. I first introduce my estimation strategy using the Hyundai example.

Hyundai and the 2002 Election

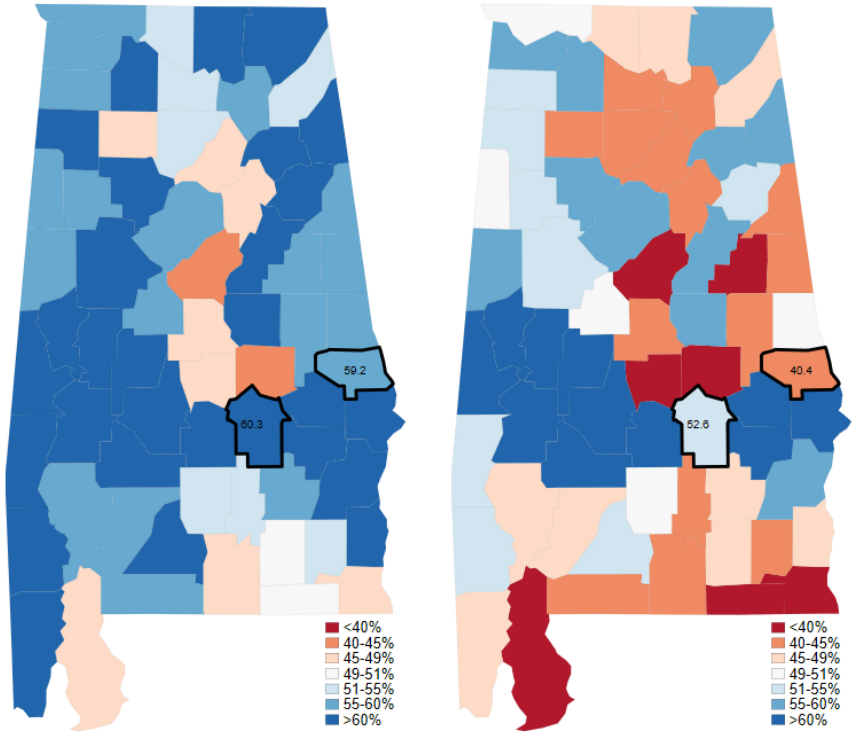
As it happens, 2002 was an election year in Alabama. Understanding whether and why attracting a firm will help a governor win re-election is the goal of this paper, widening the pool to not only include Hyundai and Siegelman but all of the subsidy deals and state governor elections from 2002 to 2018.

[10] See Slattery (2020) for more details on using the English Auction to approximate a subsidy competition.

[11] Biglaiser and Mezzetti (1997) provide a model of politicians' policy decisions under re-election concerns. Their main result is that the politician's willingness-to-pay for a project is different from voters' willingness-to-pay. They apply this analysis to bidding wars for firms.

To give a brief preview of how this analysis will proceed, I will start by comparing the vote shares for the incumbent in subsidy-winning counties and non-subsidy winning counties in the state, before and after the subsidy deal. Therefore, the governor is held constant in both the pre and post periods, but faces two different competitors. Figure 2 shows this for the case of Alabama. In 1998 Siegelman faced the incumbent governor, Republican Fob James, and won handily, with 57.9% of the total vote (Panel (a)). In 2002 (Panel (b)) Siegelman faced off with U.S. Rep Bob Riley, whose district borders Montgomery County. This was a very tight, and controversial, race, with Bob Riley winning by only 3,000 votes (0.23% of the votes cast).[12]

Figure 2: Two Elections for Don Siegelman



(a) Siegelman vs. James (1998) (b) Siegelman vs. Riley (2002)

Notes: These maps of Alabama show the vote share won by Don Siegelman in his two elections for governor, in 1998 (Panel (a)) and 2002 (Panel (b)). The two outlined counties are Montgomery and Lee, where Hyundai and Nissan, respectively, were offered subsidies to locate. Hyundai chose Montgomery, while Nissan did not locate in Alabama, and instead put their plant in Mississippi. These maps provide an introduction to the empirical strategy. I will compare the change in vote share for a single governor (e.g. Siegelman), in treated counties (Montgomery), with the change in vote share in control counties (Lee). Election data is from the Election Atlas (Leip, 2018).

These maps also provide an introduction to my empirical strategy. The two outlined counties are Montgomery and Lee County. Hyundai received a subsidy to locate in Montgomery, while Lee County, to the west

[12]Siegelman was initially declared the winner, but the call was overturned after a recount in a single county that reassigned thousants of Siegelman votes to Riley. After this controversy the state amended the election rules to mandate supervised recounts in close races (Sharp, 2020). This event happened in Magnolia Springs, which is in Baldwin County, 3 hours southwest of Montgomery.

of the state, was in a competition to win a Nissan plant in 2000, but was beat out to a site in Canton, Mississippi.[13] The labels show the vote shares for Siegelman in these counties, and in the surrounding area. I will compare the change in vote share for a single governor (e.g. Siegelman), in treated counties (Montgomery), with the change in vote share in control counties (Lee).

Governor Siegelman lost 7.6 percentage points in Montgomery between 1998 and 2002. Meanwhile, in Lee County, Siegelman lost 18.8 percentage points in vote share. A concern may be that the runner-up location is less likely to support the governor because the subsidy was lost. This would lead me to overestimate the effect on vote share. However, there is very little news coverage of losing subsidy locations, suggesting that voters in runner-up counties do not know their "runner-up status".[14]

In Section 5 I will take this analysis to all the subsidy deals in the data. First, I introduce the subsidy data.

3 Data and Survey Evidence

3.1 Data on Subsidy Deals

I have detailed data on just under 400 subsidy deals, from 2002 to 2017. The data include the name of the subsidized firm, the type of establishment, the winning and runner-up location in the subsidy competition, the size of the incentive promised by the winning location, and the number of jobs and investment planned by the subsidized establishment. The average subsidy deal is valued at about $164 million over 10 years, for a firm promising 1,500 jobs and an investment of $840 million. Appendix A describes the data collection process and presents descriptive statistics for the firm-level subsidy data, by sector.

The Hyundai deal in 2002 was actually quite standard for the industry; Hyundai received $234 million for a promise of 2,000 jobs and $1 billion in investment, while the average auto manufacturer in the sample receives $243 million for a promise of 2,600 jobs and $980 million in investment. Although manufacturing and utilities make up almost 60% of all deals, and 75% of the total subsidy spending, trade and services firms also receive subsidies over this period. This includes headquarters and offices for finance and insurance, labs for scientific research firms, and warehouses and distribution centers for companies like Amazon and Fedex.

Governors who can run for re-election spend more on subsidies, all else equal. In fact, Table 1 shows that being able to run for re-election is correlated with a 20% increase in subsidy size – the same increase one would expect from 1,000 additional jobs at the subsidized establishment. Governors who can run for

[13] Nissan planned to create 4,000 jobs and invest $950 million at the plant in Mississippi. The automobile manufacturer received an reported $295 million in incentives from the state, but later accounts report a larger subsidy size.

[14] In this case, a search of ProQuest for newspaper articles with the words "Montgomery" and "Hyundai Plant" lead to 1,114 results, 272 in the local newspaper (the Advertiser). Meanwhile, the same search for Nissan in the runner-up location ("Opelika" and "Nissan Plant") lead to 13 results, 1 in the local newspaper.

Table 1: Term Limits and Subsidy Size

	log(subsidy ($M))			
Jobs promised (1,000)	0.20***	0.19***	0.19***	0.21***
	(0.04)	(0.03)	(0.04)	(0.04)
Investment planned ($B)		0.05**	0.05***	0.05***
		(0.02)	(0.02)	(0.01)
Unemployment rate (%)			0.06**	0.03
			(0.02)	(0.02)
Governor can run for re-election			0.24*	0.23*
			(0.11)	(0.11)
Observations	387	387	387	387
R-squared	0.09	0.18	0.20	0.29
Additional Controls				×

Notes: This table shows the correlation between subsidy size, subsidy deal characteristics, and the governor's career concerns. The analysis is at the subsidy deal level, where the dependent variable is the log subsidy value. The correlate of interest is whether or nor the governor is eligible to run in the next election. Deal characteristics include the number of jobs promised and investment planned by the firm. The fourth specification also includes the number of bidders in the subsidy competition, the party of the governor, and county level controls (average wages, personal income per capita, population, % urban, % with college degree). Sources include National Conference of State Legislatures (2019*b*) (term-limits, party affiliation), Bureau of Labor Statistics (1990-2017) (unemployment), Ruggles, Flood, Goeken, Grover, Meyer, Pacas and Sobek (2019) (population, % Urban, % BA), U.S. Bureau of Economic Analysis (1967-2017) (personal income per capita). Data on subsidy-giving collected by the author.

re-election are also more likely to give subsidies than their term-limited counterparts (Appendix Table A.3), which is consistent with previous work (Slattery, 2020; Slattery and Zidar, 2020).

3.2 Data on Elections of Incumbent Governors

I link the subsidy-giving behavior of governors to political outcomes. I use election outcomes from the "Election Atlas" (Leip, 2018). This includes county level votes for each candidate in gubernatorial elections from 1998 to 2018.

Over the sample period, 122 incumbent governors run for re-election. Table 2 presents descriptive statistics for these incumbent elections, broken out by subsidy-giving behavior. The distinction here is that subsidy deal winner governors have won at least one subsidy deal during their term, while runner-up governors have competed for firms with subsidy offers during their term, but have not been successful winning a firm. Lastly, the group of "neither" governor elections include all incumbents running for re-election that have not been observed winning or as the runner-up in any subsidy competition.[15] The table shows across all groups, incumbent governors win re-election by a wide margin. On average, incumbents win with a vote share of about 56.3% (the "Current Election" column), compared with a vote share of 54.6% in the last election. Over my sample period, only 16 incumbents (13%) lose their re-election bids.

[15]That is not to say necessarily that they did not compete, but they were not in the final two competitors for the firm.

Table 2: Incumbent Elections and Subsidy-Giving

		Vote Share (%)		Economic Vars (%)		Election Advertising	
Incumbent	N	Last	Current	Unemp	Δ Manuf Emp	% Jobs	$ per Vote
Subsidy Deal Winner	66	54.1	56.2	6.05	-0.89	46.1	8.98
Runner-up	23	56.5	57.4	4.91	-1.48	34.9	6.94
Neither	34	54.3	55.8	4.33	2.57	28.7	4.53

Notes: This table presents descriptive statistics for incumbent governor elections in subsidy-winning states, runner-up states, and all other states. Subsidy deal winner governors have won at least one subsidy deal during their term, runner-up governors have competed for firms with subsidy offers during their term, but have not been successful winning a firm, and "neither" governor elections include all other incumbents running for re-election that have not been observed winning or as the runner-up in any subsidy competition. The table lists the number of observations for each group, the vote share for the incumbent in their previous (labeled "last"), and current election (when they run as an incumbent). State economic variables are presented for the year of the current election, and include the state unemployment rate and the change in the state manufacturing employment. Election Advertising variables, again for the current election, include the percent of ads that mention job creation, and the advertising spending per vote. Sources for state election and economic variables are Leip (2018) (election results), Fowler and Ridout (2017); Goldstein and Rivlin (2005); Goldstein, Niebler, Neiheisel and Holleque (2011) (political advertising content and spending), Bureau of Labor Statistics (1990-2017) (unemployment), and County Business Patterns (1997-2017) (manufacturing employment). Data on subsidy winners and runner-ups collected by the author.

Table 2 also highlights some differences between subsidy-deal winning incumbents and their no subsidy peers. Subsidy deal winners face higher unemployment and declines of manufacturing when they are up for re-election, and they also run more campaign ads that focus on job creation. This is consistent with what we know from Table A.3, governors are more likely to give subsidies when the unemployment rate is higher. The subsidy winner elections are also characterized by higher spending, as measured by advertising spending per vote, suggesting more competitive elections. Runner-up governor elections also have higher unemployment and spending than the "neither" category.

These summary statistics highlight the difficulty in estimating the effect of subsidy-giving on the election of incumbent governors: subsidy-winning governors are not similar on observables to the potential control groups, and likely have many unobservable factors to governor type that would confound a strategy that compares subsidy-winners to the rest of the sample.[16] In Appendix C.2 I compare state level vote shares across incumbent races and find a weak positive correlation between subsidy-giving and support for the incumbent.[17] This correlation might be observed by all governors, and therefore could help to rationalize the difference in subsidy-giving behavior of incumbents with and without re-election concerns. However, by taking the analysis to the county level, I can estimate the causal effect of subsidy-giving on incumbent support.

[16]For example, if subsidy winning governors are more aggressive in subsidy competitions because they are more worried about the election and in more competitive elections, this would bias the results downward. Alternatively, if subsidy winning governors are governing in more attractive states to business, making it easier to attract firms and win subsidy competitions, voters may be happy with the governor because the state is attractive in general, not because of the subsidy, biasing the results upward.

[17]My state level results suggest a 1 percentage point increase in votes share. This translates to roughly 17,000 votes at the median. When I aggregate the county level results to the state I calculate an increase in about 15,000 votes (Section 5.1).

3.3 Survey Data on Voters

I supplement data on subsidy-giving and elections with a survey of voters across 5 states. The goal of the survey is to collect information about what voters know about subsidy-giving in their state. I am able to elicit this information with an incentivized quiz about a recent subsidy deal in the state. The survey also asks voters about how they learned about the subsidy deal, what they think about the subsidy deal, and what they know about other state economic development policies. The survey partner, YouGov, provides demographic information on each participant, therefore I also have data on the age, income, employment status, and education of each respondent, as well as their zip code.

The five states in the survey sample are Georgia, Kentucky, New York, Texas and Wisconsin. The subsidy deals in the survey sample are all for manufacturing firms. The subsidized establishments receive an average subsidy of $206 million, promise 1,680 jobs, and plan to invest $1.1 billion at the new plant. Therefore, the deals are comparable, if slightly larger, than the manufacturing subsidy deals in the data set. Appendix Table B.1 presents the details of each deal in the survey sample.

The survey sheds light on what voters know about subsidy-giving in their state. I will highlight a few stylized facts from the survey that motivate the econometric approach and provide evidence for the mechanism:

1. Voters only know basic details about subsidy deal if they live in the subsidized or neighboring counties. Figure 3(a) shows that about 50% of survey respondents in the subsidized county can correctly identify the name of the firm that is opening a plant in their location. This falls to just over 20% when the respondent lives outside of the subsidized location.[18]

2. Very few voters know the size of the incentive offered to the firm. Figure 3(b) shows that less than 5% of survey respondents in the subsidized county can correctly identify the name of the firm and the size of the incentive. This drops to 2% outside of the subsidized county. Voter knowledge of the number of jobs promised is much higher, at over 10% in the subsidized county and neighboring counties, and about 5% in the general population (Appendix Figure B.1).

3. Voters learn about subsidy deals from the local news. Table 3 shows that for the roughly 25% of the sample that correctly identified the name of the subsidized firm, 60% heard about the plans for the firm's arrival from the local news and 17% read about it on social media.

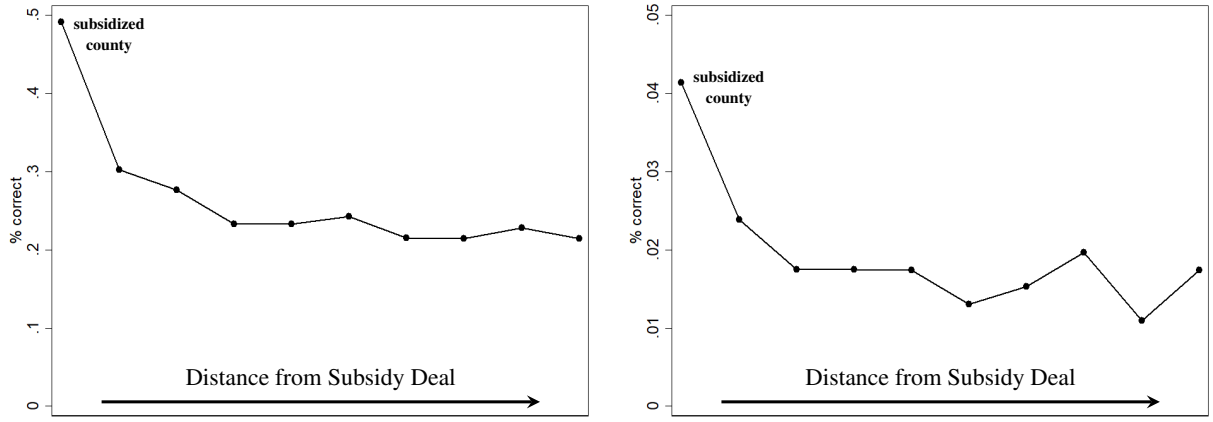
4. Voter sentiment about subsidy-giving is uniformly positive across the state. Almost 60% of respondents, regardless of location, answered the question "Do you think offering an incentive for [firm name] to

[18]The question about the firm name gives 4 choices of names and the option to respond "I am not sure." Therefore, a 20% correct response rate could be the result of guessing between the 4 options.

locate a [plant type] plant in [location] makes local residents better off?" affirmatively. Another 17% responded, "No, this does not make residents better off", while the remaining 26% were undecided.[19]

In order for subsidy-giving to have an effect on voter behavior one would expect voters to know about projects that are creating new jobs in the state. The survey confirms that this is the case, at least in the subsidized locale. The lack of voter knowledge about the subsidized project across the state suggests that the other counties in the state are not treated, and therefore the effect in the subsidized locale can be interpreted as the state level effect. Moreover, the fact that voters are much more knowledgeable about job creation than incentive size is consistent with the pandering framework discussed in Section 2.2 – voters recognize the benefit to subsidy-giving but not the cost. This finding, paired with the result that voters learn about subsidy deals from the local news, motivates further investigation into the role of salience and news coverage of subsidy-giving as a potential mechanism.

Figure 3: Voter Knowledge of Subsidy by Distance from Deal



(a) Voter correctly identifies subsidized firm

(b) Voter correctly identifies subsidy size

Notes: This figure shows how voter knowledge of the details of a recent subsidy deal changes with the voter distance from the deal. Distance is measured in deciles, in order to normalize across state geographies (recall the survey includes Texas, New York, Wisconsin, Georgia, and Kentucky). The two survey questions are multiple choice questions. The question about the identity of the firm (panel a) asks: "To the best of your knowledge, which of the following companies is building a [type of plant] in [location]?", and gives 4 choices of firm names, along with the choice "I am not sure." The question about subsidy size (panel b) asks "To the best of your knowledge, what was the value of the incentive offered to [firm name]?", and gives 5 choices with bins of a subsidy size, as well as "I am not sure." The question about the subsidy size is only asked to respondents who correctly identify the firm and correctly respond that the firm received any incentive. However, the figure shows the unconditional share of respondents that correctly answer the subsidy size question. For more information on the survey see Appendix B.

[19] Appendix Table F.1 shows correlates between respondent and location characteristics with support for subsidy-giving.

Table 3: How did you learn about [firm name]'s plans to locate in [state]?

	% of respondents
I heard about it on the local news or read about it in the newspaper.	60.29
I heard about it on social media.	17.14
I heard about it from a friend or family member.	10.14
I heard about it in a political campaign.	1.88
Other.	10.55
N = 1,074	

Notes: This table reports results on how voters learn about subsidy deals in their state. The survey question is: "How did you learn about [firm name]'s plans to locate in [state]?" Only respondents that correctly identified the subsidized firm are asked this question, which is why the sample size is 1,074 instead of 4,300. For more information on the survey see Appendix B.

4 Empirical Strategy

In order to estimate the effect of subsidy-giving on voters support for the incumbent governor I compare counties that receive subsidy deals with similar counties within the same state with a difference-in-differences estimation strategy. Comparing counties within the same state allows me to examine how support changes for a single governor, while controlling for unobservables about the governor's type.

There are two specifications. The first, Equation 1, estimates the effect of a subsidy win on within county changes in vote share for the incumbent. For incumbent governor (g), county (c), state (s), and election year (e):

$$\Delta\% \text{ vote}_{gcse} = \alpha + \beta \text{win}_{gcs[e-1,e]} + \gamma X_{gcse} + \eta_{se} + \varepsilon_{gcse}, \tag{1}$$

where $\text{win}_{gcs[e-1,e]} = 1$ if governor g won a subsidy deal for county c since last election $(e-1)$. This specification compares within county changes in vote share, while holding the state and election fixed with a state by year fixed effect, η_{se}. The economic and demographic controls from Table 5 are included, as X_{gcse}. The coefficient of interest is β, the effect of winning a subsidy deal on the within county change in vote share.

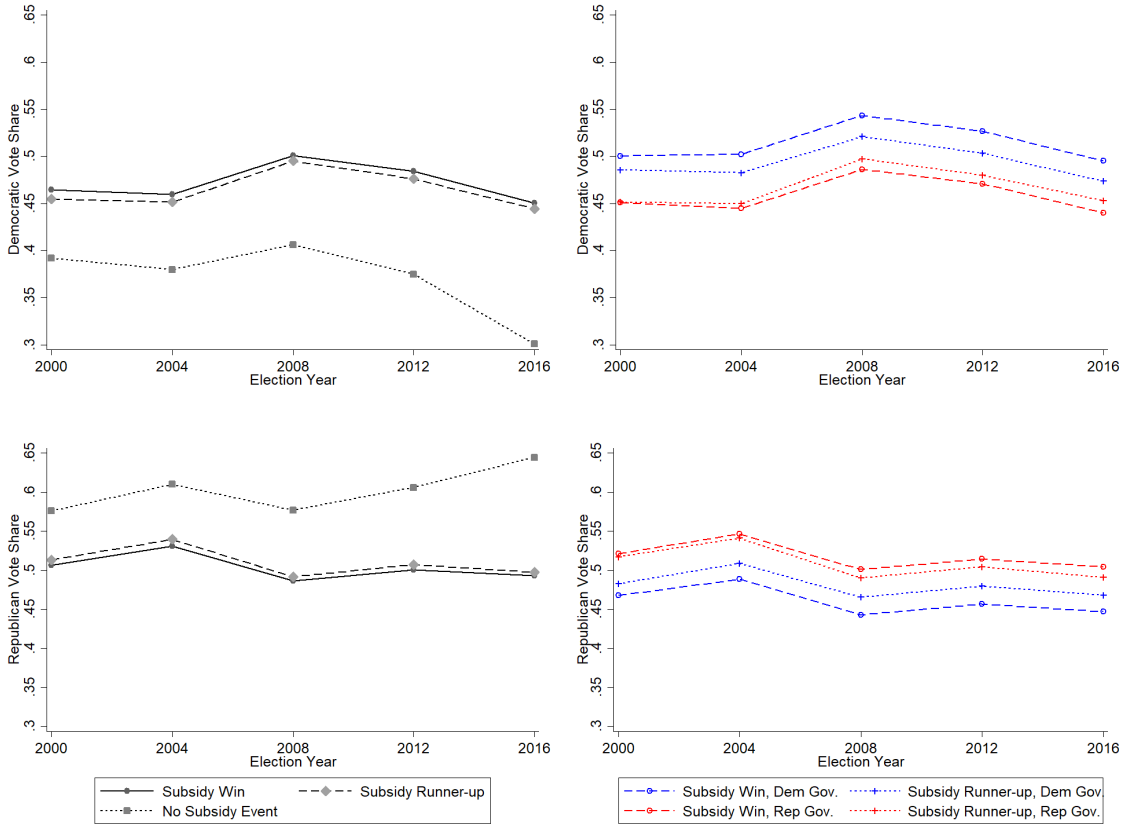
The second specification, Equation 2, is the difference-in-differences approach. Here the outcome is the county level vote share for a governor, g, who will be the incumbent in the post period. Again, $\text{win}_{gcs[e-1,e]} = 1$ if the county wins a subsidy between the two elections:

$$\% \text{ vote}_{gcst} = \alpha + \beta \text{win}_{gcs[e-1,e]} \times \text{Post}_t + \phi \text{Post}_t + \gamma X_{gcst} + \eta_{gcs} + \xi_t + \varepsilon_{gcst}, \tag{2}$$

where there are two election periods, $t \in \{e-1, e\}$, and $\text{Post}_t = 1$ if it is the governor's second election ($t = e$). I include county-governor fixed effects, η, and election year fixed effects, ξ.

I am interested in changes of support for a single governor, which means that I do not have multiple pre

Figure 4: Presidential Vote Share "Pre-Trends"



Notes: These 4 figures show the presidential vote share for winning and runner-up counties. The top panel shows the vote share for the democratic candidate, while the bottom panel shows the vote share for the republican candidate. The figures on the right separate out the vote share by the party of the governor at the time of the subsidy event. In each figure the solid line tracks runner-up counties and the dashed line tracks winning counties. The dotted line, in the figures on the left, are the counties that are neither a winner or a runner-up during the sample period.

or post periods – there are two observations for each governor-county pair. The identifying assumption is that support for the incumbent governor would have continued to move in parallel in treatment and control counties in the absence of a subsidy deal win. Figure 4 shows the presidential vote share for subsidy-winning and runner-up counties, throughout the sample period. Although I am unable to compare pre-trends for the outcome of interest, I can compare presidential vote share by party. This shows that the subsidy winning and subsidy runner-up counties have very similar trends when it comes to presidential elections – the non-participating counties, that I do not use as a control, diverge post 2012.

There are two potential identification issues that should still be discussed before proceeding to the analysis. First, what if the location of the subsidy deals is endogenous? Second, what is the right control group?

4.1 Identification: Subsidy locations

Governors may be willing to pay more for subsidies in counties where they need more votes. In Appendix Table A.2 I look for patterns between the political characteristics of counties and the location of subsidy-giving within a state. Subsidies are not more likely to go to counties with higher turnout in the last election, to counties with legislators who share the party of the governor, or to counties where the support for the governor was higher in the first election. Therefore, at least with this sample of large firms receiving subsidies, it does not seem that governors are able to manipulate where the firm locates within the state to help their re-election chances.

This is consistent with institutional details on the site selection process for large firms. In most cases, like Alabama with Hyundai, states are not going out to recruit firms. Each firm has a multi-step site selection process, which typically involves hiring a consulting team to put together a list of many potential sites. The consultants will do the research to narrow the list to a few of the most appropriate or attractive locations for the firms, and once the team has this shortlist, the firm will contact the chosen states. Only then will the governor and local officials within the state be aware that they are a possible location for the firm, and decide how much they are willing to offer the firm. The state's team can go back and forth with the firm, updating the incentive package when they are made aware of competing offers.[20,21]

The identification strategy assumes that the county specific approval of the governor is not increasing in all treatment counties, independent of subsidy-giving. This exclusion restriction would be violated if there is an effort by the governor, such as public works projects, happening in the subsidized counties and not in the control counties. This effort would increase support for the governor, and any increase in goodwill from this project would be attributed to the subsidy, biasing the results upward. I have read articles and local news coverage on each of the subsidy deals in the data set, and I have not noticed any patterns that suggest that this would be the case. This would also be surprising, given that we now know that the locations that win subsidy deals are not necessarily places where the governor is trying to win more votes. I also show that governors are not advertising more in the subsidized areas (Appendix Table C.2).

4.2 Identification: An appropriate control group

I use runner-up locations for similar subsidy competitions as the control group. Table 4 shows the characteristics of subsidy deals that were awarded to firms in winning counties, and the characteristics of deals that were awarded to firms that the runner-ups competed for, but ultimately did not win. The control group is chosen

[20]To read more about site selection see the discussion of the Volkswagen plant deal in Slattery and Zidar (2020), more general details in Slattery (2020), or trade publications on site selection such as `siteselection.com`.

[21]Governor intervention may be a margin for smaller firms receiving subsidies, as these firms are making location choices within a single state. Those types of smaller deals are not included in the sample.

Table 4: Control Group: Subsidy Characteristics

	Control		Treated	
	Mean	Med.	Mean	Med.
Subsidy ($M)	157.4	65.7	151.2	59.4
Jobs Promise	851.3	500.0	877.7	600.0
Investment ($M)	883.0	313.6	1567.9	227.7
Manufacturing	0.6	1.0	0.6	1.0

Notes: This table displays the characteristics of subsidy deals that were awarded to firms in winning counties, and the characteristics of deals that were awarded to firms that the runner-ups competed for, but ultimately did not win. The characteristics include the size of the subsidy, the number of jobs promised by the firm, the size of the investment planned by the firm, and whether or not the firm is in the manufacturing sector. Data collected by the author.

for having similar jobs promises and the same sector, but Table 4 shows that the deals also have similar sized incentive amounts and investment planned.[22]

I use the runner-up locations for two reasons. First, just like the treated locations, runner-up locations are selected on being attractive to large firms in the site selection process. So, to the extent that there are some common unobservables in what makes a location attractive the firms getting subsidy deals in my sample, this is shared by both the runner-up and treatment counties. Table 5 confirms that the runner-up and treatment counties are very similar on observables. They are both larger, more urban, and wealthier than the average county in a state.[23] Second, I know the governor put in an effort to compete for a firm for the runner-up location. A subsidy package was assembled and was attractive enough so that the location was almost chosen as the winning site. So, to the extent that there are some common location unobservables in what makes a governor want to exert effort and win a firm to a location, this is shared by both the runner-up and treatment counties.

Placebo Test

One identification concern is that voters in counties that lost out on subsidy deals are more or less likely to support the governor. Voters may be more likely to support the governor if they perceive the governor's effort to attract a firm to their location as a positive signal, even though the governor was not successful. Alternatively, voters may be less likely to support the governor if they are upset that they lost the subsidy competition, and believe the governor could have worked harder to create jobs in their area. Either one of these concerns require that voters in the runner-up locations are aware that the county was in the running for a new firm. Ultimately, survey evidence suggests that voters know very little about the runner-up status. When asked about past subsidy competitions in their area, almost 40% of respondents replied "I am not sure," and about 12%

[22] I had to drop 14 subsidy deals (9%) for which I could not find an appropriate runner-up in the same state and election cycle.

[23] In fact, Table 5 shows that winning counties are very different than the average county in a state on almost every variable.

Table 5: Descriptive Statistics

	Winning	Runner-up Counties		All Counties	
	Counties	Mean	Difference	Mean	Difference
Economic and Demographic Variables:					
log(Population)	12.47	12.49	0.02	10.25	-2.22***
	(1.38)	(1.38)	(0.15)	(1.45)	(-19.10)
log(Personal Income Per Capita)	10.62	10.66	0.05	10.41	-0.21***
	(0.30)	(0.31)	(1.30)	(0.29)	(-8.40)
log(Average Housing Price)	5.05	5.15	0.10	4.73	-0.32***
	(0.52)	(0.58)	(1.52)	(0.53)	(-7.36)
Unemployment (%)	6.29	5.94	-0.35	5.91	-0.39
	(2.31)	(1.92)	(-1.43)	(2.34)	(-1.98)
% Urban	80.56	75.82	-4.74	23.48	-57.08***
	(39.72)	(42.96)	(-0.99)	(42.38)	(-17.05)
% Black	16.39	14.92	-1.47	8.77	-7.63***
	(13.59)	(14.22)	(-0.91)	(13.37)	(-6.67)
% Hispanic	12.02	12.03	0.01	9.23	-2.78
	(13.01)	(11.38)	(0.01)	(13.79)	(-2.54)
% with HS degree	68.05	68.39	0.34	66.31	-1.74***
	(4.91)	(5.16)	(0.58)	(6.69)	(-4.17)
% with BA	20.60	20.97	0.37	14.60	-6.00***
	(8.07)	(8.66)	(0.38)	(5.69)	(-8.87)
Election Variables:					
% Vote in Previous Election	53.92	54.18	0.27	54.92	1.01
	(11.82)	(14.28)	(0.18)	(13.99)	(1.01)
% Turnout in Previous Election	0.30	0.29	-0.02	0.33	0.03***
	(0.08)	(0.07)	(-1.64)	(0.10)	(3.81)
Change in % Vote for Incumbent	2.73	0.42	-2.31	1.31	-1.41
	(9.83)	(9.59)	(-2.05)	(11.41)	(-1.70)
Observations	144	153		7,181	

Notes: This table compares the characteristics of subsidy-winning counties with other counties in the state. First, I consider the control group of "runner-up" counties. These are the counties that were reported to be in close competition for winning a firm, but they come in second place and do not win the subsidy competition. In practice, the analysis will compare treated and control counties within a state, so it is not necessarily the case that the treated county and runner-up county in a given state will have been in the same competition. The runner-up county may have been the runner-up for another subsidized firm, that located in another state. However, given that these are counties that firms have put on the shortlist, they have similar characteristics and serve as the preferred control group. I also compare subsidy-winning counties with all other the counties in the state. For the means, standard deviations are reported in parentheses. For the differences, t-stats are reported in parentheses. Sources for county level characteristics include Bureau of Labor Statistics (1990-2017) (unemployment), Ruggles, Flood, Goeken, Grover, Meyer, Pacas and Sobek (2019) (population, % Black, % Hispanic, % Urban, % BA, % high school), U.S. Bureau of Economic Analysis (1967-2017) (personal income per capita), Zillow (1996-2020) (housing prices), and Leip (2018) (turnout and vote share of incumbent).

Table 6: Runner-ups and Incumbent Vote Share

	Incumbent Vote Share		
Subsidy Deal Runner-up × Post	0.31	0.15	-0.47
	(1.52)	(1.50)	(1.50)
R-squared	0.91	0.92	0.91
County, Year FE	×	×	×
County Unemp. Control		×	
All Demographic Controls			×
Observations	2,156	2,154	1,592

Notes: This table reports the difference-in-differences estimates of the effect of being a runner-up county on vote share. Each specification includes County-Governor and Year FE, the second specification includes a control for the county unemployment rate, while the third specification controls for county unemployment as well as the county demographic and economic variables listed in Table 5. The dependent variable is the county level vote share for the governor. The governor is the incumbent, by definition, in the post election but likely not the incumbent in his or her previous election. The control group is counties with over a population over 10,000, within the same state.

responded that the government had tried but failed to attract a firm to their area. The share of respondents that thought the government had tried but failed to attract a firm to their area did not differ by the actual runner-up status of their location.

It is still possible to test whether runner-up locations have differential support for incumbents. I implement the difference-in-differences strategy from equation 2, but with the sample of states that only have runner-up counties, and did not have any winning locations. Here, I compare vote shares in runner-up counties with vote shares in similarly sized counties that were neither runner-ups or winners in the same state, before and after the subsidy competition. Table 6 shows the results; runner-up counties are not more or less likely to support the incumbent governor.

5 Voting Results

Table 7 shows the results for both specifications, at different levels of aggregation – Columns (1) - (3) report the results using county level data, while Columns (4) - (6) report results at the commuting zone level. In Columns (7) - (9) the analysis is at the county level, but the subsidy-winning county *and* it's neighbors are considered treated, while the runner-up county and each of it's neighbors are used as controls. For each specification and control group there is a baseline regression, with no control variables (Columns (1), (4), (7)). The next column in each control group includes the county or commuting zone unemployment rate (Columns (2), (5), (8)), and all of the demographic and economic variables from Table 5 are included in Columns (3), (6), and (9). The top panel shows the results from Equation 1, where the dependent variables is the raw change in county vote share for the incumbent governor. The bottom panel presents the result from the difference-in-differences

specification (Equation 2).

The results show that subsidy winning increases support for the incumbent. The increase in incumbent vote share is 2.3 to 3.5 percentage points higher in subsidy-winning counties, depending on the specification. A 3 percentage point vote share in one or two counties may not seem like a large enough increase to sway an election, and in most cases it is not. However, as noted in Table 5, most subsidized firms locate in large counties. The mean turnout for gubernatorial elections in the sample of subsidy-winning and runner-up counties is about 160,000 (85,000 at the median). This means that the 3 percentage point increase in vote share translates to about 4,800 votes at the mean, and 2,550 votes at the median. In Alabama in 2002, Don Siegelman lost re-election by 3,000 votes.[24]

Table 7: Subsidy-Giving and Incumbent Vote Share

	County			Commuting Zone			County + Neighbors		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Change in Vote Share:									
Subsidy Deal Winner	2.16**	2.16**	2.26***	1.47*	1.56*	1.47*	0.74*	0.75*	0.81**
	(0.66)	(0.67)	(0.68)	(0.61)	(0.61)	(0.63)	(0.29)	(0.29)	(0.30)
R-squared	0.81	0.81	0.83	0.89	0.89	0.90	0.84	0.84	0.85
State × Year FE	×	×	×	×	×	×	×	×	×
Unemployment		×			×			×	
All Demographic Controls			×			×			×
Observations	271	271	270	202	202	202	1,390	1,390	1,368
Diff-in-Diff Estimate:									
Subsidy Deal Winner × Post	3.13**	3.12**	3.53**	1.44	1.63	1.82	0.56	0.64	1.05
	(1.17)	(1.15)	(1.15)	(1.41)	(1.40)	(1.41)	(0.59)	(0.59)	(0.59)
R-squared	0.89	0.90	0.90	0.82	0.83	0.84	0.86	0.86	0.87
Area, Year FE	×	×	×	×	×	×	×	×	×
Unemployment		×			×			×	
All Demographic Controls			×			×			×
Observations	542	542	540	404	404	404	2,780	2,780	2,736

Notes: This table reports the estimates of the effect of subsidy-winning on changes in vote share, and the difference-in-differences estimates of the effect of subsidy-winning on vote share. Columns 1-3 use runner-up counties in the same state as controls for the subsidy-winning county, while Columns 4-6 does the same at the commuting zone level instead of the county level. In Columns 7-9 the analysis is at the county level, but the subsidy-winning county and each of it's neighbors are considered treated, while the runner-up county and each of it's neighbors are used as controls. Each specification in the top panel (corresponding to Equation 1) include State × Year FE. The second specification (Columns 2,5,8) includes a control for the area (county or CZ) unemployment rate, while the third specification (Columns 3,6,9) controls for unemployment as well as the demographic and economic variables listed in Table 5. The bottom panel is the difference-in-differences estimates, which corresponds to Equation 2. The difference-in-differences specifications include both county/CZ-governor and year fixed effects. The dependent variable is the county level vote share for the governor. The governor is the incumbent, by definition, in the post election but likely not the incumbent in his or her previous election.

Using a Coarsened Exact Matching procedure, I use per capita income, turnout, and vote share in the previous election to create a control group. Appendix Table C.1 shows that the results are robust to these

[24] Also note that the results are not driven by turnout (see Appendix Table C.3).

alternative control groups.

Persuasion Rate

Following (DellaVigna and Kaplan, 2007) I calculate the persuasion rate: the percent of receivers (voters) that change their behavior, among those that receive a message and are not already persuaded. The formula follows:

$$f = 100 \times \frac{y_T - y_C}{e_T - e_C} \frac{1}{1 - y_0},$$

where $y_T - y_C$ is the treatment effect (the difference in vote share between the treatment and control group), $e_T - e_C$ is the exposure (the voters who receive the message), and y_0 is the voters that would vote for the incumbent if there were no subsidy. The treatment effect is the 1.82 percentage point increase in vote share (Table 7). The exposure effect is the difference between the voters who know about the subsidy in the treated area (e_T =49.1%) and the voters who know about the subsidy in the control area (e_C =20.6%), which I know from the survey (Figure 3(a)). Lastly, I take the 54.5% vote share in control group as y_0.[25]

$$f = 100 \times \frac{0.018}{0.285} \frac{1}{0.455} = 14.0\%$$

This persuasian rate is similar to the effect of get out the vote efforts on turnout in Gerber and Green (2000) (15.6%) and news media on vote share in DellaVigna and Kaplan (2007) (11.6%).

5.1 The Aggregate Effect

The question remains – does subsidy-giving help incumbent governors win elections? An increase in support in the subsidized county may not translate to an increase in support in the aggregate, if voters in the rest of the state are less likely to support the governor. This would be the case if the costs of discretionary subsidy are paid by all counties, in the form of increased taxes or reduced public goods. However, the bulk of the costs of subsidy-giving are borne in the future. This is because the largest share of most subsidy deals is a tax abatement for the firm, i.e. the state is agreeing to forgo future tax revenue. This would not increase costs for voters in the short-run. Alternatively, it may be that voters in non-subsidized counties know about the subsidy deal and think they are being harmed because the governor did not successfully attract a firm to their locale. However, the survey shows that voters in non-subsidized counties know very little about any details of the subsidy deal.[26]

[25] Alternatively, one could use the 53.9% vote share of subsidy winning counties in the *previous* election (Table 5).

[26] Conditional on correctly identifying the subsidized firm (<25% of sample), 62% believe there is an incentive (15% unconditional), and only 7% select the correct incentive size (2% unconditional).

Table 8: Calculating the Aggregate Effect

Geography	Δ Vote Share (ppt)	Average Turnout	Votes Gained
County	3.53	160,000	5,658
Commuting Zone	1.82	413,000	7,517

Notes: The table reports the estimates of the effect of subsidy-winning on within county changes in vote share, at the county and commuting zone level, along with the average turnout in subsidy-winning counties and commuting zones. These two numbers are used to calculate the number of votes gained.

It also may be that subsidy-giving helps the incumbents' campaign statewide, and by only estimating the change in vote share in the subsidized locale I am underestimating the aggregate effect.[27] A vast literature on quid-pro-quo in politics (Grossman and Helpman, 2002), suggest that governors might be willing to pay more for firms that are supportive of their party, and therefore will be more likely to support their re-election campaign. In Appendix D I test two related hypotheses relating to a campaign finance channel, and I find no evidence of either.[28] Another potential mechanism is that the incumbent uses the firm's arrival in political ads, and, by running as a "job creation" candidate, gains support from voters around the state. However, the survey shows that less than 2% of voters learned about the firm's plan to locate in the state from a political campaign.

There is the possibility that neighboring counties are also affected by the treatment. Residents could easily commute to a job at the new plant, or just be more likely to know about the subsidy deal because of local news coverage. In Section 3, Governor Siegelman predicts that suppliers to Hyundai would locate all over the region, creating jobs within a 100 mile radius of the automobile plant. Therefore, in order to calculate the aggregate effect at the state level, we want to use the estimates from the commuting zone level analysis. The aggregate effect, when using the commuting zone as the treatment level, is just over 7,500 votes.[29]

Cost per vote

If we are willing to assume the vote share effect of subsidy-giving is isolated to the winning commuting zones, we can calculate a back of the envelope estimate of the cost per vote.

The average incumbent in the sample gives subsidies in 2 commuting zones in their term, and Table 8 shows that the commuting zone level effect is approximately 7,500 additional votes for the incumbent. The

[27] I cannot causally identify a 'state level' effect, but I do find a small positive effect between subsidy-giving and state-level vote share. If there is an effect outside of the subsidized county, this should bias my results downward.

[28] First, I exploit exogenous variation created by the 2010 *Citizens United* Supreme Court case to identify the relationship between subsidy-giving and campaign spending. I find that the ability of corporations to spend more in state elections has no effect on subsidy-giving. Second, I test whether local stakeholders who expect to benefit from firm arrival (i.e. related businesses, property owners, unions) are more likely to support the incumbent's campaign. I do not find evidence of differential financial support for the incumbent in the subsidized county.

[29] I can also use the slightly smaller commuting zone estimate, 1.47, to arrive at 6,071 votes gained. I use the larger estimate because this will result at a more conservative cost per vote.

additional 7,500 votes in 2 commuting zones translates to 15,033 additional votes in the state.[30]

Next, we need to calculate the additional costs. The average incumbent in the sample offers 2.9 subsidies. Previous work estimates that incumbent governors are willing to pay $40 million more for subsidy deals when they are eligible to run for re-election. However, as discussed earlier in the section, subsidy deals are not necessarily lump-sum payments from the governor. The majority of the subsidy package comes in the form of tax abatements for the individual firm – the state agrees to forgo future tax revenue from the firm. Only a portion of the subsidy has budget consequences in the year the subsidy is announced. Furthermore, the subsidy data are normalized to a 10 year time horizon. Due to the time horizon of the subsidy package, I assume a conservative 10% of the subsidy size is incurred in the year the subsidy is announced.

With the number of votes gained and the additional subsidy size I can calculate the cost per vote:

$$\text{Cost per vote } = \frac{2.9 \text{ subsidies } \times (\$40,000,000 \times 10\%)}{15,033 \text{ votes}} = \$772 \text{ per additional vote.}$$

The additional subsidy spending translates to almost $800 per additional vote. This is larger, but of a similar magnitude, of estimates of the cost per vote of campaign spending in the literature; Bombardini and Trebbi (2011) estimate an additional vote costs politicians $145, while Levitt (1994) estimates a cost per vote between $130 and $390. Note that, unlike campaign spending, in this case the governor is spending from the state budget, not their own funds. Furthermore, they are promising future funds. If the full 10 years of the additional subsidy spending is included, the cost per vote increases to almost $8,000 per vote.

5.2 Mechanisms

The goal of the remainder of this section is to identify the mechanism by which subsidy-giving confers political benefits in a local area. I investigate two hypotheses. The first is that the subsidy, by attracting a new firm, creates jobs and improves local economic outcomes for residents, thereby generating incumbent votes. I will call this the "direct effect" of subsidy-giving. The second hypothesis is that voters are aware of the subsidy deal because of the local news coverage. Then, even if these voters have not been hired or experienced any economic benefit from the firm's arrival, they might anticipate jobs and economic growth from the subsidy deal and realize the governor is making an effort to improve economic outcomes in the local area. I will call this the "salience effect."

I can test these two hypotheses by using the timing of subsidy deals within the term. Hypothesis (1), the "direct effect", suggests the effect should be larger for subsidy-giving earlier in the term, because this gives time for the firm to arrive and start hiring, improving local economic outcomes. Hypothesis (2), the "salience

[30]Note that this is consistent with the state level analysis, which suggested a vote share effect of 1.06, translating to 17,000 votes in a median turnout state (Appendix C.2).

effect," suggests the effect should be largest for more recent announcements of subsidy deals, which are the most salient to voters, due to media coverage and, possibly, political advertisements.

Table 9: Vote Change Results by Date of Subsidy Deal

	1st Year	2nd Year	3rd Year	Election Year	All Years
Subsidy Winner	2.02	1.85*	1.16	3.61**	2.26***
	(1.08)	(0.91)	(0.86)	(1.14)	(0.68)
R-squared	0.90	0.91	0.89	0.83	0.83
Observations	62	100	113	98	270
Wins	20	35	39	36	133

Notes: This table presents results for the effect of subsidy-giving on vote share (per Equation 1), by the year of the subsidy deal announcement. The baseline results (Column (5)) correspond to Specification (3) in Table 7, which uses runner-up counties as a control, and includes county and demographic controls. For each year the sample of winners is restricted to counties that do not win subsidies at some other year in the term.

Table 9 shows the results by the date the subsidy deal was announced. The baseline result, or "all years," corresponds to Specification (3) in Table 7. The table shows that subsidy deals announced in the start of the term have about one half of the effect of a subsidy announced in the election year. Due to the lag between a subsidy announcement and a firm's arrival, the large effect in the election year means that the governor can accrue political benefit before any jobs are actually created. This suggests that it is the salience of the subsidy deal and the anticipated economic effect that is more important than the realized outcomes. This is consistent with recent work by Huet-Vaughn (2019), who finds that an increase in support for Democrats following ARRA infrastructure spending was due to the salience of the spending, and not because the spending stimulated economic growth in the local area. This is not driven by differences in the types of firms or projects that get subsidies (Appendix Section E). Therefore, subsidy deals that were announced in earlier years are likely equally as salient to voters, but memory decay leads the most recent subsidy deals to have the largest effect (Angelucci and Prat, 2020).

Subsidy-Giving and News Coverage

There are many reasons to believe that news coverage is the main way that voters learn about subsidy deals. The firms in the sample are selected on receiving large subsidy deals and spurring competition between localities, two features that lead to a subsidy deal being covered by the media. Also, many of the details of the subsidy deal in the data were collected from local news articles, which suggests that there was at least some media coverage of the majority of the subsidy deals in the data. Lastly, voters in the survey report learning about the subsidy from local news.

I collect data on news coverage on each subsidy deal from ProQuest (ProQuest, 2021). ProQuest allows

users to search for past newspaper articles, with a search term and a publication date, in 567 newspapers across the United States. For each subsidy deal I collect data on the number of newspaper articles mentioning the deal, the titles of the articles, and the source of each article. Appendix Figure F.1 shows that the data are highly skewed, half of the sample of subsidy deals have 15 or fewer articles in the database, but there are 13 deals with over 100 relevant hits. I use this data on news coverage as a continuous treatment effect, instead of a dummy variable for whether the county won a subsidy deal, now the treatment is the number of newspaper articles covering that deal. Column (1) of Table 10 shows the result.

Table 10: News Coverage, Sentiment, and Heterogeneous Effects

	Media Coverage		Deal Characteristics			Location Characteristics			
	Articles	Sentiment	Manuf.	Services	Jobs (1,000)				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Subsidy Deal Winner	0.04	2.41***	2.59**	1.47	0.55	3.39**	4.22*	12.06	2.06*
	(0.12)	(0.63)	(0.83)	(0.92)	(0.41)	(1.17)	(1.76)	(6.55)	(0.82)
× Republican						-1.69			
						(1.43)			
× Unemployment							-0.26		
							(0.22)		
× Housing Prices								-1.97	
								(1.31)	
× Housing Supply									0.27
									(0.80)
Observations	270	270	196	103	270	270	270	270	184
R-squared	0.82	0.83	0.80	0.91	0.82	0.83	0.83	0.83	0.85

Notes: This table shows the heterogeneous effects of the subsidy win by the media coverage of the subsidy deal, the characteristics of the deal, and the characteristics of the winning location. The specification corresponds to Equation 1, the outcome variable is the change in vote share for the incumbent, and the equation is estimated at the county level. In Columns (1), (2), and (5) the treatment is a continuous variable, corresponding to the intensity of the treatment as measured by the number of articles about the deal, the average sentiment of those articles (neutral sentiment = 1), and the number of jobs promised, respectively. In Columns (3) and (4) the sample is split between subsidies for manufacturing and services firms. In Columns (6) - (9) the subsidy deal winner dummy variable is interacted with county characteristics. Demographic controls and state and year fixed effects are included in each specification, as described in Table 7.

On average, there is no relationship between news coverage and vote share. However, Appendix Figure F.2 shows that the relationship between news coverage and the vote share effect of the subsidy deal has an inverted-U shape – both deals with no news coverage and a large amount of news coverage have no effect on incumbent vote share. It may be the case that the deals with the most news coverage are more likely to have some controversy or negative publicity. For example, the subsidy deal with the highest number of news articles in the database is Foxconn, which was a highly controversial deal that was discussed regularly in the national news.

I calculate the sentiment of each article and take the average at the subsidy deal level, to use as a continuous measure of the treatment effect. A subsidy deal with neutral news coverage receives a sentiment score of 1,

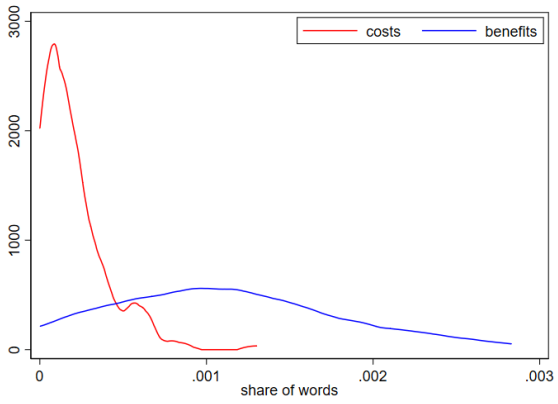
while the control counties or winning counties with no news coverage receive a 0. Appendix Figure F.3 shows a negative relationship between the sentiment score and the number of articles written – the deals with more coverage have, on average, less positive news coverage. I confirm this with a simple exercise that counts the number of words mentioning subsidy "costs" in each news article.[31] This is positively correlated with the number of articles. Sentiment and number of articles are not correlated with other location characteristics that might be related to the media environment, such as population, income, and education (Appendix Table F.1).

Column (2) of Table 10 shows that there is a positive relationship between positive news coverage and vote share. A subsidy deal with neutral news coverage is associated with a 2.41 percentage point increase in vote share. The subsidy deals with the most positive news coverage in the sample have scores of 1.16. This is associated with a 2.80 percentage point increase in vote share, an over 20% increase from the baseline effect of 2.26. Table 10 also shows the heterogeneous effects by the deal type and location characteristics.

Figure 5: News Coverage of Subsidy Costs and Benefits

Cost Words	Benefit Words
congestion	benefit
corporate welfare	employment
cost	indirect
environmental	investment
fiscal	jobs
giveaway	payroll
incentive	property value
subsidy	revenue
tax break	spillover
tax increase	supplier
	wages

(a) Cost and Benefit Dictionaries



(b) Distribution

Notes: The table on the left shows the words I use to categorize costs and benefits. The figure on the right shows, at the subsidy deal level, the distribution of how often a cost or benefit word is mentioned, as calculated by share of total words. The benefit words are much more likely to be mentioned (7x as likely), over 10% of deals have no mention of cost words.

The sentiment analysis and a comparison of the words mentioning costs and benefits in each article aligns with the survey results – voters learn about subsidy deals from the local news, which is generally positive about the deal, and is much more likely to mention the benefit of attracting the firm than the cost (Figure 5). Therefore subsidy-giving is an excellent policy to pander with, as the benefits are clear but the costs are not. With the remainder of the paper I will discuss the implications of this for policy choice across job creation strategies.

[31] Cost words include: tax break, fiscal, cost, subsidy, giveaway, corporate welfare, congestion, environmental, tax increase and incentive. This exercise confirms few articles mention the costs of a subsidy deal, while many more mention the benefits (benefit words include jobs, employment, wages, benefits, revenue, indirect, spillover, property value, payroll, investment, and supplier). Benefit words are 7 times more likely to be used than cost words.

6 Discussion: Politics and Policy Choice

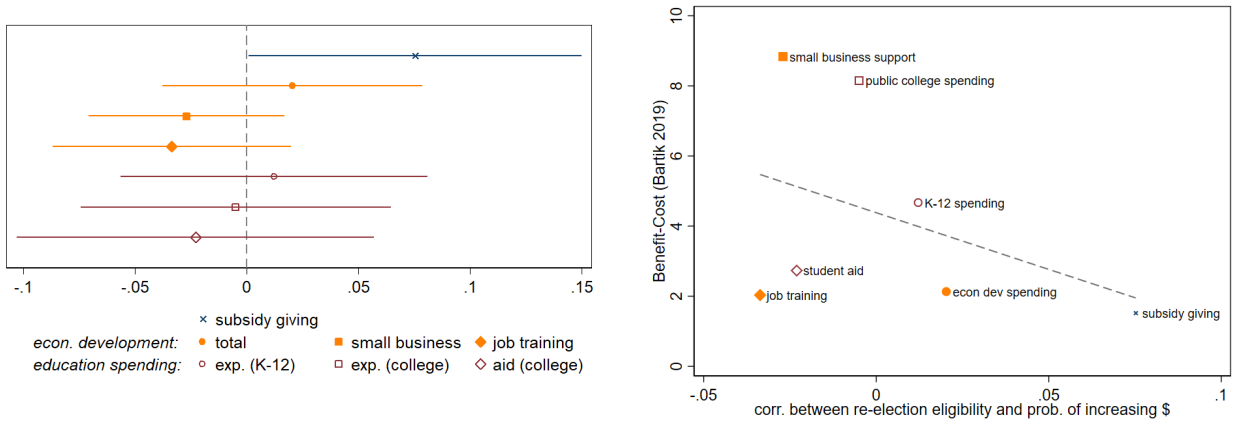
Should we be worried that the political benefit of subsidy-giving is distorting the policy choice of a governor? In order to evaluate how political benefit may or may not distort policy choice, one needs to understand which policies are most effective at improving social welfare. Recent work by Hendren and Sprung-Keyser (2020) sets out to calculate the benefit and the net cost for 133 different policies in the U.S. and to create a measure that allows comparison across policies. They divide the willingness to pay by the net cost to arrive at the policy's marginal value of public funds (MVPF). They find the highest MVPF for direct investment in health and education of low income children; these policies pay for themselves in long run. They find a lower MVPF for policies targeted to adults, even job training programs. Meanwhile, Bartik (2019) does a similar exercise for economic development spending and education spending, also finding a large benefit-cost ratio for education spending for children and a relatively low benefit-cost ratio for job training.

I use the estimates from Bartik (2019) to compare subsidy-giving with other job creation policies. The Bartik (2019) estimates are positively correlated with the Hendren and Sprung-Keyser (2020) MVPFs for the policies in both papers, but include economic development programs that are not evaluated in the latter. For each of the policies that I have data on: subsidy-giving, total state economic development spending, state small business economic development support, state job training programs, state K-12 spending, state higher education spending, and state financial aid for undergraduates, I estimate the correlation between the governors' career concerns and changes in spending for each policy instrument. This replicates the exercise in Table A.3, which looks at the correlation between state economic and political characteristics with subsidy-giving.

The results are shown on the left panel of Figure 6. As we learned in Section 3, subsidy-giving is positively correlated with the ability of governors to run for re-election: a governor who can run for re-election is 24% more likely to give subsidies than their term-limited counterparts. Meanwhile, there is no correlation between career concerns and changes in spending for any of the other policies I have data on, despite the fact that these policies have uniformly higher benefit-cost ratios that subsidy-giving (Bartik, 2019). The right panel of Figure 6 shows that there is a negative correlation between the benefit-cost estimates and the probability the governor enacts the policy in the term leading to their election.[32]

[32]It is not exactly a 1 to 1 mapping of policies that Bartik (2019) analyzes and policies that I have data on. I use his estimate for "Community college workforce education" for state higher education spending, his estimate for "Public school spending increases" for state K-12 spending, "Place-based college scholarships" for state financial aid for higher education, "Job training services" for economic development spending focused on job training, the average of his estimate for "Business services" and "Up-front Incentives" for economic development spending focused on small businesses, "Up-front incentives" for my economic development spending total, and "Average Incentives" for subsidy-giving.

Figure 6: Correlation between Elections and Policy Choices



Notes: The figure on the left shows the correlation between whether the governor can run for re-election and increases in economic development and education spending in that state. The analysis is at the state-year level, where the dependent variable is equal to 1 in state s and time t when a subsidy deal is announced in state s and year t (or is equal to 1 when spending increases for the non-subsidy policies). The regressions include state and year fixed effects, state GDP, the corporate income tax rate, the personal income tax rate, the sales tax rate, whether the state has right-to-work laws, the total manufacturing employment and population in the state, state peronal income per capita, housing prices, and an indicator for whether the governor and state legislature share the same party. The point estimate for "subsidy giving" corresponds to Spec. 3 in Table A.3. The other six estimates use alternative policies as the dependent variable, which is noted in the legend. The figure on the right shows the point estimates from the figure on the left, against the benefit-cost estimate from Bartik (2019). Data on economic development spending is collected by the author. Data on education spending is from the National Science Foundation (2000-2017): K-12 expenditures is from the "public school per pupil expenditures" series, college expenditures is from the "state support for higher education per FTE student" series, and college aid is from the "state student aid expenditures per full time undergraduate student."

This result suggests that the political benefit of subsidy-giving may be distorting the policy choice of governors with career concerns. For subsidy-giving it is important to note that the costs are hard to measure because of the long-term nature of the contracts, and the fact that the majority of the cost is forgone revenue. The long-term aspect means that the governor may enjoy political benefits and job creation in the short-term, while the future governor will have to figure out how to pay for any costs. There is also an opportunity cost to offering a discretionary incentive: the time effort of the governor and the political capital she might need to use in order to get a discretionary tax abatement passed by the legislature. Understanding why career concerned governors are more likely to give subsidies than they are to increase spending on high benefit programs is an important area for future work. It may be the issue of the timing of when jobs are created, the state budget and the ability to get subsidies approved, or the popularity of subsidy-giving versus other programs that have more salient costs.

7 Conclusion

There is an ongoing debate over the effectiveness of discretionary subsidies, due to the potential for competition between states to drive up subsidy size, the uncertainty over the benefits that a firm entry actually creates, and

the potential for politics to influence subsidy awards.

In this paper I estimate the political-benefit to subsidy-giving, and I find that support for the incumbent governor increases by 2 to 3 percentage points in subsidy-winning counties. The effect is largest when the subsidy is announced during the election year, which means that the governor can accrue political benefit before any jobs are created. This result suggests that the mechanism by which subsidy-giving increases incumbent vote share is the salience of the subsidy deal and the anticipated economic effect rather than any realized improvement in economic outcomes. Subsidy deals announced in election years do not promise more jobs and do not have larger spillovers.

I aggregate the news coverage of each subsidy deal and analyze the text in order to understand the role of the media in encouraging subsidy-giving. The coverage is almost uniformly positive, and the potential benefits of the subsidy deal are much more likely to be mentioned than the costs. Deals with no news coverage do not experience any vote share effect.

I then provide suggestive evidence that career concerned governors prefer subsidy-giving to other job creation policies that have much higher benefit-cost ratios, but longer time horizons. Future work should explicitly consider the governor's trade-off between subsidy-giving and other economic development strategies, in order to better understand whether the salience of subsidy-giving is leading politicians to favor subsidy-giving over alternative, less newsworthy, but potentially more cost-effective job creation strategies.

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Appendix

A Subsidy Data

In order to study the political ramifications of subsidy-giving I need detailed data on subsidy deals. States vary widely in the structure of their corporate and individual income taxes and payroll, and the absence of comprehensive data on state taxes, incentives, and subsidies has been a difficulty for empirical research in this field. In response, I have created two new data sets on state incentive spending and subsidy-giving behavior. The first data set tracks state spending on tax credits and economic development incentives from 2007-2014. I collect this by reading state level legislation, budget documents, and annual revenue reports.

The second data set contains details on firm-specific subsidy deals. To create this data set of firm-level subsidies I start with the publicly available *Good Jobs First* Subsidy Tracker (Mattera and Tarczynska, 2019). I restrict the sample to subsidies worth over $5 million, and remove any entry that does not mention expansion, relocation, or a discretionary incentive. Finally, I add any firm locations reported by *Site Selection* Magazine's "Incentives Deal of the Month" columns and annual "Top Deals" reports. This gives a sample of over 500 firms and locations that reportedly made subsidy deals. I then search local news reports and press releases to fill in details on each deal, including the runner-up location in the subsidy competition, and the number of jobs promised. I use the state level data set to identify any non discretionary tax credits the firm would qualify for, such as an R&D tax credit or a universal jobs training grant.[33]

Table A.1: Terms of Subsidy Deals

	# of	Subsidy ($ M)		Jobs Promised		Invest ($ M)		Cost per Job ($)	
Industry (NAICS)	Deals	Mean	Med.	Mean	Med.	Mean	Med.	Mean	Med.
Mining, Utilities (21-22)	8	781.6	824.2	300	238	5,607	4,797	2,605,227	3,470,518
Manufacturing (31-33)	226	189.8	66.5	1,443	850	1,027	376	131,504	78,291
Wholesale, Retail Trade (42-45)	18	63.8	26.2	1,908	710	268	153	33,428	36,936
Transport/Warehousing (48-49)	13	87.1	77.0	1,912	1,190	230	205	45,570	64,674
Information Svc. (51)	28	82.3	59.1	762	375	590	165	107,944	157,616
Finance, Insurance, RE (52-53)	49	86.0	28.8	1,916	1,455	262	71	44,885	19,812
Prof., Scientific, Tech Svc. (54)	40	145.8	56.4	1,552	688	304	62	93,934	81,998
Management, Other Svc. (55-81)	14	81.4	57.7	1,333	966	330	300	61,093	59,768
Full sample	396	163.9	54.3	1,474	900	842	238	111,209	60,311

Notes: This table displays sector level descriptive statistics on subsidy deals. For each industry group, the mean and median subsidy size, number of direct jobs promised, and planned investment is displayed. I also list the number of subsidy deals in each category. The data were collected by the author. The sample period is 2002-2017.

[33] I describe the data collection process in detail, and provide descriptive statistics for both the state-level and firm-level data sets in Slattery (2020) and Slattery and Zidar (2020).

Table A.2: The Location of Subsidy-Giving within a State

	All Counties		Top Profit		Top Industry	
	(1)	(2)	(3)	(4)	(5)	(6)
County Economic and Demographic Vars:						
Unemployment Rate	0.001	0.001	0.026	0.026	-0.004	-0.004
	(0.001)	(0.001)	(0.015)	(0.015)	(0.010)	(0.010)
Share Black	0.101***	0.100***	0.402	0.416	0.481	0.484
	(0.024)	(0.024)	(0.256)	(0.257)	(0.265)	(0.266)
Share Hispanic	0.040***	0.040***	0.062	0.078	0.405*	0.404*
	(0.008)	(0.008)	(0.200)	(0.204)	(0.197)	(0.199)
Share With College Degree	0.104**	0.106**	-1.233***	-1.219***	-1.027*	-1.027*
	(0.033)	(0.033)	(0.300)	(0.305)	(0.419)	(0.420)
log(Industry Wage)	0.029***	0.029***	0.452***	0.451***	0.117*	0.116*
	(0.004)	(0.004)	(0.057)	(0.057)	(0.058)	(0.059)
log(Average Housing Price)	-0.005**	-0.005**	-0.287***	-0.285***	0.094	0.094
	(0.002)	(0.002)	(0.080)	(0.080)	(0.053)	(0.053)
log(Personal Income Per Capita)	0.027***	0.027***	0.117	0.113	0.320**	0.319**
	(0.008)	(0.008)	(0.105)	(0.106)	(0.108)	(0.109)
log(Population)	0.013***	0.013***	0.168***	0.169***	0.180***	0.180***
	(0.002)	(0.002)	(0.019)	(0.019)	(0.018)	(0.018)
County Political Vars:						
% Turnout in Last Election	0.022	-0.014	0.123	0.069	0.296	0.461
	(0.022)	(0.036)	(0.390)	(0.507)	(0.372)	(0.645)
× Gov Can Run		0.047		0.082		-0.209
		(0.040)		(0.608)		(0.715)
Same Party Legislator	-0.001	-0.001	-0.018	-0.031	-0.016	-0.008
	(0.002)	(0.004)	(0.042)	(0.082)	(0.043)	(0.087)
× Gov Can Run		0.000		0.020		-0.010
		(0.005)		(0.094)		(0.096)
% Same Party Vote in Last Election	-0.007	-0.009	0.009	-0.111	-0.256	-0.360
	(0.012)	(0.030)	(0.171)	(0.321)	(0.183)	(0.433)
× Gov Can Run		0.002		0.160		0.136
		(0.032)		(0.368)		(0.470)
R-squared	0.06	0.06	0.39	0.39	0.41	0.41
Subsidy Deal FE	×	×	×	×	×	×
Observations	17,494	17,494	848	848	848	848

Notes: This table shows the correlation between subsidy-giving and location characteristics. The first two columns compare the subsidized county with all other counties in the state. The second two columns compare the subsidized county with counties that are predicted to have the highest profit for the firm, as calculated in Slattery (2020). The last two columns compare the subsidized county with the counties with the highest industry concentration in the subsidized firm's industry. In each specification the dependent variable is one if the subsidy deal is for that county, and the fixed effects are at the subsidy deal level. Economic and demographic variables are described in Table 5, turnout and vote share are from Leip (2018), and information on local legislators is from Klarner (2018).

Table A.2 shows the correlation between subsidy-giving and location characteristics. Subsidy-winning counties are larger and wealthier than the average county in the state, with higher wages. When compared with other counties that are predicted to have high profits or places that have a large industry presence the

subsidy winning places are still larger, but have less educated populations. None of the political variables are statistically significant – subsidy winning places are no more likely to have higher turn-out, have a legislator in the same party as the governor, or have differentially supported the incumbent.

Table A.3 displays the correlation between subsidy-giving, economic conditions, and the career concerns of the governor. Within a state, a 1% increase in unemployment rate is associated with 12% increase in probability of subsidy giving. Subsidy-giving is one way to create jobs, and governors put in more effort to create jobs when the unemployment rate is higher. Governors who can run for re-election are 7.5 percentage points more likely to give a subsidy in a given year, or 24% more likely to give subsidies than their term-limited counterparts. This complements the finding in previous work that incumbents winning for re-election are willing to pay more for firms, and are more likely to increase total incentive spending budgets (Slattery, 2020; Slattery and Zidar, 2020).

Table A.3: Probability of Subsidy-Giving

	$\mathbb{1}$(Subsidy in state s, year t)		
Unemployment Rate$_{st}$ (%)	0.041*	0.040*	0.034
Governor can run for re-election$_{st}$		0.056	0.075*
		(0.038)	(0.038)
Observations	768	768	768
R-squared	0.33	0.33	0.34
State, Year FE	×	×	×
Additional Controls			×

Notes: This table shows the correlation between state characteristics and subsidy-giving in that state. The analysis is at the state-year level, where the dependent variable is equal to 1 in state s and time t when a subsidy deal is announced in state s and year t. The correlates of interest are the state unemployment rate and whether or nor the governor is eligible to run in the next election. The dependent variable mean is 0.33. Each specification includes state and year fixed effects, while the third specification also includes state GDP, the corporate income tax rate, the personal income tax rate, the sales tax rate, whether the state has right-to-work laws, the total manufacturing employment and population in the state, state peronal income per capita, housing prices, and an indicator for whether the governor and state legislature share the same party. Sources for state characteristics include the CSG Book of the States (1950-2018) (tax rates), U.S. Bureau of Economic Analysis (1967-2017) (GDP, income per capita), National Conference of State Legislatures (2019*a*,*b*) (right-to-work, term-limits, party affiliation), Bureau of Labor Statistics (1990-2017) (unemployment), Zillow (1996-2020) (housing prices), Ruggles, Flood, Goeken, Grover, Meyer, Pacas and Sobek (2019) (population), and County Business Patterns (1997-2017) (manufacturing employment). Data on subsidy-giving collected by the author.

B Survey

A survey of 4,300 voters across 5 states was launched in late June 2021, with the help of the survey contract firm YouGov. The five states, sample size in each state, and the characteristics of the recent subsidy deal in each state are described in Table B.1. The survey questions are listed in Section B.2. The questions are listed for the survey that was administered in the state of Georgia, each state's survey was tailored to be specific to the details of the subsidy deal in that state. Along with the responses to the questions asked in the survey, YouGov provides the following demographic variables about respondents: Gender, Age, Education, Income, Employment, Marital Status, Zip Code, Party Affiliation, Voting Registration, and Past Voting (Presidential).

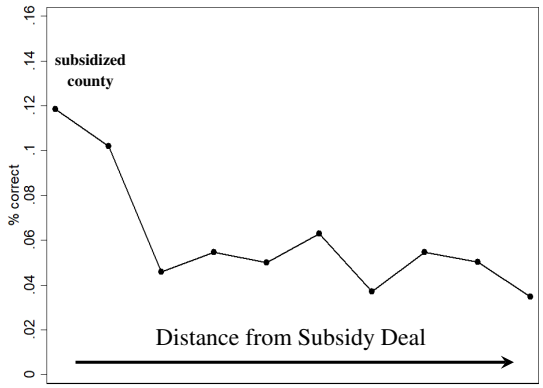
Table B.1: Survey Sample

Firm	Project	State	Announced (Complete)	Sub ($M)	Jobs	Invest ($B)	Sample Size
SK Innovation	Battery manufacturing plant	GA	2019 (2021)	299.5	2,000	1.6	1000
Nucor	Steel plant	KY	2019 (2022)	40.0	400	1.4	650
Cree	Semiconductor plant	NY	2019 (2022)	541.1	600	1.0	1000
Tesla	Cybertruck plant	TX	2020 (2021)	68.0	5,000	1.1	1000
Komatsu Mining	HQ/Manufacturing Campus	WI	2018 (2022)	84.5	400	0.3	650

Notes: This table presents the details of the subsidy deals in the survey sample. Each state's survey asks the respondents questions about one recently announced subsidy deal. The table includes details about the deal: the firm name, type of project, when the project was announced, the size of the subsidy, the number of jobs promised at the new establishment, and the size of the investment planned. The sample size in each state is also included. Section B.2 lists the survey questions.

B.1 Descriptives

Figure B.1: Voter Knowledge of Jobs Promised by Distance from Deal



Notes: This figure shows how voter knowledge of the details of a recent subsidy deal changes with the voter distance from the deal. Distance is measured in deciles, in order to normalize across state geographies. The survey asks: "To the best of your knowledge, when it was announced in [year] that [firm name] would build a plant in [location], how many jobs did [firm name] plan to hire at the new plant?", and gives 4 choices with bins of jobs promised as well as "I am not sure." The question about the jobs promised is only asked to respondents who correctly identify the firm. The figure shows the unconditional share of correct responses.

Table B.2: Correlation between Survey Responses and Respondent Characteristics

	Q3: Identify Subsidized Firm		Q8: Positive about Subsidy	
	(1)	(2)	(3)	(4)
Subsidized County	0.24***	0.26***		
	(0.04)	(0.05)		
Within 25 Miles of Subsidy	0.16**	0.16**		
	(0.06)	(0.06)		
Within 50 Miles of Subsidy	0.06*	0.04		
	(0.03)	(0.03)		
Within 100 Miles of Subsidy	0.01	-0.01		
	(0.02)	(0.02)		
Respondent has BA	0.05**	0.02	0.08***	0.05*
	(0.02)	(0.02)	(0.02)	(0.02)
Well-informed about State and Local Issues	0.06***	0.06**	0.13***	0.10***
	(0.02)	(0.02)	(0.02)	(0.02)
County Unemployment Rate	0.00	0.01	0.01	0.02
	(0.01)	(0.01)	(0.01)	(0.01)
Job Creation is Top Issue	-0.01	-0.00	0.12***	0.13***
	(0.02)	(0.02)	(0.02)	(0.02)
Correctly Identified Subsidized Firm			0.16***	0.13***
			(0.03)	(0.03)
Observations	4,300	3,786	4,300	3,786
R-squared	0.25	0.26	0.06	0.08
Income and Age Brackets		×		×
Dependent Variable Mean	0.25	0.25	0.57	0.58

Notes: This table shows the correlation between responses to two survey questions and the respondent characteristics. In Specifications (1) and (2) the dependent variable is a dummy variable equal to 1 if the respondent correctly identifies the name of the subsidized firm (Question 3). In Specifications (3) and (4) the dependent variable is a dummy variable equal to 1 if the respondent answers Question 8 affirmatively: "Yes, but only the residents that get jobs at [firm name] are better off" or "Yes, on net, residents are better off." Regressions include state fixed effects and survey weights. Specifications (2) and (4) include controls for respondent age and income.

B.2 Survey Questions

Background:

1. On a scale of 1-5, how informed are you about state and local economic growth policies?

   1 Not at all informed. I do not follow state and local news.

   2

   3 Somewhat informed. I occasionally listen to local news and read the local paper.

   4

   5 Extremely well-informed. I listen to local news and read local paper every day.

2. What are the three most important issues to you in deciding how to vote for governor: taxes, job creation, government corruption, the environment, the state budget, education, infrastructure, or health

care? Please rank from (1) most important, to (3) third most important.

Specific Subsidy Deal:

3. To the best of your knowledge, which of the following companies is building an electric car battery plant in Commerce, Georgia?

   (a) Panasonic
   (b) SK Innovation
   (c) Samsung
   (d) A123 Systems
   (e) I am not sure.

4. To the best of your knowledge, did the state or local government offer SK Innovation any specialized incentives to locate its plant in Georgia? This could be a tax credit that lowers the tax bill for the company, a direct grant given to the company, or land, buildings, and equipment given to the company free of cost.

   (a) Yes.
   (b) No.
   (c) I am not sure.

5. To the best of your knowledge, what was the value of the incentive offered to SK Innovation?

   (a) Less than $50 million.
   (b) $50-$99 million.
   (c) $100-$249 million.
   (d) $250-$499 million.
   (e) $500 million or more
   (f) I am not sure.

6. To the best of your knowledge, when it was announced in 2019 that SK Innovation would build a plant in Georgia how many jobs did the battery manufacturer plan to hire at the new plant?

   (a) 0-499.
   (b) 500-999.
   (c) 1,000-1,999.
   (d) 2,000 or more.
   (e) I am not sure.

7. How did you learn about SK Innovation's plans to locate in Georgia?

(a) I heard about it on the local news or read about it in the newspaper.
(b) I heard about it from a friend or family member.
(c) I heard about it on social media.
(d) I heard about it in a political campaign.
(e) Other.
(f) I don't recall hearing about it.

8. Do you think that offering an incentive for SK Innovation to locate a battery plant in Commerce, Georgia makes local residents better off?

(a) Yes, but only the residents that get jobs at SK Innovation are better off.
(b) Yes, on net, residents are better off.
(c) No, this does not make residents better off.
(d) I am not sure.

Knowledge of other state policies, past voting behavior:

9. In the past 10 years, how many specialized tax incentives or subsidies worth over $100 million has your state offered to private companies?

(a) 1 to 2.
(b) 3 to 5.
(c) 6 to 10.
(d) More than 10.
(e) I am not sure.

10. Besides offering large specialized tax incentives to specific firms, which economic development policies does the state government use to attract firms and create jobs? Select all that apply.

(a) A low corporate tax rate relative to other states.
(b) A job creation tax credit for new jobs created in Georgia.
(c) A research and development tax credit for research and development activities conducted in Georgia.
(d) Grants to reimburse firms for job training expenses.
(e) None of the above.

11. In the past 5 years, has the state or local government used specialized incentives to try to attract private companies to the city or county where you live?

(a) Yes, and the government was successful in attracting new companies.
(b) Yes, but the government was not successful in attracting any companies.

(c) No, the government did not try to attract companies to my area.

(d) I am not sure.

12. To the best of your knowledge, which education policies does your state government use to increase educational attainment and/or prepare students for the workforce? Select all that apply.

    (a) Universal Pre-Kindergarten: Free pre-K for 3 and 4 year old children.

    (b) Investments in broadband infrastructure to increase internet connectivity for public schools and students across the state.

    (c) Scholarship program and/or tuition assistance for low-income college students attending state universities.

    (d) Free community college for all in-state students.

    (e) None of the above.

13. Did you vote in the last gubernatorial election?

    (a) Yes, I voted for Brian Kemp.

    (b) Yes, I voted for Stacey Abrams.

    (c) No, I did not vote.

C Extended Voting Analysis

In this appendix I provide robustness checks for the main analysis in the text. I also show results on the relationship between subsidy-giving and incumbent support at the state-level in the gubernatorial races, and at the district level in state legislature races.

C.1 Robustness

Table C.1 shows the results of estimating Equation 1 using alternative control groups. Instead of using the runner-up counties, I use a coarsened exact match on within-state and year county characteristics. The characteristics are per-capita income (column (2)), income + turnout in the previous gubernatorial election (column (3)), and income, turnout, and vote share for the governor in the previous election (column (4)). I use 7 bins for income and turnout, and 6 for vote share. The table shows the percentage of winning counties I am able to find control counties for, and the percentage of runner-up counties that are included in the control. The baseline results (using the runner-up control group) are shown for comparison in Column (1). The results are robust to these alternative control groups, though 0.1 - 0.4 percentage points lower.

Table C.1: Vote Share Results: Coarsened Exact Matching

	County Level Results: Differences			
	(1)	(2)	(3)	(4)
Subsidy Deal Winner	2.26***	1.83***	2.16***	1.89***
	(0.68)	(0.43)	(0.44)	(0.46)
R-squared	0.83	0.81	0.81	0.82
Control Group	Runner-ups	CEM	CEM	CEM
CEM Variables		Income	+ Turnout	+ Vote Share
Winning Counties	133 (92%)	139 (97%)	130 (90%)	119 (83%)
Runner-up Counties	137 (100%)	90 (66%)	80 (58%)	48 (35%)
Observations	270	3,664	3,604	2,288

Notes: This table reports the estimates of the effect of subsidy-winning on changes in vote share (corresponding to Equation 1). The specification include States $\times$ Year FE as well as the demographic and economic variables listed in Table 5. Column (1) presents the baseline results with the runner-up control groups, while Columns (2) - (4) use a coarsened exact matching procedure to choose a control group. The variables used to create the control groups are per-capita income (column (2)), income + turnout in the previous election (column (3)), and income + turnout + vote share for the governor in the previous election (column (4)).

Table C.2 shows that there is not more advertising in subsidy deal winning counties, and Table C.3 shows that the voting results are not driven by turnout.

Table C.2: Advertising in Subsidized Counties

	Outcome: log(Ad Spending)				Outcome: log(Number of Ads)			
Control:	All DMAs		Runner-ups		All DMAs		Runner-ups	
Subsidy Deal Winner	0.62**	-0.23	-0.11	0.05	0.49***	-0.16	0.13	-0.02
	(0.24)	(0.13)	(0.39)	(0.19)	(0.14)	(0.10)	(0.17)	(0.11)
R-squared	0.59	0.90	0.68	0.96	0.57	0.83	0.75	0.93
Observations	135	135	43	43	213	213	78	78
State × Year FE	×	×	×	×	×	×	×	×
Demographic Controls		×		×		×		×

Notes: This table shows the ad frequency and spending in subsidized counties. The specification includes state and year fixed effects, and the demographic and economic variables listed in Table 5. Data on state election advertising from Goldstein and Rivlin (2005); Goldstein, Niebler, Neiheisel and Holleque (2011); Fowler and Ridout (2017).

Table C.3: Turnout Results

	Control: Runner-ups					
	County			Commuting Zone		
	(1)	(2)	(3)	(4)	(5)	(6)
Winner × Post	-0.29	-0.29	-0.31	-0.28	-0.31	-0.32
	(0.40)	(0.40)	(0.40)	(0.42)	(0.42)	(0.42)
R-squared	0.96	0.96	0.97	0.96	0.96	0.97
Mean Turnout	29.73	29.73	29.73	29.46	29.46	29.46
Area, Year FE	×	×	×	×	×	×
Unemployment		×			×	
All Demographic Controls			×			×
Observations	542	542	540	404	404	404

Notes: This table reports the estimates of the effect of subsidy-winning on changes in turnout (corresponding to Equation **??**). Columns (1)-(3) are the county-level estimates, and Columns (4)- (6) are the commuting zone. The control group are the runner-up counties or commuting zones in the same state and election cycle. Mean turnout in the gubernatorial election is just under 30%.

Table C.4: Spillover Analysis: Effect on Neighboring counties

	Change in Vote Share			Diff-in-Diff Estimate		
	(1)	(2)	(3)	(4)	(5)	(6)
Subsidy Deal Neighbor	0.62	0.62	0.64	0.24	0.37	0.85
× *Post for Diff-in-Diff*	(0.32)	(0.32)	(0.33)	(0.69)	(0.68)	(0.69)
R-squared	0.86	0.86	0.87	0.85	0.86	0.86
Unemployment		×			×	
All Demographic Controls			×			×
Observations	1,092	1,092	1,071	2,186	2,186	2,144

Notes: This table replicates the analysis in Table 7, but takes the neighboring counties to be treated, excluding the winning and runner-up counties. Analysis is at the county level. Therefore, it compares the neighbors to the treated county with the neighbors of the runner-up county, in order to measure the "spillover" of the treatment effect. The results show that the spillover is about 1/3 of the treatment effect in the winning county.

C.2 State Level Governor Results

Table C.5 shows the result of estimating Equation 3, which is the state-level equivalent of Equation 1. The change in percent vote for the incumbent, g, in state s, and election year e, is the dependent variable:

$$\Delta\% \text{ vote}_{gse} = \alpha + \beta \text{win}_{gs[e-1,e]} + \gamma X_{gse} + \eta_e + \varepsilon_{gse}, \tag{3}$$

and the coefficient of interest is β, the correlation between winning a subsidy during the term (between the last election the governor won, in $e-1$, and the current election, in e). These results cannot be interpreted as causal, as the control group is elections of incumbent governors in other states, so there is no way to control for unobservables about the governor's type. However, we can see here that subsidy wins are correlated with slightly larger increases in incumbent support, although the results are imprecise.

Election-level advertising spending is an additional control in the state level analysis. The Wesleyan Media Project and Wisconsin Advertising Project host political advertising data sets for Gubernatorial, Senate, House, and Presidential elections (Fowler and Ridout, 2017; Goldstein and Rivlin, 2005; Goldstein, Niebler, Neiheisel and Holleque, 2011). This data include not only the air date, sponsor, location, and cost of each ad as well as the content of the ads.

Table C.5: Subsidy-Giving and State-Level Vote Share

	All Incumbent Elections		
	(1)	(2)	(3)
Subsidy Deal Winner	2.19	1.06	1.41
	(2.06)	(2.16)	(2.32)
State Characteristics:			
State Unemployment (%)	-0.53	-0.60	0.41
	(0.86)	(0.89)	(1.03)
% Vote in Previous Election			
Corporate Tax Rate (%)		-0.41	-0.47
		(0.44)	(0.52)
Top Personal Income Tax Rate (%)		-0.04	-0.02
		(0.33)	(0.32)
% Revenue Collected from Prop. Tax		-0.16	-0.07
		(0.12)	(0.14)
Change in State Manuf. Employment (%)		0.08	0.03
		(0.09)	(0.11)
Election Characteristics:			
log(# TV Ads in Race)			-1.77*
			(0.73)
# of Challengers in Race			-0.55
			(0.70)
R-squared	0.14	0.20	0.27
Observations	122	122	101

Notes: Here are the within state changes in support for the incumbent governors who win subsidies during their terms ("Subsidy Deal Winners"), compared to the within state changes in support for the incumbents who do not win any subsidies during the term. Election year fixed effects are included in each specification. Data on state characteristics are from U.S. Bureau of Economic Analysis (1967-2017); County Business Patterns (1997-2017); CSG Book of the States (1950-2018). Data on state election advertising from Goldstein and Rivlin (2005); Goldstein, Niebler, Neiheisel and Holleque (2011); Fowler and Ridout (2017). Data on subsidy deals collected by the author.

C.3 State Legislature Results

I repeat the analysis for elections for incumbent state legislators. Here the specification is at the district level, which is the level of analysis for which I have data for state legislature elections.[34] Much like in the state level gubernatorial races, because the data is at the district level, I cannot compare voting results within a single legislator. Instead, I compare across incumbent state senators (or state house representatives) that have won subsidies in their district with state senators in the same state and year running for re-election in districts without subsidies.

Table C.6 presents the results. Here I have pared down the specifications, because I am also interested in the affiliation of state legislators with the incumbent governor. Therefore, the first three specifications are for

[34]The sample for state legislative elction returns ends in 2016, and is from Klarner (2018).

the state senate and the second three are only for the state house (for which there are many more members). The control group is the runner-up counties, which is mapped to a district. So, a subsidy winning district is any district that overlaps with a subsidy winning county, and a runner-up district is any district that overlaps with a runner-up county.

There is a very small positive effect of subsidy-winning for state senators, but Specification (2) shows that this result is driven entirely by state senators who share the party of the governor. State senators in the opposing party do not receive any vote share bump for subsidy-winning. These results do not hold as strongly for the lower house of the legislature, which might be because there are many more state house members.

Table C.6: State Legislature Vote Share Results

	State Senate			State House		
	(1)	(2)	(3)	(4)	(5)	(6)
Change in Vote Share:						
District Subsidy Win	1.65	-0.16		0.50	0.30	
	(0.94)	(1.29)		(0.60)	(0.74)	
District Subsidy Win × Same Party		3.14*			0.72	
		(1.53)			(0.76)	
State Subsidy Win × Same Party			2.30**			-0.04
			(0.72)			(0.30)
Observations	694	694	3,041	2,419	2,419	14,308
R-squared	0.29	0.29	0.15	0.15	0.16	0.08
Diff-in-Diff Estimate:						
District Subsidy Win × Post	0.83	-0.79		0.53	-0.34	
	(0.65)	(1.14)		(0.36)	(0.61)	
District Subsidy × Same Party × Post		3.07*			1.38	
		(1.45)			(0.77)	
State Subsidy × Same Party × Post			0.53			-0.10
			(0.67)			(0.28)
R-squared	0.92	0.92	0.91	0.96	0.96	0.96
Vote Share Mean	65.42		61.07	57.10		51.13
	(14.89)		(14.76)	(22.20)		(21.28)
Runner-up Control Group	×	×		×	×	
State Legislator, Year FE	×	×	×	×	×	×
Observations	1,484	1,484	6,848	4,906	4,906	34,452

Notes: This table reports the estimates of the effect of subsidy-winning on within district changes in state legislator's vote share, and the difference-in-differences estimates of the effect of subsidy-winning on vote share, equation. The results are split for the upper and lower houses of the state legislature, labeled "Senate" and "House", respectively. State legislators in districts that overlap with subsidy-winning counties are attributed a "District Subsidy Win." Specifications 2 and 4 allow for an interaction of the district subsidy win with a dummy for whether or not the legislator is in the same party as the governor. In Specifications 1, 2, 4 and 5 the control group is the set of districts that overlap with counties that were runner-ups in subsidy competitions. In Specification 3 and 6 the sample is restricted to all districts in the state that did not win subsidy competitions, to measure the correlation between election outcomes for same-party legislators and a subsidy win elsewhere in the state. Specifications 1-6 on the top two panels include state times year FE and the demographic controls from Table 5. The bottom panel is the difference-in-differences result estimates which include state legislator and year fixed effects. Data on state legislative election returns from Klarner (2018).

D Alternative Mechanism: Campaign Finance and Subsidy-Giving

I test two related hypotheses relating to a campaign finance channel, and I find no evidence of either. First, in other work I exploit exogenous variation in corporations' abilities to spend in elections created by the 2010 *Citizens United v. Federal Election Commission* Supreme Court ruling to identify the effect of corporate campaign spending in state elections on state level incentive spending for firms. We find no effect of increased corporate spending on any subsidy outcomes (Slattery, Tazhitdinova and Robinson, 2022). Here, I test whether local stakeholders who expect to benefit from firm arrival (i.e. related businesses, property owners, unions) are more likely to support the incumbent's campaign.

It may be that local stakeholders are more likely to support the campaign of the incumbent, due to the subsidy deal. This increase in campaign funds from individuals and businesses in the subsidized locality would translate to an increase in total campaign funds, which could be used for advertising or voter outreach in any part of the state.

Table D.1 present the results of the difference-in-differences specification (Equation 2), with campaign contributions to the incumbent as the dependent variable instead of vote share. Specifications (1) - (3) use individual campaign contributions as the dependent variable, while Specifications (4) - (6) use corporate campaign contributions, both in $1,000s. Individual campaign contributions to the incumbent are potentially slightly larger in the subsidized county, but a zero effect is within the 95 percent confidence interval.

Table D.1: Campaign Contributions from Individuals and Corporations in the Subsidized County

	Individual			Corporate		
	(1)	(2)	(3)	(4)	(5)	(6)
Subsidy Deal Winner × Post	10.57	11.24	9.31	1.97	2.44	1.74
	(15.46)	(15.24)	(16.20)	(11.83)	(11.67)	(12.23)
County Unemp. Control		×			×	
All Demographic Controls			×			×
Observations	536	536	524	536	536	524
R-squared	0.93	0.93	0.94	0.94	0.95	0.95

Notes: This table present the results of the difference-in-differences specification (Equation 2), with campaign contributions to the incumbent as the dependent variable instead of vote share. Specifications (1) - (3) use individual campaign contributions as the dependent variable, while Specifications (4) - (6) use corporate campaign contributions, both in $1,000s. Data on county-level campaign contributions is sourced from Bonica (2016) and National Institute on Money in Politics (2000-2018).

E Are Election Year Subsidy Deals Different?

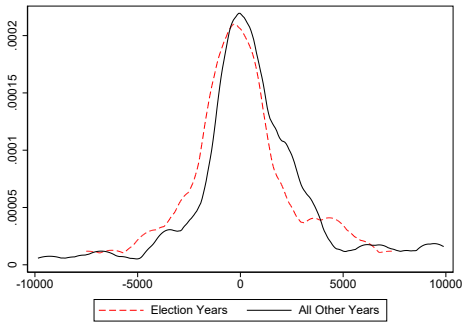
One explanation for the larger effect of election year subsidy deals is that they are different from non-election year subsidy deals. The firms subsidized in election years may be promising more jobs, planning a larger investment, or is predicted to have a greater spillover effect. The voters are rational, and the governor just tries harder to attract higher quality firms in the election year.

Table E.1(a) shows the characteristics of subsidy deals, split out by election year and whether the governor is eligible run for re-election. For incumbent governors running for re-election, the bottom two rows, subsidies announced in election years are slightly larger in size than other years, at $151 million compared to $141 million, and slight larger in jobs promised, with a little under 100 more jobs promised at the mean. However, at the median, the non-election year subsidies promise slightly more jobs. Investment promises look the same across the two groups as well. The figure on the right shows the distribution of pairwise spillover estimates for each subsidy deal. This is from Slattery and Zidar (2020), where we estimated the difference in employment in the three digit NAICS industry of the subsidized firm, between the winning and runner-up location before and after the subsidy deal. There is no noticeable difference in estimated employment spillover, if anything the non-election year subsidies have more positive spillovers in the local area.

Figure E.1: Are Election Year Deals Different?

Can Run	Election Year	N	Subsidy ($M) Mean	Subsidy ($M) Med.	Jobs Promised Mean	Jobs Promised Med.	Investment ($M) Mean	Investment ($M) Med.
		104	136	72	1,457	893	629	295
	×	31	97	57	1,579	886	424	165
×		213	141	49	1,422	1,000	1,193	157
×	×	62	151	67	1,519	950	1,034	220

(a) Subsidy Deals by Year



(b) Diff-in-Diff Employment Estimates

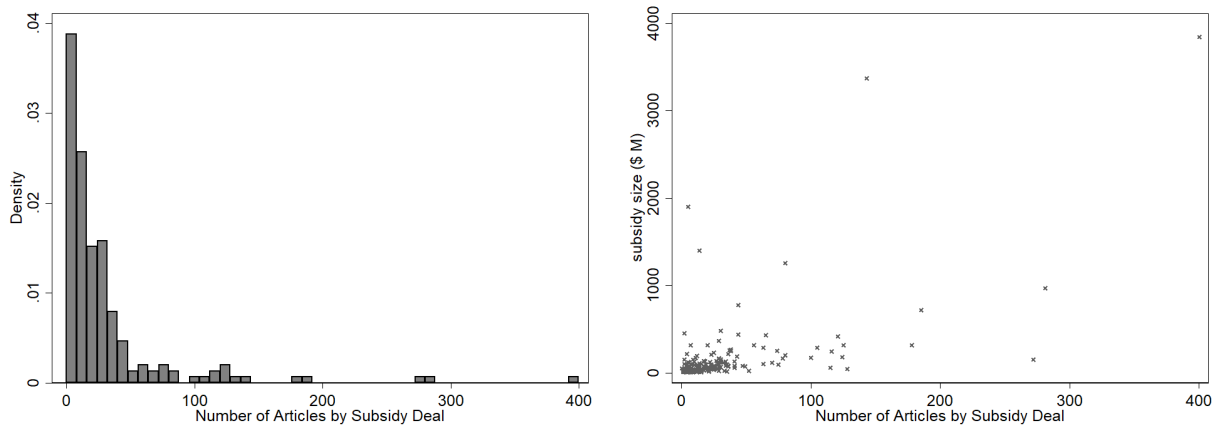
Notes: The table on the left shows the characteristics of subsidy deals that are announced under term-limited governors ("Can Run = 0"), and governors who can run in the next election ("Can Run = 1"), in election years and all other years. Data on subsidy deals collected by the author, data on term limits from National Conference of State Legislatures (2019*b*). The figure on the right shows the distribution of pairwise spillover estimates for each subsidy deal. This is from Slattery and Zidar (2020), where we estimated the difference in employment in the three digit NAICS industry of the subsidized firm, between the winning and runner-up location before and after the subsidy deal. This is limited to subsidy deals announced in 2012 or earlier, so that we had sufficient number of post years for the difference-in-differences.

F Sentiment Analysis

F.1 Measuring Sentiment

F.2 Descriptive Statistics

Figure F.1: News Coverage by Subsidy Deal

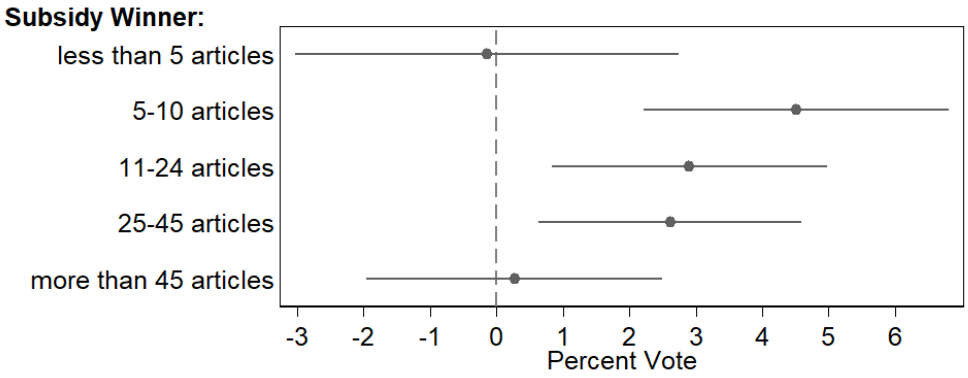


(a) Distribution of Coverage

(b) Coverage vs. Subsidy Size

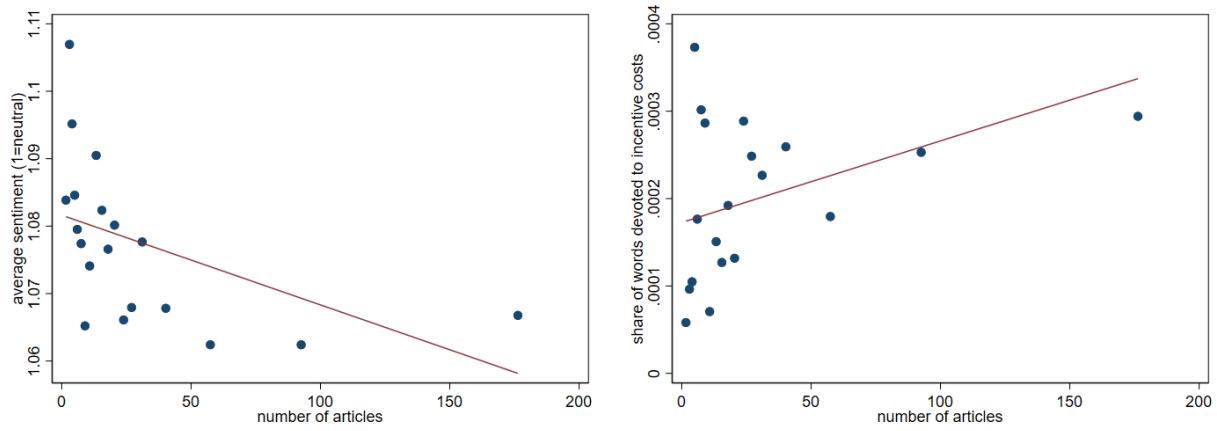
Notes: The figure on the left shows the distribution of the number of articles found about each subsidy deal. The figure on the right shows the relationship between the number of articles on the subsidy size and the size of the subsidy deal, in $M. Data on news coverage collected by the author using ProQuest (2021).

Figure F.2: Vote Change Results by News Coverage



Notes: This figure shows the point estimates and confidence intervals for the effect of subsidy-giving on vote share, by the year of the subsidy deal announcement.

Figure F.3: Sentiment and News Coverage



(a) Average Sentiment Score

(b) Share of Words Devoted to Costs

Notes: These two figures are binned scatter plots showing the relationship between the number of articles written about a subsidy deal and the "sentiment" of those articles, on average. The figure on the left uses the average sentiment score for each deal, which is calculated using the dictionary from Shapiro, Sudhof and Wilson (2020) . The figure on the right uses the the number of times the costs of the deal were mentioned, as a share of total words, as the "sentiment" measure. Data on news coverage collected by the author using ProQuest (2021).

Table F.1: News Coverage and Location, Deal Characteristics

	Number of Articles		Average Sentiment	
	(1)	(2)	(3)	(4)
log(county population)	-4.47	-1.85	-0.09	-0.26
	(2.86)	(1.91)	(0.21)	(0.20)
log(county per capita income)	19.45	7.45	0.72	1.18
	(18.31)	(9.85)	(1.11)	(1.07)
% of population with BA	-0.46	0.57	0.03	-0.00
	(0.61)	(0.31)	(0.05)	(0.05)
log(subsidy size)		14.10***		-0.99***
		(2.57)		(0.20)
jobs promised (1,000)		19.82***		0.07
		(4.37)		(0.10)
Observations	190	190	185	185
R-squared	0.02	0.57	0.02	0.13

Notes: This table shows the correlations between the number of articles and sentiment of a subsidy deal with the location characteristics of the subsidized county and the deal characteristics. The number of articles is a count of articles, collected by the author from ProQuest (2021). The average sentiment is the sentiment score of those articles, calculated using the sentiment dictionary from Shapiro, Sudhof and Wilson (2020). The average sentiment is rescaled so that 100 is neutral. Data on the subsidy characteristics is collected by the author, data on population, per-capita income, and the share with a college degree are from Ruggles, Flood, Goeken, Grover, Meyer, Pacas and Sobek (2019) and U.S. Bureau of Economic Analysis (1967-2017).

F.3 Examples

Negative articles about Hyundai:

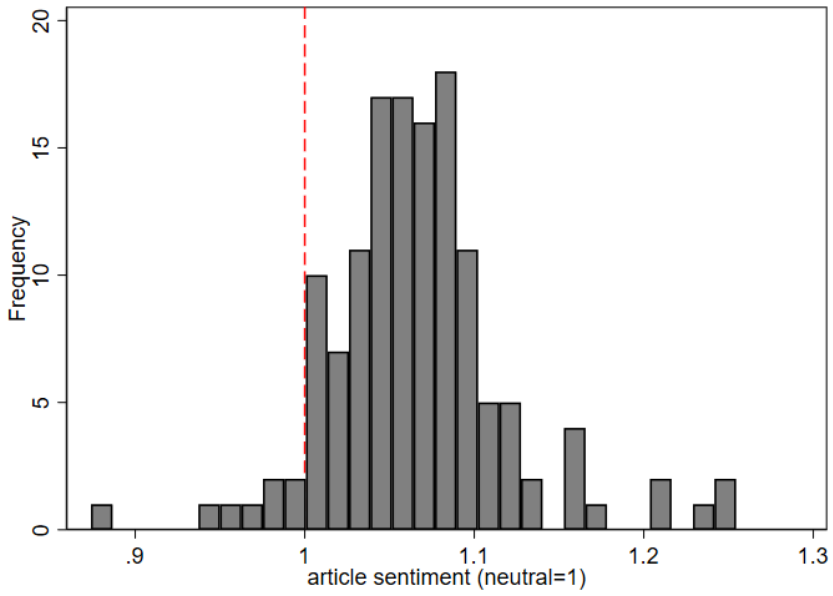
- "Montgomery City Council discusses possible temporary sales tax increase to meet city needs such as Hyundai bond issue"
- "Committee members also questioned a $7 million contract for Gresham Smith and Partners of Birmingham for architectural and engineering services on a training facility for the Hyundai plant in Montgomery. Dixon questioned why the money should come from the Public School and College Authority, which funds education capital projects. Mabry said the Hyundai training facility is a proper use of that money because it is related to education. Mabry also said the contract does not have to go before the review committee and was sent there by mistake. He said the Public School and College Authority, made up of the governor, the finance director and the superintendent of education, has not yet approved the contract."
- "Federal environmental officials overruled objections filed by the state of Michigan and approved Alabama's air permit for the $1-billion Hyundai plant being built near Montgomery. Michigan officials opposed the permit last week, arguing that Alabama's lax environmental regulations were unfairly luring automakers to the state. An official with the Environmental Protection Agency said comments about Alabama's plan were "not significant." Jesse Baskerville, deputy director of EPA's air division in Atlanta, said EPA estimates show emissions from the Hyundai plant would not push air pollution in Montgomery County above current legal limits. Patricia Spitzley, a spokeswoman for the Michigan Department of Environmental Quality, said Michigan and other states are frustrated when automakers say they could save money by locating elsewhere. Under the Clean Air Act, companies are required to use the "best available control technology" to prevent air pollution. Regulators are supposed to document how they determined what technology was required. Alabama's proposed permit for the Hyundai plant does not show that work, Spitzley said."

Postive articles about Hyundai:

- "Wadsworth said the Hyundai plant would create an economic boom for central Alabama because it will attract diverse industries to the area."
- "Hyundai supplier will boost economy RAVE: For the choice of Montgomery as a site by Mobis Alabama, the first major supplier for the Hyundai plant to locate here. That's another 430 jobs, which is certainly good news for the local economy."
- "We have a stable supply of land, and Montgomery is especially blessed to have a stable economy. Not only do we have our strong local businesses, but we have our state government and the military base that take out a lot of the peaks and valleys of employment. And the announcement of Hyundai just creates

additional stability employment wise and job growth wise to an already strong local economy, and that bodes well for people who want to invest in property for years to come. What impact is the influx of Korean families to the tri-county area having on the area housing market since the announcement of the $1 billion Hyundai plant in south Montgomery? With the opportunity we've had to work with some of the Korean families coming in, we've seen that – at least initially – most of them are planning to rent, probably until they get the plant built and things stabilize a little bit. Then we'll probably see a shift to buying and long-term investment in the community. Does the tri-county area have the population base to support the volume of new home construction that is currently going on? Absolutely. We've seen new home absorption pick up the pace over the last few years, and if anything, we're probably approaching a shortage of new homes, subdivisions and lots as we look to 2003. There just aren't as many new developments coming on line as there were three or four years ago, and there's a lot of existing developments that have either reached the saturation point and have either sold out or are close to selling out."

Figure F.4: Within Subsidy Deal Sentiment: Hyundai (2002)



Notes: This figure shows the distribution of sentiment score for the Hyundai subsidy deal in Alabama (2002). Each article mentioning the subsidy deal receives a sentiment score, given the words used in the article. There are 137 articles in the sample. The articles are collected from ProQuest (2021) and the dictionary used to calculate sentiment is from Shapiro, Sudhof and Wilson (2020). Examples of negative and positive sentiment text are given in Appendix Section F.

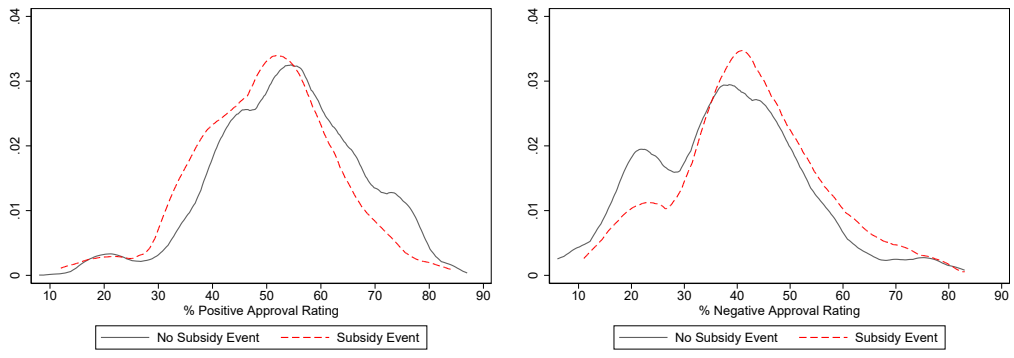
G Subsidy Timing

The voting results highlighted the importance of subsidy timing, as subsidies announced in election years had the largest effect on incumbent support in the subsidized locale. However, Table E.1 shows that governors are not more likely to give subsidies in election years than in any other year during the term. Table A.3 showed that the probability of subsidy-giving increases when the unemployment rate is higher, and in this section I will show that the probability of subsidy-giving increases when governor approval ratings fall.

Data on approval ratings are from the U.S. Official's Job Approval (JARs) Database Beyle, Niemi and Sigelman (2002). This database has all approval ratings at the state level for state governors, U.S. senators, and U.S. presidents from the mid-1900s to 2010. It has the dates each survey went out into the field, the dates the survey returned, the sample size and type, and the percent positive and percent negative response.

The "U.S. Officials Job Approval Ratings" is available through 2010, so I can only do this analysis for the first half of the sample (Beyle, Niemi and Sigelman, 2002). By governor and poll, I aggregate the results to the month level, as I have data on the month of the subsidy announcement for each firm. First, in Figure G.1, the raw data shows subsidy events are more common in lower positive approval or higher negative approval rating periods. Then, Table G.1 shows the correlations in regression form, with governor and month fixed effects. A one standard deviation increase in the positive approval rating is correlated with an almost 14 percent decrease in the probability of subsidy-giving in that month. Again, because governors have little control over when firms arrive interested in locating in the state, I interpret these results as suggestive evidence that governors put in more effort and are more aggressive in subsidy competitions when they have lower approval ratings.

Figure G.1: Approval Ratings and Subsidy-Giving



Notes: This figure shows the distribution of positive and negative approval ratings for governors in subsidy-giving and non subsidy-giving months. Months with a subsidy event are more likely to have a higher negative approval rating, and, relatedly, less likely to have a higher positive approval rating. Data on the job approval rating is from Beyle, Niemi and Sigelman (2002).

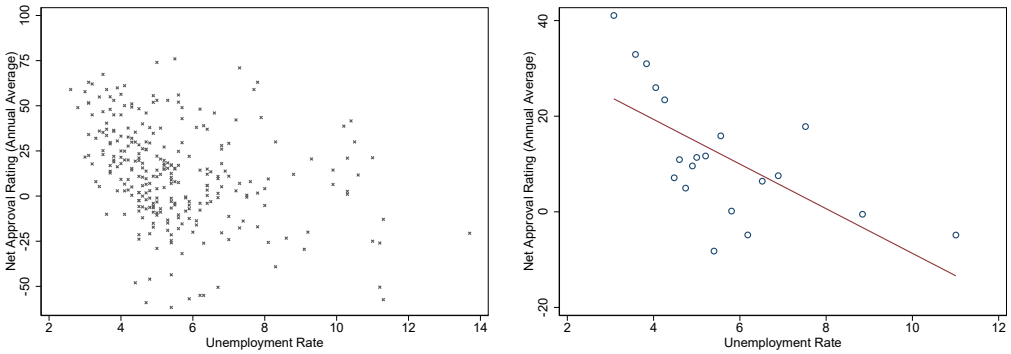
Table G.1: Subsidy-Giving and Approval Ratings

	Dep. Var: Subsidy-Giving Dummy		
	(1)	(2)	(3)
Positive Approval Rating (%)	-0.0025*	-0.0019**	-0.0018**
	(0.0012)	(0.0007)	(0.0007)
% Δ Pr(Sub-Giving) with 1 SD ⇑ in Rating:	-10.8	-14.6	-13.9
Negative Approval Rating (%)	0.0019	0.0015**	0.0013*
	(0.0010)	(0.0005)	(0.0005)
% Δ Pr(Sub-Giving) with 1 SD ⇑ in Rating:	8.5	12.2	10.5
Net Approval Rating (%)	-0.0011	-0.0009**	-0.0008**
	(0.0006)	(0.0003)	(0.0003)
% Δ Pr(Sub-Giving) with 1 SD ⇑ in Rating:	-9.7	-13.7	-12.2
Observations	1,226	2,120	2,120
Dep. Var. Mean	0.130	0.074	0.074
Governor FE	×	×	×
Balanced Sample		×	×
Month FE			×

Notes: This table shows the correlation between subsidy-giving and governor approval ratings. Data is at the month-governor level, and the dependent variable equals 1 if the governor announced a subsidy deal in that month. The top panel shows the correlation between subsidy-giving and positive approval ratings, the middle panel uses negative approval ratings, and the third pannel uses the net approval rating. Each specification has governor fixed effects, specifications (2) and (3) fill in missing months approval data with the previous, non-missing, month, and specification (3) adds month fixed effects. Data on the job approval rating is from Beyle, Niemi and Sigelman (2002) and data on subsidy timing was collected by the author.

Figure G.2 shows that approval ratings are highly correlated with unemployment rates. Governors have higher approval ratings when the economy is doing better (and unemployment is low). Therefore, the fact that subsidy-giving and approval ratings are correlated is consistent with the result in Section 3, showing the correlation between unemployment rates and subsidy-giving. I cannot say whether it is the fact that governors want to create more jobs and get the economy back on track, or want to improve their approval rating, that leads them to put more effort into subsidy competitions in these periods, as the two forces go hand in hand.

Figure G.2: State Unemployment Rate and Governor Approval Ratings



Notes: These two figures show the correlation between the state unemployment rate and the governor's approval rating. The y-axis is the net approval rating for the governor, which is the average over the 12 months. The x-axis is the annual unemployment rate in the state. The figure on the left shows the raw scatter plot while the figure on the right shows the binned scatter plot. Data on the job approval rating is from Beyle, Niemi and Sigelman (2002) and unemployment rates are from Bureau of Labor Statistics (1990-2017).

H Additional Figures

Figure H.1: Local News Coverage of the Hyundai Deal: First Week of April, 2002



(a) April 2, 2002 (b) April 3, 2002

Notes: This figure shows some of the news coverage the *Montgomery Advertiser* published about the subsidy deal for Hyundai. These articles were published the week the deal was announced.

Figure H.2: Local News Coverage of the Hyundai Deal: April 17, 2002



Montgomery Advertiser — SPECIAL REPORT: Hyundai unveils facility details — Wednesday, April 17, 2002 — 5A

Officials foresee deal's benefits

By Kell M. Dugan
Montgomery Advertiser

After the applause faded and the crowd began to dissipate, Gov. Don Siegelman and Hyundai Motor Co. President Dong Jin Kim braced for the hard questions surrounding the $1 billion plant near Hope Hull.

Journalists from across the state convened for a brief question and answer session following Tuesday's ceremonial groundbreaking for a 3-million-square-foot automotive manufacturing plant — the Korean automaker's first in the country.

From workforce development and the role robotics will play in the facility to determining factors that led to Montgomery being the final choice for the coveted site, Siegelman and Kim fielded questions that have been circulating since the first murmurs that Hyundai could locate in Alabama.

Before the first question was fired, Siegelman called the partnership "a marriage of two strong-willed people determined to make the best, highest quality automobile in the world, and finally, a governor who's determined to establish Alabama as the automotive capital of the world."

QWhat specific details can you provide for plans to build an engine plant and a stamping plant, and how will they coincide with the automotive assembly portion of the plant?

A Kim: We are going to build a complete automotive manufacturing plant, not assembly plant — engine plant, stamping plant — from scratch. So, maybe import some components in the beginning stage. We are going to localize as many parts as possible.

How will this plant be different from existing Hyundai plants?

Kim: We are going to build a state-of-the-art plant, highly automated, [that] utilizes as many robotics as possible. The main reason is to maintain high quality. I know the Alabama workforce is very well trained and ready to learn the company, [but] humans [sometimes] make mistakes, and we are trying to utilize as many automation as possible.

Siegelman: I've been to Seoul, which is by far the most highly advanced from a technological standpoint of any city I've ever visited from a robotics standpoint, and President Kim told me the one we build here will be the most advanced from a robotics standpoint. It will set a new higher standard for automotive production, which other automotive manufacturers will be challenged to emulate.

What do you say to Alabama's emerging image as the "Detroit of the South?"

Siegelman: Don't call us Detroit. You can call us a competitor, Detroit, as I understand it, has fallen auto-motive manufacturing facilities. Alabama has, indisputably, three automotive manufacturing facilities. We've located four of the top seven automotive manufacturers in the world in the state, and we're going on a hot streak. There's no other state that can make that claim.

What will this plant mean for the economy in Alabama?

Siegelman: Alabama's space-science technology and defense industry was named the most resilient in the United States. Clearly, with Hyundai we have added an important new sector. Those who have looked at Alabama and have denied acknowledging our progress can no longer deny it that this state is a leader in the field of automotive manufacturing.

Our commitment, and my belief is that the business leaders of this state and of this country will now invest more in Korea, and I believe this is an opportunity for us in Alabama to move to the Alabama-Korea-United States. This will be a strengthening of our culture, a strengthening of our economic ties, both in the state of Alabama and the United States.

How heavily did Alabama's existing automotive facilities and suppliers' base weigh into the final choice?

Kim: The primary reason we selected Alabama for our future site is the ideal location of the site and the state and local governments's commitment, particularly Gov. Siegelman's personal commitment and efforts to bringing our plant here.

Is the anticipated 2,000 direct job creation figure accurate?

Kim: Our current plan for production will be around 125,000 vehicles a year. If our plan proves successful we are going to increase our production up to 300,000. Two thousand employees is a safe number. Even though we utilize highly mechanized, highly robotic methods, we need at least 2,000 employees.

Describe the cultural likeness between Alabama and Korea.

Siegelman: Alabama workers have values and a work ethic similar to what I found in Korea. The people in Korea are polite, warm, friendly, generous — they want to be of help, and they're committed to their families. Alabamians have those values, and next to their families, Alabamians love their jobs.

What role did incentives play in luring Hyundai to Alabama?

Siegelman: Every state provides incentives. If incentives were the main factor in driving some of those investments, then some of them would not have been

Hyundai Motor Co. Chairman Mong Koo Chung, left, and Gov. Don Siegelman, right, greet each other Tuesday during the groundbreaking ceremony for the Hyundai plant near Montgomery. Siegelman called the deal between Alabama and Hyundai a marriage between two strong-willed people determined to make the best, highest quality automobile in the world.

Mickey Welsh Advertiser

Hyundai Motor Co. Chairman Mong Koo Chung, left, and Gov. Don Siegelman, right, watch Tuesday's groundbreaking ceremony.

Todd Van Emst Advertiser

Gov. Don Siegelman, left, and Hyundai Motor Co. President Dong Jin Kim, right, speak with the media after the groundbreaking ceremony Tuesday.

Mickey Welsh Advertiser

Media representative from across the state were on hand for Tuesday's groundbreaking ceremony just outside of Montgomery.

Mickey Welsh Advertiser

ALABAMA AUTOMOTIVE TIMELINE

- **1992:** Mercedes-Benz selected a site near Tuscaloosa to build its first U.S.-based sports utility manufacturing plant outside of Germany.
- **1993:** With roughly 1,500 team members on payroll, Mercedes went into production of the M-Class and has produced more than 350,000 of the sport utility vehicles to date.
- **1999:** Honda announced it would build a $500 million, comprehensive automotive assembly facility in Lincoln to produce Odyssey minivans and engines.
- **April 25, 2000:** Honda hosts grand opening of the Lincoln plant, expected to employ 2,300 by the end of the year and have twin annual capacities of 120,000 minivans and 120,000 engines.
- **August 2000:** Daimler-Chrysler announces a $600 million expansion that will add 2,500 jobs at the Tuscaloosa County facility, bringing the total payroll close to 4,000.
- **2001:** In February 2001, Toyota announced that it selected Huntsville for its newest engine plant in North America. The $568 million plant will build 4-cylinder and V-6 engines for Toyota's Tundra truck. The Huntsville plant will be the company's first outside of Japan to manufacture V-8 engines. Production is expected to commence this summer 2003. The 1,320 million plant will employ about 750 people.
- **April 1, 2002:** Hyundai reveals a 1,500-acre site near Montgomery for a $1 billion assembly plant expected to hire around 2,000 people. Production is expected to begin in 2005.
- **April 16, 2002:** Groundbreaking for 2 million-square-foot Hyundai facility on 1,525-acre parcel north of Teague Road.

THE EXECUTIVES

Mong Koo Chung

- **Title:** Chairman of the Board Hyundai Automotive Group
- **Experience:** Joined Hyundai in 1974, having served as chairman of Hyundai Motor Service and Hyundai Engineering & Construction. He was chairman of Hyundai Steel Co. from 1987 to 1995, served as president of Hyundai Space Engineering from 1994 to 1998 and president of Hyundai Group from 1998 to 1999. Chairman of the Hyundai Motorsports Club from 1988 to 2000, runner motorsport of Hyundai Automotive Group in 1999.
- **Education:** Bachelor's degree in industrial business administration from Hanyang University in Seoul.

Dong Jin Kim

- **Partners:** President and Chief Executive Officer of Hyundai Motor Co.
- **Experience:** Joined Hyundai Heavy Industry in 1977, served as director of the Hyundai Engineering & Research Institute from 1998 until 1999, also served as president of Hyundai Space Research and director of Hyundai Motor's Commercial Vehicle Division; former president of Hyundai Motor Co. in 2001, and currently serves as chairman of the board of Hyundai Investment Company.
- **Education:** Bachelor's degree in mechanical engineering from Seoul National University; received his Ph.D in industrial engineering in 1988 from Yonsei Engineering College.

Outlying counties, cities seek some connection to Hyundai

By Alisia Bass
Montgomery Advertiser

Greenville leaders have agreed to spend $9,000 during the coming year on a billboard in Montgomery County.

Mayor Dexter McLendon feels it will be money well spent because he caught wind of his town's desire to cash in on Hyundai's $1 billion investment just as the road in Hope Hull.

"I got the idea from a billboard on I-85 near where the Honda plant was being built," McLendon said this week. "Another town did the same thing. I thought it might work for us, too.

Mayors of several Alabama cities and counties are looking for ways to attract Hyundai's attention in the coming months as construction gets under way on the automotive plant, which will be within easy driving distance.

In the Wilcox Crenshaw County town of Rutledge, Mayor Jon D. Flynn is optimistic that residents there will find work at the Hyundai plant when it opens in December 2005.

"We're only 30 miles from Hope Hull," said Flynn, who is mayor of the town of 450. "Some of our people already work in Montgomery County. I feel this is a good opportunity for our town and all of Crenshaw County."

At the moment, Flynn said, there aren't any plans in Rutledge to attract businesses that will employ Hyundai facility workers when it opens, but the city is looking for some subtle supply plans, like

A sign off of Interstate 65, sponsored by the city of Greenville, welcomes Hyundai to Alabama.

Todd Van Emst Advertiser

town will be high on the list.

"I know they're going to be looking, and we've already got a Longs Bail Bonds in our county," Flynn said, referring to a pharmaceutical plant that is expected to open soon in nearby Luverne. "I think that might give us an edge in that department."

Tuskegee Mayor Lucinda Dunn and Joan Vaughan, president of the Tuskegee City Council, both attended Tuesday's groundbreaking ceremony.

Vaughan said Tuskegee, Shorter, Brunson and Notasulga, along with the Macon County Commission and Tuskegee University, pledged $100,000 toward the incentive package to lure Hyundai to Alabama.

"It will be paid out over a three-year period," Dunn said. "We don't want to lure Hyundai to come to help us in Macon County, but I'm sure we'll have an opportunity to deal with suppliers."

Vaughan said Macon County may not be able to afford a large billboard, "but I think we can capture Hyundai's attention with our aggressiveness."

Before Montgomery County was selected, Lee County had been courted and one of the frontrunners for the Hyundai location. Lee County officials quickly agreed to congratulate the Kim and Chung team to work immediately to design the deal.

McLendon said the sign is costing Greenville $600 a month for 12 months, along with a startup fee of $1,000.

"We wanted the sign to be in place by Dec. 1," he said. "I think we accomplished just that."

Tom Traylor of Traylor Advertising said his company was able to produce the sign quickly "with a clear, concise message."

We also consider the quality of the workforce. We do not expect well-trained workers to come to our area. We understand they have not been trained. Yet the workers should convert to automotive specialty well.

Kim: The incentive package is not the main factor for our selection or the decision-making process. Incentives are good, but in the long run, incentives are just a portion on the tip of the iceberg. The most important thing is the people — the attitude of people or dedication or commitment of the state and the local government officials.

Kim: Our intention is to make this company [a] success in our country," Flynn said.

Vaughan said Macon

4A Wednesday, April 17, 2002 — SPECIAL REPORT: Hyundai unveils facility details — Montgomery Advertiser

Details: Governor says business leaders have taken notice

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industry," Chung said through a translator.

On behalf of Hyundai Motor Co., Chung presented Montgomery Mayor Bobby Bright and Montgomery County Commission Chairman Bill Joseph $250,000 check for the Alabama Partnership for Children Early Childhood Learning.

Chung announced the gift, which will support teacher training, education initiatives, opportunities for students, community communications, principal training and other related educational opportunities.

"Hyundai's decision to build it local plant in the U.S. comes from our aspiration to provide our U.S. customers, who have recognized the value of Hyundai cars and have decided to buy Hyundai, with the impeccable quality and timely response only possible locally," Chung added.

Siegelman told the crowd that in the last couple of years top business leaders around the world would never have believed Alabama could catapult itself to the "top of the list of every automotive manufacturer in the world."

Vine, dedication, perseverance and a committed workforce have changed all of that, he said.

"Not long ago the world's business leaders couldn't find Alabama on a map. And after today, you better believe they know where Alabama is. Because it's the new home of Hyundai," Siegelman said, garnering a standing ovation.

As the itinerary of speakers swept the ground from state and local officials to Korean dignitaries and Hyundai officials, gray skies gave way to rays of sunlight, ushering in a spring-like mindset and by the warmth of Southern hospitality.

"After the last two days, we now know what a Hyundai project we can put together," said Albert Cho, of the Korean Consulate General of the Alabama — Georgia — Tennessee Office, motioning to the tent-covered buffet table luncheon that featured Korean and Southern cuisine.

"We can take the rest of the day off, but tomorrow, the real work begins," he said.

For Randy Goerge, president of the Montgomery Area Chamber of Commerce, the work has already begun.

"We had about 40 supplies on from Tuesday's meeting of the Montgomery Area Chamber, listing the advantages [and] size area [the] plant will be built before the ground breaking ceremony.

"We had a chance to show them some of our quality of life attributes and existing industrial parks and also we tried to give them a feel for the business, industrial and living environment they would experience here," Goerge said.

Goerge said he expects such site location searches to become more pronounced and structured as the months and years roll on and a ripple effect is realized for Montgomery and state economic recruitment officials to meet with existing suppliers there.

"This is the beginning of a very significant change in the way we do business in Montgomery," George said.

With work on the site slated to begin as early as today, Goerge said a contractor for the project estimate is expected to be announced within the next two weeks, and a design team should be named with in three months.

Members of the Korean Society of Montgomery wave flags and welcome dignitaries Tuesday to the groundbreaking ceremony of the Hyundai plant near Montgomery. The itinerary of speakers ranged from state and local officials to Korean dignitaries.

Photos by Mickey Welsh Advertiser

Many of those who attended Tuesday's groundbreaking ceremony got a look at a display of several new Hyundai automobiles.

Montgomery Mayor Bobby Bright, left, chats with U.S. Rep. Earl Hilliard, right, during Tuesday's groundbreaking ceremony near Montgomery.

"Hyundai wants to build the greatest automobile, and we want to build the greatest state," Siegelman said. "To the people in Montgomery and across Alabama, Hyundai brings hope, and you cannot put a price on that."

Kell M. Dugan, who covers business for the Montgomery Advertiser, can be reached at 3496116, by fax at 261-1571, or by e-mail at kdugan@montgomeryadvertiser.com.

Residents welcome area's changes

Many are pleased by the increased economic opportunities in Hope Hull

By Dave Hendrick
Montgomery Advertiser

Life will not be the same for Debbie Henderson.

She stood near one of the several large white canopy tents covering the Tuesday groundbreaking events at Hyundai Motor Co.'s future site just off Hope Hull Road.

Within feet far from her hometown of Hope Hull.

The crowd of more than 1,000 men in suits and women in business clothes swarmed the grounds. Over there was the governor and the lieutenant governor. Mayors from a dozen or more cities. Over here was perhaps the freak with the economic development experts, Hyundai executives, congressmen, senators and other VIPs.

They talked about money, opportunity, jobs and cars.

Henderson talked of home.

Debbie lived out in Hope Hull all her life. She has friends and and good at the same time," Henderson said. "I've been here 20 years. You come out here and you smell the country. You see, we're in the country. So, it's going to be a little sad."

Her co-worker, Candy Riddle, stood by and nodded.

"It's not the country anymore," she said. "You have to go a little further to be in the country."

They know the Hyundai plant is going to be good for Montgomery County's economic future, and they are glad to see that. The jobs the plant will create and the thousands more created by satellite companies supporting Hyundai will improve the quality of life for some in the region.

That is the golden highway that will lead to a better life for many in Hope Hull before Thursday, Hope Hull was a quiet, sleepy little burg with a few convenience stores and small businesses.

Now people know they are near hope Hull by looking at the green roadside signs with arrows pointing to the Hyundai site.

Folks outside Hope Hull, all the way in Clayton in Barbour County, see promise in the plant now, too.

"It's wonderful, not only for Montgomery, but for the whole area," said Mayor Jack Walker, assistant city clerk in Clayton. It's largest industry is Royal Brothers Trucking Co. "We're hoping Royal Brothers will get business from here."

Closer to home, residents and politicians are looking forward to the jobs that Hyundai brings, touting payrolls to its workers whose average salaries will hit $41 per hour.

"It's gorgeous," said Rev. B.E. Moss of Mt. Zion Baptist Church in North Elmore. "It's great because of what it is bringing to the state of Alabama, and par-

Hundreds of dignitaries and area residents attended Tuesday's groundbreaking ceremony for the Hyundai plant near Montgomery.

Todd Van Emst Advertiser

ticularly Montgomery. It's a great blessing. Twenty-one dollars an hour is great. You just think about what a family can do with that kind of money."

Montgomery County Commissioner Jim Williams of District 4 praised the day.

"It's a day of jubilation," he said. "It's the greatest thing to happen in Montgomery in the past 20 years. I thank God I am alive to see it."

For Young Kap Kim, the Korean-born owner of Dexter Deli in downtown Montgomery, the day has more meaning than just money, jobs and a manufactory in the county.

Kim is a native of Korea, but Montgomery is the home he wanted the two adult boys to become one Tuesday.

"I've lost my words," he said. "I've lived in Montgomery 27 years. This is the most exciting moment of my life."

As a strong the gold Hyundai sedan that will be posted for weeks. "This is the most exciting moment of my life. I am so proud to see our hometown come to Montgomery. I am proud of the industry. And [often pride comes the home."

Dave Hendrick, who covers city government for the Montgomery Advertiser, can be reached at 240-2412 or by e-mail at dhendrick@montgomeryadvertiser.com.

Build: Construction set to end in 2004

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gue Road to four lanes. Total cost of the work is about $837 million.

The two local governments must raise and $2 million in bonds to pay for the preparation and road work.

Plant construction is scheduled to be completed in late 2004, and trial production will begin in September 2004. The first vehicle is expected to roll out in March 2005.

The buildings will cover about one-fourth of the 1,525 acreage.

About one-third of the total site will be paved between 146 on the west, CSX Transportation on the east and Teague Road on the south. A test track will run the north-south length of the property paralleling I-65.

The remainder of the property will be open fields, and a pond will be on the northwest section of the property.

Once the plant reaches full production, it will build 300,000 Hyundai Sonatas sedans and Santa Fe sport utility vehicles per year.

The project's general contractor will be named some time after the first spade is in place, Strange said.

Clinton also announced the formation of a new subsidiary called Hyundai Motor Manufacturing Alabama, LLC, which will be responsible for plant operations in the Montgomery area, and introduced the facility's management team.

Tong Soo Kim, who has been president of Hyundai's assembly facility in India, will serve as chief executive officer.

James Lee, an engineer who served as Hyundai project manager through out negotiations, will oversee the plant's daily operations while B.M. Ahn, president of Hyundai U.S.A., has been named plant manager.

An artist's rendering of the proposed 2-million-square-foot facility was also unveiled, indicating a test track to the east of the plant and ample space for expansion to the west.

The plant will produce Sonata sedans and Santa Fe sport utility vehicles beginning in 2005. The site includes a transmission and assembly facility; a stamping plant and an engine plant.

Hyundai Motor Co. officially announced it chose Montgomery on April 1 for its plant expected to produce 300,000 vehicles per year at peak production.

HYUNDAI CONSTRUCTION TIMELINE

- **April 16, 2002:** Groundbreaking
- **November 2002:** Start of construction
- **June 2004:** Completion of building
- **September 2004:** Trial production begins
- **March 2005:** Vehicle production begins

ABOUT THE FACILITY

- The 2 million square-foot facility will be built on 1,525 acres of land in the city of Montgomery.
- Construction of the facility is expected to begin in November.
- The company will invest approximately $1 billion in the new facility.
- Once it is fully operational, the plant expects the facility to employ approximately 2,000 people.
- The facility is scheduled to begin production in 2005.
- The combined manufacturing and assembly facility will produce the next generation designs of both the popular Sonata sedan and the Santa Fe sport utility vehicle for the North American market.
- In addition, the site will include a stamping plant and an engine plant.
- At maximum capacity, the facility is expected to produce 300,000 units per year.
- The $1 billion cost will be 70 percent financed through internal cash reserves and 30 percent through outside financing.

ABOUT HYUNDAI MOTOR CO.

- Hyundai is the fifth-largest automobile importer in the United States.
- 344,235 Hyundai cars and sport utility vehicles were sold in the United States in 2001, according for a 42 percent increase in sales over 2000 — the largest increase in the industry.
- Hyundai Motor Co. reported a 75 percent rise in net profit for 2001 to $879 million — mainly built in the company's 25-year history.
- Worldwide, Hyundai Motor Co. sold 1.64 million units in 2001, a 4.7 percent increase month at tributed to brisk sales of high-end passenger cars and sport utility vehicles.
- Hyundai, along with its subsidiary and cooperative companies, employs around 250,000 people worldwide.
- Hyundai's 2002 model lineup in the United States features the redstyled and refined Sonata, as well as the Accent, Elantra GLS sedan, Elantra five-door hatchback, the Santa Fe sport utility vehicle, the Tiburon coupe, Accent wagon, and the all-new 2003 Tiburon.

What They Said

"I've lived out in Hope Hull all my life, and it's kinda sad and good at the same time."

—Debbie Henderson, Hope Hull resident

"It's a great blessing. Twenty-one dollars an hour is great. You just think about what a family can do with that kind of money."

—The Rev. B.E. Moss, Mt. Zion Baptist Church in North Elmore

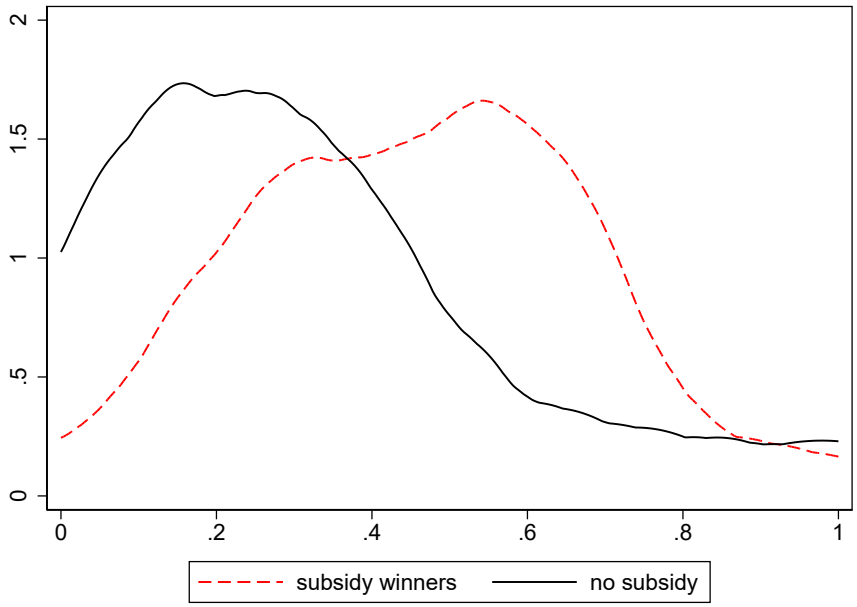
Jum Soon Oh, left, hands Jin Brown a program before Tuesday's groundbreaking ceremony for the Hyundai plant near Montgomery.

Figure H.3: "Siegelman New Jobs" TV Ad Spot (2002)



Notes: This figure shows the storyboard for one of Governor Siegelman's television advertisements in Alabama's 2002 gubernatorial election. Governor Siegelman was running for re-election, and the ad highlights his success in attracting firms and creating jobs in Alabama over his first term. Four automobile manufacturers are mentioned by name: Honda, Mercedes, Toyota, Hyundai, and the narration is coupled with images of newspaper headlines about the firms locating in Alabama. The ad concludes with the claim that Don Siegelman had brought more than 68,000 new jobs to Alabama. This ad ran 525 times across the state in the month of May 2002, for an estimated cost of $129,927 (Goldstein and Rivlin, 2005).

Figure H.4: Advertising Data: Incumbent Subsidy-Winners



Notes: This figure shows the difference in the content of incumbent governors advertisement, by whether or not they won a subsidy deal during their term. The x axis shows the percent of ads that the incumbent governor runs that mention job creation. The data on political advertisements are from the Wisconsin Advertising Project and the Wesleyan Media Project (Fowler and Ridout, 2017; Goldstein and Rivlin, 2005; Goldstein, Niebler, Neiheisel and Holleque, 2011).