A   Appendix

Figure A.1: Pairwise Difference-in-Differences Estimates of Firm-Specific Subsidies

(a) Number of Jobs Promised, Level

(b) Number of Jobs Promised, Percent

(c) Size of Subsidy, Level

(d) Size of Subsidy, Percent
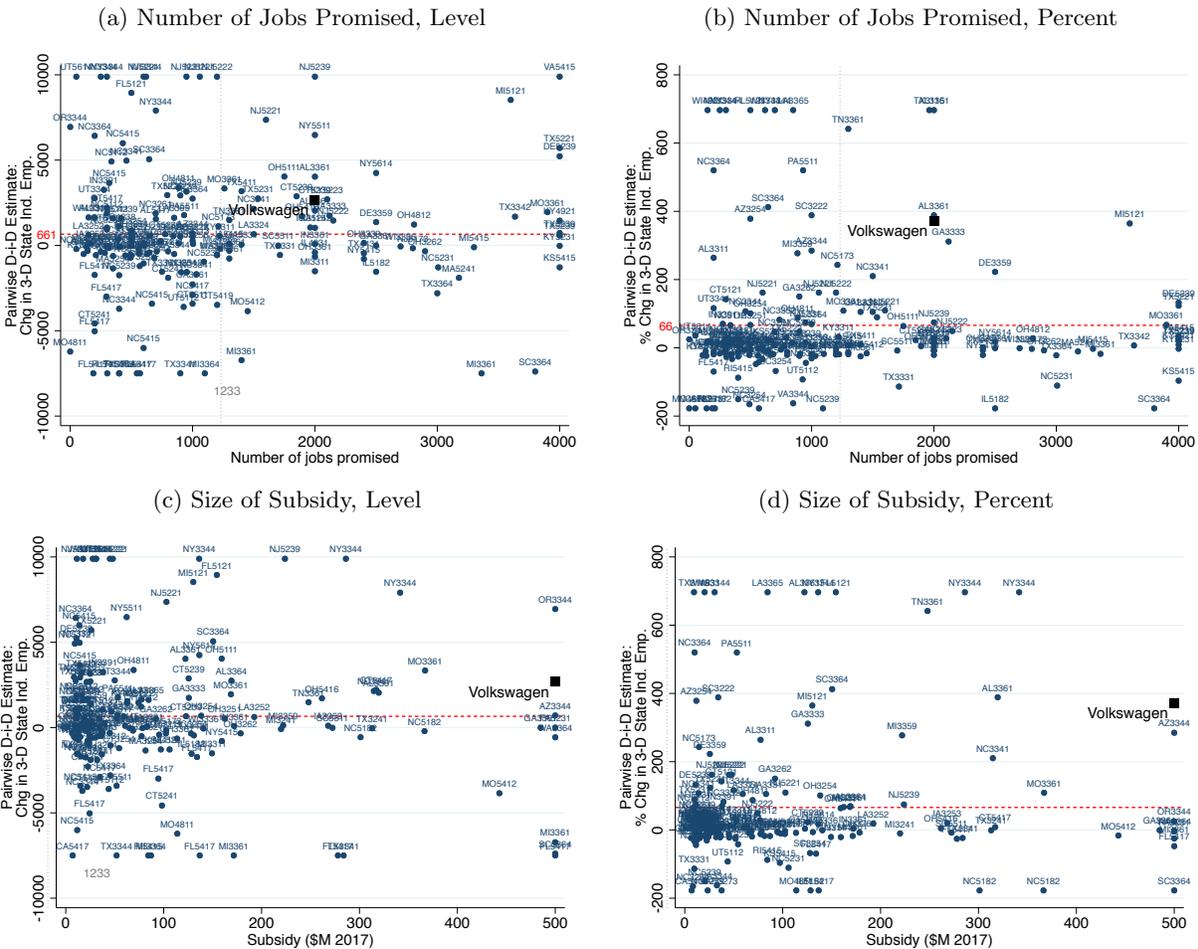
Notes: This figure plots pairwise difference-in-difference estimates for the deals in our sample whose "winner and "runner-up" counties have positive pre-deal employment. Pre-deal employment is the average for the three years prior to the deal. Post-deal employment is the three-year average of employment 4, 5 and 6 years after the deal. The sample is winner-runner-up pairs whose year of deal is between 2002 and 2012. Panels A and B compares the level and percent change in employment to the number of jobs promised. Panels C and D replicate Panels A and B, but plot the estimates relative to the size of the subsidy package. Estimates are winzorized at the 5% level. The dotted light gray line denotes the average number jobs promised and the size of the average subsidy package. The dashed red line denotes the mean difference-in-differences estimate. We censor number of jobs promised at 4,000 and subsidy amount to $500M for visualizations sake. Four deals promise over 4,000 jobs, and 5 subsidies are over $500M.

Figure A.2: State Characteristics and Per Capita Incentive Spending

■ Full Sample   ◇ Only 2014
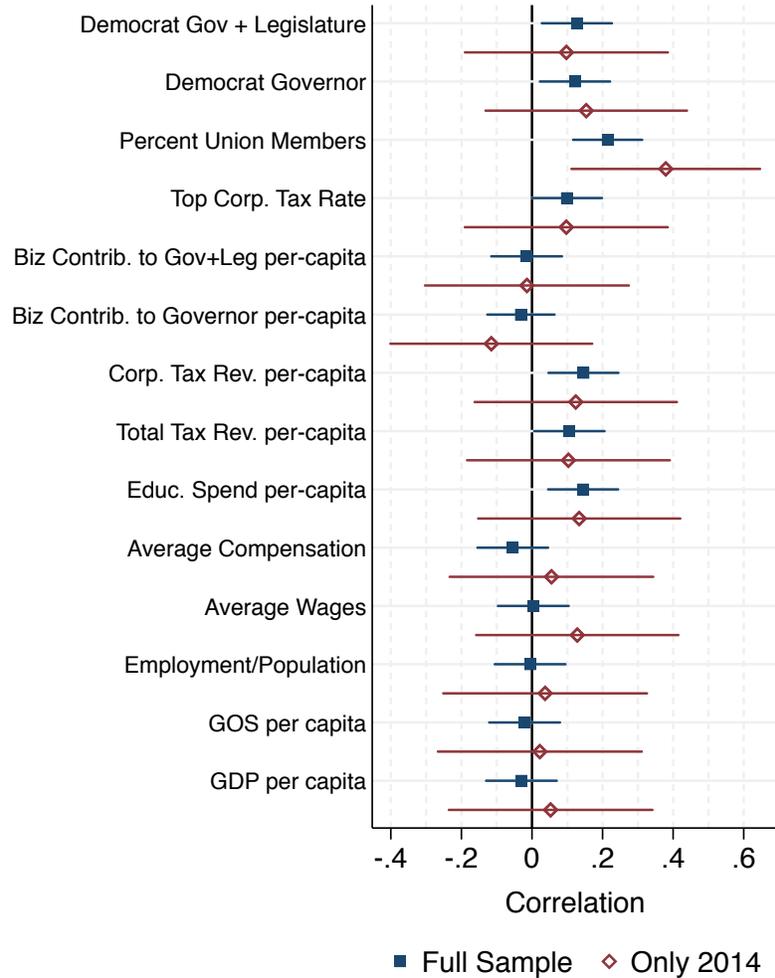
Notes: This figure plots correlations between state per capita business tax incentive spending and state characteristics. The correlation coefficient and the 95% confidence interval are reported. The navy squares report the relationship over the full sample (2007- 2014), while the maroon hollow diamonds report the results for 2014. State per capita incentive spending is from Slattery (2019). GDP, GOS, and compensation are sourced from the U.S. Bureau of Economic Analysis (1967-2017). Corporate income tax revenue, total tax revenue, and education expenditures are drawn from the US Survey of State and Local Government Finance, via the Tax Policy Center. Top corporate income rates from the CSG Book of the State (1950-2018). Population comes from the US Census. Wages and employment are sourced from the Census County Business Patterns (1997-2017). Data on state union shares come from the work of Hirsch, Barry and Macpherson, David and Vroman, Wayne (1964-2018), while campaign contributions come from Chirinko and Wilson (2010). Lastly, data on the party of governors and state legislatures is from Follow the Money (2000-2016).

Figure A.3: Event Studies: Within-Industry Employment Effects of Winning a Subsidy Deal

(a) Our Deals Dataset
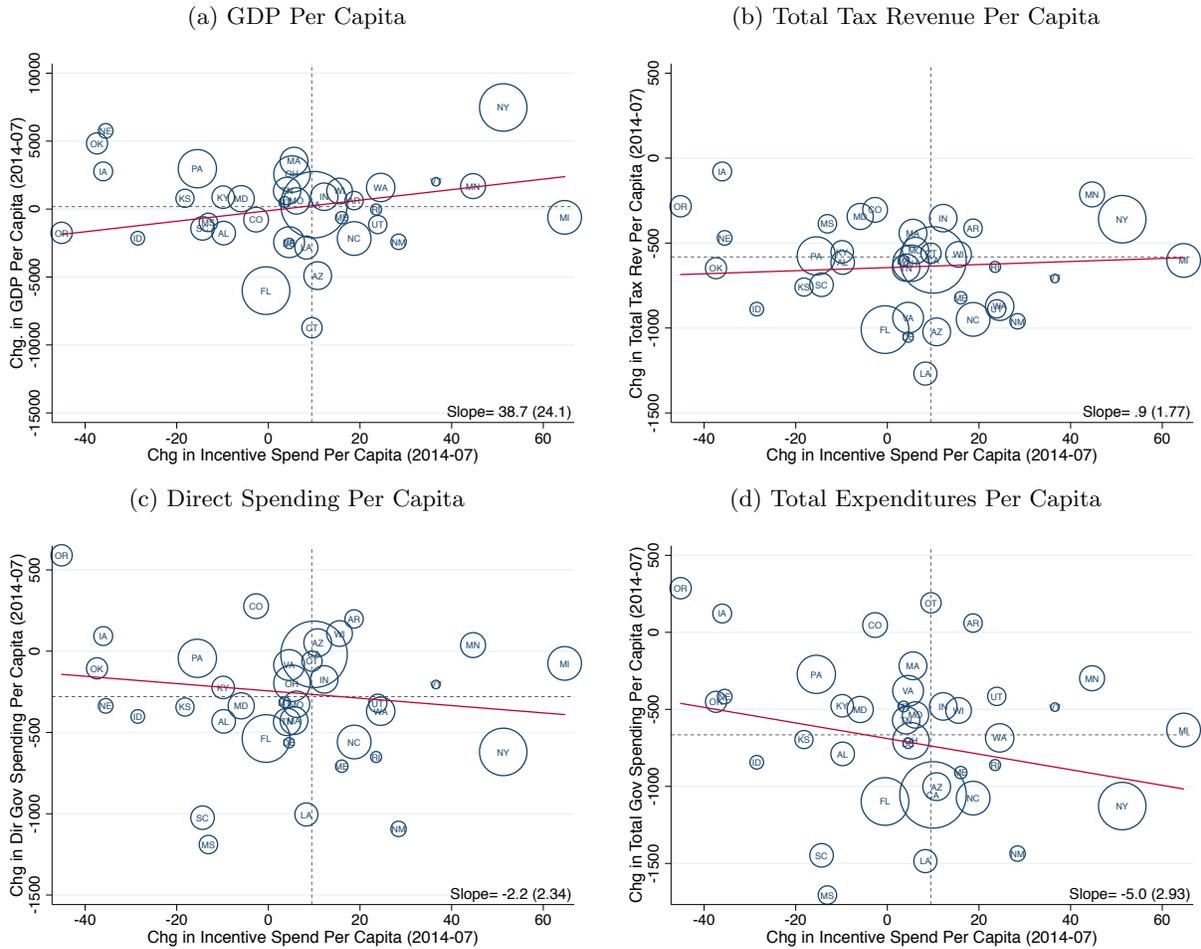
(b) Million-Dollar Plants Deals Dataset
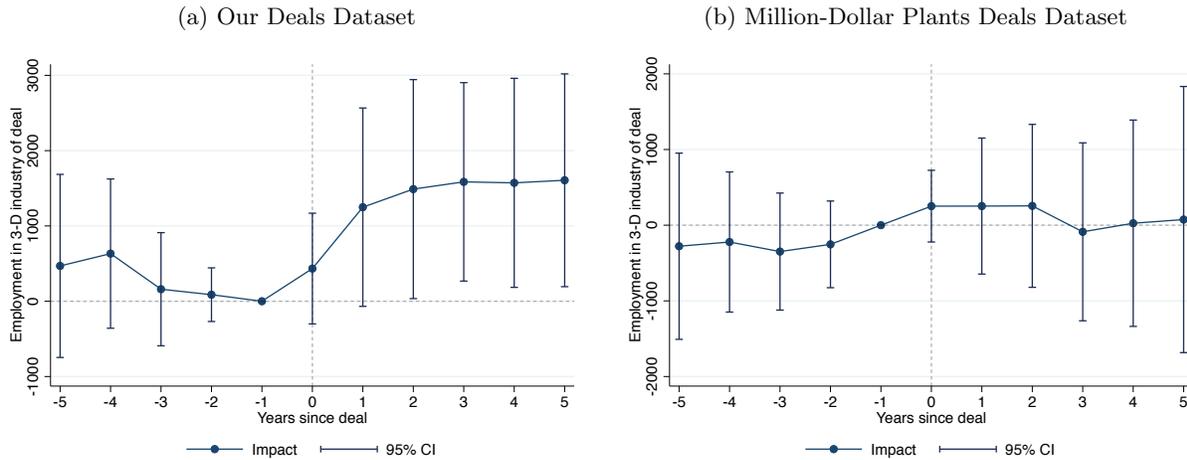
Notes: This figure plots event study estimates of the effect of winning a firm-specific deal on employment in NAICS 3-digit industry of deal, with employment data taken from Quarterly Census of Employment and Wages (QCEW, 1990-2017). We use the same specification as Figure 4. Panel (a) shows event study coefficients estimated using firm-specific subsidy deals from Slattery (2019), and Panel (b) shows more modest and less precise effects as measured using Bloom, Brynjolfsson, Foster, Jarmin, Patnaik, Saporta-Eksten and Van Reenen (2019) deals dataset.

Figure A.4: Event Studies: Employment Effects of Winning a Subsidy Deal

(a) Our Deals Dataset

(b) Million-Dollar Plants Deals Dataset
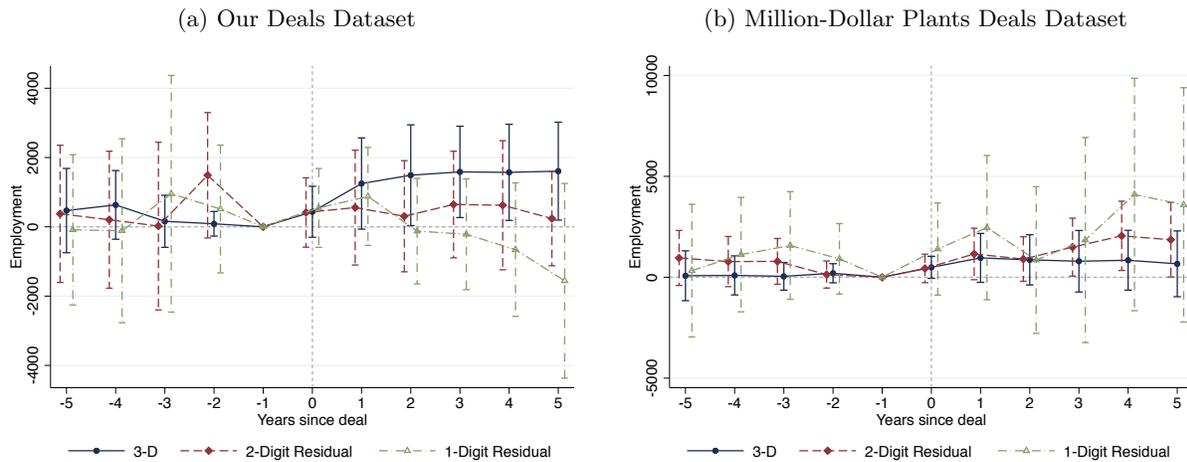
Notes: This figure shows event study estimates of the effect of winning a firm-specific deal on three outcomes: employment in 3-digit industry of deal, 2-digit residual employment, and 1-digit residual employment. We use the same specification as Figure 4. Panel (a) plots event study coefficients using firm-specific subsidy deals from Slattery (2019), showing little evidence for positive employment spillovers associated with winning a firm-specific deal. Panel (b) plots event study coefficient using Bloom, Brynjolfsson, Foster, Jarmin, Patnaik, Saporta-Eksten and Van Reenen (2019) deals dataset which covers deals in roughly the same period. While estimates in panel (b) are imprecise, they show a rosier picture for potential spillover effects. In both panels, employment figures are taken from the Quarterly Census of Employment and Wages (QCEW, 1990-2017).

Figure A.5: Changes in State Incentive Spending, Economic Activity, and Fiscal Policy

(a) GDP Per Capita

(b) Total Tax Revenue Per Capita

(c) Direct Spending Per Capita

(d) Total Expenditures Per Capita

Notes: This figure plots the change in per capita outcomes of each state from 2007 to 2014 versus the change in per capita incentive spending over the same period. Per capita incentive spending includes both state tax expenditures on tax credits for businesses, and state economic development programs for businesses. The incentive spending data is collected by the author from state tax expenditure reports and state budget documents (Slattery, 2019). The source of the state outcome data (GDP, tax revenues, direct spending, and total expenditures) is the Census of Governments.

Table A.1: The Size Distribution of Establishments Receiving Firm-Specific Incentives

Employment	# of Firm-Specific Incentives	Total Establishment Entry	% Coverage
1 - 99	39	8,971,339	0.00
100 - 249	47	26,126	0.18
250 - 499	80	4,251	1.88
500 - 999	141	1,419	9.94
1000+	236	639	36.93

Notes: This table reports the number and percentage of establishments that receive firm-specific incentives, by employment size. The set of 543 firm-level subsidy deals is from Slattery (2019). The rows correspond to the employment level of the establishment. For the subsidy deals, this is the number of jobs promised at the establishment. For the total establishment entry, it is the actual employment at the establishment. The first column is the number of establishments of that size that received discretionary subsidies over the period 2002-2016. The second column is the total number of establishments entering the U.S. over the same period (sourced from the Census Business Dynamics Statistics). The third column is the % of total entrants that receive firm-specific incentives (number of firm-specific incentives divided by total entry).

Table A.2: Characteristics of Firms that Receive Firm-Specific Incentives

	All Compustat		Subsidized Firms		Subsidized Firms: Year of Deal	
	Mean	Median	Mean	Median	Mean	Median
Employees (1000s)	9.0	0.6	71.8	34.3	102.5	64.4
Capital Stock ($M)	1,513.3	28.2	12,221.9	3,074.5	18,473.7	8,026.0
Revenue ($M)	3,458.7	184.5	40,289.3	15,152.0	60,941.9	40,660.0
Gross Profit ($M)	1,138.8	67.5	13,128.6	4,049.4	20,846.0	9,255.8
Market Value ($M)	2,991.4	189.5	45,499.6	13,199.0	77,448.5	28,204.2
State Income Taxes ($M)	5.1	0.0	57.9	8.1	99.4	13.9
Total Income Taxes ($M)	99.8	1.0	1,226.2	276.8	1,792.3	639.3
Observations	107,214		2,422		303	

Notes: This table includes descriptive statistics for all firms included in Compustat, and the Compustat firms that received discretionary subsidies, from 2002 to 2014. Compustat is a database of financial, statistical and market information on global companies throughout the world. We merged the firm-level subsidy data (Slattery, 2019) to Compustat data on firm names. We found 56% of the firms in Compustat. In the first two columns we report statistics for the full sample of 107,218 active firm-years in Compustat. In columns 3 and 4 we report the same statistics for the sample of firms in Compustat that are observed receiving at least one firm-specific incentive in the firm-level subsidy data. Columns 5 and 6 report the statistics for the same subsample of firms, only for the year in which they receive the firm-specific incentive. Dollars are measured in 2017 dollars.

Table A.3: Top Industries Receiving Firm-Specific Incentives

Industry (NAICS)	Subsidy ($ M)		# Jobs Promised		Cost per Job ($)		Investment($ M)		# of Deals
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	
Full sample	178.4	53.2	1,487	810	119,972	65,678	757.5	219.0	543
Analysis sample	163.3	53.8	1,229	868	132,884	62,045	765.0	236.4	196
Manufacturing analysis sample	214.1	57.2	1,071	738	199,907	77,532	1,004.4	389.3	101
Automobile manuf. (3361)	293.6	118.2	2,768	2,000	106,057	59,119	854.8	500.0	56
Aerospace manuf. (3364)	585.8	94.9	2,734	1,100	214,237	86,265	534.5	500.0	31
Semiconductor/electronic manuf. (3344)	188.1	58.2	730	500	257,623	116,450	2,145.0	351.5	27
Financial activities (5239)	92.3	24.9	2,652	1,691	34,809	14,749	286.8	84.1	25
Scientific R&D svc (5417)	113.7	51.7	518	302	219,259	171,440	185.0	42.2	22
Pharmaceutical/medicine manuf. (3254)	55.1	36.8	601	500	91,743	73,691	389.1	191.6	21
Basic chemical manuf. (3251)	187.4	93.2	196	126	956,701	736,516	779.0	699.8	18
Information Technology (5415)	143.6	29.3	2,325	800	61,756	36,648	459.8	21.5	18
Data processing, hosting/related svc (5182)	169.4	112.7	490	110	345,513	1,024,982	1,270.5	1,000.0	14
Rubber product manuf. (3262)	109.1	92.1	1,465	1,200	74,447	76,776	538.9	570.0	13
Petroleum/coal manuf. (3241)	141.5	84.9	605	218	233,995	390,463	3,525.0	662.0	12

Notes: This table reports descriptive statistics for subsidy deals in the top 10 industries, by number of deals, in the subsidy deal data set (Slattery, 2019). We report the mean and median size of the subsidy deal (2017 $M) for each industry, as well as the mean and median number of jobs promised in those deals. We also include descriptive statistics on the cost per job (subsidy over number of jobs promised), and investment promised. The top 10 industries in the table make up 47% of the sample in terms of number of deals, and 56% of the sample in terms of dollars spent.

Table A.4: Comparing Winner and Runner-up Counties

County:	Winner (Full)		Winner (Analysis)		Runner-up		Average		Pop > 100K	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Employment (1000s)	201.3	82.0	229.1	142.9	303.5	157.5	44.1	11.3	197.1	102.9
	(380.82)		(240.09)		(520.81)		(141.76)		(297.13)	
Population (1000s)	407.0	171.2	453.9	285.1	610.0	308.1	90.9	25.2	400.8	208.6
	(795.29)		(479.08)		(1,093.83)		(294.84)		(623.08)	
Wage bill (M)	10,969.5	3,403.9	12,789.2	6,751.4	17,477.6	7,689.0	2,086.8	376.7	10,059.3	4,207.9
	(23,012.67)		(15,973.19)		(31,657.84)		(8,236.70)		(17,826.63)	
Average wages (1000s)	45.5	42.8	48.6	45.0	48.6	45.0	34.8	33.1	44.4	42.1
	(11.99)		(13.24)		(14.84)		(8.96)		(10.89)	
Personal income (M)	19,640.2	6,592.2	23,161.7	11,790.5	31,131.8	14,512.0	3,968.0	792.9	18,809.3	8,473.0
	(38,879.81)		(29,274.20)		(53,499.94)		(14,449.31)		(30,781.22)	
Personal income per capita (1000s)	40.9	39.3	44.5	41.8	45.6	41.7	34.1	32.8	42.9	40.6
	(12.03)		(14.09)		(14.64)		(8.53)		(11.25)	
Population density	1,096.7	285.3	1,524.9	485.2	1,702.1	506.3	229.4	42.4	1,088.6	341.0
	(4,765.15)		(6,439.90)		(6,302.85)		(1,674.19)		(3,926.36)	
Unemployment rate (%)	4.0	3.7	3.7	3.4	3.8	3.5	4.4	4.1	3.9	3.6
	(1.28)		(1.05)		(1.17)		(1.69)		(1.52)	
% emp in mfg.	21.5	18.0	20.1	16.0	17.6	15.3	19.3	17.3	16.4	14.8
	(13.04)		(13.24)		(9.87)		(15.28)		(9.16)	
% emp info & prof svcs.	19.3	17.2	22.4	22.1	24.1	24.0	9.6	8.3	21.2	19.6
	(10.13)		(10.78)		(9.93)		(8.18)		(8.19)	
% urban	73.2	78.5	81.0	90.6	82.8	91.8	39.1	38.4	81.0	85.3
	(24.65)		(19.77)		(17.88)		(30.72)		(15.89)	
% Bachelor's or more	22.1	20.3	25.4	24.6	26.9	25.4	16.5	14.5	24.9	23.4
	(9.55)		(10.21)		(10.19)		(7.69)		(9.12)	
% white	78.1	81.1	77.4	79.2	75.7	77.8	84.5	91.3	79.4	82.9
	(15.55)		(13.73)		(15.05)		(16.53)		(14.90)	
% Hispanic	7.0	3.1	8.1	3.9	8.1	3.9	6.2	1.8	9.1	4.3
	(10.11)		(11.01)		(9.39)		(12.05)		(12.86)	
% foreign-born	6.2	3.5	7.7	4.7	8.5	5.5	3.5	1.7	7.7	5.3
	(7.34)		(7.95)		(8.38)		(4.85)		(7.43)	
log housing units	11.2	11.2	11.5	11.6	11.7	11.7	9.4	9.3	11.6	11.4
	(1.31)		(1.25)		(1.23)		(1.35)		(0.80)	
Observations	268		115		126		3,107		533	

Notes: This table summarizes employment, wage bill, average wages, personal income, population and personal income per capita for "winning" and "runner-up" counties in our sample, and compares them to the average U.S. county. All statistics reported are from the year 2000. "Winning" counties are the counties where firms locate after receiving a subsidy deal. "Runner-up" counties are the second-place location in the subsidy competition. Data on the identity of runner-up counties is collected by the Slattery (2019) by reading news articles and press releases on each subsidy deal. At least one runner-up county is known for 278 of the subsidy deals, or about 51% of the sample of 543 deals. Wages and personal income are measured in 2017 dollars. Employment and unemployment data come from the Bureau of Labor Statistics (BLS, 1990-2017). Wage and industry employment data come from Quarterly Census of Employment and Wages (QCEW, 1990-2017). Race/ethnicity, educational attainment, percent urban, and housing units data come from the U.S. Census (U.S. Census Bureau, 2000). Personal income and population data come from the U.S. Bureau of Economic Analysis (1967-2017).

Table A.5: Comparing Winner and Runner-up Counties: Population-weighted Summary Statistics

County:	Winner (Full)		Winner (Analysis)		Runner-up		Average		Pop > 100K	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Employment (1000s)	940.9	452.0	479.0	442.2	1,228.4	511.5	502.1	200.9	656.2	333.9
	(1,233.41)		(301.60)		(1,384.42)		(877.23)		(959.11)	
Population (1000s)	1,955.3	884.4	955.2	858.4	2,555.8	1,003.4	1,046.7	407.8	1,367.6	661.8
	(2,652.71)		(620.82)		(2,986.69)		(1,874.95)		(2,055.47)	
Wage bill (M)	54,295.2	24,556.1	28,291.1	22,088.6	71,942.3	31,827.1	27,936.4	8,861.3	36,644.4	17,951.4
	(70,789.76)		(21,457.68)		(78,596.12)		(50,500.78)		(55,322.35)	
Average wages (1000s)	54.0	51.2	55.4	51.3	57.2	55.8	46.7	44.8	50.5	48.7
	(14.81)		(15.44)		(15.88)		(13.82)		(13.39)	
Personal income (M)	92,501.5	41,676.7	50,500.5	41,083.6	122,695.7	62,813.7	49,316.9	18,092.7	64,625.2	31,052.2
	(116473.85)		(39,115.76)		(129507.58)		(84,173.89)		(91,678.80)	
Personal income per capita (1000s)	48.3	43.8	51.0	46.0	51.0	48.2	43.6	41.5	46.9	43.8
	(14.88)		(17.97)		(16.05)		(13.44)		(13.46)	
Population density	3,051.8	1,306.1	3,597.3	1,213.9	3,540.2	1,657.9	2,129.2	480.3	2,783.4	971.0
	(8,672.56)		(11,359.34)		(9,540.73)		(6,634.85)		(7,513.94)	
Unemployment rate (%)	3.9	3.7	3.5	3.5	3.9	3.7	4.1	3.8	4.0	3.7
	(1.16)		(0.86)		(0.97)		(1.42)		(1.36)	
% emp in mfg.	15.0	14.5	14.3	13.8	14.1	13.6	16.4	14.5	14.2	13.4
	(8.00)		(7.26)		(6.31)		(10.29)		(7.41)	
% emp info & prof svcs.	27.6	28.6	29.0	28.6	30.1	30.0	21.8	21.4	25.5	26.3
	(8.66)		(9.07)		(7.28)		(10.20)		(8.35)	
% urban	92.4	97.1	93.5	96.6	95.0	98.0	78.9	91.1	90.5	95.8
	(12.68)		(9.77)		(8.82)		(25.85)		(12.29)	
% Bachelor's or more	27.6	25.9	29.5	27.0	29.6	27.4	24.4	24.5	27.1	25.9
	(8.71)		(9.39)		(7.99)		(9.48)		(8.62)	
% white	69.3	70.5	72.7	72.9	66.9	66.5	75.2	77.7	71.9	74.4
	(15.04)		(12.05)		(14.15)		(17.04)		(16.26)	
% Hispanic	16.7	10.5	13.7	7.8	18.2	15.6	12.6	5.7	15.0	8.8
	(15.89)		(15.14)		(14.38)		(15.07)		(15.57)	
% foreign-born	14.9	11.2	13.2	10.4	17.1	15.2	11.1	6.6	13.7	9.8
	(11.88)		(11.12)		(11.37)		(10.92)		(11.18)	
log housing units	12.8	12.8	12.6	12.7	13.1	13.0	11.8	12.0	12.5	12.5
	(1.23)		(0.85)		(1.18)		(1.58)		(1.11)	
Observations	268		115		126		3,103		533	

Notes: This table replicates Table A.4, with population weights.

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