Investment Incentives Can Attract Foreign Direct Investment: Evidence from the Great Recession

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Abstract

Do investment incentives influence private firms' location decisions? We distinguish between tax incentives and incentives that require real-time government spending including job training and infrastructure. The latter can influence where firms invest by resolving information asymmetries. We evaluate how these incentives shape the location decisions of foreign firms, investors who suffer from high information asymmetries. We leverage features of the Great Recession and 2009 Recovery Act stimulus, which temporarily increased state's fiscal capacity to fund real-time incentives. During the narrow stimulus spending window, states that received more federal Medicaid stimulus - instrumented with the exogenous component of the federal Medicaid funding formula - attracted more foreign direct investment (FDI) and increased spending on real-time incentives. During the spending window, foreign-owned manufacturing plants located in US counties that lacked a history of FDI. On average, these counties saw more real-time state incentive spending. Counties with idle industrial capacity were more likely to be new FDI recipients only if they had narrow vote margins in the prior gubernatorial election. These findings suggest that governors offered real-time incentives in counties with lower start-up costs and more swing voters. Tax incentives had no effect on FDI. These findings have important policy implications for the efficient use of investment incentives.

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State and local governments in the United States spend an estimated $50 billion annually on investment incentives, a threefold increase since 1990 (Bartik, 2019a; Bartik, 2020). These subsidies to attract new investment by private firms are controversial. Evidence is mixed as to whether incentives influence firms' location decisions or contribute to economic development enough to justify their cost to taxpayers (Greenstone et al., 2010; Slattery and Zidar, 2020). Sharper critiques cast incentives as little more than veiled corporate subsidies that fuel destructive bidding wars among states (Burstein and Rolnick, 1995). As US policymakers grapple with global supply chain vulnerabilities and rising income inequality, incentives garner renewed interest as a tool of industrial policy and local economic development (National Economic Council, 2023).

Much of what we know about incentives is from study of tax incentives, one type of incentive that reduces firms' tax liability for undertaking activities that further economic development including job creation and research (Bartik, 2019b). Conventional wisdom holds that tax incentives are rarely decisive in firms' location decisions because firms select locations that meet their basic production needs and then seek incentives after the fact (Jensen, 2018). Politicians nonetheless offer tax incentives to opportunistically claim credit from voters for job-creating investments (Jensen and Malesky, 2018). Credit claiming is immediate while the fiscal costs of lower tax revenues are deferred. Unconstrained by current budgets, tax incentives give rise to bidding wars (Sobel et al., 2022).

By contrast, we argue that certain types of incentives can influence firms' location decisions by addressing information asymmetries that raise firms' costs. These incentives typically entail real-time government spending including cash grants, specialized business inputs, and land development. Although real-time incentives account for a minority of incentives offered by US states, they often create value for firms that exceeds their dollar cost to taxpayers (Bartik, 2020). These incentives should be particularly influential in the location decisions of firms unfamiliar with the market and in circumstances that magnify the costs of information asymmetries. Given the need for real-time expenditures, budget constraints effectively preclude bidding wars of the magnitude that tax incentives enable. Empirical tests of this claim must overcome the inference challenge that states with the fiscal capacity to offer real-time incentives may be systematically different in other ways relevant to firms' location decisions.

We meet this challenge by leveraging features of the Great Recession and the American Recovery and

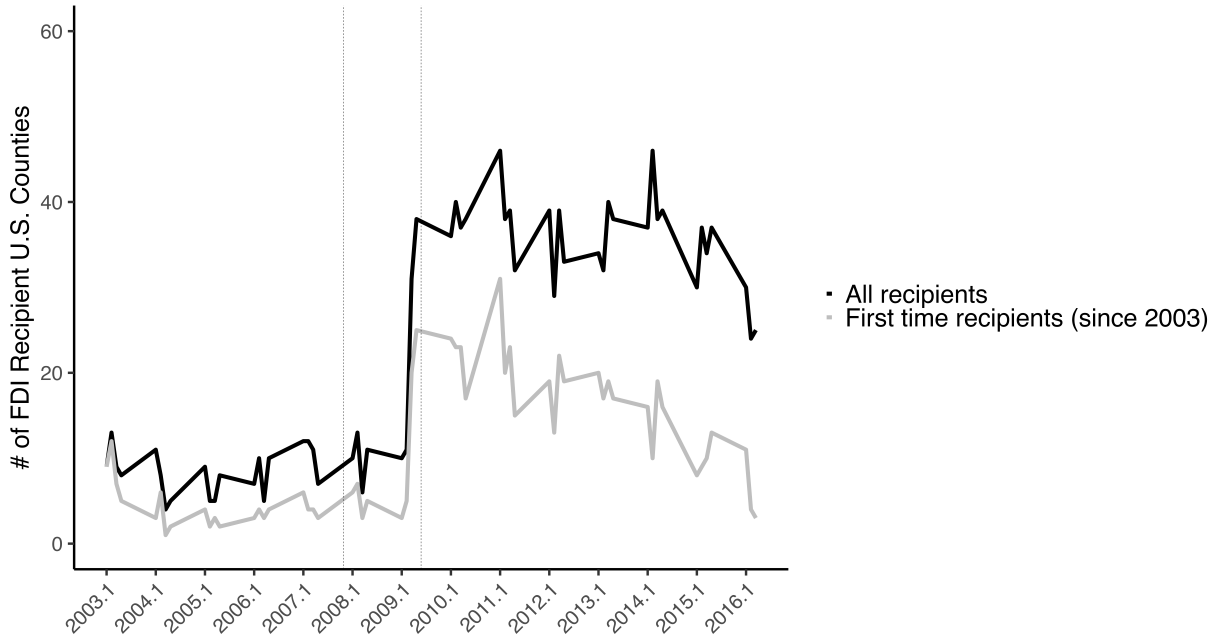
Reinvestment Act, the February 2009 federal stimulus. The act dispersed $200 billion to state and local governments, an exogenous positive budget shock that temporarily increased states' fiscal capacity to fund real-time incentives. Nearly half was distributed across states using the pre-existing federal funding formula for Medicaid, the means-tested health insurance program jointly funded by federal and state governments. States, however, had discretion over how to spend these funds, which they had to spend before October 2010. Our instrumental variable framework centers around an exogenous source of variation in the Medicaid formula, states' pre-recession Medicaid spending (Chodorow-Reich et al., 2012). Using this framework, we analyze the effects of Medicaid stimulus on new manufacturing foreign direct investment (FDI) into US states during 2009-2011. Foreign firms are sought-after investors who create new jobs and positive productivity spillovers, and can suffer from especially acute information asymmetries.

We find that Medicaid stimulus corresponded to higher FDI inflows during 2009-2011, controlling for several other state-level drivers of FDI. Further, FDI concentrated in counties that had not received new FDI in the preceding five years, suggesting distinctive drivers of firms' location decisions during this period. Our findings are robust to various model specifications and alternative definitions of the stimulus spending window. Using the same empirical framework, we find that stimulus corresponded to higher state spending on real-time incentives. On average, states spent $170,000 more on real-time incentives for every $1 million in Medicaid stimulus received. A subset of real-time incentives drives this pattern, incentives that resolve information asymmetries related to site selection and establishing production. Stimulus had no direct bearing on state's capacity to offer tax incentives and, accordingly, we find no effect on tax incentives granted during the stimulus spending window.

Next, we investigate the mechanisms through which real-time incentives influence FDI location decisions. Figure 1 plots the geographic distribution of new manufacturing FDI in the US by quarter during 2003-2016. The black line indicates the number of US counties that had at least one new announced investment in that quarter. The gray line depicts what we call "new" counties, the subset of counties in that quarter that received FDI for the first time since 2003, the first year for which county-level FDI data are available. During 2003-2008, a total of 108 US counties received FDI. During 2009-2011, 400 counties received FDI during 2009-2011, of which 228 (fifty-seven percent) were new counties. The trend is short lived, with the expansion

returning to pre-recession levels shortly after the stimulus spending window closed.

Figure 1: County Distribution of US Greenfield Manufacturing FDI Inflows, 2003-2016 (Quarterly)



The figure plots the number of US counties that received at least one new (greenfield) manufacturing FDI investment by quarter. Black line plots the total number of counties that received investment. Gray line is the subset that received investment for the first time since 2003. Vertical lines demarcate the Great Recession. Data Source: fDimarkets database.

We analyze the correlates of new county status to explore how real-time incentives influence firms' location choices. Like most empirical analyses of incentives, we cannot directly observe if incentives were decisive in firms' location decisions. That said, our empirical setting holds constant many of the fundamentals thought to drive firms' location decisions. Additionally, real-time incentives are subject to budget and other constraints so politicians cannot offer them as readily as they can tax incentives. Thus, the analysis also considers how politicians allocate real-time incentives.

We estimate a multinomial logit model of county FDI status during 2009-2011: "new" (received FDI during but not before), "old" (received FDI before and during) and "never", (no FDI before or during). Controlling for county-level drivers of FDI, total spending on real-time incentives correlates with new county status. Tax incentives, however, do not. A positive interaction of mass layoffs, a proxy for idle industrial capacity, and narrow vote margin in the prior gubernatorial election suggests that state politicians directed

real-time incentives to counties that both met firms' needs and in which politicians could claim credit for investment from swing voters.

We address several alternative explanations for new county status including local governments' incentive spending, FDI in anticipation of stimulus-funded infrastructure improvements, changed industry composition of FDI, and strategic investments by foreign firms to sway the votes of local congressional representatives. We validate our classification of county FDI status with proxies dating back to 1991. Additionally, we show no geographic expansion of domestic manufacturing investment.

Our study contributes to scholarship on investment incentives by demonstrating that certain types of incentives can influence where foreign firms locate. We highlight distinctive features of real-time incentives that alleviate information asymmetries that raise foreign firms' costs. Our findings offer an important qualification to the conventional wisdom, based on tax incentives, that incentives are ineffective (Slattery and Zidar, 2020). Our results echo findings that firms who plausibly suffer from information asymmetries are responsible for incentive-driven job growth (Criscuolo et al., 2019). Contrary to prior work (Devereux et al., 2007), we show how incentives can help counter FDI's tendency to geographic agglomeration.

As more US states embrace real-time incentives (Calabrese, 2012), our context also offers a useful policy implication: policymakers would do well to promote and tailor real-time incentives in circumstances that exacerbate information asymmetries. We analyze response to economic crisis but our findings hold lessons for other contexts in which firms must establish new production facilities quickly such as the reconfiguration of global supply chains following the Covid-19 pandemic and the 2018 US-China trade war.

Our findings also contribute to scholarship on politicians' motives to offer investment incentives. Whereas prior work emphasizes that politicians offer tax incentives because they bear little cost of forgone tax revenue (Jensen and Malesky, 2018), our findings indicate that politicians prioritized real-time incentive spending during the Great Recession despite acute demand for other categories of public spending (McDonald et al., 2021; Wang, 2016). Politicians' motives to prioritize among different forms of targeted spending may be an important mechanism through which electoral systems contribute to spatial inequality (Rickard, 2020).

Our county-level findings are consistent with state politicians using incentives to claim credit from a specific subset of the electorate, swing voters. Prior related research focuses on variation in local government

incentive policies across the electoral cycle (Jensen et al., 2020) and the ease with which local institutions allow politicians to claim credit (Jensen et al., 2015). Our focus on state incentive policies allows us to consider heterogeneity across voters in electoral motives to use incentives. Our focus on foreign-owned firms, whose legal capacity to lobby and make political campaign contributions is limited, holds constant alternative explanations for which firms receive incentives (Sobel et al., 2022).

Theoretical Framework

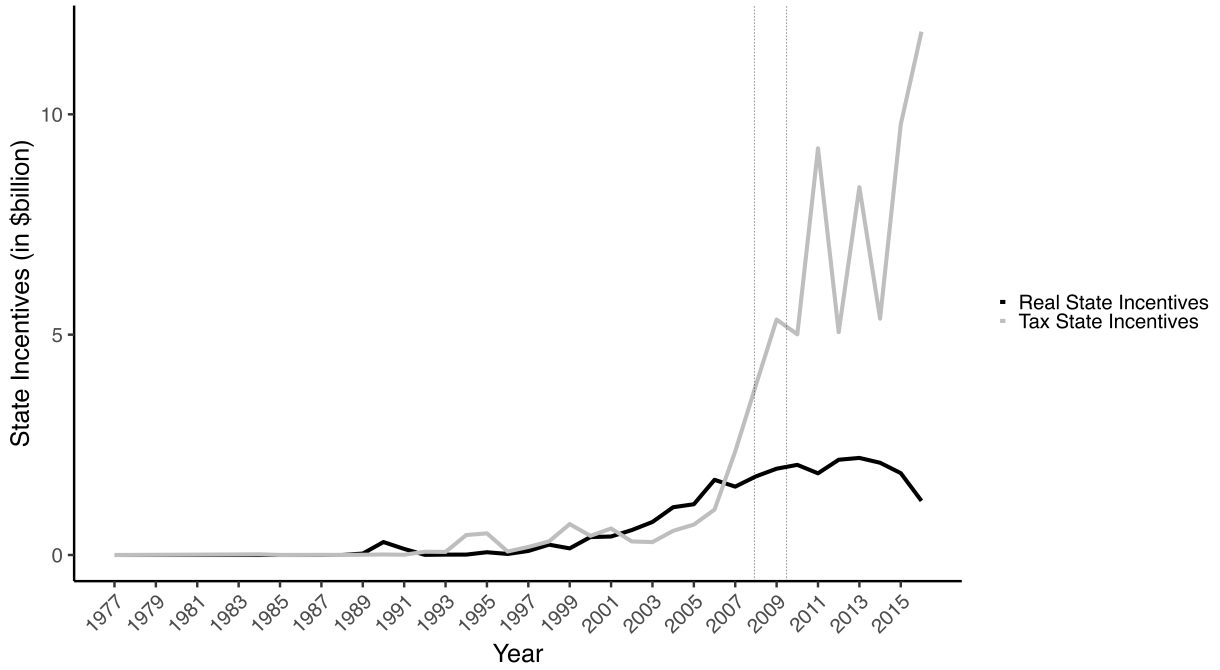
The primary goal of investment incentives is to influence where private firms locate economically productive activities. Tax incentives reduce firms' tax liabilities in various ways and may be contingent on the number of jobs created, or linked to specific activities such as research and development. Real-time incentives, defined by the real-time government expenditures that they typically entail, defray investing firms' costs or enhance productivity. They take several forms including cash grants, loan guarantees, and specialized inputs such as job training, industrial land, and infrastructure. In practice, firms receive incentive packages that bundle multiple types of incentives. Some incentives are automatically available to firms who meet statutory criteria whereas others are subject to policymakers' discretion.

In the United States, state governments are the single largest source of incentives (Slattery and Zidar, 2020). Figure 2 plots annual state incentive expenditures during 1977-2016. Tax incentives grew sharply just prior to the Great Recession, driven by exceptionally large tax incentives for specific projects (Sobel et al., 2022). Real-time incentives exhibited modest growth. During 2009-2011, the average tax incentive was almost $3 billion whereas the average real-time incentive was about $500,000.

Conventional wisdom, focused on tax incentives, holds that incentives do not influence where firms locate. Instead, the wisdom holds, firms select locations according to basic production needs and then seek incentives (Jensen, 2018). Thus, even if incentives correlate with new investment, they do not necessarily drive location choices. Politicians may recognize this but nonetheless offer tax incentives to give voters the impression that the politician's efforts were decisive in attracting the investment (Jensen and Malesky, 2018). Tax incentives allow politicians to claim credit immediately while deferring the consequences of reduced tax revenue.

We argue that this conventional wisdom does not extend to real-time incentives. Real-time incentives

Figure 2: US State Incentive Expenditures, 1977-2016



Annual spending measured in constant 2010 dollars. Dashed vertical lines demarcate the Great Recession. Data Source: Good Jobs First Subsidy Tracker.

can influence where firms invest by alleviating costly information asymmetries. We develop this argument in the context of foreign direct investment (FDI), investments by foreign firms, which, in the US, are generally to produce and sell within the US.[1] Firms undertake FDI to capture global scale economies from highly productive intangible assets – technology, managerial practices – while maintaining control over the assets (Alfaro, 2017). Given high costs of multinational production, foreign firms are among the world's most productive (Helpman et al., 2004). Therein lies politicians' intense interest in attracting FDI. Not only does FDI create new jobs, FDI spillovers increased American firms' productivity by 14 percent (Keller and Yeaple, 2009) and American workers' wages an average of seven percent (Setzler and Tintelnot, 2021). Like most firms, foreign firms seek locations that meet their basic production needs, typically skilled labor, reliable infrastructure, and low regulatory burden, among other needs.

To varying degrees, foreign firms confront costs arising from their lack of familiarity with the host market. We characterize these costs as information asymmetries, using the term to also encompass cultural/linguistic

[1]Firms are foreign in as much as their ultimate beneficial owner is in a foreign country.

frictions and the absence of relationships with key partners (Eden and Miller, 2004; Zaheer, 1995). Foreign firms operating in the US have higher costs than otherwise equivalent domestic firms. These costs manifest in higher dollar cost for inputs and diminished productivity. They have higher initial production costs associated with adapting products and production practices to a new market (Chor and Manova, 2012), and higher labor and input search costs (Javorcik, 2015). Foreign firms contend with higher borrowing costs due to their relative lack of relationships with US lenders (Antràs and Yeaple, 2014; Desbordes and Wei, 2017).[2] Underlying many of these costs are cultural and language differences that complicate the already complex communication required to produce and sell goods made with sophisticated production technologies and practices (Oldenski, 2012).

Real-Time Incentives Influence FDI Location Decisions

Real-time incentives help alleviate the costs of information asymmetries.[3] Cash grants and loan guarantees offset higher capital requirements, and often with less scrutiny than a private lender would exercise (Buch et al., 2009). Publicly funded, firm-specific worker training helps foreign firms overcome cultural frictions to realize the productivity potential of advanced technologies (Fosfuri et al., 2001). These programs reduce labor turnover and increase productivity, especially in collaboration and communication-oriented production tasks (Hollenbeck, 2008). All else equal, foreign firms would have a harder time establishing such programs themselves. They are less familiar with local educational and training resources and require local expertise to adapt production processes to the local market. European and Japanese firms indicate a particular interest in training programs because they anticipate that American workers lack skills essential to their production techniques (Schneider, 2010). Incentives can reduce costs in other ways. Manufacturing firms require factories and other kinds of industrial land (Munson and Schultz, 2013). Incentives that subsidize these inputs reduce both firms' real-time financial costs and search costs. Depending on the industry, firms may require upgrades

[2]Although parent companies are a potential source of capital (Desai et al., 2008), borrowing locally mitigates currency risk (Bilir et al., 2019).

[3]Foreign firms often hire site selection consultants to assist with location decisions. These consultants lower search costs but cannot alleviate information problems related to adapting processes and products to the local market.

to local infrastructure such as roads or power grids, improvements for which private alternatives may be difficult to fashion. Manufacturing extension programs exist to facilitate connections with suppliers and the adaption of products to the local market (Brandt et al., 2018; Lowe et al., 2023).

Real-time incentives can influence where foreign firms locate by providing a location-specific solution to information asymmetries.[4] When foreign firms evaluate the internal rate of return for potential investment sites, they seek to minimize infrastructure and start-up costs (Woessner-Collins, 2010). Many types of real-time incentives, though not all, have an inherent location-specific component. For example, provision of land and factory space necessarily require dictate firms' location decisions. Bartik (2020, p. 117) relays the example:

> One CEO told me that his decision about where to locate a particular new facility had been determined by the availability in that city of an empty factory. The empty factory allowed the new facility to get into production quickly.

Incentives related to infrastructure and specialized inputs often build upon existing, place-based capacity. Job training programs often require collaboration with educational institutions with the relevant capacity to facilitate training (Miller, 2014).

A further consideration is that politicians have some discretion over the size and types of incentives that a firm receives. A crucial difference between tax and real-time incentives is that latter are subject to budget constraints. Whereas politicians can offer tax incentives widely, their ability to offer real-time incentives is limited by both budget constraints and, for some incentives, the local characteristics upon which the incentives build. Within these parameters, politicians may still prioritize areas where incentives yield larger electoral rewards. For example, analyses of governors' designation of areas eligible for a large federal tax incentive program find that designated census tracts met eligibility criteria and were also more likely to have a state representative from the governor's party (Alm et al., 2021; Frank et al., 2022) or have firms connected to the governor (Eldar and Garber, 2023). Thus, any account of how real-time incentives influence FDI

[4] In the US, location decisions refer to the state in which a foreign firm locates or a county within the state. These are not necessarily sequential choices as firms often compare counties across states (Greenstone et al., 2010).

location decisions has to consider how politicians' motives to offer incentives fuels geographic variation in the availability of incentives.

FDI can have electoral benefits for incumbent politicians (Jensen and Malesky, 2018; Owen, 2019; Slattery, 2022).[5] New plant announcement are high profile local media events that connect a politician to job creation in voters' minds (Bao and Chen, 2018). Despite a resurgence of economic nationalism (Andrews et al., 2018), nearly 75 percent of Americans surveyed report a favorable view of new FDI (Pew Research Center, 2014). Politicians do not discriminate against foreign firms when offering incentives (Jensen et al., 2020).

We propose that, to the extent that politicians can favor certain areas, they offer more incentives to projects in counties with swing voters. Investment incentives are well suited to persuade moderate voters who lack strong party allegiances. In general, targeted spending is an effort to draw the support of moderate voters (Cox, 2009; Stokes, 2005). All else equal, moderates are more responsive to targeted spending as compared to core supporters who are motivated by ideology (Dixit and Londregan, 1996; Grimmer et al., 2012). Moderates privilege politicians' skill and experience, and are more responsive to economic policies of candidates whose ideology they do not share (Fowler et al., 2022; Krasa and Polborn, 2014). This is especially likely during economic crises. Theories of retrospective economic voting propose that voters hold incumbent governors accountable for their state's economic conditions (Atkeson and Partin, 1995; Carsey and Wright, 1998; Niemi et al., 1995), regardless of whether they have control over the state's economy (Cummins and Holyoke, 2018; Svoboda, 1995).

Empirical Context: The Great Recession

The Great Recession is an insightful setting to examine how real-time incentives influence where in the US foreign firms locate. Borrowing from US banks became even more costly (Chodorow-Reich, 2014). Foreign parent companies, themselves credit constrained, had less capacity to provide working capital (Biermann and

[5]Though less relevant to foreign firms, politicians may target incentives to campaign donors or otherwise politically connected firms (Aobdia et al., 2021; Sobel et al., 2022). Foreign firms are prohibited from making contributions and are arguably less likely to have political connections independent of a prospective investment.

Huber, 2023; Buch et al., 2009). Additionally, the US dollar appreciated, which increased foreign investors' real costs (Froot and Stein, 1991). Firms reported greater interest in incentives (Johnson and Toledano, 2022), citing incentives as more salient to their location decision than in previous years (Gambale, 2011). Tax incentives, however, may have been less attractive because secondary markets for tax credit monetization contracted (Aldy, 2013).

Stimulus partially relieved state's budget constraints. In general, states operate under tight fiscal constraints that require trade-offs across spending categories and between spending and taxation (Poterba, 1994). Almost all states are legally required to balance their budgets and have limited scope to borrow (Jonas, 2012). The recession strained state budgets to a degree not seen since the Great Depression (National Association of State Budget Officers, 2009). On average, federal stimulus replaced approximately one-fourth of lost state revenue (Leachman and Williams, 2021).

Despite these constraints, states increased incentive spending (Bosman, 2009; Stringer, 2010), especially cash incentives (McIntosh, 2012). Ohio's governor claimed credit for a $650 million investment by French steel manufacturer Vallourec, explicitly stating that federal stimulus was redirected towards incentives (Akron Beacon Journal, 2010). Many states expanded the geographic scope of previously localized incentive programs (Goodman and Wakefield, 2021; The Pew Charitable Trusts, 2021). States redoubled investment promotion efforts, which inform potential investors about specific counties in the state suited to their needs. Anecdotal evidence is consistent with governors' electoral motives to privilege certain counties for incentive spending. Wisconsin Governor Scott Walker designated Milwaukee as a *city-non-grata* because of its pro-union orientation and the city failed to receive a single major subsidy package during 2010-2016 (Hinkley and Weber, 2021; McCarthy, 2015, p. 835).

Empirical Strategy

Our empirical strategy leverages distinctive features of the 2009 Recovery Act, which transferred $200 billion to state and local governments. Health care, education, and transportation accounted for over ninety percent of transfers. The act relied heavily on existing statutory funding formulas to distribute funds quickly and in a transparent manner and to limit pork barrel-style targeting. Consistent with this goal, congressional

district-level stimulus expenditures do not correlate with partisanship (Boone et al., 2014; Gimpel et al., 2012).

Our state-level analysis focuses on the single largest stimulus transfer, $88 billion towards Medicaid. Typically, the federal government funds 50-83 percent of a state's Medicaid expenditures. The precise federal contribution is based on the Federal Medical Assistance Percentages (FMAP) formula. FMAP incorporates a three-year rolling average of state unemployment and other state economic characteristics, such that states with worse economic performance receive more funding. The Recovery Act temporarily increased the federal government's share of Medicaid expenses by 6.2 percentage points across the board, with additional increases indexed to current state unemployment. The act retroactively applied this modified formula from October 2008. Medicaid stimulus accounted for 75% of Recovery Act transfers distributed in the first quarter of 2009.

Our state-level empirical strategy rests on three features of this stimulus. First, Medicaid stimulus was a positive shock to state budgets. Federal lawmakers "intended to boost the level of discretionary funds available to states and not simply to relieve Medicaid burdens" (White House Council of Economic Advisors, 2009). States also replaced some of their own planned spending with stimulus, freeing up state funds for other uses (Conley and Dupor, 2013; Dupor, 2013).[6] Peter Orzag, then-director of the federal Office of Management and Budget, blamed this practice for the act's modest effects on economic growth (Boone et al., 2014).

Second, the Recovery Act relied on the FMAP formula to distribute stimulus across states. Following research on the employment effects of stimulus (Chodorow-Reich et al., 2012), we deploy the plausibly exogenous portion of the formula, state Medicaid spending in 2007, in an instrumental variable framework. Third, states forfeited any unspent Medicaid stimulus left at the end of the 2010 federal fiscal year (September 30, 2010). This requirement provides us a discrete window to evaluate the effects of stimulus on incentive spending. States were prohibited from depositing funds into reserves or narrowing Medicaid eligibility.

Our county-level analysis considers the potential effects of non-Medicaid stimulus spending on which counties received FDI. Of particular interest is the $54 billion in education stimulus. While we discuss this spending in greater detail below, we note here two important features relevant to our research design. The act

[6] In general, state and local governments have been shown to use growth in intergovernmental transfers to free up their own funds for other uses (Baicker and Gordon, 2006; Baicker and Staiger, 2005).

relied on funding formulas to distribute these funds across states so, like Medicaid funding, their distribution across states was apolitical. Unlike Medicaid stimulus, governors had little flexibility to use these funds. The act required states to distribute education stimulus to local education agencies according to existing education funding formulas and required that states maintain their education spending at specified levels. The law also granted states an additional year to spend non-Medicaid stimulus and subsequently extended that deadline one to two years for many programs.

Finally, two additional stimulus provisions are relevant to our argument. Federal grants and loan guarantees sought to expand private investment in renewable energy. Both foreign and domestic firms were eligible for this support. Consistent with our theoretical argument, grants under this program were considered successful in attracting renewable energy investment whereas tax provisions were not (Aldy, 2013). Second, the act's "Buy American" provision required all building materials used in stimulus-funded construction of public buildings be sourced domestically. Both provisions plausibly motivated foreign firms in relevant industries to invest in the US quickly, suggesting greater sensitivity to information symmetries.

FDI During Great Recession

During 2009-2011, new manufacturing FDI was more than triple than during 2005-2007. Despite the recession, the US remained an attractive market for foreign firms. A 2009 United Nations survey revealed that most multinational companies anticipated that US market demand would rebound by 2012 (UNCTAD, 2010).

FDI's post-recession geographic expansion defies simple explanation.[7] Ostensibly, the basic logic of firms' location decisions did not change.[8] FDI tends to spatially agglomerate, reflecting firms' common location-specific needs including labor and infrastructure, and positive externalities from proximity to other foreign firms and firms in their industry (Bobonis and Shatz, 2007; Head et al., 1995). Location decisions for manufacturing FDI, our focus, are relatively flexible as compared other industries in which proximity to natural resources or customers dictate location. For example, Golden Dragon, a Chinese manufacturer of copper pipes and tubes reported considering 62 sites across the US before selecting Thomasville, Alabama for

[7] Figure A1 maps FDI's geographic expansion after the recession.

[8] Although economic crises correlate with increased foreign acquisition of distressed firms (Aguiar and Gopinath, 2005), they do not routinely stimulate new foreign plants.

its first US plant, announced in 2011 (Amy, 2011).

Appendix A compares FDI across new and old counties. One notable difference is that among new counties, two industries feature prominently: metals and renewable energy, consistent with Recovery Act provisions that motivated foreign firms in these industries to establish themselves in the US market quickly. Renewable energy firms display classic features of information asymmetries including high initial capital requirement and the need for specialized labor (Woessner-Collins, 2010). Both industries have arguably weaker motives to locate in old counties. Renewable energy, as a relatively new industry, had fewer opportunities for agglomeration externalities. As a relatively low value added industry, steel has inherently lower externalities. The average project value and distribution of FDI across source countries and industries were broadly unchanged, with the most FDI flowing from advanced industrialized source countries into manufacturing industries.[9]

New county investments also tended to create fewer jobs, suggesting that new counties received smaller investments (Table A1). For example, Alpla, an Austrian manufacturer of plastic packaging, invested in Hoke County, North Carolina, creating 40 jobs. The state's One North Carolina Fund awarded Alpla a $120,000 grant (McCleary, 2009). To the extent that smaller investments imply larger information asymmetries, real-time incentives may have had a larger role in these firms' location decisions. Some might associate FDI with very large investments by sophisticated multinational companies with experience and internal capacity to overcome information asymmetries. Relatively few investments in our sample fit this description. As compared to new counties, old counties have higher mean project values and higher variance, indicating that investment by firms less swayed by real-time incentives concentrated in old counties.

State-Level Empirical Analysis

Data

Table A2 provides summary statistics and data sources. Our dependent variable in the baseline state-level analysis is the sum of new state manufacturing FDI during 2009-2011 (inflation-adjusted millions of US dollars). We measure investment using project-level FDI data from the *Financial Times*'s *fDi Markets*

[9] See Figure A2 - Figure A7.

database.[10] The database reports salient project characteristics including industry, investors' country of origin, production activities, and the plant's US county location. We restrict the sample to manufacturing plants as defined in the database.[11] We model FDI's geographic expansion by disaggregating state FDI into "new" FDI, counties that had not received FDI during 2003-2008, and "old" FDI, which had received FDI in the preceding five years. The sample consists of 229 new, 56 old, and 2,827 never counties.

Our independent variable is total Medicaid stimulus. In an ordinary least square framework, FDI may correlate with the regression error term through the potential effect of contemporaneous state unemployment on location decisions.[12] Following Chodorow-Reich et al. (2012), our instrument is the exogenous component of the FMAP formula, 2007 state Medicaid spending.

Model

We use a two-stage least squares regression to estimate the causal effect of Medicaid stimulus on total state new foreign manufacturing investment during 2009-2011, Y_s. Our sample ends in 2011 to allow for potential lags between the end of stimulus (September 2010) and announcement of foreign investment. In the first stage, we regress Medicaid stimulus on our 2007 Medicaid spending instrument Z_s. In the second stage, we regress state-level FDI on instrumented Medicaid stimulus, $\hat{S}_s$. The coefficient of interest is β, which captures the causal effect of Medicaid stimulus on FDI. A β that is positive and significant would be consistent with stimulus attracting new FDI.

First stage:

$$1(a)\ \hat{S}_s = \gamma + \lambda \mathbf{Z_s} + \zeta \mathbf{X_s} + \delta v_s + \psi_s,$$

Second stage:

[10]The database timestamps projects by date of announcement, rather than operation, and retroactively removes any announced projects that failed to materialize. We exclude projects with two standard deviations greater than the mean in valuation.

[11]The database's manufacutring classification closely corresponds to NAICS categories 31-33.

[12]The FMAP formula relies on three endogenous factors that correlate with states' real-time economic conditions: change in the number of Medicaid claimants, change in average spending per beneficiary, and change in a state's unemployment rate.

$$1(b)\ Y_s = \alpha + \beta \hat{S}_s + \eta \mathbf{X_s} + \kappa v_s + \epsilon_s,$$

We include a vector of controls, X_s, for state characteristics that may have influenced a state's propensity to receive FDI independent of stimulus. Given FDI's documented tendency for geographic agglomeration, we control for stock of state FDI with the sum of announced projects during 2003-2008. We account for multiple state labor market characteristics including union membership in 2007, lagged employment change (from May to December 2008), 2008 state unemployment rate, and the share of manufacturing employment in 2008. We also control for 2008 state per capita GDP and adult population, which may correlate with levels of Medicaid stimulus received. John Kerry's 2004 presidential vote share controls for a state's political and regulatory investment climate. Finally, we use region-fixed effects, v_s, for nine census divisions to account for unobserved differences that may influence FDI location decisions.

Results

Table 1 presents our first-stage estimates. Model 1 reveals a significant and positive bivariate correlation between the instrument and the Medicaid stimulus. The instrument explains more than 90% of the variation in the Medicaid stimulus. The estimated coefficient of the instrument in Model 2 with full covariates is 0.15 and this estimate is statistically significant at the 95% confidence level. The high correlation between 2007 federal Medicaid transfers and the Medicaid stimulus in both models suggests that the instrument is relevant. This strong correlation reflects the importance of pre-recession Medicaid transfers in determining stimulus payments to states. With F-statistics well above 10, we can reject the null hypothesis that our instrument is weak.

Table 2 presents our second stage results. The dependent variable in Model 1 is the total state FDI inflows during 2009-2011. Model 1 shows that Medicaid stimulus had a positive and significant effect on FDI. Models 2 and 3 restrict the sample to FDI in new and old counties, respectively. We see that this positive effect is driven exclusively by new counties. During 2009-2011, on average, new counties collectively received FDI worth approximately $550 million. The coefficient estimate in Model 2 shows that, on average and accounting for other relevant factors, each additional $1 million in Medicaid stimulus corresponds to $300,000 in FDI announced in new counties. We find no effect for old counties (Model 3).

Given our cross-sectional model, we cannot control for time-invariant state characteristics. High Medicaid spending states may be systematically different in their propensity to receive FDI. We address this possibility by estimating a model of change in FDI in new counties between 2006-2008 and 2009-2011 (Model 4). The effect of Medicaid stimulus remains positive and significant.

The results are not sensitive to changing the sample period to 2009-2010 (Table A3). We also conduct a placebo test by regressing FDI inflows during 2006-2008 on post-recession Medicaid stimulus. Our null result indicates that pre-recession FDI did not correlate with the Medicaid stimulus (Table A4).

Incentives Drive FDI Growth

Next, we evaluate the role of incentives in driving state FDI. Incentives data are from Good Jobs First, a non-governmental watchdog group that tracks incentives with the goal of strengthening accountability. Their Subsidy Tracker reports data collected from media and direct government inquiries, among other sources, including incentive type, cost, and source. These data are the most comprehensive accounting of incentives but they have notable shortcomings. Consistent with the widely criticized lack of transparency surrounding incentives, the sample is biased towards large incentives, which receive more media coverage. Jurisdictions may vary in the methodologies used to calculate incentives' reported value. One possible implication is that real-time incentives are underreported because they tend to be smaller.

First, we estimate the causal effect of stimulus on state government incentive spending using the same instrumental variable framework with total state incentive spending during 2009-2011 as our second stage outcome. We also disaggregate incentives into real-time and tax incentives.[13] An observable implication of our empirical strategy is that real-time incentive spending grew because states had a limited time frame to spend Medicaid stimulus. Although Figure 2 indicates high growth of tax incentives, their use should not directly correlate with stimulus. Given our cross-sectional analysis, we cannot control for time-invariant state characteristics such as variation across states in their legal capacity to offer certain types of incentives. We

[13]Real-time incentives: training and cost reimbursement, grants, loans, enterprise zone funds, bond financing, and infrastructure assistance. Tax incentives: property tax abatement, tax credits and rebates, and tax increment financing. Some incentives, such as opportunity zones, combine tax and real-time incentives.

proceed on the plausible assumption that this capacity does not correlate with 2007 state Medicaid spending.

Table 3 summarizes our results. The positive and significant coefficient estimate in Model 1 implies that, on average, an additional one million dollars in Medicaid stimulus corresponds to $170,000 more in real-time incentives. We also estimate effect on change in incentive spending between 2006-2008 and 2009-2011. This analysis addresses the possibilities that high Medicaid spending states are systematically different in their incentive spending and that measurement of incentives changed during the sample period. The coefficient on Medicaid stimulus remains positive and significant for real-time incentives (Model 2).[14] We find no effect of stimulus on tax incentives (Model 3) or change in tax incentives (Model 4).

We consider the role of information asymmetries by disaggregating real-time incentives into two categories. Cash incentives encompass grants and training costs. Land incentives include firm-specific infrastructure spending and improvements to industrial land and buildings.[15] We find positive and significant effects of both incentive types (Table A6), lending further support to our theory that these subsidies may help foreign firms overcome information asymmetries. Additionally, we regress new FDI projects in old and new counties on investment incentives to demonstrate the positive correlation between FDI in new counties and real-time incentives (Table A7).

Content analysis of local newspapers confirms that the FDI projects in our sample received state investment incentives. Local news is the primary source through which voters learn about new investment (Slattery, 2022). Text of local newspaper articles are from the Newsbank database. For each investment project in our data, we searched local newspapers in the location of the plant for a two-month window following the project announcement. Appendix B provides further details of our procedure. Approximately 75% of those projects received incentives, which ranged between between $120,000 and $150 million with an average of $17 million. Although these estimates include both tax and real-incentives, they directly link incentives to the projects in our sample.

Finally, we estimate our baseline model with new domestic manufacturing investment in place of FDI to show no analogous pattern for domestic firms. On average, domestic firms do not suffer from the same degree

[14] Table A5 presents the results for bundled outcomes of state and local government-sponsored incentives.

[15] Land incentives are sometimes bundled with tax incentives in the context of opportunity zones. The majority of state opportunity zone incentives during our sample period were for land redevelopment.

of information asymmetry as do foreign firms. Domestic investment data are from *fDi Markets*. These data begin in 2007, which almost certainly causes us to overestimate the number of new counties. Nonetheless domestic investment did not exhibit geographic expansion (Figure A8). Table A8 summarizes our estimates. Model 1 is the second stage of our 2SLS estimation. Models 2 and 3 are ordinary least squares regressions of domestic investment on real-time and tax incentives, respectively. We find no correlation between incentives and domestic investment.

County-Level Empirical Analysis

We next analyze correlates of new county status. Given that we cannot observe whether incentives were the deciding factor in which county firms selected, this analysis can, at best, suggest how incentives shaped firms' decisions. As noted earlier, our empirical setting holds constant many of the standard correlates of location decisions. Anecdotal examples support the importance of real-time incentives to new county FDI. In Alabama, Mobile County, home of many foreign firms, failed to attract pipe manufacturers Lakeside Steel (Canada) or Golden Dragon (China). These firms located in new counties Clark and Montgomery, respectively. Both counties offered real time incentives that Mobile County was unable to match including grants and land (Amy, 2010).

Relative to old counties, new counties had lower educational attainment and less racial diversity, and were more rural and politically conservative.[16] An obvious concern about our classification of new and old counties is that our project-level FDI data begin in 2003. We risk misclassifying counties that received FDI before 2003 as new. Though pre-2003 county FDI stock data are not available, trends in local foreign firm employment data for 1991-2002 provide a compelling proxy.[17] The average of annual median employment in foreign-owned manufacturing plants during 1991-2002 is consistent with our classification.[18]

[16] See Appendix A, Table A9 and Table A10.

[17] Data are for US census-designated metropolitan areas. Source: Brookings Institution FDI in US Metro Areas database (Saha et al., 2014).

[18] Old counties = 105,472, new counties = 45,542, and never counties = 12,126. Patterns are similar if we restrict the sample to just 2002 or to plants that were not foreign acquisitions, or if we weight employment by 1990 county population.

We estimate a multinomial logit regression of county FDI status with state fixed effects. Counties are classified as new, old, or never corresponding to if and when they received FDI during 2003-2011.[19] Our sample includes 217 new counties and 47 old counties.[20] The baseline category is never counties.[21]

Our main variable of interest is the sum of state spending on incentives in the county during 2009-2011. Local governments in new counties may have spent stimulus in ways that attracted investment. The Recovery Act allocated $64 billion towards education, mandating state governments distribute these funds to local governments according to existing state education funding formulas. Stimulus could have freed up local funds for other uses or have been spent in ways that de facto subsidized investment such as specialized training programs in local community colleges. Thus, we control for county education stimulus expenditures during 2009-2011. A limitation of this measure is that funding formulas may correlate with a county's propensity to receive FDI or have state-funded incentives.

We capture geographic variation in governors' motivates to fund incentives based on county vote margins in the prior gubernatorial election. Governors should be more likely to offer incentives in narrow vote margin countries, defined as a less than ten percentage points difference in the two-party vote share. Additionally, we account for overall political context by controlling for the partisanship of the county's US Congressional representative and John McCain's 2008 presidential vote share, a reasonably consistent proxy for local partisanship (Gerber and Huber, 2010).

We control for other county-level traits that may affect foreign firms' location decisions: unemployment rate, working-age population, lagged FDI, lagged domestic investment, and lagged foreign mergers and acquisitions. The latter two variables capture unobserved county characteristics that influence the overall environment for new business. The number of patents issued in a county is an observable and time-varying proxy for innovation, which may attract FDI.

[19]The unconditional probabilities that a county in new, old, and never are 7%, 2%, and 91%, respectively.

[20]We omit counties that include state capitals. Stimulus data incorrectly indicate these counties as final recipient of stimulus funds intended for further distribution by state governments.

[21]See Appendix C for details on model specification. Table A11 provides summary statistics and data sources.

For ease of interpretation, Figure 3 illustrates the average marginal effect of each predictor.[22] Both real-time incentives and education stimulus correlate with new county status only. An additional $22,000 in incentives raises the average probability of new county status by two percentage points. Among controls, lagged FDI is negatively correlated with new county status, consistent with expansion. New counties are more likely to have a Republican US House representative. We find no correlation for tax incentives (Table A13).

One implication of our theoretical framework is that political targeting of incentives may be conditional on the county's underlying capacity to support investment. Our cross-sectional research design precludes controls for time invariant county characteristics. Geographic expansion, however, points to a role for time-varying county characteristics salient to foreign firms. During our sample period, many foreign firms cited the importance of "shovel-ready" conditions that would allow them to establish production quickly. We capture these conditions with a proxy for idle industrial capacity, the sum of county workers affected by extended mass layoffs during 2000-2006.[23] These events often coincide with plant closures, indicating idle capacity such as factories and machinery as well as specialized labor. We add this proxy to our baseline specification. Figure A9 illustrates our findings.[24] Mass layoffs increase the probability of new county status only in competitive counties. One interpretation of this finding is that incentives support adapting idle capacity to meet foreign firms' needs. Another implication is that if governors are motivated by credit claiming, favoritism towards competitive counties should be conditional on the governor's eligibility for re-election. We find that competitive counties are more likely to be new counties if the governor was eligible for re-election (Figure A10).[25]

Additional tests help to verify that local government incentives do not drive new county status. We analyze the subset of federal education stimulus designated for K-12 students with disabilities, which the Recovery Act required states to distribute according to the pre-recession share of county students eligible for federal disability benefits under the 1990 Individuals with Disabilities Education Act. Proceeding on the identifying

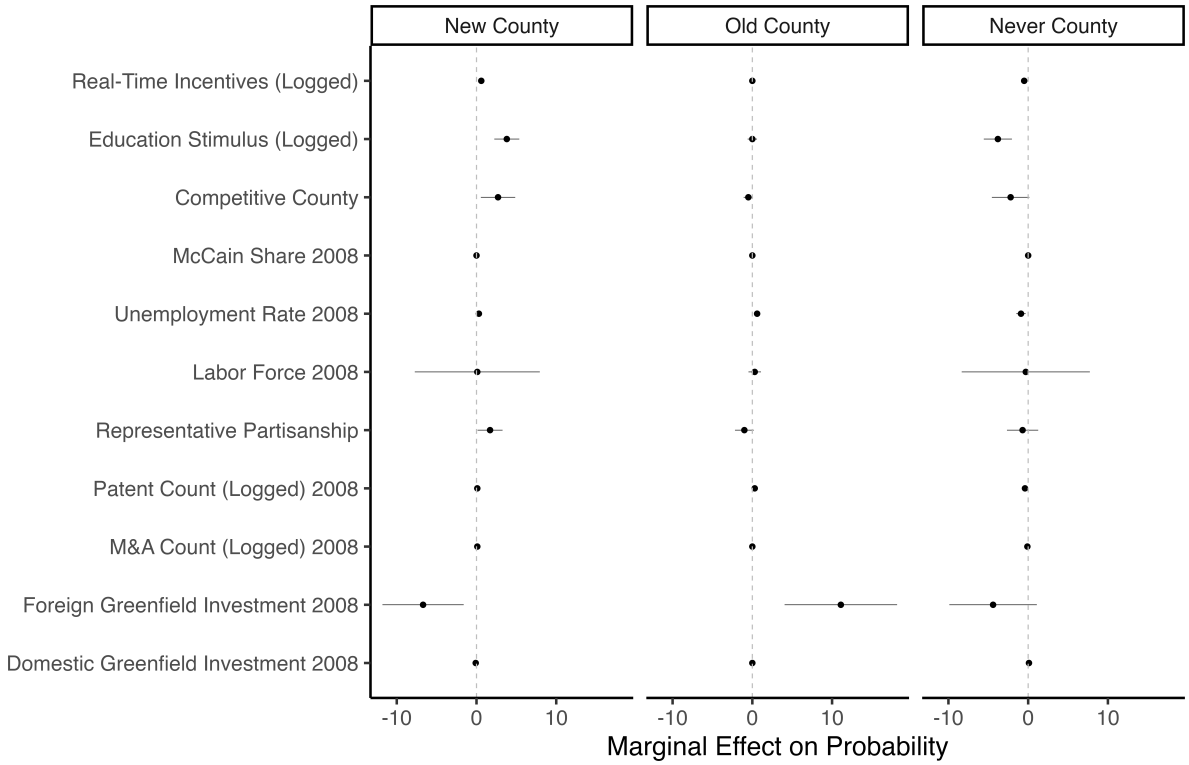
[22] See Table A12 for estimates.

[23] The US Department of Labor defines extended mass layoffs as layoffs by a single employer lasting more than 31 days and that produce more than 50 unemployment claims.

[24] Full results in Table A14.

[25] Full results in Table A15.

Figure 3: The Marginal Effect of Economic and Political Predictors On the County Categorization Probabilities



Marginal effect of covariates on the probability of never, old, or new county status with respect to FDI during 2009-2011. Horizontal lines indicate 95% confidence intervals. Coefficients are reported in Table A12.

assumption that county share of these students is otherwise uncorrelated with the propensity to be a new country, we estimate a two-stage least squares regression using the pre-recession share of benefits-eligible students as our instrument. We find no evidence that local governments diverted this stimulus into investment subsidies and the effect of state-sponsored real-time incentives remain significant.[26] A separate analysis finds that education stimulus designated for community colleges does not correlate with new county status (Table A18). Local governments may have used these funds to indirectly provide incentives such as job training programs.

Alternative Mechanisms

We address multiple alternative mechanisms through which stimulus expenditures could have made counties more attractive locations for FDI.[27] Infrastructure quality is often a priority in manufacturing firms' location decisions. Though most stimulus-funded infrastructure projects were not yet operational during the sample period (US Government Accountability Office, 2011), firms may have made investments in anticipation of improved infrastructure. We evaluate this mechanism within our county-level empirical framework by controlling for three types of infrastructure stimulus relevant to FDI: highway and bridge improvements; renewable energy; and job training and broadband Internet. For each type, we control for logged stimulus received by a county during 2009-2011. Our baseline findings remain unchanged (Table A19). Renewable energy FDI grew during the sample, the most notable shift in FDI's industrial composition during the sample. Our results are unchanged if we exclude renewable energy FDI projects (Table A20).

Finally, we address other mechanisms through which the Great Recession may have contributed to FDI's geographic expansion. Using our county-level framework, we show that foreign firms did not strategically invest in key congressional districts to head off trade restrictions (Table A21), and that corporate inversions, the nominal movement of American companies' headquarters overseas for tax avoidance, did not give the illusion of new FDI (Table A22).[28] Our results do not change if we control for county GDP in 2008 (Table A23).

[26] Appendix D.1 explains this analysis in detail. Table A16 and Table A17 present first and second stage regressions results, respectively.

[27] Appendix D.2 provides further details about these analyses.

[28] See Appendix D.3.

The federal government did not increase FDI promotion during the sample and generally had limited capacity to offer incentives.[29] The US offers visas in exchange for investment in economically distressed areas, but these investments are not considered FDI.

Conclusion

Investment incentives are a controversial policy tool because they redistribute public resources to private firms despite mixed evidence on the tangible economic benefits they generate. We leverage unique circumstances of the Great Recession and 2009 Recovery Act stimulus to shed new light on these controversies. Highlighting the distinction between tax and real-time incentives, and the latter's potential to resolve information asymmetries, we find that stimulus corresponded to more state spending on real-time incentives and FDI into counties that had not received FDI in the previous five years. These counties were more likely to have idle industrial capacity and a narrow vote margin in the prior gubernatorial election, suggesting governors' electoral motives to offer incentives in counties with higher electoral rewards for attracting new FDI.

Future research can build on these findings by further unpacking how information asymmetries influence firms' location decisions. Some types of asymmetries may be more costly and circumstances can create new asymmetries. Policymakers could use these insights to deploy incentives more efficiently. Our findings also introduce a new dimension to the long standing puzzle of why politicians offer incentives. We confirm the conventional wisdom that tax incentives are ineffective and show that real-time incentives can, under certain circumstances, help to attract investment in a relatively cost effective manner. Future research might compare the electoral return to offering very large tax incentives versus modest real-time incentives that yield actual investments.

References

Aguiar, M., & Gopinath, G. (2005). Fire-sale foreign direct investment and liquidity crises. *The Review of Economics and Statistics*, *87*, 439–452.

[29]Francisco Sanchez, "Testimony on Foreign Direct Investment and SelectUSA." Testimony before the House Energy and Commerce Subcommittee on Commerce, Manufacturing, and Trade (April 18, 2013).

Akron Beacon Journal. (2010). Compliments of France - A New Steel Plant In. *Akron Beacon Journal (Akron, OH)*. February 17, 2010.

Aldy, J. E. (2013). Policy MonitorA Preliminary Assessment of the American Recovery and Reinvestment Act's Clean Energy Package. *Review of Environmental Economics and Policy*, *7*, 136–155.

Alfaro, L. (2017). Gains from Foreign Direct Investment: Macro and Micro Approaches. *The World Bank Economic Review*, *30*, S2–S15.

Alm, J., Dronyk-Trosper, T., & Larkin, S. (2021). In the land of OZ: designating opportunity zones. *Public Choice*, *188*, 503–523.

Amy, J. (2010). Is cash crunch slowing growth. *Press-Register (Mobile, AL)*. August 2, 2010.

Amy, J. (2011). Plant means 300 jobs. *Press-Register (Mobile, AL)*. March 29, 2011.

Andrews, S., Leblang, D., & Pandya, S. S. (2018). Ethnocentrism Reduces Foreign Direct Investment. *The Journal of Politics*, *80*, 697–700.

Antràs, P., & Yeaple, S. R. (2014). Multinational Firms and the Structure of International Trade. In G. Gopinath, E. Helpman, & K. Rogoff (Eds.), *Handbook of International Economics* (Vol. 4, pp. 55–130). Elsevier.

Aobdia, D., Koester, A., & Petacchi, R. (2021). *The politics of government resource allocation: Evidence from U.S. state government awarded economic incentives* (SSRN Scholarly Paper No. ID 3127038).

Atkeson, L. R., & Partin, R. W. (1995). Economic and referendum voting: A comparison of gubernatorial and senatorial elections. *American Political Science Review*, *89*, 99–107.

Baicker, K., & Gordon, N. (2006). The effect of state education finance reform on total local resources. *Journal of Public Economics*, *90*, 1519–1535.

Baicker, K., & Staiger, D. (2005). Fiscal shenanigans, targeted federal health care funds, and patient mortality. *The Quarterly Journal of Economics*, *120*, 345–386.

Bao, C. G., & Chen, M. X. (2018). Foreign rivals are coming to town: Responding to the threat of foreign multinational entry. *American Economic Journal: Applied Economics*, *10*, 120–157.

Bartik, T. (2019a). *Making sense of incentives: Taming business incentives to promote prosperity*. W.E. Upjohn Institute.

Bartik, T. J. (2019b). *Costs and benefits of a revised Foxconn project*. W.E. Upjohn Institute for Employment Research. Kalamazoo, MI.

Bartik, T. J. (2020). Using place-based jobs policies to help distressed communities. *Journal of Economic Perspectives*, *34*, 99–127.

Biermann, M., & Huber, K. (2023). Tracing the International Transmission of a Crisis Through Multinational Firms. Working Paper. National Bureau of Economic Research.

Bilir, L. K., Chor, D., & Manova, K. (2019). Host-country financial development and multinational activity. *European Economic Review*, *115*, 192–220.

Bobonis, G. J., & Shatz, H. J. (2007). Agglomeration, adjustment, and state policies in the location of foreign direct investment in the United States. *The Review of Economics and Statistics*, *89*, 30–43.

Boone, C., Dube, A., & Kaplan, E. (2014). The political economy of discretionary spending: Evidence from the American Recovery and Reinvestment Act. *Brookings Papers on Economic Activity*, 375–428.

Bosman, T. H. (2009). The Future of Economic Incentives. *Area Development*. February/March 2009.

Brandt, P., Schrank, A., & Whitford, J. (2018). Brokerage and Boots on the Ground: Complements or Substitutes in the Manufacturing Extension Partnerships? *Economic Development Quarterly*, *32*, 288–299. Publisher: SAGE Publications Inc.

Buch, C. M., Kesternich, I., Lipponer, A., & Schnitzer, M. (2009). *Financial constraints and the margins of FDI*. Deutsche Bundesbank.

Burstein, M., & Rolnick, A. J. (1995). *Congress should end the economic war between the states* (Annual Report No. Vol 9 (March)). Federal Reserve Bank of Minneapolis.

Calabrese, D. (2012). States Re-Examine How They Use Incentives to Attract Business Development. *Area Development*. February 19, 2012.

Carsey, T. M., & Wright, G. C. (1998). State and national factors in gubernatorial and senatorial elections. *American Journal of Political Science*, *42*, 994–1002.

Chodorow-Reich, G. (2014). The Employment Effects of Credit Market Disruptions: Firm-level Evidence from the 2008–9 Financial Crisis *. *The Quarterly Journal of Economics*, *129*, 1–59.

Chodorow-Reich, G., Feiveson, L., Liscow, Z., & Woolston, W. G. (2012). Does state fiscal relief during recessions increase employment? Evidence from the American Recovery and Reinvestment Act. *American Economic Journal: Economic Policy*, *4*, 118–145.

Chor, D., & Manova, K. (2012). Off the cliff and back? Credit conditions and international trade during the global financial crisis. *Journal of International Economics*, *87*, 117–133.

Conley, T. G., & Dupor, B. (2013). The American Recovery and Reinvestment Act: Solely a government jobs program? *Journal of Monetary Economics*, *60*, 535–549.

Cox, G. (2009). Swing voters, core voters, and distributive politics. In I. Shapiro (Ed.), *Political Representation*. Cambridge, MA: Cambridge University Press.

Criscuolo, C., Martin, R., Overman, H. G., & Van Reenen, J. (2019). Some Causal Effects of an Industrial Policy. *American Economic Review*, *109*, 48–85.

Cummins, J., & Holyoke, T. T. (2018). Fiscal accountability in gubernatorial elections. *State Politics & Policy Quarterly*, *18*, 395–416.

Desai, M. A., Foley, C. F., & Forbes, K. J. (2008). Financial constraints and growth: Multinational and local firm responses to currency depreciations. *The Review of Financial Studies*, *21*, 2857–2888.

Desbordes, R., & Wei, S.-J. (2017). The effects of financial development on foreign direct investment. *Journal of Development Economics*, *127*, 153–168.

Devereux, M. P., Griffith, R., & Simpson, H. (2007). Firm location decisions, regional grants and agglomeration externalities. *Journal of Public Economics*, *91*, 413–435.

Dixit, A., & Londregan, J. (1996). The determinants of success of special interests in redistributive politics. *The Journal of Politics*, *58*, 1132–1155.

Dupor, B. (2013). *Creating jobs via the 2009 Recovery Act: State medicaid grant compared to broadly-directed spending* (Working Paper No. 2013-035A). Federal Reserve Bank of St. Louis.

Eden, L., & Miller, S. R. (2004). Distance Matters: Liability of Foreignness, Institutional Distance and Ownership Strategy. In M. A. Hitt & J. L.C. Cheng (Eds.), *Theories of the Multinational Enterprise: Diversity, Complexity and Relevance* (Vol. 16, pp. 187–221). Emerald Group Publishing Limited.

Eldar, O., & Garber, C. (2023). Does Government Play Favorites? Evidence from Opportunity Zones. *The Journal of Law and Economics*, *66*, 111–141.

Fosfuri, A., Motta, M., & Rønde, T. (2001). Foreign direct investment and spillovers through workers' mobility. *Journal of International Economics*, *53*, 205–222.

Fowler, A., Hill, S. J., Lewis, J. B., Tausanovitch, C., Vavreck, L., & Warshaw, C. (2022). Moderates. *American Political Science Review*, 1–18.

Frank, M. M., Hoopes, J. L., & Lester, R. (2022). What determines where opportunity knocks? Political affiliation in the selection of Opportunity Zones. *Journal of Public Economics*, *206*, 104588.

Froot, K. A., & Stein, J. C. (1991). Exchange rates and foreign direct investment: An imperfect capital markets approach. *The Quarterly Journal of Economics*, *106*, 1191–1217.

Gambale, G. (2011). *25th Annual Corporate Survey*. Area Development Magazine. Winter 2011.

Gerber, A. S., & Huber, G. A. (2010). Partisanship, political control, and economic assessments. *American Journal of Political Science*, *54*, 153–173.

Gimpel, J. G., Lee, F. E., & Thorpe, R. U. (2012). Geographic distribution of the federal stimulus of 2009. *Political Science Quarterly*, *127*(4), 567–595.

Greenstone, M., Hornbeck, R., & Moretti, E. (2010). Identifying agglomeration spillovers: Evidence from winners and losers of large plant openings. *Journal of Political Economy*, *118*, 536–598.

Grimmer, J., Messing, S., & Westwood, S. J. (2012). How words and money cultivate a personal vote: The effect of legislator credit claiming on constituent credit allocation. *American Political Science Review*, *106*, 703–719.

Head, K., Ries, J., & Swenson, D. (1995). Agglomeration benefits and location choice: Evidence from Japanese manufacturing investments in the United States. *Journal of International Economics*, *38*, 223–247.

Helpman, E., Melitz, M. J., & Yeaple, S. R. (2004). Export Versus FDI with Heterogeneous Firms. *American Economic Review*, *94*, 300–316.

Hollenbeck, K. (2008). *Is There a Role for Public Support of Incumbent Worker On-the-Job Training?* W.E. Upjohn Institute.

Javorcik, B. S. (2015). Does FDI Bring Good Jobs to Host Countries? *The World Bank Research Observer*, *30*, 74–94.

Jensen, N. M. (2018). Bargaining and the effectiveness of economic development incentives: an evaluation of the Texas chapter 313 program. *Public Choice*, *177*, 29–51.

Jensen, N. M., Findley, M. G., & Nielson, D. L. (2020). Electoral institutions and electoral cycles in investment incentives: A field experiment on over 3,000 U.S. municipalities. *American Journal of Political Science*, *64*, 807–822.

Jensen, N. M., & Malesky, E. J. (2018). *Incentives to pander: How politicians use corporate welfare for political gain*. Cambridge, MA: Cambridge University Press.

Jensen, N. M., Malesky, E. J., & Walsh, M. (2015). Competing for global capital or local voters? The politics of business location incentives. *Public Choice*, *164*, 331–356.

Johnson, L., & Toledano, P. (2022). *Investment Incentives: A Survey of Policies and Approaches for Sustainable Investment*. Columbia Center on Sustainable Investment.

Jonas, J. (2012). *Great Recession and fiscal squeeze at U.S. subnational government level* (Working Paper No. 12/184). IMF.

Keller, W., & Yeaple, S. R. (2009). Multinational enterprises, international trade, and productivity growth: Firm-level evidence from the United States. *The Review of Economics and Statistics*, *91*, 821–831.

Krasa, S., & Polborn, M. (2014). Social ideology and taxes in a differentiated candidates framework. *The American Economic Review*, *104*, 308–322.

Leachman, M., & Williams, E. (2021). *States can learn from Great Recession, adopt forward-looking, antiracist policies*. Center on Budget and Policy Priorities.

Lowe, N., Schrock, G., Wilson, M. D., Rabbani, R., & Forbes, A. (2023). Centering Work: Integration and Diffusion of Workforce Development Within the U.S. Manufacturing Extension Network. *Economic Development Quarterly*, *34*, 375–388.

McDonald, B. D., Decker, J. W., & Johnson, B. A. M. (2021). You don't always get what you want: The effect of financial incentives on state fiscal health. *Public Administration Review*, *81*, 365–374.

McIntosh, B. (2012). Corporate Executive Survey Analysis: Unacceptable Employment Rates Should Lead to Improved Incentives for Expanding Business. *Area Development*, (2012). Winter 2012.

Miller, G. (2014). The True Value of Economic Development Incentives. *Area Development*.

Munson, D. B., & Schultz, M. (2013). Primer: Financial Incentives Help Growing Auto and Aerospace Firms. *Area Development*.

National Association of State Budget Officers. (2009). *The fiscal survey of states*. National Governors Association.

National Economic Council. (2023). *The Economics of Investing in America*. The White House.

Niemi, R. G., Stanley, H. W., & Vogel, R. J. (1995). State economies and state taxes: Do voters hold governors accountable? *American Journal of Political Science*, *39*, 936–957.

Oldenski, L. (2012). Export Versus FDI and the Communication of Complex Information. *Journal of International Economics*, *87*, 312–322.

Owen, E. (2019). Foreign direct investment and elections: The impact of greenfield FDI on incumbent party reelection in Brazil. *Comparative Political Studies*, *52*, 613–645.

Pew Research Center. (2014). Faith and skepticism about trade, foreign investment [Global attitudes project]. Retrieved from https://www.pewresearch.org/global/2014/09/16/faith-and-skepticism-about-trade-foreign-investment/

Poterba, J. M. (1994). State responses to fiscal crises: The effects of budgetary institutions and politics. *Journal of Political Economy*, *102*, 799–821.

Rickard, S. J. (2020). Economic geography, politics, and policy. *Annual Review of Political Science*, *23*, 187–202.

Saha, D., Fikri, K., & Marchio, N. (2014). *FDI in U.S. metro areas: The geography of jobs in foreign-owned establishments*. The Brookings Institute.

Schneider, P. (2010). Financial Incentives for Foreign Business. *Area Development*.

Setzler, B., & Tintelnot, F. (2021). The effects of foreign multinationals on workers and firms in the United States. *The Quarterly Journal of Economics*, *136*, 1943–1991.

Slattery, C. (2022). *The political economy of subsidy-giving* (Working Paper).

Slattery, C., & Zidar, O. (2020). Evaluating state and local business incentives. *Journal of Economic Perspectives*, *34*, 90–118.

Sobel, R. S., Wagner, G. A., & Calcagno, P. T. (2022). The political economy of state economic development incentives: A case of rent extraction. *Economics & Politics*, *1*.

Stokes, S. C. (2005). Perverse accountability: A formal model of machine politics with evidence from Argentina. *American Political Science Review*, *99*, 315–325.

Stringer, T. J. (2010). Business Incentives in 2010: Alive and Well. *Area Development*. February/March 2010.

Svoboda, C. J. (1995). Retrospective voting in gubernatorial elections: 1982 and 1986. *Political Research Quarterly*, *48*, 16.

UNCTAD. (2010). *World investment report 2010* (Report No. E.10.II.D.2). United Nations.

US Government Accountability Office. (2011). *Recovery act education programs: Survey of school districts' uses of funds* (Report No. GAO-11-885SP).

Wang, J. (2016). Do economic development incentives crowd out public expenditures in U.S. states? *The B.E. Journal of Economic Analysis & Policy*, *16*, 513–538.

White House Council of Economic Advisors. (2009). The effects of state fiscal relief. Retrieved from https://obamawhitehouse.archives.gov/node/5008

Woessner-Collins, A. M. (2010). Tailored Fit. *Site Selection*. November 2010.

Zaheer, S. (1995). Overcoming the Liability of Foreignness. *Academy of Management Journal*, *38*, 341–363.

Tables

Table 1: First Stage Regression Results

	Medicaid Stimulus (millions)	Medicaid Stimulus (millions)
Pre-recession Medicaid spending (millions)	0.19***	0.15***
	(0.01)	(0.01)
Kerry's 2004 vote share		2.12
		(2.22)
% Union share		11.98**
		(5.69)
GDP per person 16+		-0.00
		(0.00)
% Manufacturing employment		-4.56
		(9.27)
State population 16+		0.00***
		(0.00)
State-sponsored incentives lagged		0.01
		(0.02)
Total employment change lagged		-0.00*
		(0.00)
% Unemployment rate		-33.86*
		(19.60)
Observations	51	51
Region-fixed Effects	no	yes
F-Statistic	377.85	266.83

Robust standard errors in parentheses. * p<0.10, ** p<0.05, *** p<0.010.

Table 2: Two-Stage Least Squares Regression of Greenfield FDI on Medicaid Stimulus

	FDI	FDI in New Counties	FDI in Old Counties	Δ FDI in New Counties
	(1)	(2)	(3)	(4)
Medicaid Stimulus				
(millions)	0.17**	0.30***	-0.06	0.29***
	(0.08)	(0.07)	(0.06)	(0.07)
Kerry's 2004 vote share	0.38	2.16	0.03	-0.44
	(5.24)	(4.96)	(2.04)	(5.41)
% Union share	-34.84**	-24.59*	-16.19	-15.20
	(14.57)	(14.19)	(9.99)	(13.71)
GDP per person 16+	-0.00	-0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
% Manufacturing employment	26.04	32.39**	-3.94	42.45**
	(17.73)	(14.97)	(7.09)	(18.31)
State population 16+				
(millions)	-62.72	-171.15***	53.14	-198.23***
	(59.55)	(46.96)	(43.33)	(50.02)
Greenfield FDI				
lagged	0.17**	0.02***	-0.00	0.02***
	(0.07)	(0.00)	(0.01)	(0.00)
Total employment change				
lagged	-0.00	-0.01***	0.00	-0.01***
	(0.00)	(0.00)	(0.00)	(0.00)
% Unemployment rate	21.86	10.08	0.98	-51.55
	(45.87)	(38.00)	(20.27)	(55.61)
Observations	51	51	51	51
Region-Fixed Effects	yes	yes	yes	yes

Robust standard errors are in parentheses. * p<0.10, ** p<0.05, *** p<0.010

Table 3: Two-Stage Least Squares Regression Of Investment Incentives on Medicaid Stimulus

	State-Sponsored Real Incentives	Δ State-Sponsored Real Incentives	State-Sponsored Tax Incentives	Δ State-Sponsored Tax Incentives
	(1)	(2)	(3)	(4)
Medicaid Stimulus (millions)	0.17***	0.13**	-0.02	-0.08
	(0.03)	(0.05)	(0.22)	(0.21)
Kerry's 2004 vote share	0.56	-2.97**	-5.73	-5.09
	(1.90)	(1.33)	(16.05)	(15.55)
% Union share	-2.64	2.75	47.07	45.09
	(3.76)	(3.72)	(66.64)	(66.57)
GDP per person 16+	-0.00	0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.01)	(0.01)
% Manufacturing employment	5.19	3.67	-17.81	-26.11
	(4.38)	(5.05)	(58.36)	(55.59)
State population 16+ (millions)	-36.05***	-21.21*	-86.67	-67.01
	(8.57)	(11.32)	(104.56)	(96.43)
State-sponsored incentives lagged	0.32***	-0.16***	0.22**	-0.24**
	(0.03)	(0.05)	(0.11)	(0.10)
Total employment change lagged	0.00*	0.00**	-0.01	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
% Unemployment rate	1.09	16.06	263.83	280.51*
	(13.05)	(10.18)	(170.33)	(169.72)
Observations	51	51	51	51
Region-Fixed Effects	yes	yes	yes	yes

Robust standard errors are in parentheses. * p<0.10, ** p<0.05, *** p<0.010

Appendix

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A COMPARING NEW AND OLD COUNTIES

In this section, we compare and contrast new and old FDI recipient counties. 2003 is the first year for which we have county level FDI data. New counties received FDI during 2009-2011 but not 2003-2008. Old counties received FDI both during 2009-2011 and 2003-2008. Never counties did not receive FDI in either period.

As compared to old counties, new counties had higher Republican vote shares in the 2008 US presidential election, less racial diversity, lower educational attainment and household incomes, smaller populations, and were less urban (Table A9 and Table A10).

Figure A6 summarizes the industry composition of FDI in new and old counties. Among notable trends, new counties received more investments in metals and renewable energy. Provisions of the Recovery Act created incentives for foreign firms in these industries to establish in the US quickly. New counties garnered 41 investments in metals and 11 investments in renewable energy. Older counties secured only 8 investments in metals and 1 renewable energy project.

The source country composition of FDI was similar in new and old counties Figure A7.

Projects in new counties created fewer jobs on average. Average project value was similar though with greater variance in old counties Table A1.

Most new counties received one plant during 2009-2011 whereas old counties were more likely to receive multiple plants. 278 firms invested in new counties and 118 firms in old counties. Most foreign firms made a single US investment. 16 firms invested in both new and old counties.

The top five states for per capita incentives were Louisiana ($1,500), Michigan ($1,100), Kentucky ($351), Connecticut ($322), and Oklahoma ($225).[30]

[30]Data source: Good Jobs First Subsidy Tracker (Mattera and Tarczynska, 2019).

B TEXT ANALYSIS OF LOCAL NEWS COVERAGE OF INVESTMENT INCENTIVES

We wrote a web crawler to scrape NewsBank, a database that provides full-text of many local newspaper articles.[31]. First, we created a list of all 425 foreign firms that made new greenfield investments in manufacturing during January 2009-December 2011. We removed common words/terms such as "Inc", "Ltd" and "Co" to broaden the search results. If the company name became a widely used word we added either the country or the industry next to it.[32] The Python code for the crawler took the company name, investment receiving state and date investment announced as inputs and searched NewsBank for all local news about the company. We searched for any newspaper article written in the two-month range after the investment was announced.[33] For example, to find related news on Fujifilm's investment announcement in South Carolina on July 2009, we searched for "Fujifilm" with the search refined by source location "South Carolina" in July and August 2009. We saved all articles returned by the search engine about a company as one PDF.

After we completed searches for 425 companies, we compiled a corpus combining all company-related articles. To filter articles that mentioned incentives, we did a keyword search with the following keywords: **tax credit, grant, incent*, tax abate, inducement, stimulus fund, job training, subsidi*, relocation, expense, reimbursement, fund, rebate, tax refund, assistance** We created this list of keywords from how other incentives databases characterize company incentives and all the newspaper articles we read about them. We extracted sentences (sometimes paragraphs) that contained one or more of these keywords. Out of 425 companies, we were able to locate newspaper articles about 264. Of those 264, only articles about 48 companies didn't mention any incentives.

Excerpts from these news articles can be found below. These articles reveal that the role of state and

[31] NewsBank

[32] For example, on June 6, 2011, Santana, a textile company, announced a new plant opening in Hidalgo County, Texas. To eliminate irrelevant search results, we added "Textiles" next to the company name while we conducted our search.

[33] After conducting preliminary searches, we realized that most local newspaper coverage of the investment announcement took place in two months.

county incentives in attracting foreign companies right after the Great Recession was also documented by local newspapers.

"Blade Dynamics, a British designer and manufacturer of wind turbine blades, announced in August it was moving to Michoud, bringing 600 jobs over the next decade in exchange for a $30 million state incentive package." - New Orleans City Business, Mew Orleans LA

"On the Jan. 27 editorial that said Shelby County commissioners' frustration over $22 million in county funds that's included in the Electrolux incentives package is understandable, but it's sometimes necessary to commit public money to attract job-creating businesses. We'll never know what it takes to get companies to come to Memphis if all we plan to do is to buy their love." The Commercial Appeal, Memphis TN

"Jobs, but at what cost? Three hundred new jobs in the San Fernando Valley are surely a plus, but let's not overlook what it costs the taxpayers. It is a reasonable assumption that $37,440 in tax breaks per employee approximates the average payroll cost per employee, management included. Add to this a reasonable estimate of $500,000 in equipment tax breaks and we have a total of roughly 12 million dollars that Mission will not have to pay, meaning that the taxpayer has just taken the hit for about 10 years of Mission's payroll for the new plant. What company wouldn't take that?" Daily News of Los Angeles, CA

"The state already has a nobid contract with Talgo, a Spanish train manufacturer, to build two 14-car trains for the Hiawatha, using $43.1 million in state funds, down from $47.6 million because of a joint purchasing deal with Oregon. State officials are in talks with the Federal Railroad Administration on the purchasing rules that must be followed in spending stimulus money on passenger cars and locomotives, Klein said." The Freeman, Milwaukee, WI

"Unitex USA is the company that county officials have been calling by the code name "Project Forest" as they have negotiated an incentives package for it." Anderson Independent-Mail, Anderson, SC

"Zultek credited the Gibson County Economic Development Corp. for helping the company make the decision to locate in Gibson County. Windsor Machine will receive personal property tax phase-in incentives granted by the Gibson County Council." The Herald, Jasper, IN

"We are grateful to our state funding partners and the entire management team of the local ABB operation that worked tirelessly for months on our behalf to win this project and help secure the continued growth of

ABB" Danville Register & Bee, Danville, VA

"Determining who or what was responsible for bringing these jobs to our state can sometimes be an exercise in eeny-meeny-miny-moe. Did Gov. Nikki Haley's phone calls bring them to South Carolina? Was it a presentation by the state Commerce Department and agency head Bobby Hitt? Was it the tens of millions of dollars in incentives offered by the state? ... As soon as the Continental announcement was made public, all sorts of S.C. officials commenced patting each other on the back... In North Carolina, the reverse is occurring, as politicians and officials fall over themselves to issue blame for losing Continental, which had considered locating in Brunswick County. Ultimately, however, what matters to most Carolinians – at least for those who aren't in or seeking elected office – is not so much who should get the credit, but simply that jobs are coming." Sun News, Myrtle Beach, SC

C COUNTY-LEVEL REGRESSIONS

In our main county-level regressions we examine the effect of real-time incentives on county FDI status. We filter the Good Jobs First Subsidy Tracker data to include only state-sponsored incentive projects. We calculate the total value of real-time subsidies at the county level between 2009 and 2011 using this information. We exclude 10 states (Alaska, Arkansas, Idaho, Massachusetts, Minnesota, North Dakota, New Hampshire, Rhode Island, Wyoming, and Washington D.C.) from our analysis due to missing county indicators. We take the log of county-level incentives (in $ millions) as our final measure.[34]

We derive data for our education stimulus measure by searching the Recovery Act Recipient Reports Database for stimulus awarded by the US Department of Education during 2009-2011. We restricted our research to "subprime" funds that are distributed by state departments to local governments.[35] The US Department of Education distributed funds to state governments and tasked them with distributing funds to local education agencies in a manner consistent with the state's existing education funding formula. We adjusted award amounts for inflation using 2010 dollars. We then aggregated award amounts at the county level by using the county geocodes provided in the database.

We include a county's unemployment rate as a control to account for excess labor available for production. To the extent that the recession freed up large pools of labor, post-recession greenfield investment may locate accordingly. These data are from the US Bureau of Labor Statistics database. Using the same data, we also control for the labor force in the county. We use lagged greenfield projects to control for FDI agglomeration effects. Our measure includes both new investments and expansions to old investments in order to account for big investment projects that expanded in our sample period. We follow other municipal-level political economy studies of economic activity in measuring local partisanship with county-level presidential vote

[34]We add a small number before we take the log to deal with zeros.

[35]There are three types of recipients for federal awards: prime, subprime, vendors. Recipients are categorized as prime if they receive funds from the awarding agency directly. Prime recipients can be companies, state, county, and city agencies. Recipients are categorized as subprime if they receive funds from the awarding agency indirectly through a middleman (mostly state offices). Vendors are companies that receive the funds to execute the task. We exclude vendors from our analyses.

shares (Gerber and Huber, 2010). Levendusky et al. (2008) show that presidential vote share is a reasonably consistent proxy for partisanship. Tausanovitch and Warshaw (2014) show municipal government policies reflect partisan preferences of constituents. We use county-level Republican presidential vote share in the 2008 election, drawn from Dave Leip's Atlas of US Elections.

Data for domestic greenfield come from fDiMarkets; data for M&A come from Thomson Reuters' SDC Platinum database. We also add the number of patents as a control. To the extent that foreign firms are drawn to locations with greater technological innovation, patents are an observable and time varying metric of innovation at the county level. Data for patents are from US Patent and Trademark Office.[36]

We compose our measure of excess capacity using the Bureau of Labor Statistics' Mass Layoff statistics. We use the number of initial claimants (in thousands) for unemployment insurance associated with mass layoffs at the county level between 2001 and 2006. This measure serves as a proxy for excess capacity that a county has to entice new manufacturing investors with idle factories and machinery. We interact this measure with the vote margin of a county to see if politicians can direct location-based incentives to get firms to invest in swing counties conditional on excess capacity.

We further investigate whether governors have political motives to target stimulus funds by exploiting governor term limits. We argue that such targeting should be the most relevant for governors who are facing elections in the near future. We use exogenous variation created by term limits for governors by each state to further examine whether political ambitions are driving the results in our paper. We collect information on governors' term limits from ballotpedia.org. We only consider immediate term limits since they are a better proxy for immediate election concerns. We coded governors that couldn't run due to term limits and governors who chose not to run for other reasons as 0[37]. We coded governors who ran in the subsequent election as 1. Out of 49 governors who were in office in 2009, 29% (14) ran in the subsequent election, whereas 71% (35) did not. We then re-ran our multinomial logit model, including an interaction term between our eligibility measure and competitiveness.

Here, we detail the results of two interactions from our county-level analyses. First is the interaction between excess capacity and county vote margins. Since interpreting the results of a multinomial logit

[36] https://www.uspto.gov/web/offices/ac/ido/oeip/taf/countyall/usa_county_gd.htm

[37] These reasons included: retirement, impeachment, or bid for the presidential election

model with interaction terms is complicates, Figure A9 and Figure A10 depict the predicted probabilities of being a never, old, and new county calculated from our models. Figure A9 shows that the probability of being categorized as a new county increases as mass layoffs increase in competitive counties. Figure A10 demonstrates that governors that were most likely to govern new counties were those who were eligible to run in the subsequent elections and in competitive counties (11%). The probability of being a new county significantly decreases when we consider governors who did not run in the election (8%). This means that counties who received investment for the first time since 2003 were governed by politically ambitious governors who diverted stimulus funds to attract new investment in their communities. As expected, among governors who ran, the probability of being a new county rises 5.5 percentage points if they faced a competitive election.

C.1 Multinomial Logit Model

We model the log-odds of a county to be classified as the last two categories by the following equations;

$$ln\left(\frac{P(county=new}{county=never}\right) = \mu_{10} + \mu_{11}S_c + \mu_{12}\mathbf{V_c} + \mu_{13}s_c,$$

$$ln\left(\frac{P(county=old}{county=never}\right) = \mu_{20} + \mu_{21}S_c + \mu_{22}\mathbf{V_c} + \mu_{23}s_c,$$

where $ln\left(\frac{P(county=new}{county=never}\right)$ is the log-odds of a new county, $ln\left(\frac{P(county=old}{county=never}\right)$ is the log-odds of an old county, S_c is received stimulus by county c, V_c is a vector of county-level controls and s_c is state-fixed effects. Our reference category is never counties - counties that have not received any investment in our sample period. We expect receiving higher levels of stimulus and real-time incentives differentiate new counties from never counties as sudden influx of cash would allow these counties to attract more FDI.

D ALTERNATIVE EXPLANATIONS

D.1 Ruling Out the Possibility That Local Stimulus Funds Diverted as Incentives

We argue that the growth of FDI following the Great Recession reflects governors' allocation of investment incentives. Local governments, such as county and cities, also offer funds to foreign firms to locate in their region. To rule out the possibility that FDI's geographic expansion is due to local government subsidies, we look at the effect of education stimulus on FDI at the county level. We employ an instrumental variable

approach to calculate the local average treatment effect. Our focus is a subset of federal education stimulus designated for K-12 students with disabilities. The Recovery Act stipulated that these funds be distributed to counties in proportion to the number of students eligible for federal disability benefits just prior to the recession. We construct our instrument by using the number of eligible students in a county's education system in 2006 and scaling it by a county's 2006 population.[38] We argue that this is a valid instrument since the number of benefits-eligible students is exogenous and it influences county-level FDI only through its effect on the education stimulus.

Table A16 shows that disabled students as a share of county school-age population is significantly and positively correlated with the amount of education stimulus counties received per working population. Table A17 demonstrates that there is no significant relationship between a county's education stimulus and greenfield FDI received after the Great Recession. We interpret these results as suggestive, as the F-statistics for the instrumental variable regression barely passes the traditional threshold. We also assume that the 2006 share of disabled students in a county influences FDI after the Great Recession only through affecting the distribution of the education stimulus.

D.2 Different Types of Stimulus

The ARRA included several different categories of stimulus. Our analysis in the main text focuses of Medicaid and education stimulus, the top largest categories of spending. An alternative explanation could be that other types of stimulus these counties received alongside education and health stimulus may have made them attractive options for MNC.

We evaluate three categories of stimulus that may influenced which counties received new investment. First, we look at whether stimulus distributed for highway infrastructure enhancements played a role in attracting FDI. We scrape the Recovery Act Recipient Reports Database funds awarded by the Department of Transportation. Unlike our education stimulus measure, our transportation stimulus measure includes funds awarded to prime recipients, in this case mostly states' transportation departments. The majority of these funds are allocated for highway improvement purposes. Even though controlling for transportation

[38] Data are from Urban Institute & Brookings Institution Tax Policy Center

stimulus alleviates some omitted variable bias concerns, we can't rule out that new counties were more likely to have highways in need of repair.[39]

Second, we construct a measure for energy stimulus to account for FDI attracted to localities due to generous funding available for renewable energy. These funds are distributed under "Title 17 Innovative Technology Direct Loan Financing" and "Energy Efficiency and Renewable Energy" programs. For example, SAFT America, a subsidiary of a French battery company, opened in Jacksonville, Florida after receiving $95.5 million loan from the US Department of Energy under the "Energy Efficiency and Renewable Energy" program. Thus, we restrict our sample to funds awarded by the Department of Energy under the previously mentioned programs to prime recipients which are mainly solar energy companies and state energy departments.

Finally, we create a stimulus category called infrastructure stimulus using funds awarded under certain programs. Infrastructure stimulus was given to local governments with the aim of improving their soft infrastructure, such as internet access, job training etc, to make them more competitive in the job market. We construct this measure by looking at funds distributed for job training, broadband, and rural broadband. These funds are distributed by the Department of Labor under "Employment and Training Administration-Training and Employment Services", Department of Commerce under "Federal Communications Commission-Broadband Technology Opportunities Program", and Department of Agriculture under "Rural Utilities Service-Distance Learning, Telemedicine, and Broadband Direct Loan."

Table A19 presents the regression results where we include three stimulus categories as controls. All stimulus amounts are normalized to 2010 dollars. Counties that received more transportation and infrastructure stimulus are more likely to be categorized as new counties. Thus, it is possible that foreign firms considered the anticipated stimulus-funded improvements in infrastructure in their investment location decisions. Importantly, our baseline findings regarding county vote margins are unchanged. In contrast to our SAFT America example, we do not observe an increase in the probability of receiving FDI post-recession in renewable energy industry. We re-estimate our county models by excluding renewable energy FDI from our sample in Table A20. Our main results do not change.

[39]Results are the same if we replace total Department of Transportation spending with just highway funds.

D.3 FDI to Preempt Trade Restrictions

The aftermath of economic crises are usually characterized by a return to protectionism. Surprisingly, the US trade policy did not take a protectionist turn following the Great Recession. Instead, Congress passed three free trade agreements (FTA) with substantive majorities lowering tariffs with South Korea, Colombia and Panama on January 12, 2011. [40]

We explore whether the sudden increase in FDI after the Great Recession may have played a role in the continuation of liberal policies in the US Congress. Foreign firms often advocate for free trade in host country as their operations rely on imported input and/or exporting output to foreign countries. Foreign firms that invest in the US market with the aim for producing and exporting their products (firms engaging in vertical integration) oppose high tariff barriers that would hinder their exports. Similarly, even foreign MNC that produces and sells for the US market (firms engaging in horizontal integration) may oppose high tariff barriers if they supply raw and intermediary materials from other countries. Thus, we assume that FDI have a stake in the passing of liberal trade policies. Anticipating a turn to protectionism after the economic crisis, foreign companies may have engaged in quid-pro-quo relations with the policymakers: they may have directed their investments to protectionist politicians to lobby for future trade liberalization.

The observable implication for this theory is that we should see more FDI in places where members of Congress have voted against trade liberalization. Given that the timing of the recession and the influx of FDI coincide, we have to test for this alternative explanation to show that our story holds against this possibility. We operationalize protectionist tendencies of House members by looking at their voting records in the 109th and 110th Congress.[41] We obtain this data from Cato Institute's free trade ratings of the individual Congress members. Cato relies on data on the trade-related bill voting patterns of each members from the Library of Congress to compute the number of protectionist votes for each Congress session. The institute further breaks down this measure by looking at voting patterns for bills that discuss trade barriers

[40] South Korea FTA passed with 278 Yeas and 151 Nays in the House, 83 Yeas and 15 Nays in the Senate. Colombia FTA passed with 262 Yeas and 167 Nays in the House, 66 Yeas and 33 Nays in the Senate

[41] 109th Congress convened between January 3, 2005 and January 3, 2007. 110th Congress convened between January 3, 2007 and January 3, 2009.

and subsidies. In the 109th Congress, House members voted on 13 bills and amendments concerning trade barriers and 5 bills concerning trade subsidies. In the 110th Congress, House members voted on 8 bills and amendments concerning trade barriers and 6 bills concerning subsidies. We stack all individual members from both congresses and aggregate at the congressional district level to obtain the share of protectionist votes (also broken down by barrier and subsidy-related voting). We merge this data with the number of FDI in the district between 2009 and 2010 and take its log to use as our dependent variable. We also control for the rate of unemployment and the partisanship of the district representative as they might be correlated with both protectionist voting and FDI in the district. We add state fixed-effects to account for unobservable variation between states in attracting FDI.[42]

Table A21 presents the results. Contrary to our expectations, protectionist voting in a district doesn't predict FDI it receives in 2009 and 2010. We repeat our regression by substituting protectionist subsidy and barrier-related voting in our subsequent models. The results don't change. These results suggest that the trends we see in FDI after the Great Recession is not driven by a strategic interaction between politicians and foreign investors, at least regarding trade voting.

[42]Some districts experience a change in the partisanship of the representative. For example, Arizona 5th district switched hands from the Republican J.D. Hayworth to the Democratic Harry Mitchell in the 2006 elections. In such cases, we code partisanship as the party of the last representative. In the Arizona 5th district case, we coded the district as Democratic. Excluding these districts from the analysis doesn't change the results.

E TABLES

Table A1: New Manufacturing FDI Value and Jobs Created in Old and New Counties

	Old Counties			New Counties		
	Mean	Median	SD	Mean	Median	SD
Jobs	129.23	99.00	120.38	116.12	70.00	146.61
Value (2010$ million)	71.42	21.37	231.26	54.71	23.21	103.07

We exclude SASOL, a $10 billion investment from a South African company as an obvious outlier.

Table A2: Summary Statistics and Data Sources for State-Level Regressions

Statistic	Mean	St. Dev.	Min	Max	Data Source
New Manufacturing FDI (mil) 2009-2011	436	505	0	1,835	FdiMarkets
New Manufacturing FDI (mil) New Counties 2009-2011	128	237	0	1,116	FdiMarkets
New Manufacturing FDI (mil) Old Counties 2009-2011	308	409	0	1,703	FdiMarkets
New Manufacturing FDI (mil) 2006-2008	152	278	0	1,419	FdiMarkets
New Manufacturing Domestic Investment (mil) 2009-2011	662	670	0	2,405	FdiMarkets
Real-Time Incentives (mil) 2009-2011	115	272	0	1,874	Good Jobs First Subsidy Tracker
Tax Incentives (mil) 2009-2011	384	1,140	0	6,796	Good Jobs First Subsidy Tracker
Land Incentives (mil) 2009-2011	41	254	0	1,812	Good Jobs First Subsidy Tracker
Cash Incentives (mil) 2009-2011	58	84	0	321	Good Jobs First Subsidy Tracker
State and Local Real-Time Incentives (mil) 2009-2011	118	274	0	1,876	Good Jobs First Subsidy Tracker
State and Local Tax Incentives (mil) 2009-2011	489	1,201	0	6,987	Good Jobs First Subsidy Tracker
Medicaid Stimulus (mil) 2009-2010	1,198	1,572	55	7,776	US Recovery Accountability and Transparency Board (recovery.gov)
Medicare Spending (mil) 2007	6,173	8,048	425	43,564	Centers for Medicaid and Medicare Services
% Kerry Vote Share 2004	47	10	26	89	Dave Leip's Atlas
% Union Share 2007	11	5	3	25	Bureau of Labor Statistics
GDP per 16+ person 2008	49,199	17,196	31,907	154,890	Bureau of Economic Analysis
% Manufacturing Employment 2008	11	4	1	20	American Community Survey
Population 16+ (mil) 2008	5	5	0	28	U.S. Census Bureau
Δ Employment May-December 2008	−56,212	75,045	−431,300	1,700	Current Employment Statistics
% Unemployment Rate 2008	5	1	3	8	Bureau of Labor Statistics

Table A3: Two-Stage Least Squares Regression of Greenfield FDI on Medicaid Stimulus 2009-2010

	FDI	FDI in New Counties	FDI in Old Counties
	(1)	(2)	(3)
Medicaid Stimulus			
(millions)	0.17**	0.23***	-0.04
	(0.07)	(0.04)	(0.05)
Kerry's 2004 Vote Share	-1.57	0.01	0.67
	(3.29)	(2.70)	(1.86)
% Union share	-29.77***	-15.13**	-16.99*
	(10.68)	(5.95)	(10.06)
GDP per person 16+	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)
% Manufacturing employment	8.87	13.32*	-3.42
	(12.61)	(7.37)	(6.61)
State population 16+			
(millions)	-57.14	-134.12***	41.88
	(52.18)	(24.64)	(31.05)
Greenfield FDI			
Lagged	0.09	0.02***	-0.01
	(0.06)	(0.00)	(0.01)
Total Employment Change			
Lagged	-0.00	-0.00***	0.00
	(0.00)	(0.00)	(0.00)
% Unemployment rate	15.55	-8.39	7.01
	(32.48)	(19.68)	(20.33)
Observations	51	51	51
Region-fixed Effects	yes	yes	yes

The dependent variables in Model 1, 2, and 3 are all greenfield FDI, greenfield FDI in new counties, and greenfield FDI in old counties respectively. Robust standard errors are in parentheses. * $p<0.10$, ** $p<0.05$, *** $p<0.010$

Table A4: Placebo Test: Two-Stage Least Squares Regression of 2006-2008 Greenfield FDI on Medicaid Stimulus

	FDI	FDI in New Counties	FDI in Old Counties
	(1)	(2)	(3)
Medicaid Stimulus			
(millions)	-0.01	0.03	-0.04
	(0.04)	(0.03)	(0.04)
Kerry's 2004 vote share	5.05	3.26	1.79
	(3.38)	(3.23)	(1.95)
% Union share	-17.52**	-7.54	-9.99
	(8.07)	(6.29)	(8.38)
GDP per person 16+	-0.00*	-0.00*	0.00
	(0.00)	(0.00)	(0.00)
% Manufacturing employment	-8.31	-8.54	0.23
	(6.61)	(7.48)	(4.32)
State population 16+			
(millions)	33.02***	14.28	18.74*
	(12.39)	(9.84)	(10.88)
Greenfield FDI 2006			
lagged	0.03	-0.06	0.09
	(0.07)	(0.05)	(0.06)
Total employment change			
lagged	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
% Unemployment rate	41.32	58.32*	-17.00
	(31.39)	(33.62)	(20.29)
Observations	51	51	51
Region-Fixed Effects	yes	yes	yes

The dependent variable for the placebo test is the total value of new manufacturing greenfield FDI betwwen 2006 and 2008 in Model 1, total value of new manufacturing greenfield FDI between 2006 and 2008 in new counties in Model 2, and old counties in Model 3. Robust standard errors are in parentheses. * $p<0.10$, ** $p<0.05$, *** $p<0.010$

Table A5: Two-Stage Least Squares Regression of Non-Federal Incentives on Medicaid Stimulus

	Real Incentives	Tax Incentives
	(1)	(2)
Medicaid Stimulus		
(millions)	0.12***	0.39*
	(0.03)	(0.21)
Kerry's 2004 vote share	0.68	-14.15
	(1.78)	(17.62)
% Union share	-2.48	42.66
	(3.52)	(64.14)
GDP per person 16+	-0.00	-0.00
	(0.00)	(0.01)
% Manufacturing employment	5.51	-21.10
	(4.32)	(56.84)
State population 16+		
(millions)	-21.69**	-163.38
	(9.30)	(102.87)
Incentives		
Lagged	0.29***	0.05
	(0.03)	(0.18)
Total employment change		
lagged	0.00*	-0.00
	(0.00)	(0.00)
% Unemployment rate	3.22	298.89*
	(12.30)	(179.21)
Observations	51	51
Region-fixed Effects	yes	yes

The dependent variables consist of real state and local incentives in Model 1, and state state and local incentives in Model 2. Robust standard errors are in parentheses. * p<0.10, ** p<0.05, *** p<0.010

Table A6: Two-Stage Least Squares Regression of Cash and Land Incentives on Medicaid Stimulus

	Cash Incentives	Land Incentives
	(1)	(2)
Medicaid Stimulus		
(millions)	0.03**	0.10**
	(0.01)	(0.04)
Kerry's 2004 vote share	0.44	1.58
	(0.83)	(1.77)
% Union share	-3.23	-4.11**
	(2.23)	(1.99)
GDP per person 16+	-0.00	-0.00
	(0.00)	(0.00)
% Manufacturing employment	3.01	-0.23
	(2.76)	(3.20)
State population 16+		
(millions)	3.49	-25.16**
	(5.49)	(11.27)
Total employment change		
lagged	0.00**	-0.00
	(0.00)	(0.00)
% Unemployment rate	1.85	-6.14
	(6.65)	(8.97)
State-sponsored cash incentives		
lagged	0.30***	
	(0.02)	
State-sponsored land incentives		
lagged		0.38***
		(0.04)
Observations	51	51
Region-fixed Effects	yes	yes

The dependent variable in Model 1 comprise grants and training reimbursements. The dependent variable in Model 2 comprise enterprise zones and grants. Robust standard errors are in parentheses. * p<0.10, ** p<0.05, *** p<0.010

Table A7: OLS Regression of State Greenfield FDI on Incentives in New and Old Counties

	FDI in New Counties	FDI in New Counties	FDI in Old Counties	FDI in Old Counties
	(1)	(2)	(3)	(4)
State-sponsored real incentives				
(millions)	0.52***		-0.09	
	(0.16)		(0.15)	
State-sponsored tax incentives				
(millions)		-0.03		0.03
		(0.04)		(0.02)
Kerry's 2004 vote share	3.30	0.97	-0.08	0.59
	(5.79)	(5.83)	(2.47)	(2.91)
% Union share	-20.23	-8.19	-16.78	-19.90
	(16.79)	(16.68)	(14.42)	(14.06)
GDP per person 16+	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
% Manufacturing employment	30.81*	30.43	-3.79	-3.45
	(17.39)	(19.67)	(8.85)	(8.47)
State population 16+				
(millions)	-72.36*	-43.97	33.31	29.37
	(38.32)	(44.38)	(31.52)	(32.09)
Greenfield FDI				
lagged	0.01***	0.01**	0.00	0.00
	(0.00)	(0.01)	(0.02)	(0.01)
Total employment change				
lagged	-0.00*	-0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
% Unemployment rate	16.89	35.43	-1.20	-11.85
	(48.13)	(55.47)	(25.45)	(28.13)
Observations	51	51	51	51
Region-Fixed Effects	yes	yes	yes	yes

The dependent variable in the first two models measure the value of new manufacturing greenfield FDI in new counties. The dependent variable in the last two models measure the value of new manufacturing greenfield FDI in old counties. Robust standard errors are in parentheses. * $p<0.10$, ** $p<0.05$, *** $p<0.010$

Table A8: Two-Stage and Ordinary Least Squares Regression of Domestic Greenfield Investment on Medicaid Stimulus

	Domestic Investment (2SLS) (1)	Domestic Investment (OLS) (2)	Domestic Investment (OLS) (3)
Medicaid Stimulus (millions)	0.09		
	(0.14)		
State-sponsored real incentives (millions)		0.26	
		(0.34)	
State-sponsored tax incentives (millions)			-0.00
			(0.10)
Kerry's 2004 vote share	-3.25	-2.28	-2.02
	(9.69)	(11.54)	(11.01)
% Union share	-49.56***	-49.52**	-44.41**
	(17.76)	(22.63)	(19.52)
GDP per person 16+	-0.00	-0.00	-0.00
	(0.00)	(0.01)	(0.01)
% Manufacturing employment	25.28	25.07	24.98
	(22.17)	(27.25)	(26.03)
State population 16+ (millions)	14.81	35.35	44.31
	(51.20)	(26.35)	(31.04)
Domestic investment lagged	0.09	0.09	0.11
	(0.07)	(0.08)	(0.07)
Total employment change lagged	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)
% Unemployment rate	211.80***	209.31***	207.14***
	(58.39)	(69.35)	(70.10)
Observations	51	51	51
Region-Fixed Effects	yes	yes	yes

Model 1 is a 2SLS regression that regresses new domestic manufacturing greenfield investment on Medicaid stimulus. Model 2 and 3 are OLS regressions that regress new domestic manufacturing greenfield investment on state-sponsored real and tax incentives respectively. * $p<0.10$, ** $p<0.05$, *** $p<0.010$

Table A9: Summary Statistics of Demographic Variables for Never, Old, and New Counties in County-Level Regressions

	Never Counties (N=2799)		New Counties (N=217)		Old Counties (N=47)	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
2008 McCain Share	61	12	57	11	52	14
Population	67,746	179,111	221,928	326,429	959,687	1,673,193
% Foreign-Born	4	5	6	6	10	8
% Urban	38	30	63	27	86	17
% White	84	16	79	16	69	15
% College-Educated	5	5	7	4	9	4
Median Income	25,173	4,926	27,938	5,848	28,239	4,334
% Poverty	11	6	11	5	11	4

Table A10: Difference in Means T-tests for Never, Old, and New Counties in County-Level Regressions

	New-Never		New-Old	
	Diff	p-value	Diff	p-value
2008 McCain Share	-0.037	9.314E-6	0.052	0.023
Population	154,182	5.868E-11	-737,759	0.004
% Foreign-Born	0.020	2.882E-6	-0.042	0.002
% Urban	0.243	2.2E-16	-0.229	3.407E-11
% White	-0.053	3.921E-6	0.105	5.076E-5
Median Income	2,764	9.207E-11	−300	0.688
% Poverty	-0.005	0.215	-0.005	0.483
% College-Educated	0.126	1.77E-5	-0.024	0.001

Table A11: Summary Statistics and Data Sources for County-Level Regressions

Statistic	Mean	St. Dev.	Min	Max	Data Source
Education Stimulus (Logged)	1.58	1.76	−9.21	7.95	Recovery Act Recipient Reports fedspending.org
Transportation Stimulus (Logged)	−1.14	4.66	−9.21	7.30	Recovery Act Recipient Reports fedspending.org
Energy Stimulus (Logged)	−6.68	4.27	−9.21	7.35	Recovery Act Recipient Reports fedspending.org
Infrastructure Stimulus (Logged)	−6.67	4.35	−9.21	4.83	Recovery Act Recipient Reports fedspending.org
Real-Time Incentives (Logged)	−7.35	3.56	−9.21	4.86	Good Jobs First Subsidy Tracker
Cash Incentives (Logged)	−7.62	3.31	−9.21	3.73	Good Jobs First Subsidy Tracker
Land Incentives (Logged)	−9.01	1.36	−9.21	4.86	Good Jobs First Subsidy Tracker
Tax Incentives (Logged)	−7.56	3.76	−9.21	7.43	Good Jobs First Subsidy Tracker
Competitive County	0.26	0.44	0	1	Dave Leip's Atlas
Governor Eligible to Run	0.31	0.46	0	1	Dave Leip's Atlas
Mass Layoffs (in 100,000s) 2000-2006	0.02	0.09	0.00	2.97	Bureau of Labor Statistics
McCain Vote Share 2008	60.46	12.46	12	92	Dave Leip's Atlas
% Unemployment Rate 2008	5.81	2.05	1.30	22.60	Bureau of Labor Statistics
Labor Force (in millions) 2008	0.05	0.15	0.0000	4.93	Bureau of Labor Statistics
Patent Count (Logged) 2008	−2.96	5.54	−9.21	8.88	US Patent and Trademark Office
M&A Count (Logged) 2008	−6.13	4.70	−9.21	6.07	Thomson Reuters SDC Platinum
Domestic Greenfield Investment 2008	−8.76	2.39	−9.21	8.56	FdiMarkets
Foreign Greenfield Investment (Dummy) 2008	0.04	0.20	0	1	FdiMarkets

Table A12: Multinomial Logit Regression of Greenfield FDI on Stimulus and Real-Time Incentives

	Old_Counties	New_Counties	Old_Counties	New_Counties	Old_Counties	New_Counties
	(1)	(2)	(3)	(4)	(5)	(6)
Real-Time Incentives (Logged)	-0.01	0.10***				
	(0.15)	(0.02)				
Cash Incentives (Logged)			-0.15	0.12***		
			(0.10)	(0.02)		
Land Incentives (Logged)					0.15	0.04***
					(0.13)	(0.01)
Education Stimulus (Logged)	0.03	0.67***	0.07	0.66***	-0.01	0.72***
	(0.67)	(0.12)	(0.64)	(0.12)	(0.65)	(0.12)
McCain Share 2008	0.04	0.01	0.05	0.00	0.04	0.01
	(0.07)	(0.01)	(0.07)	(0.01)	(0.07)	(0.01)
Unemployment Rate 2008	1.38*	0.08**	1.35*	0.08**	1.36*	0.09**
	(0.71)	(0.04)	(0.71)	(0.04)	(0.71)	(0.04)
Labor Force 2008	0.80	0.04	0.61	0.06	0.76	0.02
	(1.15)	(0.72)	(1.05)	(0.71)	(1.14)	(0.73)
Representative Partisanship	-1.90	0.22	-2.12	0.23	-1.82	0.20
	(1.46)	(0.15)	(1.52)	(0.16)	(1.37)	(0.15)
Patent Count (Logged) 2008	0.82**	0.03	0.87**	0.03	0.81**	0.03*
	(0.35)	(0.02)	(0.35)	(0.02)	(0.36)	(0.02)
M&A Count (Logged) 2008	0.12	0.02	0.13	0.02	0.12	0.02
	(0.08)	(0.03)	(0.09)	(0.03)	(0.08)	(0.03)
Foreign Greenfield Investment 2008	27.87***	-0.70	26.70***	-0.72	27.19***	-0.61
	(8.90)	(0.48)	(9.02)	(0.47)	(8.72)	(0.49)
Domestic Greenfield Investment (Logged) 2008	0.08	-0.02	0.09	-0.02	0.09	-0.01
	(0.09)	(0.02)	(0.09)	(0.02)	(0.09)	(0.02)
Observations	3059	3059	3059	3059	3059	3059
State-Fixed Effects	yes	yes	yes	yes	yes	yes

Multinomial logit coefficients estimated via maximum likelihood. The outcome is a categorical variable that indicates never, old and new county status. The baseline category is never counties. Model 1 includes all real-time incentives, Model 2 includes grants and training reimbursements, and Model 3 includes enterprise zones and infrastructure assistance. All models include state-fixed effects. Robust standard errors are in parentheses and clustered by state. * p<0.10, ** p<0.05, *** p<0.010

Table A13: Multinomial Logit Regression of Greenfield FDI on Stimulus and Tax Incentives

	Old_Counties	New_Counties
	(1)	(2)
Tax Incentives (logged)	-0.13	0.06
	(0.17)	(0.04)
Education Stimulus (Logged)	0.27	0.69***
	(0.81)	(0.12)
McCain Share 2008	0.04	0.01
	(0.07)	(0.01)
Unemployment Rate 2008	1.41*	0.09**
	(0.77)	(0.04)
Labor Force 2008	0.60	0.04
	(1.36)	(0.72)
Representative Partisanship	-1.94	0.19
	(1.23)	(0.15)
Patent Count (Logged) 2008	0.83**	0.03
	(0.37)	(0.02)
M&A Count (Logged) 2008	0.14	0.02
	(0.10)	(0.03)
Foreign Greenfield Investment 2008	28.85***	-0.64
	(9.43)	(0.51)
Domestic Greenfield Investment (Logged) 2008	0.08	-0.01
	(0.09)	(0.02)
Observations	3059	3059
State-Fixed Effects	yes	yes

Multinomial logit coefficients estimated via maximum likelihood. The outcome is a categorical variable that indicates never, old and new county status. The baseline category is never counties. The independent variable is tax incentives. The model include state-fixed effects. Robust standard errors are in parentheses and clustered by state. * $p<0.10$, ** $p<0.05$, *** $p<0.010$

Table A14: Multinomial Logit Regression of Greenfield FDI on Competitive Counties and Mass Layoffs

	Old_Counties	New_Counties	Old_Counties	New_Counties	Old_Counties	New_Counties
	(1)	(2)	(3)	(4)	(5)	(6)
Competitive County=1	-1.13	0.43**	-1.31	0.42**	0.01	0.27
	(0.94)	(0.17)	(0.96)	(0.18)	(1.09)	(0.22)
Mass Layoffs 2000-2006			7.02	4.51	23.64***	2.58
			(9.84)	(3.11)	(8.33)	(3.02)
Competitive County=1 × Mass Layoffs 2000-2006					-9.05*	3.66*
					(5.31)	(2.12)
Education Stimulus (Logged)	0.14	0.68***	0.27	0.66***	-0.42	0.66***
	(0.68)	(0.12)	(0.82)	(0.12)	(0.96)	(0.12)
Real-Time Incentives (Logged)	-0.04	0.10***	-0.06	0.10***	-0.14	0.10***
	(0.17)	(0.02)	(0.16)	(0.02)	(0.16)	(0.02)
McCain Share 2008	0.06	0.00	0.07	0.00	0.07	0.00
	(0.08)	(0.01)	(0.09)	(0.01)	(0.10)	(0.01)
Unemployment Rate 2008	1.45*	0.08**	1.32**	0.06	1.47**	0.06*
	(0.76)	(0.04)	(0.67)	(0.04)	(0.60)	(0.03)
Labor Force 2008	0.71	0.02	-2.37	-1.80	-5.32	-1.55
	(1.08)	(0.72)	(5.07)	(1.38)	(3.67)	(1.42)
Representative Partisanship	-2.56	0.25*	-2.56	0.28*	-3.28	0.29*
	(1.74)	(0.15)	(1.80)	(0.16)	(2.12)	(0.16)
Patent Count (Logged) 2008	0.88**	0.03	0.81**	0.03*	1.08**	0.03*
	(0.37)	(0.02)	(0.38)	(0.02)	(0.45)	(0.02)
M&A Count (Logged) 2008	0.13	0.02	0.14	0.02	0.15	0.02
	(0.08)	(0.03)	(0.10)	(0.03)	(0.10)	(0.03)
Foreign Greenfield Investment 2008	28.38***	-0.72	26.14***	-0.70	27.59***	-0.75
	(9.57)	(0.49)	(6.78)	(0.49)	(4.14)	(0.53)
Domestic Greenfield Investment (Logged) 2008	0.09	-0.02	0.11	-0.02	0.18	-0.02
	(0.10)	(0.02)	(0.10)	(0.02)	(0.12)	(0.02)
Observations	3059	3059	3059	3059	3059	3059
State-Fixed Effects	yes	yes	yes	yes	yes	yes

Multinomial logit coefficients estimated via maximum likelihood. The outcome is a categorical variable that indicates never, old and new county status. The baseline category is never counties. An election is competitive if the difference in two-party vote share is less than 10 percentage points. All models include state fixed effects. Robust standard errors are in parentheses and clustered by state. * p<0.10, ** p<0.05, *** p<0.010

Table A15: Multinomial Logit Regression of Greenfield FDI on Competitive Counties and Governor Term Limits

	Old_Counties	New_Counties
	(1)	(2)
Competitive County=1	-2.08*	0.20
	(1.19)	(0.20)
Eligible to Run=1	-11.17***	-1.63***
	(2.83)	(0.18)
Competitive County=1 × Eligible to Run=1	7.67***	0.69**
	(2.61)	(0.31)
Education Stimulus (Logged)	-0.07	0.68***
	(0.78)	(0.12)
Real-Time Incentives (Logged)	-0.04	0.10***
	(0.18)	(0.02)
McCain Share 2008	0.03	0.00
	(0.08)	(0.01)
Unemployment Rate 2008	1.74**	0.08**
	(0.80)	(0.04)
Labor Force 2008	0.72	-0.01
	(0.98)	(0.73)
Representative Partisanship	-2.49	0.24
	(1.89)	(0.15)
Patent Count (Logged) 2008	1.08**	0.03
	(0.43)	(0.02)
M&A Count (Logged) 2008	0.13	0.02
	(0.09)	(0.03)
Foreign Greenfield Investment 2008	30.92***	-0.74
	(10.10)	(0.49)
Domestic Greenfield Investment (Logged) 2008	0.06	-0.02
	(0.08)	(0.02)
Observations	3056	3056
State-Fixed Effects	yes	yes

Multinomial logit coefficients estimated via maximum likelihood. The outcome is a categorical variable that indicates never, old and new county status. The baseline category is never counties. An election is competitive if the difference in two-party vote share is less than 10 percentage points. Eligibility to run is determined by whether a governor ran for the subsequent election. All models include state fixed effects. Robust standard errors are in parentheses and clustered by state. * $p<0.10$, ** $p<0.05$, *** $p<0.010$

Table A16: First Stage Regression Results for County-Level Local Government Incentives and Education Stimulus

	Education Stimulus (Scaled)
	(1)
Share of Special Education Children	1366.88***
	(419.50)
Real-Time Incentives (Logged)	-1.17
	(1.93)
Competitive County=0	0.00
	(.)
Competitive County=1	-33.91***
	(10.09)
McCain Share 2008	-6.79***
	(1.13)
Unemployment Rate 2008	32.34***
	(4.54)
Labor Force 2008	-19.93
	(52.79)
Representative Partisanship	24.97
	(15.61)
Patent Count (Logged) 2008	-0.95
	(1.37)
M&A Count (Logged) 2008	2.18**
	(0.98)
Foreign Greenfield Investment 2008	7.15
	(22.42)
Domestic Greenfield Investment (Logged) 2008	0.31
	(1.61)
Observations	3049
State-Fixed Effects	yes

The dependent variable is the amount of education stimulus scaled by a county's labor force. The independent variable is the number of special education students in a county divided by the county's school age population. Models include state fixed-effects. Robust standard errors are in parentheses and clustered by state. * $p<0.10$, ** $p<0.05$, *** $p<0.010$

Table A17: Two-Stage Least Squares Regressions of Greenfield FDI on Education Stimulus, County-Level

	FDI All Counties	FDI New Counties	FDI Old Counties
	(1)	(2)	(3)
Education Stimulus (Scaled)	0.00	0.00	-0.00**
	(0.00)	(0.00)	(0.00)
Real-Time Incentives (Logged)	0.06***	0.06***	-0.00
	(0.02)	(0.01)	(0.01)
Competitive County	0.17**	0.19**	-0.02
	(0.07)	(0.08)	(0.02)
McCain Share 2008	0.00	0.00	-0.00
	(0.01)	(0.00)	(0.00)
Unemployment Rate 2008	0.00	-0.03	0.03**
	(0.03)	(0.03)	(0.01)
Labor Force 2008	1.65***	0.51	1.15***
	(0.50)	(0.41)	(0.19)
Representative Partisanship	0.06	0.07	-0.01
	(0.06)	(0.05)	(0.03)
Patent Count (Logged) 2008	0.02***	0.02***	-0.00
	(0.01)	(0.01)	(0.00)
M&A Count (Logged) 2008	0.03***	0.03***	0.00
	(0.01)	(0.01)	(0.00)
Foreign Greenfield Investment 2008	1.65***	-0.55***	2.20***
	(0.34)	(0.21)	(0.27)
Domestic Greenfield Investment (Logged) 2008	0.03*	0.01	0.02*
	(0.02)	(0.01)	(0.01)
Observations	3049	3049	3049
State-Fixed Effects	yes	yes	yes

The dependent variables are the log of total greenfield FDI in all counties, new counties and old counties respectively. The independent variables are the amount of education stimulus scaled by a county's labor population. Education stimulus is instrumented by the share of special education children in county's schools. Models include state fixed-effects. Robust standard errors are in parentheses and clustered by state. * $p<0.10$, ** $p<0.05$, *** $p<0.010$

Table A18: Multinomial Logit Regression of Greenfield FDI on Education Stimulus to Community Colleges and Real-Time Incentives

	Old_Counties	New_Counties
	(1)	(2)
Competitive County=1	-1.17	0.39**
	(1.04)	(0.18)
Education Stimulus to Community Colleges (Logged)	-0.06	-0.01
	(0.11)	(0.03)
Real-Time Incentives (Logged)	-0.02	0.13***
	(0.16)	(0.02)
McCain Share 2008	0.06	-0.01
	(0.06)	(0.01)
Unemployment Rate 2008	1.49*	0.08**
	(0.80)	(0.03)
Labor Force 2008	1.61**	1.50*
	(0.79)	(0.83)
Representative Partisanship	-2.64	0.33**
	(1.66)	(0.15)
Patent Count (Logged) 2008	0.93**	0.10***
	(0.39)	(0.02)
M&A Count (Logged) 2008	0.12	0.07***
	(0.09)	(0.02)
Foreign Greenfield Investment 2008	27.74***	-0.54
	(10.02)	(0.45)
Domestic Greenfield Investment (Logged) 2008	0.09	-0.00
	(0.10)	(0.02)
Observations	3059	3059
State-Fixed Effects	yes	yes

Multinomial logit coefficients estimated via maximum likelihood. The outcome is a categorical variable that indicates never, old and new county status. The baseline category is never counties. Education stimulus variable is measured by the subset of state stimulus to local governments allocated to community colleges. All models include state fixed effects. Robust standard errors are in parentheses and clustered by state. * p<0.10, ** p<0.05, *** p<0.010

Table A19: Multinomial Logit Results - Different Types of Stimulus

	Old_Counties	New_Counties	Old_Counties	New_Counties	Old_Counties	New_Counties	Old_Counties	New_Counties
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Energy Stimulus (Logged)	-0.19	0.06**					-0.19	0.05
	(0.14)	(0.03)					(0.15)	(0.03)
Transportation Stimulus (Logged)			-0.04	0.07**			0.01	0.06***
			(0.09)	(0.03)			(0.10)	(0.02)
Infrastructure Stimulus (Logged)					0.04	0.06***	0.05	0.05***
					(0.11)	(0.02)	(0.12)	(0.02)
Education Stimulus (Logged)	0.57	0.55***	0.16	0.61***	0.08	0.59***	0.49	0.42***
	(0.60)	(0.15)	(0.66)	(0.12)	(0.68)	(0.11)	(0.59)	(0.14)
Real-Time Incentives (Logged)	-0.01	0.10***	-0.04	0.10***	-0.04	0.10***	-0.01	0.10***
	(0.18)	(0.02)	(0.17)	(0.02)	(0.16)	(0.02)	(0.17)	(0.02)
Competitive County	-1.22	0.43**	-1.15	0.43**	-1.10	0.45**	-1.21	0.46***
	(0.89)	(0.18)	(0.95)	(0.17)	(0.98)	(0.18)	(0.90)	(0.18)
McCain Share 2008	0.05	0.01	0.05	0.00	0.06	0.01	0.06	0.01
	(0.08)	(0.01)	(0.08)	(0.01)	(0.08)	(0.01)	(0.09)	(0.01)
Unemployment Rate 2008	1.42*	0.09**	1.41*	0.08**	1.45*	0.08**	1.44*	0.09***
	(0.76)	(0.04)	(0.75)	(0.03)	(0.78)	(0.04)	(0.81)	(0.04)
Labor Force 2008	0.27	-0.05	0.75	0.03	0.72	-0.03	0.28	-0.08
	(0.87)	(0.67)	(1.09)	(0.72)	(1.07)	(0.71)	(0.86)	(0.66)
Representative Partisanship	-2.63	0.22	-2.51	0.25*	-2.60	0.25	-2.72	0.22
	(1.69)	(0.16)	(1.75)	(0.15)	(1.72)	(0.15)	(1.66)	(0.16)
Patent Count (Logged) 2008	0.95***	0.03	0.87**	0.03	0.87**	0.03	0.96**	0.02
	(0.36)	(0.02)	(0.37)	(0.02)	(0.38)	(0.02)	(0.37)	(0.02)
M&A Count (Logged) 2008	0.18**	0.01	0.13	0.01	0.12*	0.01	0.17**	-0.00
	(0.09)	(0.03)	(0.09)	(0.03)	(0.07)	(0.03)	(0.09)	(0.03)
Foreign Greenfield Investment 2008	27.97***	-0.69	26.76***	-0.72	28.76***	-0.73	26.85***	-0.71
	(6.69)	(0.48)	(9.43)	(0.48)	(10.20)	(0.48)	(7.77)	(0.47)
Domestic Greenfield Investment (Logged) 2008	0.08	-0.02	0.09	-0.02	0.09	-0.02	0.08	-0.02
	(0.11)	(0.02)	(0.10)	(0.02)	(0.10)	(0.02)	(0.11)	(0.02)
Observations	3059	3059	3059	3059	3059	3059	3059	
State-Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes

Multinomial logit coefficients estimated via maximum likelihood. The dependent variables are categorical variables that indicate never, old and new county status. The baseline category is never counties. An election is competitive if the difference in two-party vote share is less than 10 percentage-points. All models include state-fixed effects. Robust standard errors are in parentheses and clustered by state. * p<0.10, ** p<0.05, *** p<0.010

Table A20: Multinomial Logit Results - Without Solar Energy

	Old_Counties	New_Counties
	(1)	(2)
Education Stimulus (Logged)	0.32	0.69***
	(0.72)	(0.12)
Real-Time Incentives (Logged)	-0.05	0.11***
	(0.18)	(0.02)
Competitive County	-1.35	0.44***
	(1.08)	(0.16)
McCain Share 2008	0.06	0.00
	(0.08)	(0.01)
Unemployment rate 2008	1.46**	0.08**
	(0.73)	(0.04)
Labor Force 2008	0.58	-0.05
	(1.09)	(0.72)
Representative Partisanship	-2.88	0.29*
	(1.96)	(0.16)
Patent Count (Logged) 2008	0.85**	0.03
	(0.35)	(0.02)
M&A Count (Logged) 2008	0.11	0.01
	(0.10)	(0.03)
Foreign Greenfield Investment 2008	27.49***	-0.53
	(9.75)	(0.49)
Domestic Greenfield Investment (Logged) 2008	0.13	-0.03
	(0.11)	(0.02)
Observations	3059	3059
State-Fixed Effects	yes	yes

Multinomial logit coefficients estimated via maximum likelihood. The dependent variable is a categorical variable that indicates a never, old and new county status. The baseline category is never counties. An election is competitive if the difference in two-party vote share is less than 10 percentage-points. Model includes state-fixed effects. The sample excludes investment in renewable energy industry. Robust standard errors are in parentheses and clustered by state. * $p<0.10$, ** $p<0.05$, *** $p<0.010$

Table A21: Ordinary Least Squares Regression Results for Quid-Pro-Quo Greenfield FDI

	FDI	FDI	FDI
	(1)	(2)	(3)
Share of Protectionist Votes	1.44		
	(2.00)		
Share of Protectionist Votes on Barriers		1.13	
		(1.59)	
Share of Protectionist Votes on Subsidies			0.66
			(0.96)
Republican District	0.58	0.49	0.48
	(0.56)	(0.49)	(0.49)
Unemployment Rate 2008	0.13	0.15	0.14
	(0.13)	(0.13)	(0.13)
Observations	392	392	391
State-Fixed Effects	yes	yes	yes

Table A22: Multinomial Logit Results - Without Tax Havens

	Old_Counties	New_Counties
	(1)	(2)
Education Stimulus (Logged)	0.21	0.63***
	(0.62)	(0.12)
Real-Time Incentives (Logged)	0.01	0.10***
	(0.13)	(0.02)
Competitive County	-0.34	0.47***
	(0.87)	(0.17)
McCain Share 2008	0.02	0.00
	(0.06)	(0.01)
Unemployment rate 2008	1.03**	0.06*
	(0.46)	(0.04)
Labor Force 2008	0.92	-0.05
	(1.20)	(0.81)
Representative Partisanship	-1.64	0.34**
	(1.25)	(0.16)
Patent Count (Logged) 2008	0.67***	0.03
	(0.26)	(0.02)
M&A Count (Logged) 2008	0.02	0.02
	(0.12)	(0.03)
Foreign Greenfield Investment 2008	23.56***	-0.27
	(4.96)	(0.49)
Domestic Greenfield Investment (Logged) 2008	0.14	-0.01
	(0.10)	(0.02)
Observations	3059	3059
State-Fixed Effects	yes	yes

Multinomial logit coefficients estimated via maximum likelihood. The dependent variable is a categorical variable that indicates a never, old and new county status. The baseline category is never counties. An election is competitive if the difference in two-party vote share is less than 10 percentage-points. Model 1 and 2 include state-fixed effects. Sample excludes investment from the following countries: Netherlands, Switzerland, Luxembourg, Cayman Islands, Singapore, Panama, Mauritius, Cyprus, Ireland. Robust standard errors are in parentheses and clustered by state. * p<0.10, ** p<0.05, *** p<0.010

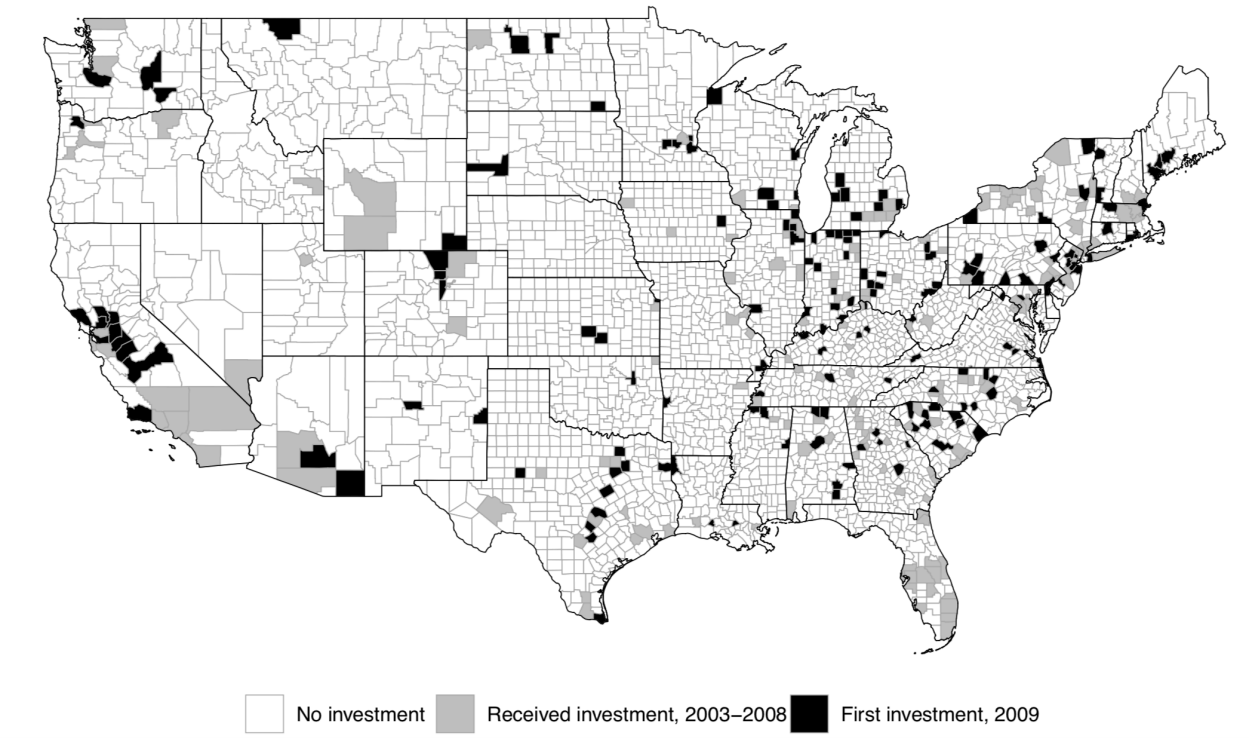
Table A23: Multinomial Logit Results - Including County Market Size

	Old_Counties	New_Counties
	(1)	(2)
Education Stimulus (Logged)	0.31	0.56***
	(0.81)	(0.14)
Real-Time Incentives (Logged)	-0.04	0.06
	(0.17)	(0.04)
Competitive County	-0.74	0.45**
	(0.88)	(0.23)
McCain Share 2008	0.05	-0.00
	(0.09)	(0.01)
Unemployment Rate 2008	1.39	0.13*
	(0.90)	(0.07)
Labor Force 2008	0.57	0.07
	(1.08)	(0.76)
Representative Partisanship	-2.12	0.38*
	(1.78)	(0.22)
Patent Count (Logged) 2008	0.74*	0.07
	(0.41)	(0.05)
M&A Count (Logged) 2008	0.12	-0.00
	(0.09)	(0.03)
Foreign Greenfield Investment 2008	33.19***	-0.77
	(2.23)	(0.54)
Domestic Greenfield Investment (Logged) 2008	0.08	-0.03
	(0.09)	(0.03)
GDP Per Capita 2008	-0.00	0.00
	(0.00)	(0.00)
Observations	1119	1119
State-Fixed Effects	yes	yes

Multinomial logit coefficients estimated via maximum likelihood. The dependent variable is a categorical variable that indicates a never, old and new county status. The baseline category is never counties. An election is competitive if the difference in two-party vote share is less than 10 percentage-points. Model 1 and 2 include state-fixed effects. GDP per capita measure is available only for metropolitan statistical areas. Robust standard errors are in parentheses and clustered by state. * $p<0.10$, ** $p<0.05$, *** $p<0.010$

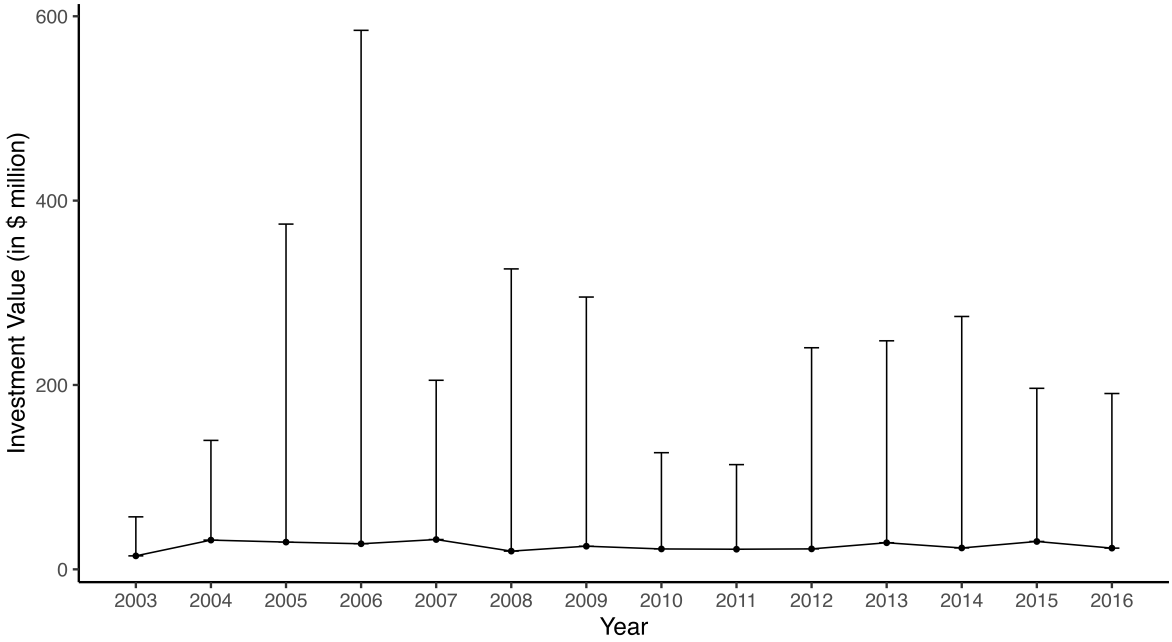
F FIGURES

Figure A1: Greenfield FDI Expansion After Great Recession



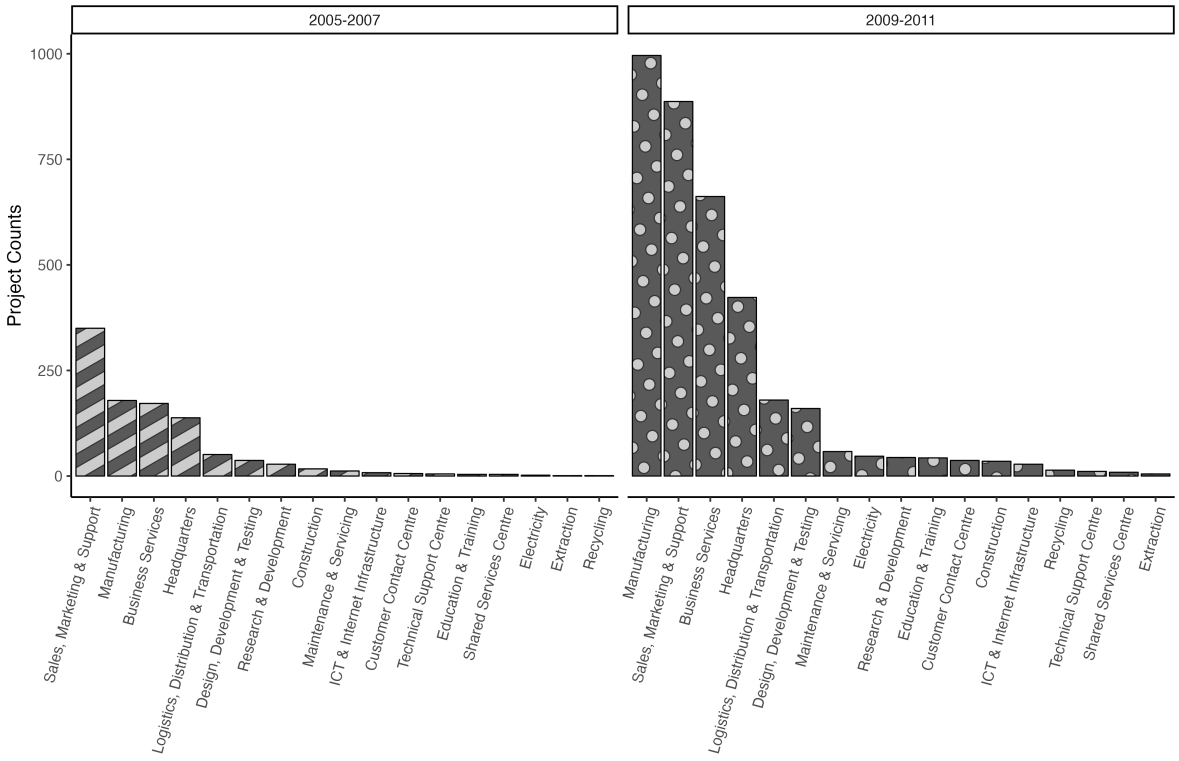
Data Source: fDimarkets database

Figure A2: Manufacturing FDI Project Values, 2003-2016



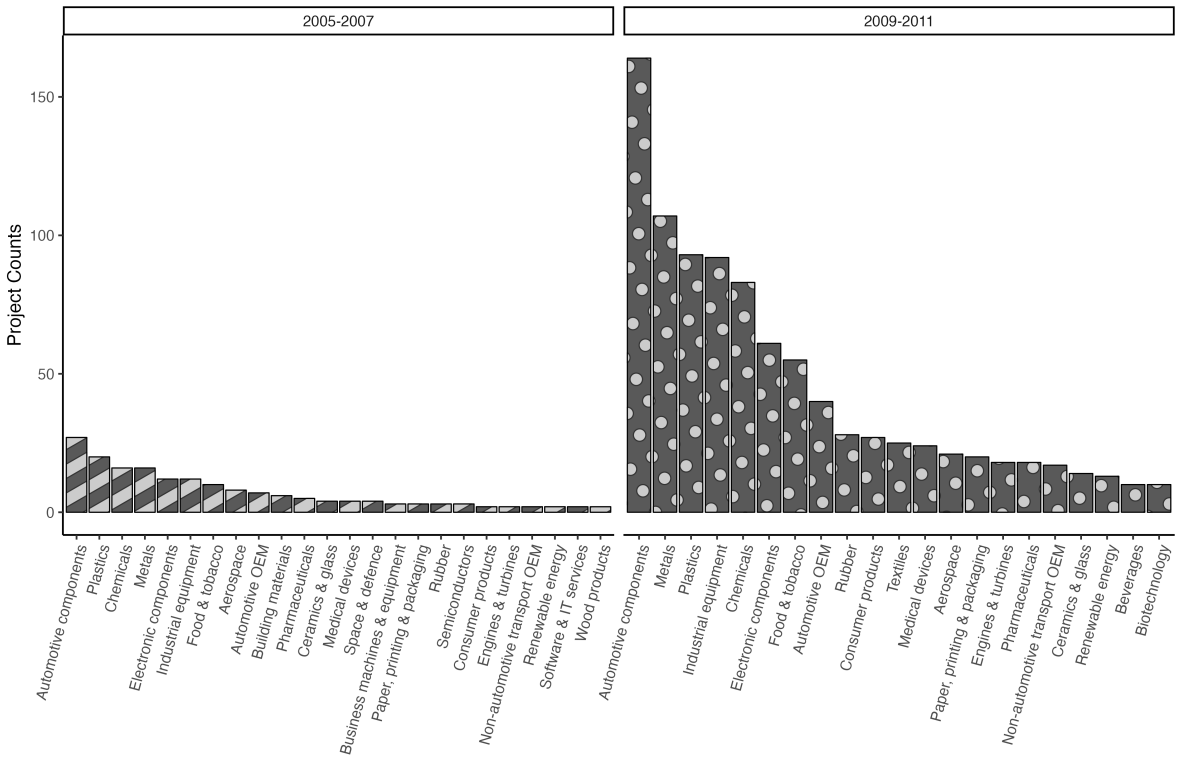
Note: The y-axis indicates the median value of new foreign manufacturing project inflows in 2010 constant million dollars. Bars indicate one standard deviation above median investment value. Figure omits one outlier, a $10 billion investment by South Africa's SASOL in 2011. Data Source: fDimarkets database

Figure A3: FDI Industry Activities Unchanged Post Recession



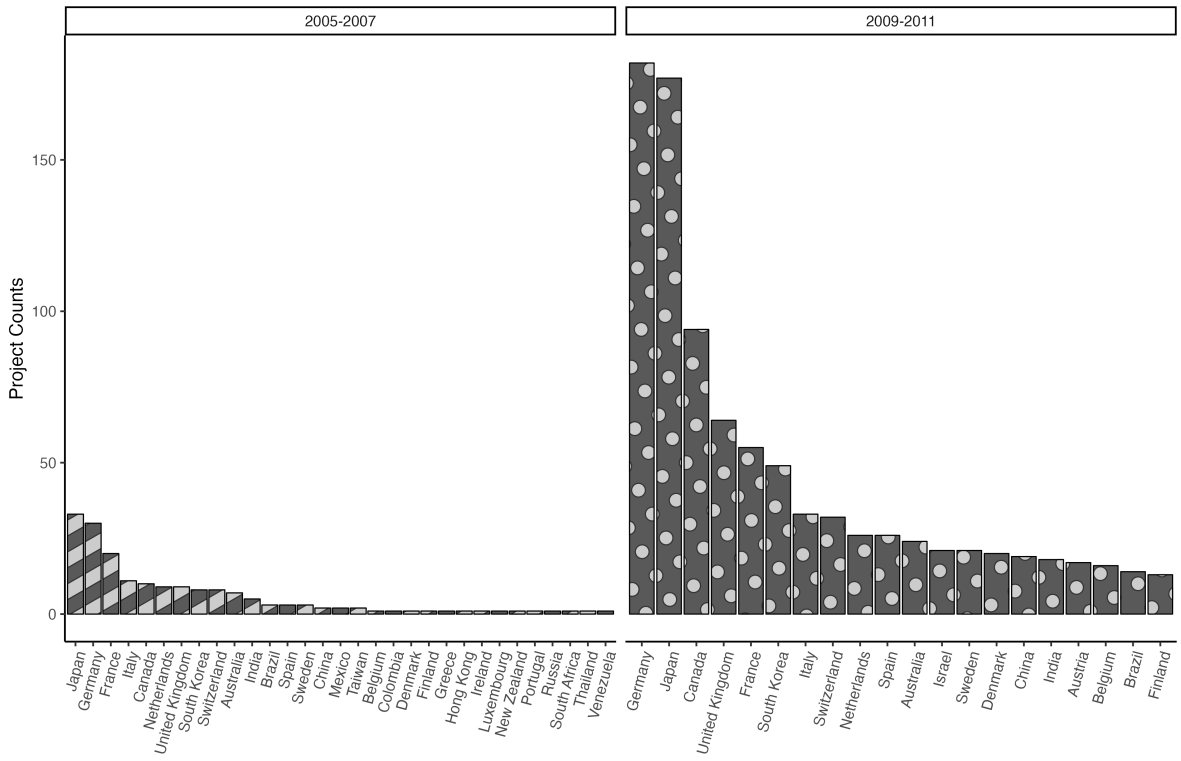
Note: The y-axis indicates the number of new foreign investments in top 20 industry activities. Industry activity refers to specific tasks the project will undertake. For example, a firm in a manufacturing industry may invest to conduct research and development or for sales/marketing. Data Source: fDimarkets database

Figure A4: FDI Manufacturing Industry Composition Unchanged Post Recession



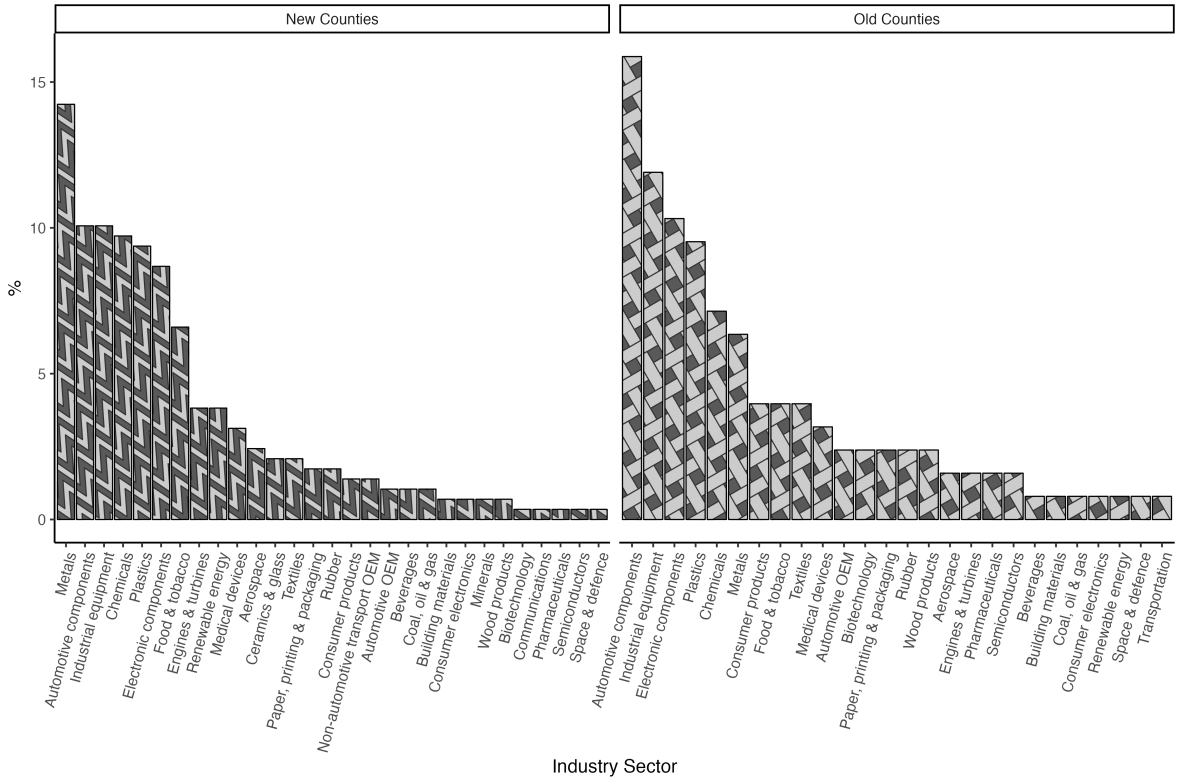
Note: The y-axis indicates the number of new foreign manufacturing investments in the top 20 industry sectors. Data Source: fDimarkets database

Figure A5: FDI Source Country Composition Unchanged Post Recession



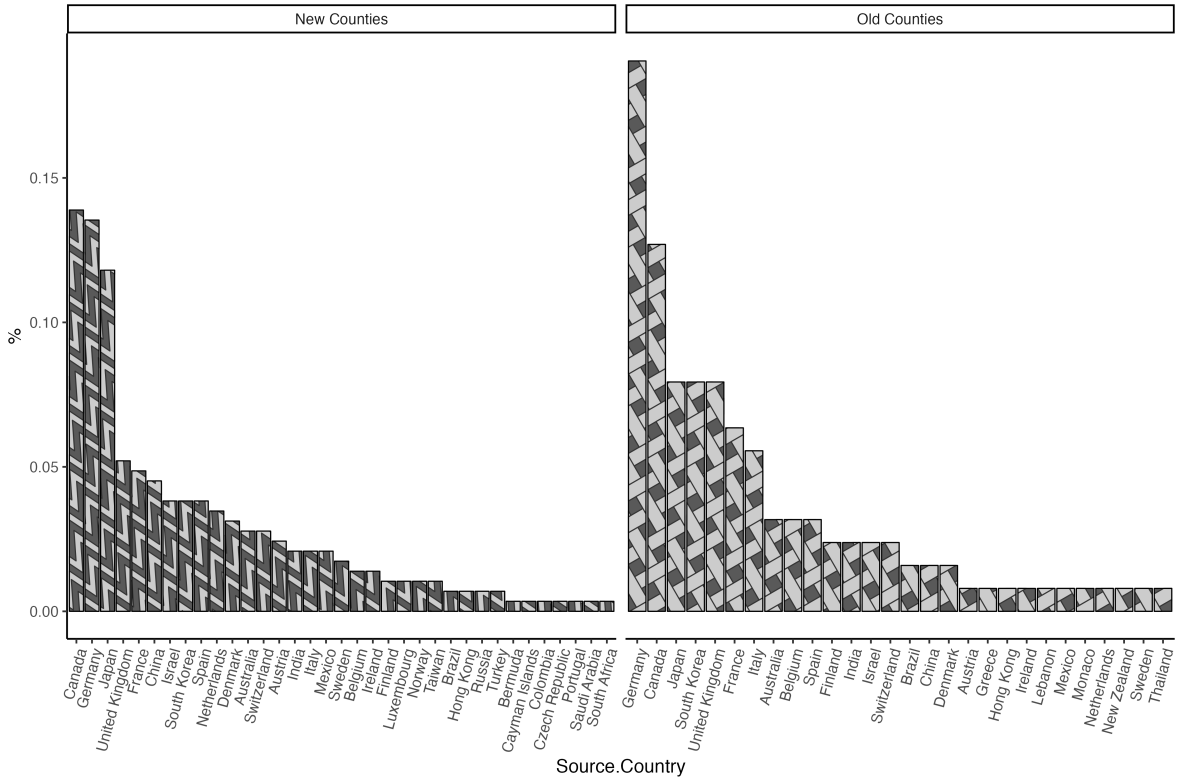
Note: The y-axis indicates the number of new foreign manufacturing investments in the top 20 source countries. Data Source: fDimarkets database

Figure A6: Distribution of FDI in Old and New Counties by Industry Sector After the Great Recession



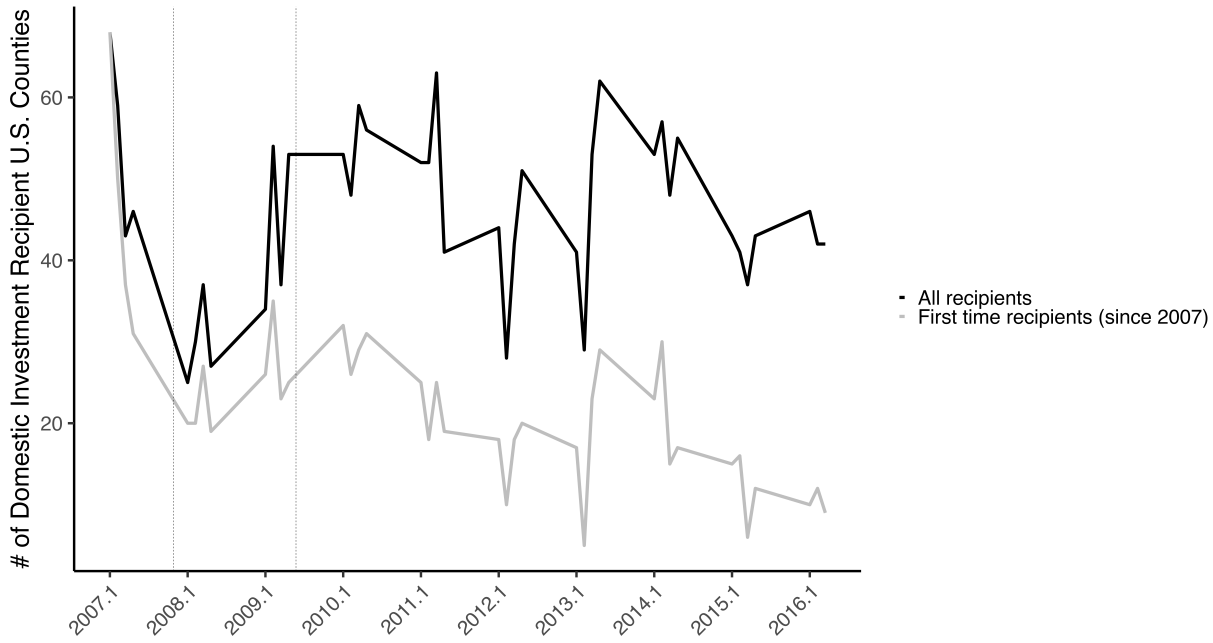
Note: The y-axis indicates the percentage of new foreign manufacturing firms in a certain industry sector.
Data Source: fDimarkets database

Figure A7: Distribution of FDI in Old and New Counties by Home Country After the Great Recession



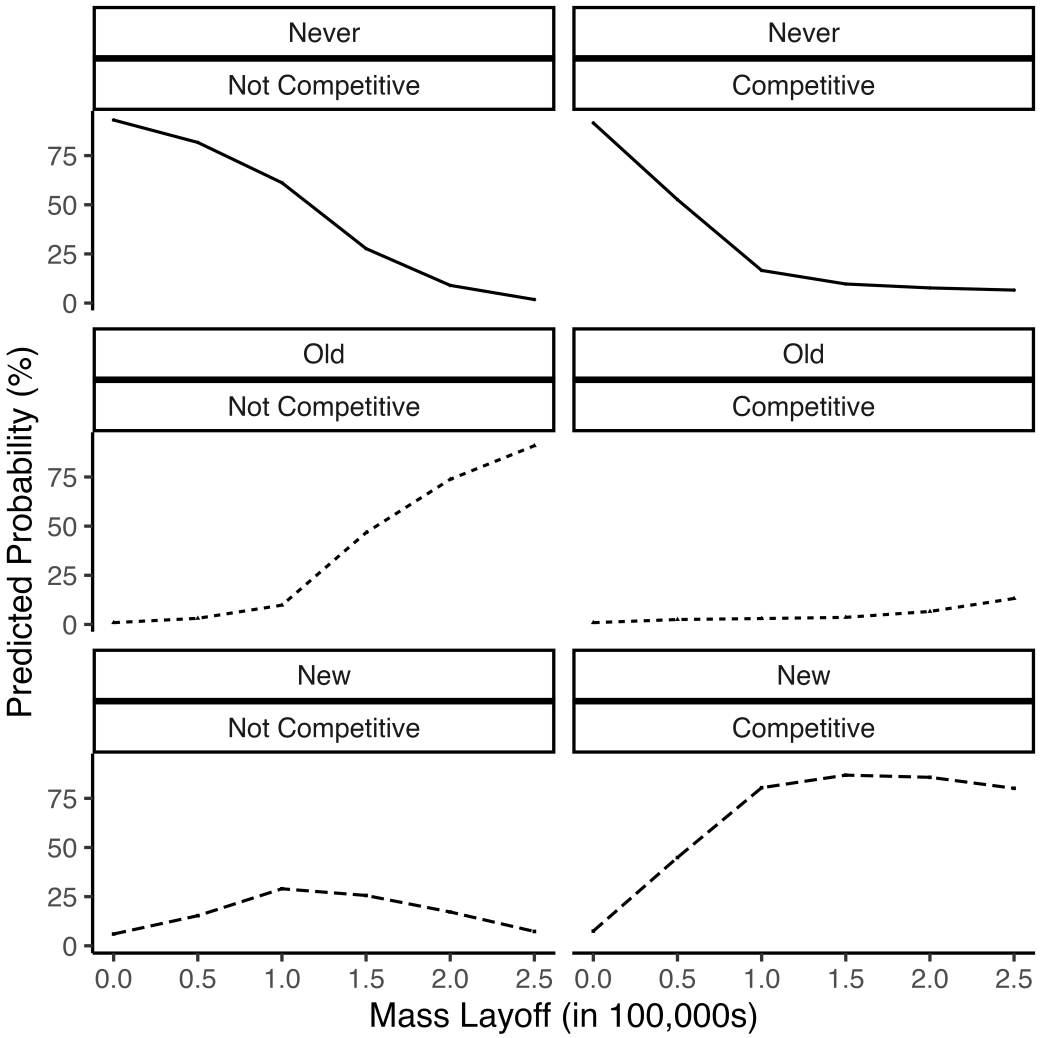
Note: The y-axis indicates the percentage of new foreign manufacturing firms coming from a certain home country. Data Source: fDimarkets database

Figure A8: County Distribution of US Domestic Greenfield Manufacturing Investment, 2007-2016 (Quarterly)



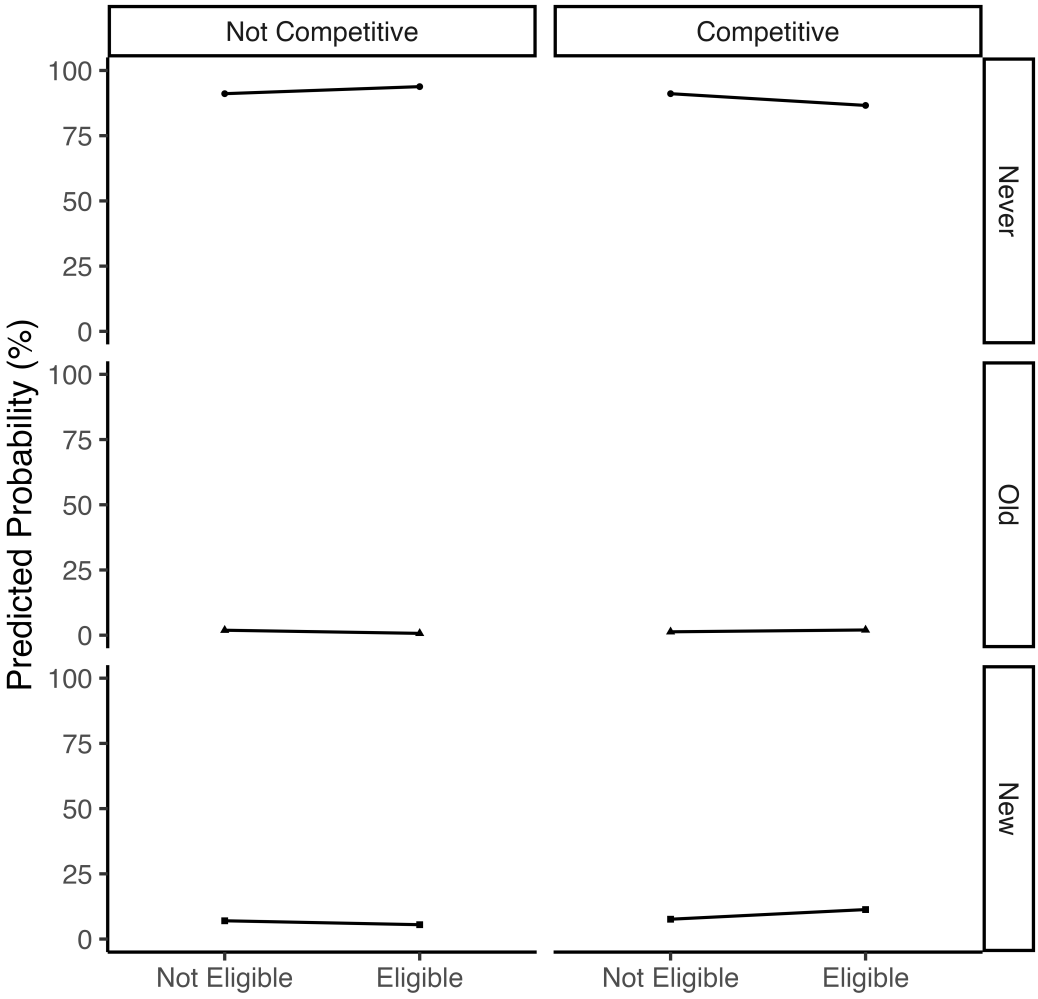
This figure plots the number of US counties that received at least one new domestic greenfield manufacturing investment by quarter. The black line plots the total number of counties that received investment. The gray line is the number the received investment for the first time during the sample. The vertical lines indicate the Great Recession. Data Source: fDimarkets database.

Figure A9: Mass Layoffs Increase the Probability of New County Categorization in Competitive Elections



This figure plots the predicted probability of being categorized as a new county depending on governors' term limits and competitiveness of the subsequent elections.

Figure A10: Governors With No Term Limits Facing Competitive Elections Are More Likely to be in New Counties



This figure plots the predicted probability of being categorized as a new county depending on governors' term limits and competitiveness of the subsequent elections.

Appendix References

Goodman, J., & Wakefield, A. (2021). Incentives: How states can avoid costly pitfalls while rebuilding their economies. *Site Selection Magazine*. November 2021.

Hinkley, S., & Weber, R. (2021). Incentives and austerity: How did the Great Recession affect municipal economic development policy? *Urban Affairs Review*, *57*, 820–855.

Levendusky, M., Pope, J., & Jackman, S. (2008). Measuring district-level partisanship with implications for the analysis of U.S elections. *Journal of Politics*, *70*(3), 736–753.

Mattera, P., & Tarczynska, K. (2019). The Good Jobs First subsidy tracker.

McCarthy, L. (2015). Something new or more of the same in the bidding wars for big business? *Growth and Change*, *46*, 153–171.

McCleary, N. (2009). Firm to bring 40 jobs to Hoke. *Fayetville Observer, the NC*.

Tausanovitch, C., & Warshaw, C. (2014). Representation in municipal government. *American Political Science Review*, *108*, 605–641.

The Pew Charitable Trusts. (2021). *How states can direct economic development to places and people in need*. The Pew Charitable Trusts.