Assessing the Pollution Haven Hypothesis in an Interdependent World

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January 2007

Abstract

After proposing a simple theoretical framework to illustrate the importance of third-country effects in empirical studies of the Pollution Haven Hypothesis, we test the model using state-level panel data on inbound US FDI and relative abatement costs. Our analysis reveals that while own state attributes rarely have statistically significant effects on own inbound FDI when aggregated over all manufacturing sectors, many neighboring state attributes do matter. Moreover, the theoretical model does well in explaining FDI in the chemical sector; we tend to find significant effects in the correct direction of variables designed to reflect market demand and production costs. Finally, we consistently find a negative impact of own environmental stringency on inbound FDI in the chemical sector; the impact of neighboring environmental stringency is also statistically significant, but the impact is negative on average, contrary to our initial expectations. Nonetheless, the fact that the impact of more stringent environmental regulations spillover across states indicates that future research into the validity of the PHH must account for spatial spillovers.

JEL: C31, F21, Q52
Keywords: Foreign Direct Investment, Environmental Regulation, Spillovers, Spatial Econometrics

*The authors wish to thank Arik Levinson and Wolfgang Keller for generously providing the data, as well as Arik and participants at the Research Triangle Environmental Seminar for thoughtful comments on an earlier version. Corresponding author: Daniel Millimet, Department of Economics, Box 0496, Southern Methodist University, Dallas, TX 75275-0496. Tel: (214) 768-3269. Fax: (214) 768-1821. E-mail: millimet@mail.smu.edu.

1 Introduction

The precise relationship between environmental policy, the location of production, and subsequent trade flows remains an open and widely debated issue. To take a fresh look at this relationship, we provide the first theoretical and empirical analysis (to our knowledge) that merges the literature on environmental regulation and capital flows with the literature on third-country effects in the FDI location choice decision.

Understanding the nature of this relationship is of particular interest in light of the so-called Pollution Haven Hypothesis (PHH), whereby a reduction in trade barriers enables polluting multinational enterprises (MNEs) to outsource (at least some) production activities to areas with less stringent environmental regulation. While there exist a number of empirical frameworks for testing the PHH (see, e.g, Levinson and Taylor 2006), few studies have examined the PHH by analyzing the stocks and flows of foreign direct investment (FDI) as a function of parent or host environmental stringency, and none have done so in a model with third-country effects. Given the dramatic rise in FDI relative to trade volumes over the past two decades (Ramondo 2005), the focus on the behavior of MNEs is certainly justified and this is the approach we take. Using US state-level data, we find that, although *own* state attributes rarely have statistically significant effects on inbound US foreign direct investment (FDI), many *neighboring* state attributes matter both economically and statistically. In addition, we find that using recently derived spatial-econometric methods produces results that better accord with the theoretical model than methods that ignore that spatial autocorrelation.

Previous studies analyzing the impact of environmental stringency on capital flows, while ignoring third-country effects, yield mixed results. On the one hand, List and Co (2000), Keller and Levinson (2002), Fredriksson et al. (2003), Co and List (2004), and Millimet and Racine (2006) examine the spatial distribution of inbound US FDI across states, finding evidence that location decisions are influenced by environmental stringency. Dean et al. (2005) conclude that spatial distribution of inbound Chinese FDI across provinces is affected by environmental stringency as well, but only from certain parent countries. Wagner and Timmins (2004) find that the location choice of outbound German FDI is affected by environmental considerations, but only in pollution-intensive industries; Xing and Kolstad (2002) obtain a similar result using outbound US FDI. On the other hand, Henderson and Millimet (2006) in revisiting some of the analysis in Keller and Levinson (2002), find smaller impacts of environmental stringency on the spatial distribution of the stock of FDI across US states using nonparametric techniques. Similarly, List et al. (2004) find that the location decisions of new foreign-owned plants across counties in New York State are not affected by variation in regulatory stringency generated by the US Clean Air Act using a semi-nonparametric propensity score matching estimator. Finally, Eskeland and Harrison (2003) and

Javorcik and Wei (2004) find little robust impact of variation in environmental costs on the distribution of FDI across industries into four developing countries and on the spatial distribution of FDI across Eastern Europe and the former Soviet Union, respectively. See Copeland and Taylor (2004) for a review of the literature.

One potential shortcoming of this literature, however, is that it remains disconnected from the emerging literature on third-country effects in FDI determination. In the theoretical literature, Yeaple (2003) analyzes incentives for horizontal and vertical FDI in a three-country model, finding important spillovers across potential hosts which may either be positive (if potential hosts are complements) or negative (if potential hosts are substitutes). Similarly, Ekholm et al. (2003) examine third-country effects on incentives to engage in export platform FDI, while Grossman et al. (2003) and Baltagi et al. (2005a) analyze third-country effects on complex forms of FDI. As has been noted previously, failure to account for third-country effects in empirical analyses of FDI may lead to biased inference. This may be particularly problematic in the context of empirical analyses of inbound US FDI since state-level environmental regulations have been shown to be strongly related to the regulatory stringency of neighboring states (Fredriksson and Millimet 2002). While some of the above empirical studies employ conditional or nested logit models, these model the role of other potential hosts in a particular fashion. For instance, the conditional logit model imposes the Independence of Irrelevant Alternatives assumption and implies that the marginal effects of a change in a given potential host and neighboring potential host attribute are of the opposite sign. Moreover, both models analyze only the discrete location problem (as opposed to the *value* of FDI).

The empirical literature considering third-country effects on FDI (but ignoring environmental stringency) may be divided into two strands. In the first, Coughlin and Segev (2000), Blonigen et al. (2004), and Baltagi et al. (2005a, b) analyze the amount of FDI received by a *given host* as a function of the attributes or the amount of FDI received by *neighboring hosts* using spatial-econometric techniques. Head et al. (1995) utilize a conditional logit model to analyze Japanese FDI across US states, finding evidence of agglomeration effects between neighboring states. In the second, Blonigen et al. (2005) analyze the amount of FDI received by a single host from a *given parent* as a function of the amount of FDI received by the host from *neighboring parents*. Blonigen et al. (2005) utilize inbound FDI to the US, where FDI is aggregated across states, but disaggregated across parent countries. Here, we examine inbound FDI as well, but our analysis is more in line with the first strand of the literature on third-country effects. Specifically, we utilize data on FDI disaggregated across US states, but aggregated across parent countries. Thus, our analysis is perhaps most closely related to Coughlin and Segev (2000) and Dean et al. (2005), both of which analyze the distribution of inbound FDI across Chinese provinces. While Dean et al. (2005) rely on conditional and nested logit models, Coughlin and Segev (2000) employ spatial techniques and find

support for a spatial-error model – as opposed to a spatial-lag model – as shocks to FDI are correlated across provinces. In our analysis, we follow the lead of the country-level analyses in Baltagi et al. (2005a, b), which test for the sources of the spillovers from neighboring hosts, but in the context of a subnational setting as in Coughlin and Segev (2000).

Prior to undertaking the empirical analysis, we provide a simple theoretical framework building on Blonigen et al. (2005). The partial equilibrium framework illuminates the source of spillovers and generates several testable predictions. The results provide some support for the salient role of spillovers in the determination of FDI and support the theoretical model. The results also highlight the importance of incorporating third-country effects into empirical analyses of the PHH. We reach four primary conclusions. First, *own* state attributes rarely have statistically significant effects on own inbound FDI when aggregated over all manufacturing sectors. However, many *neighboring* state attributes matter economically and statistically. Second, allowing for spatial spillovers at the regional level appears fruitful relative to spillovers only among contiguous neighbors; the results are more in line with the theoretical predictions. Third, the theoretical model does fairly well overall in explaining inbound FDI in the chemical sector; we tend to find significant effects in the correct direction of variables designed to reflect market demand and production costs. Fourth, we consistently find a negative impact of own environmental stringency on inbound FDI in the chemical sector; the impact of neighboring environmental stringency is also statistically significant, but the impact is negative on average, contrary to our initial expectations. Nonetheless, the fact that the impact of more stringent environmental regulations spillover across states indicates that future research into the validity of the PHH must account for spatial spillovers. The remainder of the paper is organized as follows. Section 2 presents the theoretical model. Section 3 describes the baseline empirical specification as well as the data. Section 4 discusses the results, along with several sensitivity analyses. Finally, Section 5 concludes.

2 Theoretical Model

To motivate the empirical analysis, we consider a simple partial-equilibrium analysis which builds on Blonigen et al. (2005). The model incorporates third-country effects when there is a single parent country considering production and exports across multiple hosts. Consistent with the data used in the empirical analysis (discussed below), we consider the single parent country to be an aggregation of all countries outside the US.

The parent country, indexed by the subscript 3, contains a single firm. For simplicity, we assume that the horizontal firm undertakes production in the parent country as well as two host states in the US,

indexed by 1 and 2. Consistent with the data, inbound FDI is strictly positive for both hosts. Let q_i denote sales by the firm in location i, $i = 1, 2, 3$. Let Q_{ij} denote production by the firm in location i sold in location j; $Q_i \equiv \sum_j Q_{ij}$ represents total production by the firm in location i. We allow for potential trade flows from the parent country to each of the host states. Ruling out exports from the host states to the parent, as well as between host states, implies $Q_{13} = Q_{23} = Q_{12} = Q_{21} = 0$. Thus, we are abstracting from more complex forms of FDI, such as export platform FDI. This set-up implies the following identities

$$
\begin{aligned}
q_1 &= Q_{11} + Q_{31} && (1)\\
q_2 &= Q_{22} + Q_{32} && (2)\\
q_3 &= Q_{33} && (3)\\
Q_1 &= Q_{11} && (4)\\
Q_2 &= Q_{22} && (5)\\
Q_3 &= Q_{31} + Q_{32} + Q_{33} && (6)
\end{aligned}
$$

Finally, the profit function of the multinational enterprise (MNE) is given by

$$\Pi^{MNE} = \sum\nolimits_i \left[P_i(q_i; \beta_i) q_i - C_i(Q_i; \alpha_i) - \gamma_i - \sum\nolimits_j t_{ij} Q_{ij} \right] - \Gamma \qquad (7)$$

where $P_i(\cdot)$ is the inverse demand function, β_i is a vector of demand shifters in i such that $P_i^{\beta_i}, P_i^{q_i \beta_i} > 0$, $C_i(\cdot)$ is total variable production cost associated with production in i such that $C_i^{Q_i}, C_i^{Q_i Q_i} > 0$, α_i is a vector of variable production cost shifters in i, $t_{ij} \geqslant 0$ is trade costs of exports from i to j (where $t_{ii} = 0$), γ_i is the fixed cost associated with production in i, and Γ is a fixed cost parameter for the MNE.

The objective of the MNE is to maximize (7) with respect to $Q_{11}, Q_{22}, Q_{31}, Q_{32}$, and Q_{33}. The first-order conditions (FOCs) are given by

$$
\begin{aligned}
\frac{\partial \Pi^{MNE}}{\partial Q_{3i}} &= P_i^{q_i} q_i + P_i - C_3^{Q_3} - t_{3i}, \qquad i = 1, 2, 3\\
\frac{\partial \Pi^{MNE}}{\partial Q_{ii}} &= P_i^{q_i} q_i + P_i - C_i^{Q_i}, \qquad i = 1, 2
\end{aligned}
$$

where superscipts denote derivatives and we have omitted the arguments of functions for simplicity. The FOCs may be re-written as

$$
\begin{aligned}
P_i^{q_i} q_i + P_i &= C_3^{Q_3} + t_{3i}, \qquad i = 1, 2, 3 && (8)\\
C_i^{Q_i} &= C_3^{Q_3} + t_{3i}, \qquad i = 1, 2 && (9)
\end{aligned}
$$

which are identical to Blonigen et al. (2005) with the exception that we do not restrict $Q_{22} = 0$. Equation (8) is the standard mark-up condition for a monopolist. Equation (9) reflects the trade-off facing a horizontal firm between parent production and exports and host production.

Given the system of FOCs, we now may analyze the response by the parent to exogenous changes in various parameters. Define

$$\widetilde{P}_i \equiv P_i^{q_i q_i} q_i + 2P_i^{q_i} < 0$$

and

$$\Phi \equiv C_1^{Q_1 Q_1} C_2^{Q_2 Q_2} C_3^{Q_3 Q_3} (\widetilde{P}_1 \widetilde{P}_2 + \widetilde{P}_1 \widetilde{P}_3 + \widetilde{P}_2 \widetilde{P}_3) - \widetilde{P}_1 \widetilde{P}_2 \widetilde{P}_3 \left(C_1^{Q_1 Q_1} C_2^{Q_2 Q_2} + C_1^{Q_1 Q_1} C_3^{Q_3 Q_3} + C_2^{Q_2 Q_2} C_3^{Q_3 Q_3} \right) > 0$$

We can compute the following comparative statics:

$$\frac{dQ_{11}}{dt_{31}} = \Phi^{-1} \widetilde{P}_1 \left[C_2^{Q_2 Q_2} C_3^{Q_3 Q_3} \left(\widetilde{P}_2 + \widetilde{P}_3 \right) - \widetilde{P}_2 \widetilde{P}_3 \left(C_2^{Q_2 Q_2} + C_3^{Q_3 Q_3} \right) \right] > 0 \tag{10}$$

$$\frac{dQ_{11}}{dt_{32}} = \Phi^{-1} \left[\widetilde{P}_1 \widetilde{P}_3 C_3^{Q_3 Q_3} \left(\widetilde{P}_2 - C_2^{Q_2 Q_2} \right) \right] < 0 \tag{11}$$

$$\frac{dQ_{11}}{d\beta_1} = \Phi^{-1} C_2^{Q_2 Q_2} C_3^{Q_3 Q_3} \widetilde{P}_2 \widetilde{P}_3 \left(P_1^{\beta_1} + P_1^{q_1 \beta_1} q_1 \right) > 0 \tag{12}$$

$$\frac{dQ_{11}}{d\beta_2} = \Phi^{-1} C_2^{Q_2 Q_2} C_3^{Q_3 Q_3} \widetilde{P}_1 \widetilde{P}_3 \left(P_2^{\beta_2} + P_2^{q_2 \beta_2} q_2 \right) > 0 \tag{13}$$

$$\frac{dQ_{11}}{d\beta_3} = \Phi^{-1} C_2^{Q_2 Q_2} C_3^{Q_3 Q_3} \widetilde{P}_1 \widetilde{P}_2 \left(P_3^{\beta_3} + P_3^{q_3 \beta_3} q_3 \right) > 0 \tag{14}$$

$$\frac{dQ_{11}}{d\alpha_1} = \Phi^{-1} C_1^{Q_1 \alpha_1} \left\{ C_2^{Q_2 Q_2} \left[\widetilde{P}_1 \widetilde{P}_2 \widetilde{P}_3 - C_3^{Q_3 Q_3} \left(\widetilde{P}_1 \widetilde{P}_2 + \widetilde{P}_1 \widetilde{P}_3 + \widetilde{P}_2 \widetilde{P}_3 \right) \right] + \widetilde{P}_1 \widetilde{P}_2 \widetilde{P}_3 C_3^{Q_3 Q_3} \right\} \tag{15}$$

$$\frac{dQ_{11}}{d\alpha_2} = -\Phi^{-1} C_2^{Q_2 \alpha_2} \widetilde{P}_1 \widetilde{P}_2 \widetilde{P}_3 C_3^{Q_3 Q_3} \tag{16}$$

$$\frac{dQ_{11}}{d\alpha_3} = -\Phi^{-1} C_3^{Q_3 \alpha_3} \widetilde{P}_1 \widetilde{P}_2 \widetilde{P}_3 C_2^{Q_2 Q_2} \tag{17}$$

Equations (10) – (17), although slightly more complex given the addition of production in both host states and the explicit incorporation of cost shifters in all locations, offer similar insight as in Blonigen et al. (2005). First, inbound FDI to a given host state is increasing in trade costs to that state (since exports and host production are substitutes) and decreasing in trade costs to other states (since exports are now diverted from other states). Second, inbound FDI to a given host state increases with positive demand shifts in any location. Third, as equation (15) takes the opposite sign of $C_1^{Q_1 \alpha_1}$, increases in the marginal cost of production in a given host state reduce that state's inbound FDI. Conversely, as equations (16) and (17) are of the same sign as $C_2^{Q_2 \alpha_2}$ and $C_3^{Q_3 \alpha_3}$, respectively, increases in the marginal cost of production in other states or the parent country raise a given host state's inbound FDI. In sum, then, the theoretical model yields three testable implications for the spatial pattern of inbound FDI from the rest of the world:

(i) own and other states' trade costs should have opposite effects on own FDI;

(ii) own and other states' demand shocks should affect own FDI in the same direction; and,

(iii) own and other states' production cost shocks should have opposite effects on own FDI.

We now test these implications empirically.

3 Empirical Analysis

3.1 Model

The baseline econometric model used to test for spillovers between states in the determination of the spatial distribution of inbound US FDI is

$$\ln(FDI_{it}) = \eta_i + \lambda_t + \sum_{k=1}^{K}\left[\beta_k \ln(x_{ikt}) + \delta_k \sum_{j=1}^{48} \omega_{ijt} \ln(x_{jkt})\right] + \varepsilon_{it} \tag{18}$$

where FDI_{it} is a measure of aggregate inbound FDI into state i at time t, η_i are state effects, λ_t are time effects, x_{ikt}, $k = 1, ..., K$, is a set of attributes of state i at time t reflecting trade costs and demand and production cost influences, ω_{ijt} is the weight assigned to state j by state i at time t, where some of the weights may be zero (and ω_{iit} always equals zero), δ_k is the measure of spillovers associated with x_k, and ε_{it} is a heteroskedastic error term, allowed to be arbitrarily correlated within a state over time.[1]

There are two issues to be addressed when estimating an equation such as (18). The first issue is the choice of weights, ω. As is well known, the choice of the weights is ad hoc in these types of models. Prior to discussing the weighting schemes utilized, it is important to note that if the weight matrix is mis-specified, this would attenuate the estimates of δ_k to zero, as we are essentially looking for evidence of spillovers in the 'wrong' place. Thus, our estimates should be interpreted as lower bounds (in absolute value). However, if we find evidence of third-country effects, then this is not problematic for our purposes. In light of this, we utilize three straightforward weighting schemes. First, we assign a weight of zero to non-contiguous states and equal weights to all contiguous states. In other words, $\sum_j \omega_{ijt} \ln(x_{jkt})$ simplifies to the mean of $\ln(x_{jkt})$ in neighboring states. Second, following Fredriksson and Millimet (2002), we adopt two regional breakdowns for the 48 mainland US states (see Appendix A). The use of regional weights is also motivated by the evidence in Glick and Woodward (1987) that foreign-owned affiliates in manufacturing tend to serve regional markets. For each regional breakdown, $\sum_j \omega_{ijt} \ln(x_{jkt})$ simplifies to the mean of $\ln(x_{jkt})$ in all other states within the region (again, giving each state equal weight). The two regional classifications come from the US Bureau of Economic Analysis (BEA) and Crone (1998/1999). The BEA regional classification

[1] There are only 48 states as Alaska and Hawaii are excluded (discussed below).

system was introduced in the 1950s and has never been amended. While this classification system is widely used by economists in studying regional economic activity (e.g., Carlino and DeFina 1995; Carlino and Mills 1993, 1996), Crone (1998/1999) devised an alternative regional breakdown for US states using cluster analysis to group states according to similarities in economic activity. We refer to these weighting schemes as BEA and Crone weights, respectively.

3.2 Data

The data come directly from KL; thus, we provide only limited details. The data cover the 48 contiguous U.S. states from 1977 – 1994, omitting 1987 due to missing data on abatement costs. The four dependent variables we utilize are the value of gross property, plant, and equipment (PP&E) of foreign-owned affiliates for all manufacturers, as well as just for the chemical sector (1992 – 1994 omitted), and employment at foreign-owned affiliates for all manufacturers, as well as just for the chemical sector (1992 – 1994 omitted).[2] The chemical sector is analyzed in isolation given that FDI in these industries is most likely to be responsive to spatial variation in environmental stringency given the pollution-intensive nature of production.

Consistent with figures reported elsewhere, inbound FDI stocks increased tremendously over the sample period. Aggregate manufacturing PP&E increased over tenfold from 1977 to 1994, from roughly $20 million to nearly $300 million. An increase of similar proportion occurred in the chemical sector from 1977 to 1991, from roughly $10 million to $90 million. Employment grew at a slower, but still substantial, rate, increasing from roughly 675,000 to almost 2.3 million in aggregate manufacturing; 190,000 to 500,000 in the chemical sector.

The set of control variables included in (18) correspond to proxies for trade costs (t_{31} and t_{32}), demand shifters (β), cost shifters (α), and parent country attributes. Specifically, total road mileage and state effects capture time-varying and time invariant (e.g., distance to ports) differences in trade costs across states. Population and market proximity (a distance-weighted average of all other states' gross state products) reflect market size and demand shocks. Relative abatement costs (RAC), unemployment rate, unionization rate, average production-worker wages across the state, land prices, energy prices, and tax effort (actual tax revenues divided by those that would be collected by a model tax code, as calculated by the Advisory Commission on Intergovernmental Relations) capture variation in production costs and resource availability. The measure of RAC is attributable to Levinson (2001) and represents the ratio of actual state-level abatement costs to predicted state-level abatement costs, where the predicted value is based on the industrial composition of the state. Consequently, higher values indicate greater pollution

[2]For each dependent variable, the sample represents an unbalanced panel where the number of observations for total manufacturing PP&E (employment) are 811 (814); for chemical sector PP&E (employment), the sample size is 563 (621).

control costs. The index varies over time and across states. Finally, since FDI is aggregated across all countries outside the US, time effects capture all parent country attributes. All variables are expressed in logarithmic form with the exception of the unemployment and unionization rates.

4 Results

4.1 Baseline Models

Estimates of (18) are provided in Tables 1-4. Table 1 (3) displays the results for PP&E (employment) in all manufacturing; Table 2 (4) displays the results for PP&E (employment) in the chemical sector. Each table contains eight specifications. Columns 1 and 2 omit the spatially weighted covariates and treat η_i as fixed effects (FE) and random effects (RE), respectively. Columns 3 through 8 include the spatially weighted attributes of neighboring states, where Column 3 (4) uses the contiguous weight matrix and FE (RE), Column 5 (6) uses the BEA regional weight matrix and FE (RE), and Column 7 (8) uses the Crone regional weight matrix and FE (RE).

PP&E: All Manufacturing Prior to discussing the individual coefficients in Table 1, we note that the Hausman test rejects the RE assumption in all four specifications (p = 0.00 in each case). In addition, among the FE models, the null of no spatial effects is rejected at the $p < 0.05$ level when using Crone weights. Thus, we focus our discussion on the three FE models with spatial effects.

Turning to the estimates of the elasticity of FDI with respect to RAC, we find no statistically significant effect of own RAC in the three FE models with spatial effects, although the point estimates are negative in all three models. The impact of neighboring RAC is also statistically insignificant at conventional levels in all three FE models, with the point estimates being negative in two models (contiguous and BEA weights). In terms of the state characteristics capturing demand effects, the impact of own market proximity (population) is positive, albeit statistically insignificant at conventional levels, in three (two) FE models with spatial effects. The effect of neighboring market proximity is negative in all three FE specifications, contrary to the predictions of the theoretical model, although the estimates remain statistically insignificant at conventional levels. However, the impact of neighboring population is positive in all three FE models, and is statistically significant in the FE model using BEA weights, consonant with our expectations.

In terms of attributes reflecting production costs, we obtain negative point estimates in all three FE specifications with spatial effects for own unionization, wages, land values, and tax effort. While the sign of these effects accord with our theoretical predictions, the only statistically significant effect is for unionization in the FE model using BEA weights. While our expectation is that higher own unionization

rates should deter FDI due to greater production costs, the fact that the evidence is consonant with this is noteworthy since previous research has not always produced robust support for the deterrent effect of unions on FDI (e.g., Coughlin et al. 1991). In particular, the conjecture has been that while unions may lead to higher production costs, they may also improve efficiency or provide well defined labor rules, yielding an ambiguous impact (Beeson and Husted 1989; Co and List 2004). Here, we find the net effect of own unionization to be negative. The impact of neighboring production cost variables is also consistent with the theoretical model in many instances. In particular, the impact of neighboring unemployment is negative and statistically significant in the FE model using Crone weights, and the impact of neighboring energy prices is positive, albeit statistically insignificant, in all three FE specifications. Moreover, the signs on the coefficients of neighboring unionization, wages, and tax effort are consonant with our expectations in two of three FE specifications for each variable (although the effect of neighboring wages is statistically significant and of the opposite sign in the FE model using contiguous weights).

Finally, with respect to own trade costs, we obtain negative point estimates for own highway mileage in all three FE specifications with spatial effects, although the FE estimates are not statistically significant at conventional levels. While this is consistent with the theoretical model as transportation infrastructure is assumed to be inversely related to trade costs, it is contrary to the findings in Coughlin et al. (1991). See Blonigen (2005) for a review of the literature on 'tariff-jumping' FDI. Neighboring highway mileage, on the other hand, has a positive effect in all three FE specifications, and is statistically significant as well in the FE model using BEA weights.

PP&E: Chemical Sector Turning to the chemical sector, we find many more statistically significant effects across the various specifications (relative to Table 1), particularly for own attributes, although the null of no spatial effects is only rejected at conventional levels in one specification (the RE model with contiguous weights). Moreover, the Hausman tests reject the RE assumption in all four specifications. As a result, we continue to focus primarily on the results from the FE models, where many of the results remain consistent with the theoretical model and the PHH.

In terms of the results, several findings are noteworthy. First, we obtain negative point estimates of own RAC in all eight specifications, with the coefficients being statistically significant using FE and omitting spillovers and including spillovers using contiguous and Crone weights. However, the impact of neighboring RAC is negative in two of the three FE models, albeit statistically insignificant at conventional levels, and we fail to reject the null that effects of own and neighboring RAC are jointly zero in the FE model using Crone weights where the impact of neighboring RAC is positive. Second, own market proximity is positive and statistically significant in all eight specifications. However, this comes at the 'expense' of population,

which is now either statistically insignificant or negative and statistically significant (FE model using BEA weights). In addition, we obtain mixed evidence on the effect of neighboring market proximity and population (some positive and some negative point estimates), although the only statistically significant coefficient in the FE models is a positive impact of neighboring population in the model using BEA weights. Nonetheless, the positive effects of own market proximity and neighboring population are consistent with our expectations based on the theoretical impact of market demand on inbound FDI. Similarly, Coughlin et al. (1991), Coughlin and Segev (2000), Head and Mayer (2004), Blonigen et al. (2004), and Baltagi et al. (2005a, b) find positive effects of various covariates designed to capture market demand on inbound FDI. Chakrabarti (2001) finds 'robust' positive effects as well using an Extreme Bounds Analysis approach. Moreover, the impacts are economically quite large, with elasticities well above unity.

Third, the impacts of many variables related to production costs remain consistent with theoretical expectations. Own unemployment has a positive and statistically significant impact on FDI in the FE models using either regional weighting scheme, consonant with Coughlin et al. (1991). The impacts of own unionization and land values are negative in all eight specifications, with all but two of the estimates being statistically significant; the point estimates for own wages and tax effort are negative in all FE models, although statistically insignificant at conventional levels. The signs of the coefficients on the neighboring production cost variables are mixed with respect to our theoretical predictions. However, the positive and statistically significant impact of neighboring land values in the FE model using contiguous weights is consonant with the theory. Finally, consonant with theoretical expectations, the impact of own (neighboring) highway mileage is negative (positive), albeit statistically insignificant, in all four (two of three) FE models.

Employment: All Manufacturing Table 3 presents the results using aggegate manufacturing employment in foreign-owned affiliates to measure the stock of FDI. Prior to discussing the individual coefficients, we again note that the Hausman test continues to reject the RE assumption in all four specifications (p = 0.00 in each case). In addition, in two of the three FE models, the null of no spatial effects is rejected at the $p < 0.05$ level (the exception being the FE model with Crone weights). Thus, we focus our discussion primarily on the FE models with spatial effects.

Turning to the coefficient estimates on RAC, we obtain negative, but statistically insignificant, estimates of own RAC in two of three FE specifications with spatial effects, with the coefficients being very small in magnitude as well. The impact of neighboring RAC is positive and statistically insignificant in two of three FE models as well; we fail to reject the null that the effects of own and neighboring RAC are jointly zero at conventional levels in all three FE models. In terms of the state characteristics capturing demand effects,

the effect of own market proximity is positive in all eight specifications, and statistically significant in one FE specifications. Again, this comes at the 'expense' of population, which negatively impacts inbound FDI in all four FE specifications; the coefficient in the FE model using BEA weights is statistically significant as well. Nonetheless, the positive effects of market proximity are consistent with our expectations based on the theoretical impact of demand on inbound FDI. Moreover, the impact of neighboring market proximity (population) is positive in two (three) FE specifications, consonant with the theoretical model; the effect of market proximity (population) is negative (positive) and statistically significant in the FE model using BEA weights.

In terms of attributes reflecting production costs, we obtain negative point estimates for own wages and energy prices in all three FE models with spatial effects, although the coefficients are never statistically significant at conventional levels. We also obtain negative point estimates in two of three FE specifications with spatial effects for land values and tax effort, although the estimates are never statistically significant. The impact of neighboring wages is positive and statistically significant in the FE models using Crone weights; however, it is negative and statistically significant in the FE model using contiguous weights. Moreover, also inconsistent with our theoretical predictions, the point estimates for neighboring land values and energy prices are negative, albeit statistically insignificant, in the majority of the FE specifications. However, we do find some neighboring effects consonant with the theoretical model. Specifically, the impact of neighboring unionization and tax effort are each positive, albeit statistically insignificant, in two of three FE specifications. The effect of spatial variation in taxation on investment location is consonant with the results in Hines (1996) and Head and Mayer (2004); see Blonigen (2005) for a review. In addition, the impact of neighboring unemployment is negative, but statistically insignificant, in all three FE models.

Finally, with respect to own trade costs, we obtain negative (positive) point estimates for own (neighboring) highway mileage in one (three) FE models with spatial effects. The positive impact of neighboring highway mileage is statistically and economically significant in the FE model using BEA weights. This pattern of point estimates is consistent with the theoretical model as transportation infrastructure is assumed to be inversely related to trade costs.

Employment: Chemical Sector Table 4 presents the final set of baseline results, where FDI is measured using employment at foreign-owned affiliates in the chemical sector. As with the analysis of PP&E in the chemical sector, the empirical results accord extremely well with the theoretical model. As in the previous sections, we first note that the Hausman test rejects the RE assumption in all four specifications (p = 0.00 in each case). In addition, we reject the null of no spatial effects in all three FE models at the $p < 0.10$ confidence level. Thus, as in our previous discussions, we focus primarily on the FE models with

spatial effects.

Turning to the coefficient estimates on RAC, we obtain negative and statistically and economically significant estimates of own RAC across all eight specifications. The estimates suggest an approximately 3 – 4% decline in employment if RAC increases by 10%. The impact of neighboring RAC is positive and statistically insignificant in one of three FE models (Crone weights), but we do reject the null that the effects of own and neighboring RAC are jointly zero at the $p < 0.01$ confidence level in all three FE models. In terms of the state characteristics capturing demand effects, the impact of own market proximity is positive in all eight specifications, with many of the coefficients being statistically significant. As with the previous FDI measures, this comes at the 'expense' of population; all four FE estimates are negative and two are statistically significant (contiguous and BEA weights). In addition, the impact of neighboring population (market proximity) is positive (negative) in two of three FE models; the positive effect of neighboring population is statistically significant in the FE model using BEA weights. Thus, in general, these results offer strong support for the theoretical model predicting positive effects of own and neighboring market demand on inbound FDI.

In terms of attributes reflecting production costs, we obtain positive and statistically significant effects of own unemployment in all eight specifications. We also obtain negative, but statistically insignificant, point estimates in all four FE specifications for unionization and land values, as well as a negative and statistically insignificant effect of energy prices in three of four FE models. The only findings not consistent with the theoretical model are the positive point estimates for wages and tax effort in the four FE models. In terms of neighboring effects, we obtain positive and statistically significant impacts of unionization and land values in the FE models using Crone and contiguous weights, respectively. We also find positive, albeit statistically insignificant, effects of neighboring wages (energy prices) in two (three) FE models. The only statistically significant coefficient that is not consistent with the theoretical predictions is a large, negative impact of neighboring tax effort in the FE model using BEA weights. Finally, with respect to own trade costs, we obtain negative (positive) point estimates for own (neighboring) highway mileage in all four (two of three) FE models.

Summary Given the large number of results, Table 5 provides a concise summary. To simplify matters, the theoretically predicted direction of the effect of each covariate is listed, as well as the results from the three FE models with spatial effects for each of the four dependent variables. A '+' ('–') sign indicates a statistically significant coefficient at at least the $p < 0.10$ significance level; a gray shading indicates that the effect is consistent with the theoretical prediction. Viewed in this light, five results become immediately clear. First, overall the theoretical model fares well; the vast majority of statistically significant effects

are in the correctly predicted direction. Second, the theoretical model does a better job explaining FDI in the chemical sector, measured by the larger number of statistically significant effects in their theoretically predicted direction. Third, there is some evidence consistent with the PHH; the impact of own RAC on FDI is negative and statistically significant in the chemical sector; neighboring RAC is never statistically significant. Fourth, whereas the impacts of the variables designed to capture neighboring market demand – market proximity and population – sometimes have the 'wrong' sign, the other variable has the 'correct' sign in the same specification. Thus, one must be cautious interpreting the effect of either variable in isolation as there is some tension when controlling for market proximity and population simultaneously. Blonigen et al. (2004) obtain a similar result; finding a positive (negative) effect of host country GDP (population) on outbound US FDI. Finally, the most frequent empirical result *not consistent* with the theoretical model – aside from the impact of population – is the negative effect of neighboring wages. However, Glick and Woodward (1987) find that interstate wage differentials did not influence employment growth in MNEs, and Head and Mayer (2004) find little role of wages in explaining Japanese investment in the European Union. Similarly, Chakrabarti (2001) conclude that the impact of wages on FDI is not 'robust' when using an Extreme Bounds Analysis approach. To assess the robustness of these conclusions, we turn to a number of sensitivity analyses.

4.2 Sensitivity Analysis

4.2.1 Functional Form

The first sensitivity analysis addresses the (log-) linear functional form utilized in the baseline model. As shown in Henderson and Millimet (2006) using these same data, this functional form yields misleading results when spatial effects are omitted. However, Millimet and Racine (2006) find little substantive difference between parametric and nonparametric analyses of FDI *flows*. To see whether our results with respect to the PHH are sensitive to functional form when spatial effects are included, we re-estimate the models in Tables 1-4 allowing for a more complex effect of RAC.[3] Specifically, we include a quadratic term for own and neighboring RAC, as well as the interaction between own (neighboring) RAC and all other own (neighboring) covariates. We then calculate the observation-specific elasticity of FDI with respect to own and neighboring RAC, compute standard errors via the delta method, and report the mean elasticity, as well as the elasticity at the 25^{th}, 50^{th}, and 75^{th} percentiles. Results for PP&E and employment are presented in Tables 6 and 7, respectively.

[3]In the interest of brevity, we did not attempt a fully nonparametric model, as in Henderson and Millimet (2006) or allow for more complicated effects of the other covariates. Obviously, such extensions could be done, although the sample size must be kept in mind.

The top panel of Table 6 displays the results measuring FDI by PP&E in all manufacturing sectors. First, we note that the Hausman rejects the RE assumption in all four specifications (p = 0.00 in each case). Thus, we continue to primarily focus on the FE estimates. Second, across all four FE specifications, none of the reported coefficients on own RAC are statistically significant. However, we do find several statistically significant effects of neighboring RAC. Specifically, the mean elasticity is positive and statistically significant in the FE models using either regional weighting scheme. Furthermore, the elasticity at the 75^{th} percentile is positive and statistically significant in all three FE models, and is positive and statistically significant at the median in the FE model using Crone weights; the elasticity at the 25^{th} percentile is negative in all three FE models, and statistically significant in the FE model using BEA weights. The elasticities are also quite large economically. For example, according to the FE model using BEA weights, a 10% increase in neighboring RAC is associated with an increase (decrease) in own FDI of at least roughly 5% (2%) for 25% (25%) of the sample. These findings are noteworthy for three reasons. First, not only are the results consonant with the theoretical model, but it indicates that the effect of neighboring RAC is heterogeneous across state-year cells. Second, it is the first empirical evidence, to our knowledge, confirming the PHH through an examination of neighboring policy spillovers. Finally, the fact that the statistically significant mean elasticity only materializes when using BEA and Crone weights suggests that it is imperative, when assessing the PHH, to compare locations at the regional level.

The bottom panel of Table 6 reports the results for the chemical sector. Again, the Hausman test rejects the RE assumption in all four specifications (p = 0.00 in each case). Thus, we focus on the FE results, which continue to offer evidence in favor of our theoretical model and the PHH. First, we find a statistically significant, negative impact of own RAC at the 25^{th} percentile using contiguous weights. While the mean elasticity is negative in all three FE models with spatial effects, it is never statistically significant. Second, while we find some negative and statistically significant effects of neighboring RAC at the 25^{th} percentile using contiguous and BEA weights, the mean and median elasticities are positive, albeit statistically insignificant, in two of the three FE specifications for each. Moreover, according to the FE model using either regional weighting scheme, the impact of neighboring RAC is positive and statistically and economically significant at the 75^{th} percentile. Again, this indicates important heterogeneity in the responsiveness of FDI to environmental stringency, as well as the importance of accounting for spatial spillovers in empirical examinations of the PHH.

Table 7 reports the analogous results using employment at foreign-owned affiliates to measure FDI. As in the PP&E models, the Hausman test rejects the RE assumption in all specifications using employment in all manufacturing (top panel) and the chemical sector (bottom panel). Thus, we continue to focus on the FE estimates. In both panels, the mean and median elasticity with respect to own RAC is negative

in every case, and one (three) of the four mean elasticity estimates is statistically significant in the top (bottom) panel. Moreover, the majority of the elasticity estimates at the 75^{th} percentile are negative across the two panels, although none are statistically significant. In terms of the effect of neighboring RAC on employment, we continue to find support for the PHH when examining spillovers across states. Specifically, the mean and median elasticity estimates are positive in the majority of the FE specifications across the two panels, and the mean and median estimates are statistically significant in FE model using Crone weights for employment in all manufacturing. In addition, the elasticity with respect to neighboring RAC is positive and statistically significant at the 75^{th} percentile in the FE models using either regional weighting scheme in both panels (positive, but statistically insignificant, in both panels in the FE model using contiguous weights). Finally, highlighting the heterogeneity, a few of the elasticities at the 25^{th} percentile are negative, and the FE estimates at the 25^{th} percentile and mean using contiguous weights are statistically significant.

Overall, then, the specifications allowing for a more flexible effect of RAC on FDI support previous evidence in Henderson and Millimet (2006) and Millimet and Racine (2006) that the impact of environmental stringency on inbound US FDI is heterogeneous across states and over time. Moreover, the results confirm that this heterogeneity is more than academic curiosity; allowing for non-linearities and interactions provides further evidence, beyond that found in the baseline models, of (i) the PHH at work in the US, (ii) the importance of analyzing FDI location using a regional perspective, and (iii) the importance of incorporating spatial spillovers into analyses of the PHH.

4.2.2 Land Area

The second sensitivity analysis follows the previous literature and includes land area as an additional control. In the preferred FE models, this variable drops out since it is time invariant. However, for robustness, we re-estimate the baseline RE models in Tables 1-4 as previous work has found significant effects of area on FDI (e.g., Coughlin et al. 1991; Head and Mayer 2004). To proceed, we include (log) own land area in square miles, as well as (log) *aggregate* land area of neighboring states in the models including spatial effects. Note, this diverges from our treatment of other neighboring covariates; rather than computing the average over neighboring states, we include the sum as this is more natural in this context. The common hypothesis is that greater land area increases the likelihood of MNE activity since it increases the number of potential sites. As such, we expect own (neighboring) area to positively (negatively) impact inbound FDI. Tables B1-B2 in Appendix B present the results; Table 8 provides a concise summary. In the interest of brevity, we simply note that the qualitative results are unchanged. For instance, in the 12 baseline RE models with spatial effects, we rejected the null of no spatial effects nine times at the $p < 0.10$

level; including own and neighboring land area, we reject the null in ten specifications. Similarly, in the 12 baseline RE models, we reject the null that own and neighboring RAC have no impact on FDI in three models; here, we continue to reject the null in the same three specifications. Consonant with the results being essentially unaltered, own land area is statistically significant in only one model including spatial effects (all manufacturing employment using BEA weights), and the coefficient is negative. Neighboring land area is statistically significant in three models, with a negative sign in one of the three. Thus, while the baseline FE results are preferred to the RE results, we do note that our RE estimates are qualitatively unaltered when we include land area.

4.2.3 Time Effects

Our next sensitivity analysis follows Blonigen et al. (2004, 2005) and entails replacing the time effects included in the baseline model with a quadratic time trend. While the summary results in Table 5 makes it clear that the baseline empirical results accord well with the theoretical model, many of the individual coefficients are not statistically significant. Given our sample size, perhaps relaxing our treatment of time will offer additional insights.[4] Tables B3-B6 in Appendix B present the results; Table 9 provides a concise summary. Again, for brevity, we focus on the major findings. First, prior to assessing the individual coefficients, we note that (i) the Hausman test always rejects the RE assumption, (ii) we reject the null of no spatial effects at at least the $p < 0.10$ level in all 24 models including spatial effects, and (iii) we reject the null that the impacts of own and neighboring RAC are jointly zero is all three FE models for employment at foreign-owned affiliates and PP&E in the chemical sector, as well as two of three FE models for PP&E in all manufacturing. Second, while nearly all of the statistically significant coefficients reported in Table 5 remain significant, we now also find many more statistically significant effects, particularly of the spatially weighted covariates. Noteworthy differences include a statistically significant, positive impact of neighboring energy prices in eight of the twelve FE models including spatial effects; neighboring unionization and tax effort are positive and statistically significant in two and three additional specifications, respectively, relative to the baseline results. Finally, in terms of own variables, we now obtain a statistically significant, negative impact of own RAC in the FE model using Crone weights for all manufacturing PP&E, as well as negative effects of own wages in three specifications. Thus, the conclusions drawn from the baseline model with respect to the ability of the theoretical model to explain

[4]Note, when replacing the time effects with a quadratic time trend, conceivably one could include covariates capturing parent country attributes. However, since the parent in our analysis is an aggregate of all non-US countries, adding parental controls, while feasible, is not straightforward. Fortunately, Blonigen et al. (2004, 2005) find that the non-linear time trend is sufficient to capture parent attributes in their analyses.

the empirical results are, if anything, strengthened, when we use a quadratic time trend.

4.2.4 Spatial Error Correlation

Model Specification Our final sensitivity analysis allows for spatial error correlation even after controlling for the spatially weighted covariates. The methodology for the estimator is developed in Baltagi et al. (2005a), who extend the Kapoor et al. (2005) spatial random effects estimator to handle unbalanced data. To begin, we rewrite equation (18) in vector form as

$$\ln(\mathbf{FDI}_t) = \mathbf{X}_t\beta + \mu_t \tag{19}$$

where $\ln(\mathbf{FDI}_t)$ is an $N_t \times 1$ vector, N_t is the number of cross-sectional observations observed at time t, $\mathbf{X}_t$ is an $N_t \times m$ matrix (including the time effects, own covariates, and spatially weighted covariates), and β is an $m \times 1$ vector of parameters. The vector of errors, $\boldsymbol{\mu}_t$, is of dimension $N_t \times 1$ and is decomposed as follows:

$$\boldsymbol{\mu}_t = \rho\mathbf{W}_{N_t}\boldsymbol{\mu}_t + \mathbf{v}_t$$

where $\mathbf{W}_{N_t}$ is a spatial weighting matrix for period t and each element of the $N_t \times 1$ vector v_t contains a state-specific random effect and an idiosyncratic term, $v_{it} = \eta_i + \varepsilon_{it}$.

The estimator for the parameters of this random effects model with spatially correlated errors entails three steps. First, we obtain the residuals $\widehat{\mu}_{it}$ from an OLS regression of $\ln(FDI_{it})$ on X_{it}. Next, we use $\widehat{\mu}_{it}$ and the set of moment conditions given in Baltagi et al. (2005a) to estimate ρ, σ_η^2 and σ_ε^2. In the actual computation, we rewrite the moment conditions as a nonlinear least squares (NLS) problem using a technique pioneered by Kelejian and Prucha (1999). Finally, we use the estimates of ρ, σ_η^2 and σ_ε^2 to obtain Generalized Least Squares (GLS) estimates of β. Specifically, two GLS transformations are required. First, $\widehat{\rho}$ is used to perform a spatial Cochrane-Orcutt transformation. Second, $\widehat{\sigma}_\eta^2$ and $\widehat{\sigma}_\varepsilon^2$ are used to perform a standard random effects transform of the spatial Cochrane-Orcutt transformed data. OLS on the twice transformed data yields the point estimates. Standard errors robust to arbitrary heteroskedasticity and within-panel correlation among the disturbances of the twice transformed data are reported.

To obtain the fixed effects counterpart, we utilize a procedure based on Mundlak (1978). In particular, we augment the matrix $\mathbf{X}$ in (19) to include the state-specific mean of each covariate in $\mathbf{X}$, where the means are computed over the entire sample period. Formally, we estimate the following model

$$\ln(FDI_{it}) = X_{it}\beta_{FE} + \overline{X}_i\theta + \mu_{it} \tag{20}$$

where the error term, μ, has the same structure as described previously. As noted in Wooldridge (2002, p. 290-1), a Hausman test for fixed versus random effects is given by a test of the null hypothesis that the coefficients on the variable means are jointly zero (i.e., $H_o : \theta = 0$).

Results Tables B7-B10 in Appendix B present the results; Table 10 summarizes the estimates. Again, for brevity, we focus on the most noteworthy results, of which three arise. First, allowing for spatially correlated errors does not alter the results of the Hausman tests for FE versus RE; we always reject the RE assumption at the $p < 0.01$ level. Our conclusions regarding the overall significance of the spatially weighted variables, as well as the joint significance of own and neighboring RACE, are unaltered. Second, while many fewer individual coefficients are statistically significant relative to the baseline results, the results that prove robust are (i) a negative impact of own RAC on employment at foreign-owned affiliates in the chemical sector, (ii) a positive impact of own market proximity and neighboring population, and (iii) a positive (negative) effect of own unemployment (unionization) on PP&E in the chemical sector. Thus, the results that prove most robust to the allowance of spatially correlated errors are all consonant with our theoretical expectations. Third, while we do not report standard errors, we note that our estimate of ρ is negative in six of the twelve FE specifications with spatially weighted covariates, and is always smaller than 0.13 in absolute value. Thus, spatial error correlation seems of little practical consequence in these data, and there is no consistent pattern of positive or negative spatial error correlation.

Despite this last finding, we re-estimate the models allowing for spatially correlated errors replacing the time effects with a quadratic time trend given the demands placed on the data through the inclusion of state and time fixed effects and spatially correlated errors. Tables B11-B14 in Appendix B present the results; Table 11 provides a summary. First, prior to assessing the individual coefficients, we note that (i) the Hausman test always rejects the RE assumption, (ii) we reject the null of no spatial effects at at least the $p < 0.10$ level in all 24 models including spatial effects, and (iii) we reject the null that the impact of own and neighboring RAC are jointly zero is all three FE models for employment at foreign-owned affiliates and PP&E in the chemical sector, as well as two of three FE models for PP&E in all manufacturing. These results are unchanged from Tables B3-B6 that do not allow for spatially correlated errors. Second, while nearly all of the statistically significant reported in Table 10 remain, we now find many more statistically significant effects, particularly of the spatially weighted covariates. This is similar to the impact of changing from time effects to a quadratic time trend in the baseline model (Table 9 relative to Table 5). Specifically, we now obtain a statistically significant, positive impact of neighboring energy prices in seven of the twelve FE models including spatial effects; neighboring unionization and tax effort are positive and statistically significant in three and two specifications, respectively. Third, relative to the results reported in Table

9 (quadratic time trend but no spatially correlated errors), the biggest differences include no statistically significant own variables for all manufacturing PP&E, as well as the insignificance at conventional levels of own wages in all FE specifications.

Finally, relative to the previous models allowing for spatially correlated errors and including time effects, our estimates of ρ in Tables B11-B14 are suggestive of a pattern. In particular, $\widehat{\rho}$ is negative in seven of nine FE specifications with spatially weighted covariates in Tables B11-B13, and is always smaller than 0.09 in absolute value. However, while also small in magnitude, $\widehat{\rho}$ is positive in all three FE specifications with spatially weighted covariates in Table B14 (employment at foreign-own affiliates in the chemical sector), and is above 0.12 in two specifications (contiguous and BEA weights). Thus, shocks to employment at foreign-owned affiliates in the chemical sector are positively correlated within well-defined geographic areas, implying that unobservables raising inbound FDI in one state are associated with positive spillovers in nearby states. However, for the other measures of FDI, shocks are predominantly negatively correlated, implying that unobservables raising inbound FDI in one state are associated with less FDI in neighboring states. Nonetheless, relative to the same models excluding spatially correlated errors, our conclusions regarding the covariates remain robust, and the majority of the statistically significant effects are consistent with the theoretical model.

5 Conclusion

The goal of this paper is to provide the first empirical analysis (to our knowledge) merging the literature on environmental regulations and capital flows with the literature on third-country effects. While a number of results have been presented, several themes emerge when one takes a step back. First, *own* state attributes rarely have statistically significant effects on inbound US FDI when aggregated over all manufacturing sectors and using either employment or PP&E. However, many *neighboring* state attributes do matter – both economically and statistically – especially in the specifications including a quadratic time trend. One explanation for such a finding is that it is regional attributes that matter in FDI location decisions, and state or local attributes are 'small' relative the region. Second, and consonant with this intuition, the results obtained using either of the two regional weighting schemes appear to yield 'better' results overall, measured in terms of the results according with the theoretical predictions. Thus, empirical analyses of capital flows into the US should benefit from taking a regional perspective. Third, the theoretical model does fairly well across the various empirical models in explaining inbound FDI in the chemical sector (measured either by employment or PP&E). Specifically, we tend to find positive effects of (at least one of) the proxies for own and neighboring market demand, positive (negative) effects of own unemployment (unionization),

and positive effects of neighboring land values, energy prices, and tax effort. Finally, we consistently find a negative impact of own environmental stringency, although the only statistically significant *average* effects of neighboring environmental stringency are also negative, contrary to the theoretical model. One explanation for this finding is that greater environmental stringency in neighboring states may act as a signal to MNEs that a state's own environmental regulations will become more strict in the future. Fredriksson and Millimet (2002), for example, find that a state's own RAC is positively related to lagged neighboring RAC. Thus, *ceteris paribus*, a low level of neighboring RAC indicates that own RAC is likely to decline in the future. Another explanation is that the linear functional form is mis-specified. Allowing for a more complex impact of own and neighboring RAC, we obtain heterogeneous effects of neighboring RAC: positive and significant for many state-year observations, negative and significant for others. Nonetheless, the fact that third-country effects are present when analyzing the impact of environmental regulations on capital flows indicates that future research into the validity of the PHH must account for spatial spillovers. However, understanding the heterogeneous effects of neighboring RAC should be a goal of both future theoretical and empirical research.

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A Data Appendix

The BEA regional classification is as follows.

1. New England: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut
2. Mideast: New York, New Jersey, Pennsylvania, Delaware, Maryland
3. Great Lakes: Ohio, Indiana, Illinois, Michigan, Wisconsin
4. Plains: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas
5. Southeast: Georgia, Florida, Virginia, West Virginia, North Carolina, South Carolina, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana
6. Southwest: Oklahoma, Texas, Arizona, New Mexico
7. Rocky Mountain: Montana, Idaho, Wyoming, Colorado, Utah
8. Far West: Washington, Oregon, California, Nevada

The Crone (1998/1999) regions – based on a cluster analysis of similar economic activity – are as follows.

1. Maine, New Hampshire, Massachusetts, Arizona, Utah, Montana
2. Ohio, Indiana, Illinois, Michigan, Iowa, Delaware
3. Georgia, Florida, Virginia, North Carolina, South Carolina, Missouri, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Oklahoma, Rhode Island
4. New York, New Jersey, Pennsylvania, Maryland, Connecticut, West Virginia, Vermont
5. Washington, Oregon, California, Nevada, Idaho, Nebraska, Texas, Wyoming, Minnesota, Louisiana, Kansas
6. North Dakota, South Dakota, Colorado, New Mexico, Wisconsin

Table B1. Determinants of Inbound FDI: Sensitvity Analysis (PP&E, Random Effects Models)

	All Manufacturing				Chemical Sector			
	Model 1	Model 2			Model 1	Model 2		
Variable		Contiguous Weights	BEA Weights	Crone Weights		Contiguous Weights	BEA Weights	Crone Weights
ln(Levinson Index)	-0.024	-0.022	-0.001	-0.029	-0.088	-0.052	-0.107	-0.124
	(0.086)	(0.084)	(0.08)	(0.081)	(0.118)	(0.126)	(0.126)	(0.123)
ln(Market Proximity)	0.198	0.465	0.424	0.084	1.380*	1.571***	1.962*	1.262*
	(0.298)	(0.398)	(0.267)	(0.306)	(0.473)	(0.875)	(0.587)	(0.471)
ln(Population)	1.032*	0.699***	0.744*	1.243*	0.414	0.421	-0.127	0.519
	(0.302)	(0.4)	(0.287)	(0.327)	(0.573)	(0.984)	(0.677)	(0.551)
Unemployment Rate	0.001	0.003	-0.003	0.01	0.043***	0.053	0.058**	0.056**
	(0.016)	(0.017)	(0.018)	(0.015)	(0.023)	(0.037)	(0.029)	(0.022)
Unionization Rate	-0.019	-0.015	-0.024***	-0.02	-0.092*	-0.069*	-0.087*	-0.095*
	(0.013)	(0.012)	(0.013)	(0.014)	(0.02)	(0.019)	(0.022)	(0.023)
ln(Wages)	-0.297	0.376	-0.596	-0.383	0.173	1.449	0.075	0.213
	(0.623)	(0.696)	(0.697)	(0.609)	(0.977)	(1.22)	(1.14)	(1.043)
ln(Highway Mileage)	-0.143	-0.321	-0.189	-0.384	-0.648***	-0.961**	-0.891**	-0.961**
	(0.378)	(0.463)	(0.41)	(0.385)	(0.348)	(0.39)	(0.365)	(0.465)
ln(Land Value)	-0.273***	-0.216	-0.234	-0.206	-0.707*	-0.829**	-0.745**	-0.514***
	(0.148)	(0.16)	(0.163)	(0.144)	(0.265)	(0.329)	(0.315)	(0.269)
ln(Energy Prices)	-0.007	-0.068	0.064	0.030	-0.487	-0.647	-0.291	-0.257
	(0.195)	(0.197)	(0.193)	(0.177)	(0.369)	(0.412)	(0.363)	(0.396)
ln(Tax Effort)	-0.445	-0.455	-0.356	-0.520***	-0.460	-0.377	-0.088	-0.480
	(0.299)	(0.311)	(0.283)	(0.292)	(0.46)	(0.469)	(0.462)	(0.397)
ln(Area)	-0.266	-0.024	-0.345	-0.082	-0.115	-0.385	-0.459	0.285
	(0.295)	(0.35)	(0.33)	(0.299)	(0.341)	(0.359)	(0.329)	(0.363)
Spatially Weighted Variables								
ln(Levinson Index)		-0.021	-0.166	0.186		-0.101	-0.144	0.264
		(0.145)	(0.16)	(0.206)		(0.258)	(0.282)	(0.305)
ln(Market Proximity)		-0.441	-0.118	0.268		-0.927	-0.511	0.649
		(0.524)	(0.466)	(0.359)		(1.124)	(0.823)	(0.645)
ln(Population)		0.319	0.609	-0.346		0.508	1.193	-0.675
		(0.63)	(0.528)	(0.614)		(1.317)	(0.912)	(0.983)
Unemployment Rate		-0.009	0.009	-0.062***		-0.031	-0.053	-0.074
		(0.025)	(0.024)	(0.033)		(0.048)	(0.037)	(0.066)
Unionization Rate		-0.011	-0.011	-0.017		-0.024	-0.006	-0.007
		(0.023)	(0.023)	(0.04)		(0.032)	(0.037)	(0.072)
ln(Wages)		-1.953**	1.890	1.069		-3.231**	2.278	-1.340
		(0.981)	(1.222)	(1.249)		(1.603)	(1.557)	(1.79)
ln(Highway Mileage)		0.828***	-0.298	0.775		1.036***	-0.972	1.280
		(0.491)	(0.647)	(0.576)		(0.603)	(0.835)	(0.907)
ln(Land Value)		0.214	-0.274	-0.170		0.594	-0.118	-0.448
		(0.219)	(0.184)	(0.229)		(0.383)	(0.329)	(0.304)
ln(Energy Prices)		0.115	0.145	0.471		-0.331	-0.014	-0.067
		(0.412)	(0.299)	(0.342)		(0.629)	(0.487)	(0.705)
ln(Tax Effort)		0.357	0.037	0.496		0.217	0.328	-0.57
		(0.555)	(0.538)	(0.783)		(0.919)	(0.816)	(0.961)
ln(Area)		-0.406**	0.295	-0.320		0.025	1.448**	-0.783
		(0.204)	(0.484)	(0.327)		(0.266)	(0.736)	(0.548)
Joint Sign. of Spatially Weighted Variables		[p = 0.00]	[p = 0.00]	[p = 0.01]		[p = 0.00]	[p = 0.02]	[p = 0.35]
Joint Sign. of Own & Spatially Weighted Levinson Index		[p = 0.95]	[p = 0.57]	[p = 0.64]		[p = 0.85]	[p = 0.66]	[p = 0.19]
Breusch-Pagan Test of RE	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]

NOTES: Each regression also includes time dummies. *** significant at 10%; ** significant at 5%; * significant at 1%.

Table B2. Determinants of Inbound FDI: Sensitvity Analysis (Employment, Random Effects Models)

	All Manufacturing				Chemical Sector			
	Model 1	Model 2			Model 1	Model 2		
Variable		Contiguous Weights	BEA Weights	Crone Weights		Contiguous Weights	BEA Weights	Crone Weights
ln(Levinson Index)	0.025	0.012	0.045	0.001	-0.332**	-0.312**	-0.335**	-0.327**
	(0.105)	(0.094)	(0.098)	(0.104)	(0.15)	(0.14)	(0.138)	(0.143)
ln(Market Proximity)	0.207	0.264	0.389***	0.186	0.988**	1.388**	1.331*	1.062**
	(0.255)	(0.314)	(0.226)	(0.248)	(0.394)	(0.582)	(0.429)	(0.434)
ln(Population)	0.976*	0.751***	0.684**	1.028*	0.433	0.156	0.166	0.392
	(0.329)	(0.419)	(0.309)	(0.305)	(0.514)	(0.727)	(0.567)	(0.584)
Unemployment Rate	-0.004	0.005	-0.007	-0.002	0.060**	0.062	0.061**	0.070**
	(0.014)	(0.017)	(0.017)	(0.016)	(0.028)	(0.038)	(0.031)	(0.029)
Unionization Rate	0.004	0.004	0.000	0.002	-0.031	-0.022	-0.025	-0.027
	(0.011)	(0.01)	(0.01)	(0.011)	(0.021)	(0.019)	(0.023)	(0.022)
ln(Wages)	-0.778	-0.152	-1.011	-1.061***	0.590	1.008	0.036	0.441
	(0.584)	(0.683)	(0.65)	(0.57)	(0.984)	(1.059)	(1.037)	(1.022)
ln(Highway Mileage)	0.181	0.086	0.179	0.017	-0.401	-0.648	-0.716	-0.475
	(0.369)	(0.468)	(0.425)	(0.383)	(0.467)	(0.501)	(0.481)	(0.514)
ln(Land Value)	-0.204**	-0.008	-0.105	-0.078	-0.330**	-0.348***	-0.395**	-0.296***
	(0.101)	(0.151)	(0.141)	(0.123)	(0.155)	(0.189)	(0.18)	(0.16)
ln(Energy Prices)	-0.183	-0.181	-0.147	-0.130	-0.329	-0.382	-0.208	-0.298
	(0.186)	(0.192)	(0.19)	(0.179)	(0.295)	(0.275)	(0.269)	(0.307)
ln(Tax Effort)	-0.148	-0.199	-0.092	-0.215	-0.137	-0.109	0.077	-0.229
	(0.267)	(0.26)	(0.234)	(0.243)	(0.425)	(0.434)	(0.422)	(0.419)
ln(Area)	-0.522**	-0.161	-0.501***	-0.341	-0.088	-0.274	-0.372	-0.050
	(0.243)	(0.318)	(0.272)	(0.262)	(0.274)	(0.319)	(0.287)	(0.291)
Spatially Weighted Variables								
ln(Levinson Index)		0.147	-0.142	0.185		-0.129	-0.416	0.150
		(0.148)	(0.152)	(0.165)		(0.213)	(0.276)	(0.276)
ln(Market Proximity)		0.241	-0.148	0.299		-1.022	0.149	0.462
		(0.381)	(0.345)	(0.283)		(0.712)	(0.725)	(0.401)
ln(Population)		-0.102	0.457	-0.441		0.639	0.267	-0.469
		(0.481)	(0.37)	(0.402)		(0.796)	(0.669)	(0.588)
Unemployment Rate		-0.026	-0.001	-0.028		-0.030	0.009	-0.037
		(0.024)	(0.022)	(0.032)		(0.047)	(0.034)	(0.047)
Unionization Rate		0.003	0.011	0.036		-0.026	0.016	0.053
		(0.018)	(0.021)	(0.031)		(0.03)	(0.03)	(0.047)
ln(Wages)		-1.321	0.923	1.003		-1.671	1.766	0.298
		(0.831)	(1.000)	(0.762)		(1.425)	(1.158)	(1.379)
ln(Highway Mileage)		0.256	-0.128	0.399		1.053**	-0.408	0.452
		(0.414)	(0.454)	(0.362)		(0.425)	(0.442)	(0.61)
ln(Land Value)		-0.053	-0.173	-0.158		0.424***	-0.234	-0.372
		(0.182)	(0.157)	(0.162)		(0.22)	(0.257)	(0.233)
ln(Energy Prices)		-0.084	-0.286	-0.378		0.104	0.105	0.223
		(0.263)	(0.299)	(0.308)		(0.4)	(0.466)	(0.509)
ln(Tax Effort)		0.654	0.191	0.517		0.649	-0.746	-0.801
		(0.434)	(0.429)	(0.642)		(0.761)	(0.756)	(0.83)
ln(Area)		-0.235	0.053	-0.033		-0.006	1.144*	0.176
		(0.202)	(0.379)	(0.274)		(0.18)	(0.428)	(0.344)
Joint Sign. of Spatially Weighted Variables		[p = 0.17]	[p = 0.00]	[p = 0.00]		[p = 0.05]	[p = 0.00]	[p = 0.09]
Joint Sign. of Own & Spatially Weighted Levinson Index		[p = 0.60]	[p = 0.46]	[p = 0.53]		[p = 0.08]	[p = 0.05]	[p = 0.07]
Breusch-Pagan Test of RE	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]

NOTES: See Table B1.

Table B3. Determinants of Inbound FDI: Sensitvity Analysis (All Manufacturing PP&E)

	Model 1: No Spatial Effects		Model 2: With Spatial Effects					
			Contiguous Weights		BEA Weights		Crone Weights	
Variable	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**
ln(Levinson Index)	-0.127	-0.062	-0.110	-0.043	-0.055	-0.027	-0.136***	-0.077
	(0.079)	(0.079)	(0.075)	(0.077)	(0.069)	(0.077)	(0.073)	(0.081)
ln(Market Proximity)	0.170	0.279	0.402	0.423	0.749***	0.535***	0.095	0.198
	(0.469)	(0.244)	(0.526)	(0.37)	(0.427)	(0.274)	(0.485)	(0.291)
ln(Population)	0.110	0.802*	-0.046	0.765**	-0.862	0.512***	0.620	1.035*
	(0.673)	(0.271)	(0.728)	(0.378)	(0.69)	(0.293)	(0.766)	(0.31)
Unemployment Rate	0.013	0.019**	0.001	0.005	0.002	0.001	0.012	0.018
	(0.012)	(0.01)	(0.016)	(0.017)	(0.017)	(0.017)	(0.016)	(0.015)
Unionization Rate	-0.021	-0.018	-0.015	-0.010	-0.021	-0.021	-0.018	-0.011
	(0.014)	(0.013)	(0.014)	(0.012)	(0.014)	(0.013)	(0.013)	(0.014)
ln(Wages)	-0.642	-0.251	-0.211	0.346	-1.323***	-0.836	-0.964	-0.676
	(0.613)	(0.541)	(0.835)	(0.706)	(0.749)	(0.649)	(0.653)	(0.57)
ln(Highway Mileage)	-0.163	-0.225	-0.131	-0.427	0.002	-0.274	-0.276	-0.378***
	(0.716)	(0.205)	(0.703)	(0.334)	(0.556)	(0.297)	(0.665)	(0.204)
ln(Land Value)	0.040	-0.054	-0.063	-0.176	-0.060	-0.095	-0.024	-0.15
	(0.121)	(0.122)	(0.178)	(0.131)	(0.174)	(0.143)	(0.143)	(0.131)
ln(Energy Prices)	0.603*	0.481*	0.202	0.052	0.306	0.152	0.265	0.096
	(0.152)	(0.15)	(0.2)	(0.202)	(0.193)	(0.188)	(0.196)	(0.183)
ln(Tax Effort)	-0.085	-0.111	-0.342	-0.367	-0.368	-0.275	-0.447	-0.469**
	(0.316)	(0.177)	(0.366)	(0.273)	(0.312)	(0.249)	(0.358)	(0.236)
Spatially Weighted Variables								
ln(Levinson Index)			-0.212	-0.087	-0.248***	-0.244	-0.123	-0.108
			(0.152)	(0.143)	(0.132)	(0.155)	(0.181)	(0.185)
ln(Market Proximity)			0.048	-0.089	-0.471	-0.134	-0.595	0.453
			(0.689)	(0.488)	(0.533)	(0.379)	(0.768)	(0.409)
ln(Population)			-0.394	-0.258	1.930**	0.409	-0.045	-0.967
			(0.985)	(0.6)	(0.843)	(0.509)	(1.04)	(0.599)
Unemployment Rate			0.025	0.020	0.014	0.020	-0.034	-0.018
			(0.022)	(0.019)	(0.021)	(0.019)	(0.024)	(0.021)
Unionization Rate			-0.007	-0.009	0.036	0.000	0.048	0.041
			(0.026)	(0.021)	(0.027)	(0.019)	(0.035)	(0.029)
ln(Wages)			-2.466**	-2.505*	0.141	0.651	0.551	0.078
			(1.101)	(0.939)	(1.276)	(0.905)	(1.326)	(1.017)
ln(Highway Mileage)			0.593	0.818***	1.459**	0.203	0.935	1.082**
			(0.647)	(0.447)	(0.71)	(0.408)	(0.784)	(0.474)
ln(Land Value)			0.390***	0.389**	-0.073	-0.087	-0.082	-0.054
			(0.205)	(0.158)	(0.234)	(0.153)	(0.218)	(0.196)
ln(Energy Prices)			0.595**	0.719*	0.662**	0.620*	0.779*	0.903*
			(0.294)	(0.266)	(0.272)	(0.239)	(0.273)	(0.234)
ln(Tax Effort)			0.826	0.723	-0.522	0.049	0.071	0.641
			(0.627)	(0.535)	(0.564)	(0.473)	(0.881)	(0.689)
Joint Sign. of Spatially Weighted Variables			[p = 0.00]	[p = 0.00]	[p = 0.03]	[p = 0.00]	[p = 0.01]	[p = 0.00]
Joint Sign. of Own & Spatially Weighted Levinson Index			[p = 0.07]	[p = 0.68]	[p = 0.15]	[p = 0.29]	[p = 0.10]	[p = 0.47]
Breusch-Pagan Test of RE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: Each regression also includes a quadratic time trend. *** significant at 10%; ** significant at 5%; * significant at 1%.

Table B4. Determinants of Inbound FDI: Sensitivity Analysis (Chemical Sector PP&E)

	Model 1: No Spatial Effects		Model 2: With Spatial Effects					
			Contiguous Weights		BEA Weights		Crone Weights	
Variable	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**
ln(Levinson Index)	-0.313**	-0.188	-0.249**	-0.153	-0.199***	-0.106	-0.303**	-0.162
	(0.119)	(0.118)	(0.103)	(0.108)	(0.116)	(0.122)	(0.123)	(0.121)
ln(Market Proximity)	1.235	1.132*	1.895***	1.746**	2.564**	2.024*	1.063	1.112**
	(0.758)	(0.414)	(1.055)	(0.871)	(0.981)	(0.599)	(0.688)	(0.435)
ln(Population)	-0.827	0.400	-1.407	0.159	-3.317***	-0.330	0.248	0.706
	(1.044)	(0.498)	(1.857)	(0.93)	(1.687)	(0.673)	(1.167)	(0.491)
Unemployment Rate	0.059*	0.073*	0.041	0.050	0.055**	0.072**	0.049**	0.062**
	(0.022)	(0.019)	(0.03)	(0.036)	(0.025)	(0.031)	(0.022)	(0.025)
Unionization Rate	-0.111*	-0.097*	-0.104*	-0.082*	-0.115*	-0.096*	-0.112*	-0.094*
	(0.025)	(0.02)	(0.025)	(0.019)	(0.022)	(0.021)	(0.025)	(0.021)
ln(Wages)	-0.166	1.010	-0.017	1.340	-0.884	0.139	-0.294	0.562
	(1.415)	(0.981)	(1.765)	(1.22)	(1.479)	(1.118)	(1.385)	(1.018)
ln(Highway Mileage)	-0.941	-0.489	-0.891	-1.160*	-0.839	-0.960*	-1.237	-0.765**
	(0.893)	(0.314)	(0.967)	(0.386)	(1.011)	(0.317)	(0.949)	(0.348)
ln(Land Value)	-0.113	-0.362***	-0.592***	-0.708**	-0.507	-0.521***	-0.169	-0.528**
	(0.208)	(0.2)	(0.325)	(0.3)	(0.311)	(0.272)	(0.306)	(0.244)
ln(Energy Prices)	0.955*	0.617**	0.257	-0.041	0.429	0.108	0.375	-0.053
	(0.317)	(0.285)	(0.455)	(0.386)	(0.384)	(0.34)	(0.442)	(0.379)
ln(Tax Effort)	0.408	0.115	-0.085	-0.201	0.104	0.135	-0.041	-0.230
	(0.496)	(0.436)	(0.454)	(0.459)	(0.478)	(0.45)	(0.413)	(0.38)
Spatially Weighted Variables								
ln(Levinson Index)			-0.473**	-0.348	-0.535**	-0.243	-0.258	-0.266
			(0.232)	(0.24)	(0.245)	(0.286)	(0.256)	(0.261)
ln(Market Proximity)			-0.317	-0.861	-1.191	-1.368**	-0.282	0.487
			(1.436)	(1.076)	(1.228)	(0.696)	(1.242)	(0.595)
ln(Population)			-0.393	0.226	3.930***	1.697***	-0.823	-0.496
			(2.19)	(1.262)	(2.118)	(0.87)	(1.843)	(0.888)
Unemployment Rate			0.043	0.018	0.005	-0.028	-0.044	-0.03
			(0.046)	(0.039)	(0.041)	(0.034)	(0.039)	(0.034)
Unionization Rate			-0.084**	-0.061**	-0.037	-0.074**	0.013	-0.039
			(0.032)	(0.025)	(0.047)	(0.034)	(0.072)	(0.055)
ln(Wages)			-1.894	-2.158	0.288	1.691	3.278	1.783
			(2.425)	(1.469)	(2.36)	(1.384)	(2.197)	(1.431)
ln(Highway Mileage)			-0.170	1.461**	0.280	0.512	0.436	1.152
			(1.038)	(0.604)	(1.192)	(0.54)	(1.033)	(0.767)
ln(Land Value)			0.904**	0.764**	0.344	0.108	-0.494	-0.256
			(0.411)	(0.325)	(0.439)	(0.279)	(0.299)	(0.245)
ln(Energy Prices)			0.781	1.029**	1.017**	1.214*	1.283**	1.862*
			(0.521)	(0.502)	(0.498)	(0.437)	(0.568)	(0.51)
ln(Tax Effort)			1.878**	1.399***	0.140	0.533	1.045	1.681**
			(0.879)	(0.811)	(0.917)	(0.67)	(1.199)	(0.855)
Joint Sign. of Spatially Weighted Variables			[p = 0.08]	[p = 0.00]	[p = 0.07]	[p = 0.00]	[p = 0.04]	[p = 0.00]
Joint Sign. of Own & Spatially Weighted Levinson Index			[p = 0.01]	[p = 0.16]	[p = 0.06]	[p = 0.53]	[p = 0.06]	[p = 0.36]
Breusch-Pagan Test of RE		[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: See Table B3.

Table B5. Determinants of Inbound FDI: Sensitivity Analysis (All Manufacturing Employment

	Model 1: No Spatial Effects		Model 2: With Spatial Effects					
			Contiguous Weights		BEA Weights		Crone Weights	
Variable	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**
ln(Levinson Index)	-0.052	0.003	-0.060	-0.007	0.006	0.024	-0.083	-0.036
	(0.103)	(0.106)	(0.087)	(0.088)	(0.085)	(0.094)	(0.102)	(0.104)
ln(Market Proximity)	0.315	0.409***	0.604	0.283	1.117*	0.567**	0.407	0.381
	(0.342)	(0.227)	(0.393)	(0.301)	(0.299)	(0.223)	(0.36)	(0.241)
ln(Population)	-0.348	0.655**	-1.034	0.719***	-1.955*	0.394	-0.332	0.720**
	(0.678)	(0.331)	(0.819)	(0.405)	(0.674)	(0.339)	(0.699)	(0.322)
Unemployment Rate	-0.006	-0.001	0.014	0.005	0.006	-0.005	0.001	0.003
	(0.011)	(0.009)	(0.017)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)
Unionization Rate	0.012	0.008	0.017	0.009	0.011	0.003	0.012	0.009
	(0.013)	(0.012)	(0.011)	(0.01)	(0.012)	(0.011)	(0.012)	(0.01)
ln(Wages)	-0.929	-1.033**	-0.252	-0.252	-1.086***	-1.201***	-1.170***	-1.463*
	(0.633)	(0.499)	(0.769)	(0.665)	(0.646)	(0.62)	(0.644)	(0.541)
ln(Highway Mileage)	-0.119	-0.136	0.034	-0.047	0.101	-0.053	-0.193	-0.175
	(0.611)	(0.212)	(0.636)	(0.35)	(0.526)	(0.326)	(0.602)	(0.21)
ln(Land Value)	0.088	0.096	0.054	0.073	0.020	0.073	0.03	0.043
	(0.101)	(0.09)	(0.186)	(0.13)	(0.158)	(0.139)	(0.133)	(0.114)
ln(Energy Prices)	0.297**	0.216	0.003	-0.071	0.082	-0.018	0.099	-0.003
	(0.138)	(0.138)	(0.175)	(0.173)	(0.19)	(0.179)	(0.194)	(0.184)
ln(Tax Effort)	0.358	0.344***	0.021	-0.085	0.052	0.116	0.080	0.010
	(0.259)	(0.186)	(0.315)	(0.235)	(0.264)	(0.246)	(0.295)	(0.231)
Spatially Weighted Variables								
ln(Levinson Index)			-0.065	0.079	-0.194	-0.210	-0.067	-0.056
			(0.128)	(0.143)	(0.118)	(0.144)	(0.167)	(0.16)
ln(Market Proximity)			0.499	0.393	-0.593	0.029	0.014	0.048
			(0.516)	(0.349)	(0.446)	(0.251)	(0.592)	(0.305)
ln(Population)			-0.054	-0.479	2.510**	0.125	-0.267	-0.729
			(1.045)	(0.464)	(0.942)	(0.328)	(0.87)	(0.447)
Unemployment Rate			-0.018	-0.014	-0.018	-0.001	-0.039	-0.030
			(0.021)	(0.019)	(0.021)	(0.019)	(0.027)	(0.023)
Unionization Rate			0.013	0.011	0.058**	0.022	0.113*	0.085*
			(0.021)	(0.017)	(0.026)	(0.018)	(0.038)	(0.025)
ln(Wages)			-2.455*	-2.010**	-0.735	-0.054	0.367	0.027
			(0.878)	(0.842)	(1.05)	(0.962)	(0.742)	(0.759)
ln(Highway Mileage)			0.126	0.408	1.426***	0.181	0.597	0.997*
			(0.545)	(0.356)	(0.746)	(0.307)	(0.786)	(0.279)
ln(Land Value)			0.313	0.194	0.055	0.011	0.071	0.14
			(0.191)	(0.156)	(0.139)	(0.157)	(0.172)	(0.157)
ln(Energy Prices)			0.423	0.548**	0.453	0.398	0.307	0.419
			(0.264)	(0.24)	(0.301)	(0.274)	(0.28)	(0.261)
ln(Tax Effort)			1.348*	1.149*	0.031	0.551	0.96	1.261**
			(0.483)	(0.426)	(0.45)	(0.407)	(0.739)	(0.633)
Joint Sign. of Spatially Weighted Variables			[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]
Joint Sign. of Own & Spatially Weighted Levinson Index			[p = 0.74]	[p = 0.84]	[p = 0.20]	[p = 0.28]	[p = 0.62]	[p = 0.88]
Breusch-Pagan Test of RE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: See Table B3.

Table B6. Determinants of Inbound FDI: Sensitivity Analysis (Chemical Sector Employment)

	Model 1: No Spatial Effects		Model 2: With Spatial Effects					
			Contiguous Weights		BEA Weights		Crone Weights	
Variable	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**
ln(Levinson Index)	-0.444*	-0.376*	-0.389*	-0.329*	-0.306*	-0.326**	-0.399*	-0.352*
	(0.108)	(0.13)	(0.104)	(0.127)	(0.094)	(0.13)	(0.104)	(0.13)
ln(Market Proximity)	0.978	0.828**	1.723**	1.469**	2.141*	1.412*	1.118	1.037**
	(0.606)	(0.351)	(0.788)	(0.614)	(0.724)	(0.441)	(0.667)	(0.513)
ln(Population)	-1.533***	0.378	-2.316**	0.006	-4.150*	-0.072	-1.335	0.333
	(0.802)	(0.5)	(1.049)	(0.783)	(0.944)	(0.582)	(0.932)	(0.684)
Unemployment Rate	0.043***	0.053**	0.060***	0.058	0.056***	0.058***	0.057***	0.064**
	(0.026)	(0.022)	(0.034)	(0.038)	(0.028)	(0.031)	(0.03)	(0.029)
Unionization Rate	-0.023	-0.029	-0.019	-0.022	-0.026	-0.031	-0.02	-0.031
	(0.027)	(0.021)	(0.025)	(0.022)	(0.023)	(0.023)	(0.024)	(0.021)
ln(Wages)	0.690	0.786	1.229	0.937	0.095	-0.163	0.824	0.458
	(1.406)	(1.006)	(1.438)	(1.16)	(1.275)	(1.047)	(1.407)	(1.171)
ln(Highway Mileage)	-1.046	-0.262	-1.152	-0.791***	-0.926	-0.666	-1.162	-0.435
	(0.854)	(0.328)	(0.909)	(0.434)	(0.75)	(0.41)	(0.881)	(0.361)
ln(Land Value)	0.075	-0.031	-0.208	-0.261***	-0.121	-0.180	-0.133	-0.214***
	(0.152)	(0.11)	(0.22)	(0.145)	(0.188)	(0.153)	(0.173)	(0.123)
ln(Energy Prices)	0.422**	0.281	-0.097	-0.202	0.143	-0.062	0.089	-0.131
	(0.174)	(0.186)	(0.259)	(0.253)	(0.228)	(0.257)	(0.299)	(0.293)
ln(Tax Effort)	0.662***	0.354	0.210	0.043	0.469	0.339	0.285	0.072
	(0.374)	(0.389)	(0.464)	(0.449)	(0.392)	(0.411)	(0.44)	(0.406)
Spatially Weighted Variables								
ln(Levinson Index)			-0.364***	-0.173	-0.364***	-0.378	0.13	-0.012
			(0.21)	(0.205)	(0.187)	(0.259)	(0.224)	(0.25)
ln(Market Proximity)			-0.701	-0.876	-0.290	-0.630	-0.059	-0.178
			(0.883)	(0.695)	(0.969)	(0.638)	(1.049)	(0.504)
ln(Population)			0.365	0.349	4.318*	0.746	-0.645	-0.134
			(1.438)	(0.794)	(1.165)	(0.651)	(1.775)	(0.634)
Unemployment Rate			-0.025	-0.026	-0.018	-0.021	-0.094**	-0.067**
			(0.044)	(0.042)	(0.032)	(0.031)	(0.036)	(0.031)
Unionization Rate			-0.046	-0.036	0.018	-0.022	0.125*	0.03
			(0.039)	(0.028)	(0.034)	(0.024)	(0.046)	(0.034)
ln(Wages)			-2.124	-1.606	0.288	0.935	3.304***	1.432
			(1.886)	(1.362)	(1.365)	(1.193)	(1.669)	(1.159)
ln(Highway Mileage)			0.463	1.357*	0.939	0.725**	-1.053	0.842
			(0.737)	(0.385)	(0.837)	(0.33)	(0.741)	(0.542)
ln(Land Value)			0.708**	0.586*	-0.077	0.083	-0.279	-0.057
			(0.287)	(0.185)	(0.281)	(0.226)	(0.27)	(0.201)
ln(Energy Prices)			0.677**	0.875*	0.811**	0.855***	0.804***	1.251*
			(0.329)	(0.297)	(0.382)	(0.488)	(0.412)	(0.393)
ln(Tax Effort)			1.904*	1.523**	-0.145	-0.160	0.497	0.934
			(0.695)	(0.682)	(0.641)	(0.791)	(0.995)	(0.786)
Joint Sign. of Spatially Weighted Variables			[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.04]
Joint Sign. of Own & Spatially Weighted Levinson Index			[p = 0.00]	[p = 0.02]	[p = 0.00]	[p = 0.03]	[p = 0.00]	[p = 0.01]
Breusch-Pagan Test of RE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: See Table B3.

Table B7. Determinants of Inbound FDI: Sensitivity Analysis (All Manufacturing PP&E)

	Model 2: With Spatial Effects					
	Contiguous Weights		BEA Weights		Crone Weights	
Variable	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors
ln(Levinson Index)	-0.074	0.025	-0.014	0.012	-0.082	0.002
	(0.079)	(0.083)	(0.071)	(0.086)	(0.073)	(0.088)
ln(Market Proximity)	0.386	0.500	0.674	0.559***	0.045	0.237
	(0.532)	(0.34)	(0.439)	(0.257)	(0.482)	(0.261)
ln(Population)	0.137	0.785	-0.591	0.631***	0.864	1.219*
	(0.749)	(0.409)	(0.676)	(0.3)	(0.774)	(0.278)
Unemployment Rate	0.000	0.010	-0.001	0.001	0.002	0.014
	(0.017)	(0.018)	(0.017)	(0.017)	(0.016)	(0.014)
Unionization Rate	-0.022	-0.012	-0.027	-0.022	-0.024	-0.017
	(0.015)	(0.012)	(0.014)	(0.013)	(0.015)	(0.015)
ln(Wages)	-0.109	0.779	-1.130	-0.451	-0.629	-0.224
	(0.864)	(0.636)	(0.805)	(0.665)	(0.708)	(0.579)
ln(Highway Mileage)	-0.210	-0.570	-0.017	-0.408	-0.383	-0.608**
	(0.748)	(0.303)	(0.582)	(0.285)	(0.653)	(0.192)
ln(Land Value)	-0.080	-0.261***	-0.118	-0.155	-0.074	-0.266***
	(0.181)	(0.117)	(0.174)	(0.146)	(0.152)	(0.131)
ln(Energy Prices)	0.072	-0.190	0.216	-0.012	0.202	-0.041
	(0.203)	(0.193)	(0.21)	(0.195)	(0.194)	(0.174)
ln(Tax Effort)	-0.339	-0.301	-0.454	-0.275	-0.412	-0.401
	(0.358)	(0.255)	(0.317)	(0.239)	(0.349)	(0.218)
Spatially Weighted Variables						
ln(Levinson Index)	-0.133	-0.007	-0.101	-0.173	0.172	0.237
	(0.152)	(0.14)	(0.147)	(0.164)	(0.202)	(0.217)
ln(Market Proximity)	-0.190	-0.245	-0.699	-0.097	-0.878	0.373
	(0.715)	(0.436)	(0.537)	(0.362)	(0.796)	(0.326)
ln(Population)	0.086	0.138	2.756**	0.565	0.905	-0.377
	(1.046)	(0.555)	(0.844)	(0.506)	(1.108)	(0.57)
Unemployment Rate	0.000	-0.013	0.006	0.012	-0.097**	-0.065***
	(0.026)	(0.024)	(0.027)	(0.025)	(0.037)	(0.033)
Unionization Rate	-0.013	-0.003	0.005	-0.021	0.006	-0.008
	(0.027)	(0.021)	(0.031)	(0.021)	(0.047)	(0.036)
ln(Wages)	-2.121	-2.917**	1.146	1.105	2.190	0.891
	(1.175)	(0.995)	(1.51)	(0.938)	(1.723)	(1.115)
ln(Highway Mileage)	0.558	0.485	1.269	-0.150	0.510	0.653
	(0.671)	(0.397)	(0.747)	(0.414)	(0.766)	(0.463)
ln(Land Value)	0.262	0.369***	-0.320	-0.250	-0.164	-0.101
	(0.237)	(0.184)	(0.301)	(0.167)	(0.279)	(0.206)
ln(Energy Prices)	0.202	0.214	0.148	0.108	0.413	0.637
	(0.386)	(0.416)	(0.312)	(0.311)	(0.286)	(0.333)
ln(Tax Effort)	0.553	0.420	-0.820	0.052	0.193	0.658
	(0.68)	(0.509)	(0.562)	(0.435)	(0.901)	(0.685)
ρ	-0.055	-0.122	0.031	-0.007	-0.026	-0.055
Joint Sign. of Spatially Weighted Variables	[p = 0.33]	[p = 0.00]	[p = 0.16]	[p = 0.01]	[p = 0.03]	[p = 0.05]
Joint Sign. of Own & Spatially Weighted Levinson Index	[p = 0.35]	[p = 0.96]	[p = 0.78]	[p = 0.53]	[p = 0.42]	[p = 0.55]
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: Each regression also includes time dummies. *** significant at 10%; ** significant at 5%; * significant at 1%.

Table B8. Determinants of Inbound FDI: Sensitivity Analysis (Chemical Sector PP&E)

	Model 2: With Spatial Effects					
	Contiguous Weights		BEA Weights		Crone Weights	
Variable	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors
ln(Levinson Index)	-0.199	-0.074	-0.147	-0.076	-0.228	-0.036
	(0.109)	(0.128)	(0.117)	(0.133)	(0.12)	(0.129)
ln(Market Proximity)	1.901	1.669***	2.397***	2.145*	1.321	1.178**
	(1.067)	(0.849)	(0.959)	(0.54)	(0.683)	(0.41)
ln(Population)	-1.244	0.322	-2.781	-0.320	-0.051	0.780
	(1.927)	(0.91)	(1.629)	(0.6)	(1.148)	(0.465)
Unemployment Rate	0.035	0.054	0.051***	0.074**	0.047***	0.057***
	(0.031)	(0.037)	(0.023)	(0.028)	(0.022)	(0.023)
Unionization Rate	-0.106*	-0.069*	-0.117*	-0.079*	-0.108*	-0.083*
	(0.026)	(0.018)	(0.023)	(0.02)	(0.026)	(0.02)
ln(Wages)	-0.462	1.280	-1.568	-0.038	-0.683	0.677
	(1.812)	(1.183)	(1.505)	(1.094)	(1.379)	(0.887)
ln(Highway Mileage)	-0.678	-1.271*	-0.650	-1.115*	-1.202	-0.934**
	(0.995)	(0.348)	(1.08)	(0.321)	(0.959)	(0.321)
ln(Land Value)	-0.623	-0.697***	-0.583	-0.470	-0.252	-0.675**
	(0.336)	(0.276)	(0.303)	(0.256)	(0.31)	(0.24)
ln(Energy Prices)	-0.020	-0.615	0.126	-0.571	0.083	-0.552
	(0.477)	(0.405)	(0.406)	(0.343)	(0.458)	(0.378)
ln(Tax Effort)	-0.107	-0.230	-0.175	-0.007	-0.404	-0.582
	(0.452)	(0.462)	(0.486)	(0.475)	(0.445)	(0.369)
Spatially Weighted Variables						
ln(Levinson Index)	-0.264	-0.141	-0.296	-0.115	0.363	0.260
	(0.246)	(0.246)	(0.257)	(0.301)	(0.323)	(0.358)
ln(Market Proximity)	-0.591	-0.772	-1.595	-1.286***	0.694	0.868
	(1.495)	(1.011)	(1.18)	(0.622)	(1.329)	(0.557)
ln(Population)	0.389	0.390	4.905***	1.697***	-1.721	-0.495
	(2.314)	(1.196)	(2.075)	(0.767)	(1.836)	(0.889)
Unemployment Rate	0.014	-0.028	-0.009	-0.060	-0.079	-0.085
	(0.049)	(0.047)	(0.036)	(0.038)	(0.064)	(0.073)
Unionization Rate	-0.068	-0.019	-0.034	-0.046	0.062	0.001
	(0.035)	(0.032)	(0.05)	(0.034)	(0.082)	(0.068)
ln(Wages)	-2.536	-3.768***	0.331	0.643	-1.568	-0.824
	(2.802)	(1.506)	(2.611)	(1.244)	(2.661)	(1.73)
ln(Highway Mileage)	-0.187	1.115	0.243	0.188	0.544	0.829
	(1.153)	(0.569)	(1.176)	(0.489)	(1.085)	(0.833)
ln(Land Value)	0.825	0.625	0.217	-0.067	-0.440	-0.379
	(0.48)	(0.353)	(0.518)	(0.265)	(0.35)	(0.295)
ln(Energy Prices)	-0.133	-0.323	-0.002	-0.205	-0.488	0.183
	(0.643)	(0.629)	(0.47)	(0.458)	(0.68)	(0.746)
ln(Tax Effort)	1.043	0.338	-0.789	-0.093	-0.440	-0.213
	(1.034)	(0.905)	(1.015)	(0.695)	(1.162)	(0.978)
ρ	0.000	-0.054	-0.174	-0.103	-0.050	0.044
Joint Sign. of Spatially Weighted Variables	[p = 0.49]	[p = 0.00]	[p = 0.21]	[p = 0.04]	[p = 0.17]	[p = 0.43]
Joint Sign. of Own & Spatially Weighted Levinson Index	[p = 0.11]	[p = 0.72]	[p = 0.35]	[p = 0.81]	[p = 0.01]	[p = 0.62]
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: See Table B7.

Table B9. Determinants of Inbound FDI: Sensitivity Analysis (All Manufacturing Employment)

	Model 2: With Spatial Effects					
	Contiguous Weights		BEA Weights		Crone Weights	
Variable	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors
ln(Levinson Index)	-0.020	0.037	0.052	0.048	-0.043	0.013
	(0.089)	(0.096)	(0.094)	(0.108)	(0.104)	(0.108)
ln(Market Proximity)	0.643	0.351	1.052*	0.510***	0.419	0.395
	(0.387)	(0.293)	(0.295)	(0.232)	(0.369)	(0.221)
ln(Population)	-0.935	0.767***	-1.647***	0.626***	-0.165	0.900**
	(0.826)	(0.381)	(0.672)	(0.304)	(0.744)	(0.279)
Unemployment Rate	0.016	0.007	0.006	-0.005	-0.001	0.001
	(0.018)	(0.016)	(0.016)	(0.017)	(0.016)	(0.016)
Unionization Rate	0.009	0.003	0.003	-0.001	0.003	0.002
	(0.011)	(0.009)	(0.011)	(0.01)	(0.012)	(0.01)
ln(Wages)	-0.015	-0.052	-0.976	-1.017	-0.852	-1.260***
	(0.765)	(0.598)	(0.68)	(0.593)	(0.699)	(0.515)
ln(Highway Mileage)	-0.140	-0.176	0.125	-0.199	-0.249	-0.342
	(0.647)	(0.295)	(0.511)	(0.259)	(0.597)	(0.175)
ln(Land Value)	0.028	0.050	-0.044	0.059	-0.060	-0.007
	(0.182)	(0.123)	(0.148)	(0.128)	(0.139)	(0.119)
ln(Energy Prices)	-0.125	-0.231	-0.065	-0.175	-0.006	-0.154
	(0.195)	(0.19)	(0.208)	(0.186)	(0.195)	(0.181)
ln(Tax Effort)	0.038	-0.044	-0.082	0.033	0.012	-0.065
	(0.295)	(0.221)	(0.256)	(0.215)	(0.287)	(0.228)
Spatially Weighted Variables						
ln(Levinson Index)	0.022	0.146	-0.023	-0.163	0.209	0.252
	(0.124)	(0.148)	(0.119)	(0.148)	(0.171)	(0.175)
ln(Market Proximity)	0.264	0.306	-0.787	0.230	0.658	0.372
	(0.519)	(0.323)	(0.463)	(0.245)	(0.762)	(0.276)
ln(Population)	0.526	-0.103	3.522*	0.094	0.165	-0.462
	(1.043)	(0.396)	(0.941)	(0.27)	(0.879)	(0.4)
Unemployment Rate	-0.029	-0.026	-0.012	0.010	-0.023	-0.027
	(0.023)	(0.023)	(0.022)	(0.023)	(0.039)	(0.032)
Unionization Rate	0.003	0.006	0.016	0.006	0.047	0.037
	(0.021)	(0.017)	(0.025)	(0.021)	(0.041)	(0.026)
ln(Wages)	-1.892***	-1.598	0.132	0.225	1.478	0.837
	(0.87)	(0.867)	(1.093)	(0.976)	(0.882)	(0.777)
ln(Highway Mileage)	0.051	-0.010	1.340	-0.150	0.365	0.440
	(0.534)	(0.314)	(0.753)	(0.265)	(0.755)	(0.225)
ln(Land Value)	0.052	-0.022	-0.263	-0.217	-0.285	-0.152
	(0.195)	(0.162)	(0.185)	(0.176)	(0.231)	(0.159)
ln(Energy Prices)	-0.054	-0.056	-0.286	-0.307	-0.324	-0.403
	(0.263)	(0.268)	(0.311)	(0.292)	(0.276)	(0.328)
ln(Tax Effort)	0.838	0.767	-0.531	0.351	0.456	0.619
	(0.534)	(0.415)	(0.468)	(0.411)	(0.75)	(0.626)
ρ	-0.079	-0.064	0.046	0.032	-0.033	-0.017
Joint Sign. of Spatially Weighted Variables	[p = 0.03]	[p = 0.10]	[p = 0.01]	[p = 0.05]	[p = 0.22]	[p = 0.00]
Joint Sign. of Own & Spatially Weighted Levinson Index	[p = 0.94]	[p = 0.61]	[p = 0.74]	[p = 0.39]	[p = 0.45]	[p = 0.35]
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.01]	

NOTES: See Table B7.

Table B10. Determinants of Inbound FDI: Sensitivity Analysis (Chemical Sector Employment)

	Model 2: With Spatial Effects					
	Contiguous Weights		BEA Weights		Crone Weights	
Variable	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors
ln(Levinson Index)	-0.376*	-0.291***	-0.301**	-0.312***	-0.380*	-0.323***
	(0.113)	(0.138)	(0.097)	(0.148)	(0.113)	(0.146)
ln(Market Proximity)	1.646***	1.518**	1.826***	1.416*	1.029	1.026***
	(0.784)	(0.549)	(0.733)	(0.347)	(0.731)	(0.419)
ln(Population)	-2.106***	-0.001	-3.460*	0.026	-1.253	0.476
	(1.021)	(0.682)	(0.9)	(0.44)	(0.991)	(0.526)
Unemployment Rate	0.057	0.061	0.056	0.062***	0.055	0.071***
	(0.034)	(0.038)	(0.03)	(0.031)	(0.031)	(0.028)
Unionization Rate	-0.016	-0.018	-0.030	-0.025	-0.016	-0.029
	(0.024)	(0.019)	(0.022)	(0.019)	(0.024)	(0.019)
ln(Wages)	0.920	0.840	0.313	-0.048	0.742	0.418
	(1.438)	(1.077)	(1.341)	(0.932)	(1.514)	(0.987)
ln(Highway Mileage)	-1.049	-0.813***	-0.931	-0.717***	-1.195	-0.507
	(0.903)	(0.357)	(0.751)	(0.308)	(0.949)	(0.278)
ln(Land Value)	-0.214	-0.251	-0.204	-0.106	-0.151	-0.262***
	(0.214)	(0.146)	(0.196)	(0.143)	(0.186)	(0.13)
ln(Energy Prices)	-0.113	-0.421	0.022	-0.317	-0.014	-0.339
	(0.26)	(0.287)	(0.241)	(0.285)	(0.335)	(0.312)
ln(Tax Effort)	-0.013	-0.192	0.008	-0.155	0.118	-0.246
	(0.46)	(0.385)	(0.4)	(0.321)	(0.456)	(0.378)
Spatially Weighted Variables						
ln(Levinson Index)	-0.301	-0.123	-0.237	-0.179	0.260	0.130
	(0.214)	(0.21)	(0.198)	(0.255)	(0.253)	(0.278)
ln(Market Proximity)	-1.183	-0.834	-0.603	-0.566	-0.176	0.424
	(0.911)	(0.597)	(1.014)	(0.434)	(1.197)	(0.332)
ln(Population)	0.944	0.589	4.859*	0.792	-0.533	-0.264
	(1.504)	(0.696)	(1.253)	(0.457)	(1.812)	(0.54)
Unemployment Rate	-0.025	-0.026	0.006	0.001	-0.106	-0.027
	(0.044)	(0.047)	(0.035)	(0.036)	(0.054)	(0.053)
Unionization Rate	-0.041	-0.021	0.002	-0.009	0.134***	0.021
	(0.042)	(0.03)	(0.041)	(0.026)	(0.059)	(0.049)
ln(Wages)	-1.960	-1.846	0.481	-0.262	1.705	-0.140
	(2.055)	(1.433)	(1.598)	(1.171)	(2.175)	(1.391)
ln(Highway Mileage)	0.424	1.020**	0.598	0.465	-1.034	0.602
	(0.754)	(0.392)	(0.92)	(0.312)	(0.794)	(0.557)
ln(Land Value)	0.583	0.355	-0.336	-0.180	-0.279	-0.357
	(0.322)	(0.21)	(0.35)	(0.241)	(0.308)	(0.231)
ln(Energy Prices)	0.312	0.031	0.129	-0.316	0.191	0.336
	(0.386)	(0.408)	(0.423)	(0.494)	(0.502)	(0.494)
ln(Tax Effort)	1.133	0.756	-1.378***	-1.047	-0.500	-0.667
	(0.76)	(0.709)	(0.64)	(0.84)	(1.128)	(0.776)
ρ	0.128	0.088	0.091	0.136	0.046	0.046
Joint Sign. of Spatially Weighted Variables	[p = 0.02]	[p = 0.01]	[p = 0.00]	[p = 0.00]	[p = 0.18]	[p = 0.45]
Joint Sign. of Own & Spatially Weighted Levinson Index	[p = 0.00]	[p = 0.10]	[p = 0.01]	[p = 0.10]	[p = 0.00]	[p = 0.09]
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: See Table B7.

Table B11. Determinants of Inbound FDI: Sensitivity Analysis (All Manufacturing PP&E)

	Model 2: With Spatial Effects					
	Contiguous Weights		BEA Weights		Crone Weights	
Variable	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors
ln(Levinson Index)	-0.105	0.007	-0.059	0.000	-0.134	-0.049
	(0.076)	(0.077)	(0.07)	(0.079)	(0.074)	(0.085)
ln(Market Proximity)	0.436	0.539	0.769	0.617**	0.114	0.260
	(0.532)	(0.337)	(0.435)	(0.236)	(0.491)	(0.258)
ln(Population)	-0.068	0.750	-0.948	0.521	0.606	1.085*
	(0.734)	(0.386)	(0.707)	(0.27)	(0.776)	(0.278)
Unemployment Rate	0.002	0.012	0.002	0.005	0.012	0.022
	(0.017)	(0.018)	(0.017)	(0.017)	(0.016)	(0.015)
Unionization Rate	-0.016	-0.011	-0.021	-0.019	-0.018	-0.009
	(0.014)	(0.012)	(0.014)	(0.013)	(0.013)	(0.014)
ln(Wages)	-0.162	0.747	-1.313	-0.534	-0.937	-0.403
	(0.843)	(0.645)	(0.761)	(0.622)	(0.659)	(0.555)
ln(Highway Mileage)	-0.185	-0.567***	0.011	-0.372	-0.286	-0.510**
	(0.713)	(0.281)	(0.566)	(0.258)	(0.671)	(0.182)
ln(Land Value)	-0.067	-0.269***	-0.038	-0.116	-0.037	-0.238
	(0.179)	(0.126)	(0.179)	(0.142)	(0.145)	(0.125)
ln(Energy Prices)	0.186	-0.069	0.319	0.077	0.265	0.007
	(0.201)	(0.201)	(0.195)	(0.187)	(0.199)	(0.179)
ln(Tax Effort)	-0.315	-0.306	-0.380	-0.235	-0.438	-0.427
	(0.37)	(0.269)	(0.313)	(0.258)	(0.362)	(0.238)
Spatially Weighted Variables						
ln(Levinson Index)	-0.216	-0.044	-0.251	-0.205	-0.129	-0.099
	(0.152)	(0.14)	(0.135)	(0.157)	(0.18)	(0.181)
ln(Market Proximity)	0.025	-0.306	-0.496	-0.258	-0.566	0.394
	(0.697)	(0.453)	(0.55)	(0.381)	(0.787)	(0.366)
ln(Population)	-0.381	0.030	1.996***	0.529	-0.075	-0.884
	(0.986)	(0.557)	(0.867)	(0.506)	(1.067)	(0.544)
Unemployment Rate	0.024	0.012	0.014	0.018	-0.034	-0.018
	(0.022)	(0.019)	(0.022)	(0.019)	(0.025)	(0.02)
Unionization Rate	-0.006	-0.006	0.035	-0.012	0.049	0.032
	(0.026)	(0.02)	(0.027)	(0.019)	(0.035)	(0.029)
ln(Wages)	-2.474***	-2.825**	0.029	0.497	0.553	-0.212
	(1.114)	(0.91)	(1.317)	(0.845)	(1.352)	(0.971)
ln(Highway Mileage)	0.591	0.767***	1.489***	0.134	0.932	1.122**
	(0.664)	(0.382)	(0.721)	(0.368)	(0.789)	(0.429)
ln(Land Value)	0.384	0.450**	-0.072	-0.080	-0.081	0.006
	(0.206)	(0.154)	(0.237)	(0.147)	(0.22)	(0.177)
ln(Energy Prices)	0.618***	0.877*	0.640***	0.672**	0.784**	1.047*
	(0.295)	(0.26)	(0.279)	(0.235)	(0.273)	(0.22)
ln(Tax Effort)	0.816	0.557	-0.534	0.065	0.080	0.646
	(0.632)	(0.516)	(0.588)	(0.448)	(0.889)	(0.662)
ρ	-0.031	-0.096	0.033	-0.030	-0.012	-0.044
Joint Sign. of Spatially Weighted Variables	[p = 0.00]	[p = 0.00]	[p = 0.02]	[p = 0.00]	[p = 0.00]	[p = 0.00]
Joint Sign. of Own & Spatially Weighted Levinson Index	[p = 0.07]	[p = 0.95]	[p = 0.14]	[p = 0.42]	[p = 0.10]	[p = 0.69]
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: Each regression also includes a quadratic time trend. *** significant at 10%; ** significant at 5%; * significant at 1%.

Table B12. Determinants of Inbound FDI: Sensitivity Analysis (Chemical Sector PP&E)

	Model 2: With Spatial Effects					
	Contiguous Weights		BEA Weights		Crone Weights	
Variable	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors
ln(Levinson Index)	-0.255***	-0.119	-0.191	-0.047	-0.306***	-0.106
	(0.107)	(0.12)	(0.118)	(0.134)	(0.126)	(0.121)
ln(Market Proximity)	1.830	1.637	2.536**	2.172*	1.066	1.054***
	(1.082)	(0.877)	(0.975)	(0.515)	(0.697)	(0.415)
ln(Population)	-1.328	0.358	-3.201	-0.404	0.264	0.876
	(1.89)	(0.942)	(1.656)	(0.565)	(1.18)	(0.471)
Unemployment Rate	0.041	0.062	0.054***	0.088**	0.049***	0.064**
	(0.03)	(0.039)	(0.025)	(0.029)	(0.023)	(0.024)
Unionization Rate	-0.103*	-0.073*	-0.117*	-0.079*	-0.111*	-0.089*
	(0.025)	(0.018)	(0.022)	(0.019)	(0.025)	(0.019)
ln(Wages)	-0.012	1.694	-1.134	0.315	-0.294	0.869
	(1.797)	(1.161)	(1.469)	(1.014)	(1.414)	(0.893)
ln(Highway Mileage)	-0.911	-1.273*	-0.820	-1.090*	-1.253	-0.901**
	(0.983)	(0.368)	(1.034)	(0.317)	(0.967)	(0.321)
ln(Land Value)	-0.608	-0.680***	-0.505	-0.385	-0.166	-0.622**
	(0.328)	(0.287)	(0.309)	(0.249)	(0.311)	(0.237)
ln(Energy Prices)	0.229	-0.244	0.396	-0.158	0.375	-0.272
	(0.467)	(0.38)	(0.376)	(0.302)	(0.45)	(0.38)
ln(Tax Effort)	-0.095	-0.283	0.135	0.214	-0.049	-0.263
	(0.467)	(0.49)	(0.479)	(0.505)	(0.424)	(0.359)
Spatially Weighted Variables						
ln(Levinson Index)	-0.474***	-0.345	-0.523***	-0.103	-0.249	-0.385
	(0.236)	(0.242)	(0.247)	(0.3)	(0.26)	(0.268)
ln(Market Proximity)	-0.357	-0.857	-1.156	-1.649**	-0.253	0.561
	(1.478)	(1.069)	(1.236)	(0.596)	(1.254)	(0.554)
ln(Population)	-0.353	0.232	3.895	1.988**	-0.880	-0.370
	(2.237)	(1.268)	(2.101)	(0.695)	(1.876)	(0.826)
Unemployment Rate	0.041	0.009	0.009	-0.045	-0.045	-0.021
	(0.046)	(0.039)	(0.039)	(0.029)	(0.04)	(0.035)
Unionization Rate	-0.088**	-0.054***	-0.040	-0.091**	0.017	-0.059
	(0.033)	(0.027)	(0.047)	(0.033)	(0.073)	(0.055)
ln(Wages)	-1.855	-2.837***	0.483	1.847	3.269	1.343
	(2.48)	(1.362)	(2.324)	(1.119)	(2.229)	(1.415)
ln(Highway Mileage)	-0.195	1.576**	0.305	0.387	0.436	1.373
	(1.066)	(0.592)	(1.132)	(0.399)	(1.045)	(0.757)
ln(Land Value)	0.922***	0.756***	0.356	0.037	-0.492	-0.175
	(0.417)	(0.316)	(0.443)	(0.24)	(0.305)	(0.245)
ln(Energy Prices)	0.792	1.113***	0.980***	1.180**	1.270***	2.125*
	(0.534)	(0.504)	(0.498)	(0.403)	(0.578)	(0.524)
ln(Tax Effort)	1.864***	1.110	0.210	0.734	1.074	1.750***
	(0.888)	(0.83)	(0.914)	(0.623)	(1.227)	(0.846)
ρ	-0.058	-0.097	-0.082	-0.203	-0.013	0.074
Joint Sign. of Spatially Weighted Variables	[p = 0.04]	[p = 0.00]	[p = 0.04]	[p = 0.00]	[p = 0.02]	[p = 0.00]
Joint Sign. of Own & Spatially Weighted Levinson Index	[p = 0.01]	[p = 0.23]	[p = 0.06]	[p = 0.89]	[p = 0.05]	[p = 0.33]
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: See Table B11.

Table B13. Determinants of Inbound FDI: Sensitivity Analysis (All Manufacturing Employment)

	Model 2: With Spatial Effects					
	Contiguous Weights		BEA Weights		Crone Weights	
Variable	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors
ln(Levinson Index)	-0.052	0.022	0.005	0.034	-0.084	-0.025
	(0.084)	(0.088)	(0.088)	(0.099)	(0.102)	(0.105)
ln(Market Proximity)	0.704	0.365	1.140*	0.496***	0.445	0.367
	(0.386)	(0.285)	(0.302)	(0.201)	(0.366)	(0.214)
ln(Population)	-1.169	0.734***	-2.018**	0.596***	-0.392	0.816**
	(0.807)	(0.364)	(0.678)	(0.282)	(0.704)	(0.262)
Unemployment Rate	0.016	0.005	0.006	-0.006	0.001	0.003
	(0.017)	(0.016)	(0.016)	(0.017)	(0.016)	(0.016)
Unionization Rate	0.017	0.005	0.011	0.000	0.013	0.009
	(0.011)	(0.01)	(0.012)	(0.011)	(0.012)	(0.01)
ln(Wages)	-0.081	-0.160	-1.114	-1.057	-1.142	-1.455**
	(0.733)	(0.607)	(0.658)	(0.583)	(0.65)	(0.496)
ln(Highway Mileage)	-0.149	-0.145	0.127	-0.156	-0.227	-0.235
	(0.628)	(0.289)	(0.533)	(0.258)	(0.606)	(0.166)
ln(Land Value)	0.062	0.066	0.040	0.121	0.017	0.056
	(0.188)	(0.128)	(0.161)	(0.128)	(0.136)	(0.115)
ln(Energy Prices)	-0.033	-0.120	0.088	-0.038	0.097	-0.029
	(0.174)	(0.175)	(0.192)	(0.171)	(0.197)	(0.183)
ln(Tax Effort)	0.113	-0.035	0.052	0.090	0.090	0.011
	(0.299)	(0.226)	(0.268)	(0.236)	(0.297)	(0.231)
Spatially Weighted Variables						
ln(Levinson Index)	-0.084	0.107	-0.188	-0.191	-0.063	-0.025
	(0.122)	(0.146)	(0.123)	(0.146)	(0.164)	(0.162)
ln(Market Proximity)	0.400	0.114	-0.615	0.020	0.050	0.072
	(0.511)	(0.326)	(0.478)	(0.236)	(0.602)	(0.282)
ln(Population)	-0.008	-0.117	2.587**	0.105	-0.302	-0.704
	(1.009)	(0.394)	(0.976)	(0.277)	(0.885)	(0.382)
Unemployment Rate	-0.021	-0.019	-0.018	0.002	-0.038	-0.028
	(0.021)	(0.019)	(0.022)	(0.019)	(0.026)	(0.022)
Unionization Rate	0.018	0.010	0.054***	0.009	0.115**	0.073*
	(0.021)	(0.017)	(0.026)	(0.019)	(0.039)	(0.022)
ln(Wages)	-2.546**	-1.816***	-0.820	-0.210	0.364	-0.111
	(0.871)	(0.846)	(1.084)	(0.934)	(0.75)	(0.761)
ln(Highway Mileage)	0.156	0.303	1.475	0.179	0.577	1.016*
	(0.559)	(0.302)	(0.769)	(0.248)	(0.785)	(0.235)
ln(Land Value)	0.313	0.181	0.045	-0.006	0.074	0.152
	(0.186)	(0.149)	(0.146)	(0.157)	(0.174)	(0.153)
ln(Energy Prices)	0.449	0.607***	0.443	0.383	0.310	0.448
	(0.259)	(0.236)	(0.308)	(0.269)	(0.278)	(0.254)
ln(Tax Effort)	1.353**	1.039***	-0.004	0.588	0.970	1.320***
	(0.46)	(0.406)	(0.467)	(0.398)	(0.735)	(0.62)
ρ	-0.080	-0.058	0.041	0.033	-0.021	0.003
Joint Sign. of Spatially Weighted Variables	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.09]	[p = 0.00]	[p = 0.00]
Joint Sign. of Own & Spatially Weighted Levinson Index	[p = 0.70]	[p = 0.76]	[p = 0.24]	[p = 0.33]	[p = 0.61]	[p = 0.96]
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: See Table B11.

Table B14. Determinants of Inbound FDI: Sensitivity Analysis (Chemical Sector Employment)

	Model 2: With Spatial Effects					
	Contiguous Weights		BEA Weights		Crone Weights	
Variable	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors	FE w/ Spatial Errors	RE w/ Spatial Errors
ln(Levinson Index)	-0.378*	-0.297***	-0.329*	-0.303***	-0.398*	-0.336***
	(0.106)	(0.132)	(0.093)	(0.148)	(0.105)	(0.138)
ln(Market Proximity)	1.655***	1.478**	1.912**	1.409*	1.072	0.954***
	(0.756)	(0.542)	(0.679)	(0.337)	(0.684)	(0.398)
ln(Population)	-2.240***	0.031	-3.794*	0.011	-1.268	0.532
	(1.017)	(0.67)	(0.895)	(0.428)	(0.949)	(0.488)
Unemployment Rate	0.053	0.057	0.050	0.060	0.056	0.065***
	(0.034)	(0.039)	(0.028)	(0.032)	(0.03)	(0.029)
Unionization Rate	-0.017	-0.020	-0.025	-0.029	-0.021	-0.033
	(0.024)	(0.02)	(0.022)	(0.02)	(0.024)	(0.018)
ln(Wages)	0.974	0.880	0.343	0.079	0.863	0.463
	(1.39)	(1.067)	(1.31)	(0.959)	(1.435)	(0.96)
ln(Highway Mileage)	-1.030	-0.760***	-0.930	-0.646***	-1.169	-0.467
	(0.857)	(0.357)	(0.755)	(0.311)	(0.897)	(0.263)
ln(Land Value)	-0.182	-0.225	-0.109	-0.049	-0.129	-0.186
	(0.205)	(0.157)	(0.195)	(0.14)	(0.176)	(0.126)
ln(Energy Prices)	-0.006	-0.249	0.174	-0.108	0.088	-0.200
	(0.238)	(0.258)	(0.22)	(0.259)	(0.306)	(0.295)
ln(Tax Effort)	0.028	-0.116	0.225	0.129	0.285	0.019
	(0.453)	(0.413)	(0.389)	(0.357)	(0.451)	(0.391)
Spatially Weighted Variables						
ln(Levinson Index)	-0.325	-0.157	-0.293	-0.176	0.127	-0.003
	(0.205)	(0.205)	(0.196)	(0.257)	(0.233)	(0.254)
ln(Market Proximity)	-0.897	-0.917	-0.409	-0.794	-0.263	-0.077
	(0.862)	(0.633)	(0.995)	(0.454)	(1.089)	(0.413)
ln(Population)	0.493	0.521	3.904**	0.889	-0.387	0.120
	(1.423)	(0.718)	(1.245)	(0.477)	(1.787)	(0.523)
Unemployment Rate	-0.025	-0.023	-0.022	-0.017	-0.098**	-0.056
	(0.043)	(0.043)	(0.032)	(0.033)	(0.037)	(0.031)
Unionization Rate	-0.041	-0.036	0.021	-0.041	0.115***	-0.013
	(0.039)	(0.027)	(0.034)	(0.026)	(0.046)	(0.036)
ln(Wages)	-1.837	-1.438	0.433	0.382	3.459***	0.601
	(1.804)	(1.32)	(1.474)	(1.154)	(1.739)	(1.102)
ln(Highway Mileage)	0.348	1.291*	0.543	0.763***	-1.069	0.959
	(0.689)	(0.361)	(0.897)	(0.307)	(0.76)	(0.534)
ln(Land Value)	0.655***	0.509***	-0.099	0.031	-0.279	0.001
	(0.284)	(0.199)	(0.298)	(0.236)	(0.278)	(0.2)
ln(Energy Prices)	0.684***	0.903**	0.864***	0.894	0.829***	1.415*
	(0.32)	(0.299)	(0.4)	(0.486)	(0.421)	(0.396)
ln(Tax Effort)	1.748**	1.420***	-0.231	-0.077	0.460	1.220
	(0.651)	(0.652)	(0.635)	(0.805)	(0.995)	(0.748)
ρ	0.122	0.073	0.128	0.107	0.022	0.072
Joint Sign. of Spatially Weighted Variables	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]	[p = 0.00]
Joint Sign. of Own & Spatially Weighted Levinson Index	[p = 0.00]	[p = 0.05]	[p = 0.00]	[p = 0.12]	[p = 0.00]	[p = 0.02]
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: See Table B11.

Table 1. Determinants of Inbound FDI: Property, Plant, and Equipment (All Manufacturing)

	Model 1: No Spatial Effects		Model 2: With Spatial Effects					
			Contiguous Weights		BEA Weights		Crone Weights	
Variable	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**
ln(Levinson Index)	-0.079	-0.019	-0.082	-0.023	-0.011	0.000	-0.086	-0.023
	(0.081)	(0.088)	(0.079)	(0.084)	(0.069)	(0.083)	(0.071)	(0.083)
ln(Market Proximity)	0.150	0.354	0.335	0.383	0.653	0.516***	0.007	0.166
	(0.486)	(0.281)	(0.533)	(0.38)	(0.429)	(0.286)	(0.477)	(0.29)
ln(Population)	0.473	0.892*	0.158	0.843**	-0.507	0.624**	0.888	1.191*
	(0.712)	(0.3)	(0.749)	(0.395)	(0.663)	(0.318)	(0.763)	(0.306)
Unemployment Rate	-0.003	0.003	-0.002	0.003	-0.001	-0.001	0.001	0.010
	(0.017)	(0.015)	(0.017)	(0.017)	(0.017)	(0.017)	(0.016)	(0.015)
Unionization Rate	-0.024***	-0.019	-0.020	-0.012	-0.028***	-0.024***	-0.024	-0.019
	(0.014)	(0.013)	(0.015)	(0.012)	(0.014)	(0.013)	(0.015)	(0.015)
ln(Wages)	-0.743	-0.440	-0.188	0.380	-1.136	-0.650	-0.679	-0.432
	(0.737)	(0.613)	(0.859)	(0.703)	(0.793)	(0.692)	(0.704)	(0.602)
ln(Highway Mileage)	-0.102	-0.380***	-0.110	-0.466	-0.033	-0.360	-0.369	-0.485**
	(0.694)	(0.218)	(0.733)	(0.35)	(0.573)	(0.313)	(0.65)	(0.208)
ln(Land Value)	-0.144	-0.227	-0.078	-0.184	-0.136	-0.154	-0.051	-0.186
	(0.148)	(0.141)	(0.181)	(0.133)	(0.171)	(0.149)	(0.151)	(0.137)
ln(Energy Prices)	0.160	-0.011	0.097	-0.066	0.213	0.050	0.202	0.036
	(0.203)	(0.197)	(0.204)	(0.199)	(0.208)	(0.195)	(0.193)	(0.177)
ln(Tax Effort)	-0.353	-0.323	-0.384	-0.376	-0.441	-0.283	-0.428	-0.449**
	(0.359)	(0.218)	(0.358)	(0.264)	(0.315)	(0.236)	(0.345)	(0.22)
Spatially Weighted Variables								
ln(Levinson Index)			-0.126	-0.026	-0.094	-0.177	0.181	0.225
			(0.153)	(0.147)	(0.144)	(0.162)	(0.205)	(0.221)
ln(Market Proximity)			-0.151	-0.039	-0.676	-0.061	-0.937	0.444
			(0.71)	(0.492)	(0.522)	(0.361)	(0.786)	(0.363)
ln(Population)			0.074	-0.144	2.695*	0.573	0.936	-0.418
			(1.049)	(0.613)	(0.815)	(0.519)	(1.09)	(0.631)
Unemployment Rate			0.002	-0.002	0.006	0.014	-0.099**	-0.065**
			(0.026)	(0.023)	(0.026)	(0.024)	(0.038)	(0.032)
Unionization Rate			-0.015	-0.012	0.006	-0.017	0.006	-0.006
			(0.027)	(0.023)	(0.03)	(0.021)	(0.047)	(0.039)
ln(Wages)			-2.107***	-2.299**	1.295	1.441	2.204	1.351
			(1.168)	(0.987)	(1.443)	(0.981)	(1.71)	(1.205)
ln(Highway Mileage)			0.558	0.558	1.234***	-0.158	0.493	0.596
			(0.647)	(0.453)	(0.734)	(0.451)	(0.776)	(0.512)
ln(Land Value)			0.278	0.277	-0.331	-0.277	-0.167	-0.178
			(0.24)	(0.192)	(0.293)	(0.172)	(0.276)	(0.235)
ln(Energy Prices)			0.163	0.138	0.202	0.135	0.396	0.492
			(0.391)	(0.411)	(0.299)	(0.308)	(0.294)	(0.354)
ln(Tax Effort)			0.592	0.598	-0.818	0.024	0.172	0.688
			(0.675)	(0.541)	(0.542)	(0.449)	(0.898)	(0.724)
Joint Sign. of Spatially Weighted Variables			[p = 0.34]	[p = 0.04]	[p = 0.17]	[p = 0.00]	[p = 0.04]	[p = 0.02]
Joint Sign. of Own & Spatially Weighted Levinson Index			[p = 0.34]	[p = 0.95]	[p = 0.80]	[p = 0.54]	[p = 0.38]	[p = 0.58]
Breusch-Pagan Test of RE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: All regressions also include time dummies. *** significant at 10%; ** significant at 5%; * significant at 1%.

Table 2. Determinants of Inbound FDI: Property, Plant, and Equipment (Chemical Sector)

	Model 1: No Spatial Effects		Model 2: With Spatial Effects					
			Contiguous Weights		BEA Weights		Crone Weights	
Variable	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**
ln(Levinson Index)	-0.198***	-0.092	-0.199***	-0.071	-0.153	-0.109	-0.222***	-0.090
	(0.108)	(0.117)	(0.105)	(0.126)	(0.12)	(0.123)	(0.116)	(0.122)
ln(Market Proximity)	1.601**	1.460*	1.901***	1.711**	2.491**	2.006*	1.311***	1.207*
	(0.736)	(0.412)	(1.033)	(0.828)	(0.983)	(0.602)	(0.681)	(0.437)
ln(Population)	-0.673	0.350	-1.244	0.269	-3.004***	-0.265	-0.099	0.639
	(1.043)	(0.468)	(1.866)	(0.884)	(1.677)	(0.676)	(1.155)	(0.487)
Unemployment Rate	0.036***	0.045**	0.035	0.052	0.049***	0.061**	0.046**	0.054**
	(0.021)	(0.023)	(0.03)	(0.036)	(0.025)	(0.029)	(0.022)	(0.023)
Unionization Rate	-0.113*	-0.092*	-0.106*	-0.070*	-0.114*	-0.093*	-0.109*	-0.089*
	(0.026)	(0.02)	(0.025)	(0.018)	(0.023)	(0.021)	(0.025)	(0.022)
ln(Wages)	-1.131	0.112	-0.462	1.254	-1.207	-0.278	-0.693	0.375
	(1.4)	(0.946)	(1.754)	(1.194)	(1.559)	(1.146)	(1.347)	(0.988)
ln(Highway Mileage)	-0.768	-0.763**	-0.678	-1.276*	-0.671	-1.004*	-1.151	-0.805**
	(0.925)	(0.327)	(0.963)	(0.347)	(1.054)	(0.309)	(0.945)	(0.349)
ln(Land Value)	-0.422	-0.689*	-0.623***	-0.719**	-0.562***	-0.583**	-0.252	-0.589**
	(0.274)	(0.24)	(0.326)	(0.283)	(0.314)	(0.283)	(0.306)	(0.25)
ln(Energy Prices)	0.000	-0.489	-0.020	-0.593	0.123	-0.307	0.074	-0.325
	(0.449)	(0.368)	(0.462)	(0.405)	(0.422)	(0.369)	(0.457)	(0.388)
ln(Tax Effort)	-0.114	-0.408	-0.107	-0.226	-0.121	-0.089	-0.354	-0.546
	(0.503)	(0.428)	(0.438)	(0.459)	(0.49)	(0.441)	(0.433)	(0.378)
Spatially Weighted Variables								
ln(Levinson Index)			-0.264	-0.121	-0.313	-0.170	0.323	0.361
			(0.238)	(0.248)	(0.26)	(0.289)	(0.319)	(0.344)
ln(Market Proximity)			-0.591	-0.769	-1.470	-1.243***	0.473	0.908
			(1.447)	(0.99)	(1.245)	(0.69)	(1.32)	(0.594)
ln(Population)			0.389	0.399	4.858**	1.749**	-1.489	-0.676
			(2.241)	(1.172)	(2.203)	(0.887)	(1.8)	(0.946)
Unemployment Rate			0.014	-0.026	-0.013	-0.046	-0.085	-0.088
			(0.048)	(0.047)	(0.041)	(0.039)	(0.062)	(0.071)
Unionization Rate			-0.068***	-0.021	-0.029	-0.038	0.055	0.016
			(0.034)	(0.032)	(0.052)	(0.034)	(0.081)	(0.069)
ln(Wages)			-2.536	-3.398**	-0.162	0.902	-1.375	-0.733
			(2.713)	(1.536)	(2.691)	(1.431)	(2.638)	(1.7)
ln(Highway Mileage)			-0.187	1.090***	0.429	0.142	0.501	0.696
			(1.117)	(0.571)	(1.321)	(0.58)	(1.086)	(0.828)
ln(Land Value)			0.825***	0.589***	0.218	0.016	-0.409	-0.435
			(0.465)	(0.349)	(0.509)	(0.293)	(0.337)	(0.294)
ln(Energy Prices)			-0.133	-0.357	0.041	-0.162	-0.42	-0.038
			(0.622)	(0.628)	(0.505)	(0.486)	(0.663)	(0.698)
ln(Tax Effort)			1.043	0.409	-0.718	-0.232	-0.425	-0.265
			(1.001)	(0.893)	(1.015)	(0.688)	(1.16)	(0.938)
Joint Sign. of Spatially Weighted Variables			[p = 0.45]	[p = 0.00]	[p = 0.50]	[p = 0.25]	[p = 0.23]	[p = 0.44]
Joint Sign. of Own & Spatially Weighted Levinson Index			[p = 0.11]	[p = 0.77]	[p = 0.33]	[p = 0.61]	[p = 0.02]	[p = 0.23]
Breusch-Pagan Test of RE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: See Table 1.

Table 3. Determinants of Inbound FDI: Employment (All Manufacturing)

	Model 1: No Spatial Effects		Model 2: With Spatial Effects					
			Contiguous Weights		BEA Weights		Crone Weights	
Variable	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**
ln(Levinson Index)	-0.013	0.035	-0.027	0.014	0.053	0.043	-0.042	0.002
	(0.109)	(0.117)	(0.091)	(0.096)	(0.092)	(0.102)	(0.105)	(0.108)
ln(Market Proximity)	0.342	0.518**	0.553	0.267	1.013*	0.562**	0.366	0.367
	(0.372)	(0.261)	(0.393)	(0.317)	(0.295)	(0.252)	(0.364)	(0.25)
ln(Population)	-0.040	0.693***	-0.821	0.781***	-1.557**	0.464	-0.083	0.845**
	(0.74)	(0.372)	(0.834)	(0.419)	(0.676)	(0.355)	(0.739)	(0.342)
Unemployment Rate	-0.002	0.000	0.014	0.006	0.006	-0.005	-0.001	0.000
	(0.015)	(0.014)	(0.018)	(0.017)	(0.016)	(0.017)	(0.016)	(0.016)
Unionization Rate	0.007	0.006	0.010	0.006	0.003	0.000	0.003	0.002
	(0.012)	(0.011)	(0.011)	(0.01)	(0.011)	(0.01)	(0.012)	(0.011)
ln(Wages)	-0.842	-1.092***	-0.184	-0.158	-0.922	-1.080***	-0.888	-1.262**
	(0.782)	(0.576)	(0.804)	(0.671)	(0.67)	(0.635)	(0.695)	(0.56)
ln(Highway Mileage)	-0.097	-0.283	0.038	-0.103	0.085	-0.119	-0.209	-0.269
	(0.619)	(0.227)	(0.654)	(0.355)	(0.51)	(0.325)	(0.596)	(0.219)
ln(Land Value)	-0.163	-0.104	0.017	0.045	-0.068	0.000	-0.039	-0.005
	(0.103)	(0.1)	(0.18)	(0.129)	(0.147)	(0.138)	(0.137)	(0.119)
ln(Energy Prices)	-0.093	-0.184	-0.096	-0.184	-0.059	-0.146	-0.002	-0.111
	(0.19)	(0.192)	(0.198)	(0.192)	(0.209)	(0.193)	(0.194)	(0.183)
ln(Tax Effort)	-0.001	0.102	-0.051	-0.113	-0.093	0.063	0.007	-0.063
	(0.311)	(0.232)	(0.312)	(0.232)	(0.256)	(0.224)	(0.285)	(0.227)
Spatially Weighted Variables								
ln(Levinson Index)			0.039	0.143	-0.023	-0.161	0.201	0.214
			(0.13)	(0.147)	(0.116)	(0.147)	(0.174)	(0.172)
ln(Market Proximity)			0.360	0.553	-0.788***	0.192	0.569	0.407
			(0.527)	(0.358)	(0.441)	(0.259)	(0.752)	(0.327)
ln(Population)			0.478	-0.418	3.441*	0.237	0.210	-0.491
			(1.08)	(0.471)	(0.902)	(0.332)	(0.866)	(0.487)
Unemployment Rate			-0.027	-0.021	-0.012	0.007	-0.028	-0.029
			(0.024)	(0.023)	(0.021)	(0.022)	(0.04)	(0.032)
Unionization Rate			-0.002	0.003	0.021	0.009	0.046	0.040
			(0.022)	(0.018)	(0.024)	(0.019)	(0.04)	(0.029)
ln(Wages)			-1.800**	-1.589***	0.258	0.638	1.573***	1.069
			(0.875)	(0.836)	(1.067)	(0.986)	(0.895)	(0.79)
ln(Highway Mileage)			0.017	0.085	1.263***	-0.215	0.354	0.443
			(0.516)	(0.366)	(0.729)	(0.339)	(0.765)	(0.28)
ln(Land Value)			0.069	-0.030	-0.271	-0.226	-0.278	-0.174
			(0.198)	(0.163)	(0.179)	(0.175)	(0.227)	(0.17)
ln(Energy Prices)			-0.070	-0.077	-0.214	-0.240	-0.321	-0.413
			(0.264)	(0.261)	(0.296)	(0.285)	(0.282)	(0.323)
ln(Tax Effort)			0.888	0.860**	-0.556	0.328	0.495	0.639
			(0.546)	(0.436)	(0.459)	(0.422)	(0.761)	(0.651)
Joint Sign. of Spatially Weighted Variables			[p = 0.04]	[p = 0.03]	[p = 0.02]	[p = 0.00]	[p = 0.29]	[p = 0.00]
Joint Sign. of Own & Spatially Weighted Levinson Index			[p = 0.87]	[p = 0.61]	[p = 0.71]	[p = 0.40]	[p = 0.50]	[p = 0.46]
Breusch-Pagan Test of RE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: See Table 1.

Table 4. Determinants of Inbound FDI: Employment (Chemical Sector)

	Model 1: No Spatial Effects		Model 2: With Spatial Effects					
			Contiguous Weights		BEA Weights		Crone Weights	
Variable	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**
ln(Levinson Index)	-0.397*	-0.335**	-0.386*	-0.314**	-0.291*	-0.342*	-0.379*	-0.332**
	(0.122)	(0.144)	(0.111)	(0.137)	(0.094)	(0.131)	(0.11)	(0.139)
ln(Market Proximity)	1.101	1.054**	1.684**	1.496**	1.920**	1.394*	1.126	1.072**
	(0.702)	(0.451)	(0.807)	(0.585)	(0.744)	(0.479)	(0.701)	(0.492)
ln(Population)	-1.181	0.373	-2.170**	0.032	-3.623*	0.004	-1.397	0.371
	(0.85)	(0.585)	(1.027)	(0.724)	(0.912)	(0.622)	(0.952)	(0.652)
Unemployment Rate	0.057***	0.061**	0.064***	0.063***	0.061**	0.064**	0.059***	0.071**
	(0.032)	(0.028)	(0.035)	(0.038)	(0.029)	(0.031)	(0.03)	(0.029)
Unionization Rate	-0.028	-0.030	-0.021	-0.021	-0.031	-0.029	-0.016	-0.028
	(0.026)	(0.021)	(0.025)	(0.019)	(0.022)	(0.022)	(0.023)	(0.021)
ln(Wages)	0.600	0.518	1.208	0.903	0.211	-0.237	0.679	0.415
	(1.496)	(1.059)	(1.455)	(1.088)	(1.286)	(1.037)	(1.462)	(1.122)
ln(Highway Mileage)	-1.072	-0.479	-1.142	-0.842**	-0.957	-0.757***	-1.164	-0.498
	(0.925)	(0.33)	(0.926)	(0.378)	(0.742)	(0.418)	(0.931)	(0.342)
ln(Land Value)	-0.223	-0.312**	-0.237	-0.257***	-0.217	-0.276***	-0.176	-0.285**
	(0.179)	(0.128)	(0.222)	(0.139)	(0.188)	(0.16)	(0.179)	(0.126)
ln(Energy Prices)	-0.053	-0.331	-0.180	-0.391	0.029	-0.227	-0.019	-0.300
	(0.304)	(0.296)	(0.275)	(0.277)	(0.236)	(0.282)	(0.318)	(0.307)
ln(Tax Effort)	0.134	-0.097	0.111	-0.031	0.101	0.055	0.084	-0.226
	(0.429)	(0.396)	(0.455)	(0.412)	(0.39)	(0.386)	(0.439)	(0.386)
Spatially Weighted Variables								
ln(Levinson Index)			-0.343	-0.144	-0.273	-0.427	0.270	0.122
			(0.218)	(0.21)	(0.186)	(0.262)	(0.242)	(0.279)
ln(Market Proximity)			-0.951	-0.875	-0.550	-0.388	0.439	0.406
			(0.92)	(0.629)	(0.979)	(0.643)	(1.138)	(0.375)
ln(Population)			0.843	0.553	5.137*	0.686	-1.174	-0.461
			(1.529)	(0.723)	(1.164)	(0.646)	(1.774)	(0.583)
Unemployment Rate			-0.018	-0.027	0.014	0.014	-0.085	-0.032
			(0.046)	(0.047)	(0.034)	(0.033)	(0.052)	(0.051)
Unionization Rate			-0.047	-0.023	-0.005	-0.006	0.148**	0.046
			(0.041)	(0.03)	(0.04)	(0.027)	(0.057)	(0.046)
ln(Wages)			-2.313	-1.853	0.466	0.657	1.100	0.188
			(2.109)	(1.398)	(1.461)	(1.23)	(2.022)	(1.395)
ln(Highway Mileage)			0.481	1.029*	0.742	0.415	-0.936	0.583
			(0.781)	(0.393)	(0.869)	(0.362)	(0.76)	(0.551)
ln(Land Value)			0.609***	0.396***	-0.362	-0.133	-0.317	-0.380***
			(0.323)	(0.207)	(0.335)	(0.255)	(0.302)	(0.226)
ln(Energy Prices)			0.303	0.095	0.175	0.033	0.079	0.236
			(0.388)	(0.397)	(0.395)	(0.471)	(0.484)	(0.487)
ln(Tax Effort)			1.174	0.753	-1.492**	-1.205	-0.553	-0.87
			(0.78)	(0.748)	(0.618)	(0.797)	(1.09)	(0.793)
Joint Sign. of Spatially Weighted Variables			[p = 0.04]	[p = 0.03]	[p = 0.00]	[p = 0.01]	[p = 0.10]	[p = 0.27]
Joint Sign. of Own & Spatially Weighted Levinson Index			[p = 0.00]	[p = 0.06]	[p = 0.01]	[p = 0.03]	[p = 0.00]	[p = 0.06]
Breusch-Pagan Test of RE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	
Hausman Test: RE vs. FE	[p = 0.00]		[p = 0.00]		[p = 0.00]		[p = 0.00]	

NOTES: See Table 1.

Table 5. Baseline Results: Summary

	Model 2: Fixed Effects with Spatial Effects												
	PP&E: All Manufacturing			PP&E: Chemical Sector			Employment: All Manufacturing			Employment: Chemical Sector			Theoretical
Variable	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Prediction**
ln(Levinson Index)				-		-				-	-	-	-
ln(Market Proximity)				+	+	+		+		+	+		+
ln(Population)					-			-		-	-		+
Unemployment Rate					+	+				+	+	+	+
Unionization Rate		-		-	-	-							-
ln(Wages)													-
ln(Highway Mileage)													-
ln(Land Value)				-	-								-
ln(Energy Prices)													-
ln(Tax Effort)													-
Spatially Weighted Variables													
ln(Levinson Index)													+
ln(Market Proximity)								-					+
ln(Population)		+			+			+			+		+
Unemployment Rate			-										-
Unionization Rate				-								+	+
ln(Wages)	-						-		+				+
ln(Highway Mileage)		+						+					+
ln(Land Value)				+						+			+
ln(Energy Prices)													+
ln(Tax Effort)											-		+

NOTES: '+' ('-') indicates a positive (negative) and statistically significant estimate at at least the 10% significance level; empty cells denote a statistically insignificant results. Gray indicates results consistent with the theoretical prediction. All results are taken from the appropriate fixed effects model. See text for further details.

Table 6. Impact of Own and Spatially Weighted Levinson Index on FDI : Sensitivity Analysis (PP&E)

	Model 1: No Spatial Effects		Model 2: With Spatial Effects					
			Contiguous Weights		BEA Weights		Crone Weights	
Variable	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**
All Manufacturing								
Own elasticity evaluated at:								
Mean	-0.062	-0.008	-0.082	-0.033	-0.039	0.001	-0.086	-0.014
	(0.083)	(0.083)	(0.088)	(0.086)	(0.086)	(0.088)	(0.094)	(0.095)
Quartile 1	-0.239	-0.196	-0.258	-0.212	-0.225	-0.183	-0.285	-0.202
	(0.186)	(0.214)	(0.2)	(0.298)	(0.209)	(0.154)	(0.18)	(0.268)
Quartile 2	-0.079	-0.027	-0.098	-0.042	-0.066	-0.041	-0.091	-0.034
	(0.181)	(0.237)	(0.145)	(0.297)	(0.254)	(0.206)	(0.226)	(0.168)
Quartile 3	0.104	0.154	0.062	0.108	0.101	0.139	0.093	0.146
	(0.237)	(0.206)	(0.239)	(0.293)	(0.216)	(0.188)	(0.167)	(0.245)
Neighboring elasticity evaluated at:								
Mean			0.003	0.115	0.189**	0.163**	0.200***	0.291**
			(0.103)	(0.102)	(0.096)	(0.098)	(0.118)	(0.117)
Quartile 1			-0.251	-0.108	-0.188**	-0.174	-0.037	0.084
			(0.161)	(0.202)	(0.092)	(0.149)	(0.219)	(0.124)
Quartile 2			0.014	0.096	0.089	0.081	0.240	0.317**
			(0.142)	(0.143)	(0.15)	(0.183)	(0.201)	(0.125)
Quartile 3			0.288***	0.397	0.520*	0.559*	0.481**	0.526*
			(0.171)	(0.251)	(0.139)	(0.17)	(0.187)	(0.144)
Chemical Sector								
Own elasticity evaluated at:								
Mean	-0.058	0.005	-0.136	0.045	-0.014	0.209	0.014	-0.202
	(0.142)	(0.164)	(0.128)	(0.331)	(0.135)	(0.302)	(0.136)	(0.348)
Quartile 1	-0.279	-0.174	-0.396***	-0.536	-0.255	-0.233	-0.221	-0.814
	(0.251)	(0.694)	(0.225)	(1.013)	(0.273)	(0.623)	(0.334)	(0.785)
Quartile 2	-0.064	0.030	-0.145	0.072	0.012	0.252	0.023	-0.184
	(0.205)	(0.302)	(0.366)	(0.626)	(0.302)	(1.091)	(0.458)	(0.726)
Quartile 3	0.185	0.196	0.136	0.689	0.213	0.684	0.215	0.492
	(0.486)	(0.562)	(0.227)	(0.681)	(0.361)	(0.777)	(0.28)	(0.675)
Neighboring elasticity evaluated at:								
Mean			-0.114	-0.144	0.104	0.446	0.161	0.381
			(0.155)	(0.402)	(0.143)	(0.327)	(0.146)	(0.414)
Quartile 1			-0.660***	-1.156**	-0.569**	-0.643	-0.455	-0.615
			(0.343)	(0.566)	(0.269)	(0.402)	(0.244)	(0.641)
Quartile 2			-0.046	-0.190	0.108	0.174	0.146	0.351
			(0.414)	(0.689)	(0.198)	(0.404)	(0.157)	(0.641)
Quartile 3			0.448	0.580	0.744***	1.546*	0.746***	1.507**
			(0.429)	(0.702)	(0.392)	(0.469)	(0.382)	(0.716)

NOTES: Each model excluding the spatially weighted variables includes the controls from Table 1 plus a quadratic term for ln(Levinson Index) and the complete set of interactions between ln(Levinson Index) and the controls reported in Table 1. Each model including the spatially weighted variables adds the controls from Table 1 plus a quadratic term for the spatially weighted ln(Levinson Index) and the complete set of interactions between the spatially weighted ln(Levinson Index) and the spatially weighted controls reported in Table 1. Standard errors obtained via the delta method. See Table 1 for further details.

Table 7. Impact of Own and Spatially Weighted Levinson Index on FDI : Sensitivity Analysis (Employment)

	Model 1: No Spatial Effects		Model 2: With Spatial Effects					
			Contiguous Weights		BEA Weights		Crone Weights	
Variable	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**	**FE**	**RE**
All Manufacturing								
Own elasticity evaluated at:								
Mean	-0.100	-0.058	-0.139***	-0.097	-0.058	-0.031	-0.149	-0.084
	(0.067)	(0.064)	(0.075)	(0.071)	(0.067)	(0.07)	(0.07)	(0.071)
Quartile 1	-0.262	-0.225	-0.304**	-0.276	-0.207	-0.202	-0.292	-0.225
	(0.264)	(0.237)	(0.152)	(0.195)	(0.168)	(0.155)	(0.276)	(0.155)
Quartile 2	-0.139	-0.101	-0.167	-0.127	-0.113	-0.082	-0.173	-0.122
	(0.32)	(0.171)	(0.157)	(0.242)	(0.165)	(0.195)	(0.197)	(0.201)
Quartile 3	0.018	0.061	-0.005	0.044	0.050	0.083	-0.030	0.016
	(0.206)	(0.146)	(0.225)	(0.132)	(0.271)	(0.316)	(0.21)	(0.226)
Neighboring elasticity evaluated at:								
Mean			0.057	0.148	0.111	0.111	0.254**	0.381*
			(0.102)	(0.095)	(0.081)	(0.089)	(0.102)	(0.106)
Quartile 1			-0.147	-0.064	-0.183	-0.200	-0.183	-0.016
			(0.245)	(0.178)	(0.114)	(0.123)	(0.16)	(0.21)
Quartile 2			0.050	0.149	0.041	0.096	0.298**	0.386*
			(0.136)	(0.172)	(0.131)	(0.304)	(0.12)	(0.129)
Quartile 3			0.294	0.384**	0.482**	0.428*	0.784*	0.841*
			(0.181)	(0.156)	(0.229)	(0.16)	(0.132)	(0.152)
Chemical Sector								
Own elasticity evaluated at:								
Mean	-0.293**	-0.258***	-0.267**	-0.076	-0.192***	-0.129	-0.180	-0.430
	(0.131)	(0.144)	(0.122)	(0.209)	(0.11)	(0.206)	(0.104)	(0.206)
Quartile 1	-0.513	-0.497	-0.486	-0.395	-0.344***	-0.499	-0.421	-0.868
	(0.344)	(0.369)	(0.306)	(0.558)	(0.195)	(0.468)	(0.249)	(1.02)
Quartile 2	-0.292	-0.273	-0.284	-0.093	-0.205	-0.040	-0.188	-0.428
	(0.326)	(0.628)	(0.256)	(0.642)	(0.27)	(0.492)	(0.24)	(0.488)
Quartile 3	-0.091	-0.039	-0.081	0.246	-0.053	0.280	0.037	-0.037
	(0.485)	(0.414)	(0.376)	(0.477)	(0.208)	(0.401)	(0.2)	(0.431)
Neighboring elasticity evaluated at:								
Mean			-0.247***	-0.314	0.147	0.566**	0.003	-0.068
			(0.132)	(0.254)	(0.116)	(0.227)	(0.12)	(0.258)
Quartile 1			-0.855*	-1.204**	-0.330	-0.463	-0.975	-1.159
			(0.16)	(0.531)	(0.201)	(0.369)	(0.131)	(0.453)
Quartile 2			-0.185	-0.243	0.114	0.176	0.048	-0.251
			(0.401)	(0.369)	(0.146)	(0.305)	(0.128)	(0.448)
Quartile 3			0.306	0.677	0.528*	1.484*	0.896*	1.209*
			(0.362)	(0.513)	(0.182)	(0.402)	(0.152)	(0.272)

NOTES: See Table 6.

Table 8. Sensitivity Analysis Results (Land Area): Summary

	Model 2: Random Effects with Spatial Effects												
	PP&E: All Manufacturing			PP&E: Chemical Sector			Employment: All Manufacturing			Employment: Chemical Sector			Theoretical
Variable	Contiguous	BEA	Crone	Contiguous	BEA	Crone	Contiguous	BEA	Crone	Contiguous	BEA	Crone	Prediction
ln(Levinson Index)										-	-	-	-
ln(Market Proximity)				+	+	+		+		+	+	+	+
ln(Population)	+	+	+				+	+	+				+
Unemployment Rate					+	+					+	+	+
Unionization Rate		-		-	-	-							-
ln(Wages)									-				-
ln(Highway Mileage)				-	-	-							-
ln(Land Value)				-	-	-				-	-	-	-
ln(Energy Prices)													-
ln(Tax Effort)			-										-
ln(Area)								-					+
Spatially Weighted Variables													
ln(Levinson Index)													+
ln(Market Proximity)													+
ln(Population)													+
Unemployment Rate			-										-
Unionization Rate													+
ln(Wages)	-												+
ln(Highway Mileage)	+									+			+
ln(Land Value)										+			+
ln(Energy Prices)													+
ln(Tax Effort)													+
ln(Area)	-			+	+						+		-

NOTES: '+' ('-') indicates a positive (negative) and statistically significant estimate at at least the 10% significance level; empty cells denote a statistically insignificant results. Gray indicates results consistent with the theoretical prediction. All results are taken from the appropriate fixed effects model. See text for further details.

Table 9. Sensitivity Analysis Results (Time Trends): Summary

	Model 2: Fixed Effects with Spatial Effects												
	PP&E: All Manufacturing			PP&E: Chemical Sector			Employment: All Manufacturing			Employment: Chemical Sector			Theoretical
Variable	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Prediction**
ln(Levinson Index)			-	-	-	-				-	-	-	-
ln(Market Proximity)		+		+	+			+		+	+		+
ln(Population)					-			-		-	-		+
Unemployment Rate					+	+				+	+	+	+
Unionization Rate				-	-	-							-
ln(Wages)		-						-	-				-
ln(Highway Mileage)				-									-
ln(Land Value)				-									-
ln(Energy Prices)													-
ln(Tax Effort)													-
Spatially Weighted Variables													
ln(Levinson Index)		-			-					-	-		+
ln(Market Proximity)													+
ln(Population)		+			+			+			+		+
Unemployment Rate												-	-
Unionization Rate				-				+	+			+	+
ln(Wages)	-						-					+	+
ln(Highway Mileage)		+						+					+
ln(Land Value)	+			+						+			+
ln(Energy Prices)	+	+	+		+	+				+	+	+	+
ln(Tax Effort)				+			+			+			+

NOTES: '+' ('-') indicates a positive (negative) and statistically significant estimate at at least the 10% significance level; empty cells denote a statistically insignificant results. Gray indicates results consistent with the theoretical prediction. All results are taken from the appropriate fixed effects model. See text for further details.

Table 10. Sensitivity Analysis Results (Spatial Error Correlation): Summary

	Model 2: Fixed Effects with Spatial Effects												
	PP&E: All Manufacturing			PP&E: Chemical Sector			Employment: All Manufacturing			Employment: Chemical Sector			Theoretical
Variable	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Prediction**
ln(Levinson Index)										-	-	-	-
ln(Market Proximity)					+			+		+	+		+
ln(Population)								-		-	-		+
Unemployment Rate					+	+							+
Unionization Rate				-	-	-							-
ln(Wages)													-
ln(Highway Mileage)													-
ln(Land Value)													-
ln(Energy Prices)													-
ln(Tax Effort)													-
Spatially Weighted Variables													
ln(Levinson Index)													+
ln(Market Proximity)													+
ln(Population)		+			+			+			+		+
Unemployment Rate			-										-
Unionization Rate												+	+
ln(Wages)							-						+
ln(Highway Mileage)													+
ln(Land Value)													+
ln(Energy Prices)													+
ln(Tax Effort)											-		+

NOTES: '+' ('-') indicates a positive (negative) and statistically significant estimate at at least the 10% significance level; empty cells denote a statistically insignificant results. Gray indicates results consistent with the theoretical prediction. All results are taken from the appropriate fixed effects model. See text for further details.

Table 11. Sensitivity Analysis Results (Spatial Error Correlation with Time Trends): Summary

	Model 2: Fixed Effects with Spatial Effects												
	PP&E: All Manufacturing			PP&E: Chemical Sector			Employment: All Manufacturing			Employment: Chemical Sector			Theoretical
Variable	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Contiguous**	**BEA**	**Crone**	**Prediction**
ln(Levinson Index)				-		-				-	-	-	-
ln(Market Proximity)					+			+		+	+		+
ln(Population)								-		-	-		+
Unemployment Rate					+	+							+
Unionization Rate				-	-	-							-
ln(Wages)													-
ln(Highway Mileage)													-
ln(Land Value)													-
ln(Energy Prices)													-
ln(Tax Effort)													-
Spatially Weighted Variables													
ln(Levinson Index)				-	-								+
ln(Market Proximity)													+
ln(Population)	+							+			+		+
Unemployment Rate												-	-
Unionization Rate				-				+	+			+	+
ln(Wages)							-					+	+
ln(Highway Mileage)	+												+
ln(Land Value)				+						+			+
ln(Energy Prices)	+	+			+	+				+	+	+	+
ln(Tax Effort)				+			+						+

NOTES: '+' ('-') indicates a positive (negative) and statistically significant estimate at at least the 10% significance level; empty cells denote a statistically insignificant results. Gray indicates results consistent with the theoretical prediction. All results are taken from the appropriate fixed effects model. See text for further details.