## Appendix for Online Publication Only



|  | Diff |
| :---: | :--- |
| $--\diamond-$ Less Labour Intensive | $\vdash---+$ |
| $\square$ | LB/UB |
|  | More Labour Intensive |



Figure IA1: Paydex Score Dynamics-Labor Heterogeneity: We test the dynamics of the differential effect of the federal minimum wage on the Paydex score for establishments located in bounded versus unbounded states based on an establishment's labor utilization heterogeneity. These figures plot the regression coefficients of Equation 3 with a $95 \%$ confidence interval, where we interact the equation with each median group. The solid line with circles plots the regression coefficients for more labor-intensive establishments (or establishments with high labor costs), while the dashed line with diamonds plots the coefficient for less labor-intensive (or lower-laborcost) establishments. The bold dashed line indicates the period immediately before the federal minimum wage change.


Figure IA2: Paydex Score-Labor Group: We test the differential effect of the federal minimum wage on the Paydex score for establishments located in bounded versus unbounded states based on an establishment's labor groups. The figure plots the regression coefficients of Equation 1 with a $95 \%$ confidence interval, where we interact the equation with each labor group based on the number of employees one year before the federal minimum wage change.

Table IA1: State-level Determinants of Minimum Wage Bound

This table presents the results of regressions estimating the effect of various state-level economic and political conditions on state's decision of keeping their minimum wage at the federal level. All regressions are with state and year fixed effects. Standard errors are in brackets and are clustered at the state level. ${ }^{*} p<0.10,{ }^{* *} p<0.05$, ${ }^{* * *} p<0.01$.

| Dependent Variable: | Bound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
|  | State-Economic Conditions |  |  | Political Conditions |  |  |
| $\log (\mathrm{GSP})_{s, t-1}$ | -0.06 |  | 0.19 |  |  | 0.28 |
|  | [0.27] |  | [0.31] |  |  | [0.30] |
| GSP Growth ${ }_{s, t-1}$ | $\begin{aligned} & 0.78^{*} \\ & {[0.45]} \end{aligned}$ |  | $\begin{gathered} 0.31 \\ {[0.33]} \end{gathered}$ |  |  | $\begin{gathered} 0.35 \\ {[0.33]} \end{gathered}$ |
| $\log (\text { Population })_{s, t-1}$ |  | $\begin{aligned} & -0.29 \\ & {[0.31]} \end{aligned}$ | $\begin{aligned} & -0.46 \\ & {[0.37]} \end{aligned}$ |  |  | $\begin{gathered} -0.65^{* *} \\ {[0.32]} \end{gathered}$ |
| Population Growth $_{s, t-1}$ |  | $\begin{gathered} 4.05 \\ {[2.83]} \end{gathered}$ | $\begin{gathered} 3.00 \\ {[2.69]} \end{gathered}$ |  |  | $\begin{gathered} 1.99 \\ {[2.56]} \end{gathered}$ |
| Democratic Governor ${ }_{s, t}$ |  |  |  | $\begin{gathered} -0.08^{* *} \\ {[0.03]} \end{gathered}$ |  | $\begin{gathered} -0.06^{*} \\ {[0.04]} \end{gathered}$ |
| Democratic House ${ }_{s, t}$ |  |  |  |  | $\begin{gathered} 0.03 \\ {[0.04]} \end{gathered}$ | $\begin{gathered} 0.02 \\ {[0.05]} \end{gathered}$ |
| Democratic Senate ${ }_{s, t}$ |  |  |  |  | $\begin{gathered} -0.13^{* * *} \\ {[0.05]} \end{gathered}$ | $\begin{gathered} -0.14^{* * *} \\ {[0.04]} \end{gathered}$ |
| Democratic Both $_{s, t}$ |  |  |  |  | $\begin{gathered} -0.09^{* *} \\ {[0.04]} \end{gathered}$ | $\begin{aligned} & -0.04 \\ & {[0.05]} \end{aligned}$ |
| State Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Adjusted-R ${ }^{2}$ | 0.59 | 0.59 | 0.59 | 0.59 | 0.60 | 0.61 |
| No. of States | 51 | 51 | 51 | 51 | 51 | 51 |
| Observations | 1,275 | 1,275 | 1,275 | 1,275 | 1,275 | 1,275 |

Table IA2: Robustness Tests: Unbounded States

In this table, we report results for various robustness tests of our baseline specification, i.e., Column (6) of Table 2. In Column (1), we omit establishments located in those state-years where bounded states have increased their minimum wage more than the federal minimum wage increase. In Column (2), we omit establishments located in those state-years where unbounded states have increased their minimum wage in response to the federal minimum wage increase. In Column (3), we drop both types of establishment-years. In our baseline specification, we lump all the unbounded states together. In Column (4), we test differential effect of the federal minimum wage on Paydex scores for businesses located in unbounded states based on the difference between the state minimum wage and the federal minimum wage $(\Delta) . \mathbb{1}_{\Delta \leq \$ 1}$ is a dummy variable that identifies the state-year observation where $\Delta \leq \$ 1$. Similarly, we define all other $\mathbb{1}_{\Delta}$ dummies. Standard errors are in brackets and are clustered at the state level. ${ }^{*} p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$.

| Dependent Variable: | Average Paydex Score |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (1) <br> Drop Bound $\Delta M W(S)_{t}$ | (2) <br> Drop Unbound $\Delta M W(S)_{t}$ | (3) <br> Drop Both $\Delta M W(S)_{t}$ | (4) <br> Diff with $M W(F)_{t}$ |
| Bound ${ }_{s, t-1}$ | $-0.82^{* * *}$ | -0.60 ** | $-0.67^{* *}$ |  |
| $\times \Delta M W(F)_{t}$ | [0.25] | [0.23] | [0.23] |  |
| Bound $_{s, t-1}$ | $\begin{aligned} & -0.07 \\ & {[0.14]} \end{aligned}$ | $\begin{aligned} & -0.20 \\ & {[0.18]} \end{aligned}$ | $\begin{aligned} & -0.23 \\ & {[0.18]} \end{aligned}$ |  |
| $\begin{aligned} & \text { Unbound }_{s, t-1} \\ & \quad \times \Delta M W(F)_{t} \times \mathbb{1}_{\Delta<\$ 1} \end{aligned}$ |  |  |  | $\begin{aligned} & 0.58^{* *} \\ & {[0.27]} \end{aligned}$ |
| $\begin{aligned} & \text { Unbound }_{s, t-1} \\ & \quad \times \Delta M W(F)_{t} \times \mathbb{1}_{\$ 1<\Delta \leq \$ 1.5} \end{aligned}$ |  |  |  | $\begin{aligned} & 0.58^{* *} \\ & {[0.26]} \end{aligned}$ |
| $\begin{aligned} & \text { Unbound }_{s, t-1} \\ & \quad \times \Delta M W(F)_{t} \times \mathbb{1}_{\Delta \geq \$ 1.5} \end{aligned}$ |  |  |  | $\begin{gathered} 0.19 \\ {[0.34]} \end{gathered}$ |
| Establishment Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Establishment Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Unbound $\times$ Group |  |  |  | $\checkmark$ |
| Adjusted $\mathrm{R}^{2}$ | 0.62 | 0.63 | 0.63 | 0.62 |
| Observations | 30,637,205 | 27,939,819 | 27,554,105 | 31,031,426 |
| $\mathbb{1}_{\Delta<\$ 1}-\mathbb{1}_{\$ 1<\Delta \leq \$ 1.5}$ |  |  |  | 0.01 |
| p-value |  |  |  | 0.99 |
| $\mathbb{1}_{\Delta<\$ 1}-\mathbb{1}_{\Delta \geq \$ 1.5}$ |  |  |  | 0.38 |
| p -value |  |  |  | 0.36 |

## Table IA3: Nearest-Neighbor Matching: Matching Balance

This table reports the matching balance for different matching methods. In Table 5, we report the regression results based on the matched sample. First, we use the credit score in the year 2006 and exactly match establishments in the bounded states (treatment group) with the possible set of control establishments within the same NAICS4 industry donor group in the unbounded states (control group). Next, for the exactly matched control sample, we compute the Euclidean distance between treatment and control samples based on establishment-, state-, county-, and ZIP code-level observable characteristics. Panel A reports the matching balance in year 2006 for establishment-level characteristics, i.e., credit score, sales, employees, employee-to-sales ratio, and sales growth. Panel B reports the matching balance where we exactly match the credit score and use establishment's sales, employees, employee-to-sales and sales growth, and we match state-level economic conditions by including both the level and growth in GSP and population. We use the first nearest neighbor establishment as the control firm. In Panel C, we match on state-level political conditions i.e., we match for partisan at the state-level. In Panel D, at county level we match on unemployment rate, labor force, and changes in unemployment rate. In Panels E, F and G, at ZIP code-level, we match for aggregate sales growth, personal income (lagged level and growth) and house price (lagged level and growth). In Panel H, we report the matching balance when we include all establishment-, state-, county-, and ZIP code-level observable characteristics. The reported $t$-stats are based on state-level clustered adjusted standard errors.

Panel A: Matching Balance, Establishment Characteristics (Table 5, Column 1)

|  |  | Before Matching |  |  |  | After Matching |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bounded | Unbounded | Diff | t-stat | Bounded | Unbounded | Diff | t-stat |  |  |
|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ | $(7)$ | $(8)$ |  |  |
| Observations | $1,099,028$ | $1,427,678$ |  |  | 869,428 | 869,428 |  |  |  |  |
| Average Paydex Score | $i, t$ | 70.51 | 71.39 | -0.88 | -1.1 | 70.72 | 70.72 | 0.00 |  |  |
| Sales $_{i, t}$ | 1.19 | 1.24 | -0.048 | -0.5 | 1.35 | 1.28 | 0.07 | 0.75 |  |  |
| Employees $_{i, t}$ | 9.71 | 9.57 | 0.15 | 0.25 | 10.62 | 10.17 | 0.45 | 0.77 |  |  |
| Employees-Sales $_{i, t}$ | 17.1 | 16.1 | 1.02 | 3.75 | 16.5 | 15.4 | 1.0 | 2.5 |  |  |
| Sales Growth $_{i, t}$ | 0.030 | 0.028 | 0.002 | 0.56 | 0.036 | 0.036 | 0.000 | -0.05 |  |  |

## Panel B: Matching Balance, State Economic Conditions (Table 5, Column 2)

|  | Before Matching |  |  |  | After Matching |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bounded | Unbounded | Diff | t-stat | Bounded | Unbounded | Diff | t-stat |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Observations | 1,099,028 | 1,427,678 |  |  | 869,428 | 869,428 |  |  |
| Average Paydex Score $_{i, t}$ | 70.51 | 71.39 | -0.88 | -1.1 | 70.72 | 70.72 | 0.00 | 0.00 |
| Sales ${ }_{i, t}$ | 1.19 | 1.24 | -0.048 | -0.5 | 1.35 | 1.19 | 0.16 | 1.89 |
| Employees $_{i, t}$ | 9.71 | 9.57 | 0.15 | 0.25 | 10.60 | 9.47 | 1.13 | 2.26 |
| Employees-Sales ${ }_{i, t}$ | 17.1 | 16.1 | 1.02 | 3.75 | 16.5 | 15.3 | 1.2 | 5.2 |
| Sales Growth ${ }_{i, t}$ | 0.030 | 0.028 | 0.002 | 0.56 | 0.022 | 0.019 | 0.003 | 0.9 |
| $\log (\mathrm{GSP})_{s, t}$ | 12.54 | 13.08 | -0.54 | -1.59 | 12.5 | 12.6 | -0.08 | -0.28 |
| GSP Growth ${ }_{s, t}$ | -0.01 | 0.11 | -0.11 | -2.21 | 0.05 | 0.07 | -0.02 | -1.74 |
| Log(Population) ${ }_{s, t}$ | 15.75 | 16.20 | -0.45 | -1.35 | 15.72 | 15.71 | 0.01 | 0.05 |
| Population Growth $_{s, t}$ | 0.012 | 0.009 | 0.004 | 0.80 | 0.012 | 0.012 | 0.000 | 0.1 |

## Panel C: Matching Balance, State Political Conditions (Table 5, Column 3)

|  |  | Before Matching |  |  |  |  | After Matching |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bounded | Unbounded | Diff | t-stat | Bounded | Unbounded | Diff | t-stat |  |  |
|  |  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ | $(7)$ | $(8)$ |  |
| Observations | $1,099,028$ | $1,427,678$ |  |  | 869,428 | 869,428 |  |  |  |  |
| Average Paydex Score $_{i, t}$ | 70.51 | 71.39 | -0.88 | -1.1 | 70.72 | 70.72 | 0.00 | 0.00 |  |  |
| Sales $_{i, t}$ | 1.19 | 1.24 | -0.048 | -0.5 | 1.35 | 1.18 | 0.17 | 3.22 |  |  |
| Employees $_{i, t}$ | 9.71 | 9.57 | 0.15 | 0.25 | 10.60 | 9.50 | 1.10 | 2.89 |  |  |
| Employees-Sales $_{i, t}$ | 17.1 | 16.1 | 1.02 | 3.75 | 16.5 | 15.5 | 1.0 | 6.0 |  |  |
| Sales Growth $_{i, t}$ | 0.030 | 0.028 | 0.002 | 0.56 | 0.036 | 0.036 | 0.0 | -0.06 |  |  |
| Democratic Governor $_{s, t}$ | 0.43 | 0.35 | 0.08 | 0.41 | 0.43 | 0.36 | 0.1 | 0.31 |  |  |
| ${\text { Democratic } \text { House }_{s, t}}$ | 0.33 | 0.52 | -0.19 | -0.9 | 0.34 | 0.35 | 0.0 | -0.03 |  |  |
| Democratic Senates $_{s, t}$ | 0.28 | 0.51 | -0.24 | -1.14 | 0.28 | 0.29 | 0.0 | -0.04 |  |  |
| ${\text { Democratic } \text { Both }_{s, t}}$ | 0.12 | 0.16 | -0.03 | -0.29 | 0.13 | 0.12 | 0.0 | 0.02 |  |  |

## Panel D: Matching Balance, Unemployment Rate (Table 5, Column 4)

|  |  | Before Matching |  |  |  | After Matching |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bounded | Unbounded | Diff | t-stat | Bounded | Unbounded | Diff | t-stat |  |  |
|  |  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ | $(7)$ | $(8)$ |  |
| Observations | $1,099,028$ | $1,427,678$ |  |  | 869,428 | 869,428 |  |  |  |  |
| Average Paydex Score $_{i, t}$ | 70.51 | 71.39 | -0.88 | -1.1 | 70.72 | 70.72 | 0.00 | 0.00 |  |  |
| Sales $_{i, t}$ | 1.19 | 1.24 | -0.048 | -0.5 | 1.35 | 1.17 | 0.18 | 2.89 |  |  |
| Employees $_{i, t}$ | 9.71 | 9.57 | 0.15 | 0.25 | 10.60 | 9.34 | 1.26 | 3.57 |  |  |
| Employees-Sales $_{i, t}$ | 17.1 | 16.1 | 1.02 | 3.75 | 16.5 | 15.6 | 0.9 | 3.5 |  |  |
| Sales Growth $_{i, t}$ | 0.030 | 0.028 | 0.002 | 0.56 | 0.036 | 0.036 | 0.0 | -0.06 |  |  |
| Unemployment Rate $_{c, t}$ | 4.66 | 4.54 | 0.12 | 0.38 | 4.73 | 4.62 | 0.1 | 0.38 |  |  |
| $\Delta$ Unemployment Rate $_{c, t}$ | -0.52 | -0.40 | -0.12 | -1 | -0.52 | -0.47 | -0.05 | -0.47 |  |  |
| $\log \left(\right.$ Labor Force) $_{c, t}$ | 11.56 | 12.49 | -0.93 | -2.89 | 11.5 | 11.8 | -0.23 | -0.9 |  |  |

## Panel E: Matching Balance, Aggregate Sales Growth (Table 5, Column 5)

|  | Before Matching |  |  |  | After Matching |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bounded | Unbounded | Diff | t-stat | Bounded | Unbounded | Diff | t-stat |  |
|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ | $(7)$ | $(8)$ |  |
| Observations | $1,099,028$ | $1,427,678$ |  |  | 869,428 | 869,428 |  |  |  |
| Average Paydex Score | U,$t$ | 70.51 | 71.39 | -0.88 | -1.1 | 70.72 | 70.72 | 0.00 | 0.00 |
| Sales $_{i, t}$ | 1.19 | 1.24 | -0.048 | -0.5 | 1.35 | 1.25 | 0.11 | 1.14 |  |
| Employees $_{i, t}$ | 9.71 | 9.57 | 0.15 | 0.25 | 10.60 | 9.90 | 0.70 | 1.32 |  |
| Employees-Sales $_{i, t}$ | 17.1 | 16.1 | 1.02 | 3.75 | 16.5 | 15.2 | 1.3 | 3.4 |  |
| Sales Growth $_{i, t}$ | 0.030 | 0.028 | 0.002 | 0.56 | 0.036 | 0.040 | 0.0 | -0.59 |  |
| Agg. Sales Growth $_{z, t}$ | 0.041 | 0.035 | 0.007 | 1.16 | 0.040 | 0.036 | 0.0 | 0.57 |  |

## Panel F: Matching Balance, Personal Income (Table 5, Column 6)

|  | Before Matching |  |  |  | After Matching |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bounded | Unbounded | Diff | t-stat | Bounded | Unbounded | Diff | t-stat |  |
|  |  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ | $(7)$ | $(8)$ |
| Observations | $1,099,028$ | $1,427,678$ |  |  | 659,107 | 659,107 |  |  |  |
| Average Paydex Score $_{i, t}$ | 70.51 | 71.39 | -0.88 | -1.1 | 70.72 | 70.72 | 0.00 | 0.00 |  |
| Sales $_{i, t}$ | 1.19 | 1.24 | -0.048 | -0.5 | 1.37 | 1.27 | 0.10 | 0.56 |  |
| Employees $_{i, t}$ | 9.71 | 9.57 | 0.15 | 0.25 | 10.70 | 9.80 | 0.90 | 1.27 |  |
| Employees-Sales $_{i, t}$ | 17.1 | 16.1 | 1.02 | 3.75 | 16.5 | 15.4 | 1.10 | 1.9 |  |
| Sales Growth $_{i, t}$ | 0.030 | 0.028 | 0.002 | 0.56 | 0.036 | 0.027 | 0.01 | 2.15 |  |
| Log $\left(\right.$ Personal Income) $_{z, t}$ | 10.78 | 10.90 | -0.12 | -3.89 | 10.78 | 10.79 | -0.01 | -0.56 |  |
| $\Delta \log \left(\right.$ Personal Income $_{z, t}$ | 0.044 | 0.040 | 0.004 | 0.88 | 0.044 | 0.040 | 0.004 | 0.88 |  |

## Panel G: Matching Balance, House Prices (Table 5, Column 7)

|  | Before Matching |  |  |  | After Matching |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bounded | Unbounded | Diff | t-stat | Bounded | Unbounded | Diff | t-stat |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Observations | 1,099,028 | 1,427,678 |  |  | 667,193 | 667,193 |  |  |
| Average Paydex Score $_{i, t}$ | 70.51 | 71.39 | -0.88 | -1.1 | 70.71 | 70.71 | 0.00 | 0.00 |
| Sales ${ }_{i, t}$ | 1.19 | 1.24 | -0.048 | -0.5 | 1.36 | 1.16 | 0.20 | 2.39 |
| Employees $_{i, t}$ | 9.71 | 9.57 | 0.15 | 0.25 | 10.70 | 9.47 | 1.23 | 2.39 |
| Employees-Sales ${ }_{i, t}$ | 17.1 | 16.1 | 1.02 | 3.75 | 16.5 | 16.0 | 0.5 | 1.5 |
| Sales Growth ${ }_{i, t}$ | 0.030 | 0.028 | 0.002 | 0.56 | 0.038 | 0.036 | 0.002 | 0.24 |
| Log(House Price Index) $)_{z, t}$ | 11.98 | 12.50 | -0.52 | -3.32 | 11.98 | 12.07 | -0.09 | -0.87 |
| $\Delta \log (\text { House Price Index) })_{z, t}$ | 0.045 | 0.033 | 0.012 | 1.08 | 0.045 | 0.044 | 0.001 | 0.07 |

Panel H: Matching Balance, All (Table 5, Column 8)

|  | Before Matching |  |  |  | After Matching |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bounded | Unbounded | Diff | t-stat | Bounded | Unbounded | Diff | t-stat |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Observations | 1,099,028 | 1,427,678 |  |  | 659,107 | 659,107 |  |  |
| Average Paydex Score $i_{i, t}$ | 70.51 | 71.39 | -0.88 | -1.1 | 70.75 | 70.75 | 0.00 | 0.00 |
| Sales ${ }_{i, t}$ | 1.19 | 1.24 | -0.048 | -0.5 | 1.37 | 1.20 | 0.17 | 1.82 |
| Employees $_{i, t}$ | 9.71 | 9.57 | 0.15 | 0.25 | 10.75 | 9.59 | 1.16 | 1.75 |
| Employees-Sales ${ }_{i, t}$ | 17.1 | 16.1 | 1.02 | 3.75 | 16.4 | 15.8 | 0.6 | 2.7 |
| Sales Growth ${ }_{i, t}$ | 0.030 | 0.028 | 0.002 | 0.56 | 0.023 | 0.020 | 0.003 | 0.89 |
| $\log (\mathrm{GSP})_{s, t}$ | 12.54 | 13.08 | -0.54 | -1.59 | 12.6 | 12.7 | -0.13 | -0.42 |
| GSP Growth ${ }_{s, t}$ | -0.01 | 0.11 | -0.11 | -2.21 | 0.05 | 0.06 | -0.01 | -0.85 |
| $\log (\text { Population })_{s, t}$ | 15.75 | 16.20 | -0.45 | -1.35 | 15.78 | 15.84 | -0.06 | -0.2 |
| Population Growth ${ }_{s, t}$ | 0.012 | 0.009 | 0.004 | 0.80 | 0.014 | 0.010 | 0.004 | 0.92 |
| Democratic Governor ${ }_{s, t}$ | 0.43 | 0.35 | 0.08 | 0.41 | 0.43 | 0.46 | -0.03 | -0.12 |
| Democratic House ${ }_{s, t}$ | 0.33 | 0.52 | -0.19 | -0.9 | 0.32 | 0.30 | 0.01 | 0.08 |
| Democratic Senate ${ }_{s, t}$ | 0.28 | 0.51 | -0.24 | -1.14 | 0.26 | 0.35 | -0.09 | -0.47 |
| Democratic Both ${ }_{s, t}$ | 0.12 | 0.16 | -0.03 | -0.29 | 0.11 | 0.12 | -0.005 | -0.04 |
| Unemployment Rate ${ }_{c, t}$ | 4.66 | 4.54 | 0.12 | 0.38 | 4.52 | 4.50 | 0.02 | 0.06 |
| $\Delta$ Unemployment $^{\text {Rate }}{ }_{c, t}$ | -0.52 | -0.40 | -0.12 | -1 | -0.50 | -0.33 | -0.17 | -1.35 |
| Log(Labor Force) ${ }_{c, t}$ | 11.56 | 12.49 | -0.93 | -2.89 | 11.8 | 12.0 | -0.18 | -0.7 |
| Agg. Sales Growth ${ }_{z, t}$ | 0.041 | 0.035 | 0.007 | 1.16 | 0.040 | 0.034 | 0.006 | 1.03 |
| Log(Personal Income $)_{z, t}$ | 10.78 | 10.90 | -0.12 | -3.89 | 10.85 | 10.84 | 0.01 | 0.3 |
| $\Delta \log$ (Personal Income $)_{z, t}$ | 0.044 | 0.040 | 0.004 | 0.88 | 0.048 | 0.039 | 0.009 | 1.65 |
| Log(House Price Index $)_{z, t}$ | 11.98 | 12.50 | -0.52 | -3.32 | 11.99 | 12.20 | -0.21 | -2.27 |
| $\Delta \log (\text { House Price Index })_{z, t}$ | 0.045 | 0.033 | 0.012 | 1.08 | 0.045 | 0.040 | 0.004 | 0.42 |

## Table IA4: Regression Estimates: Matching on Trends

This table presents the results for regressions estimates where we exactly match Paydex scores on pre-trends. Panel A reports the regression results where we exactly match in 2005 and 2006, the average Paydex score for establishments in the bounded states (treatment group) with the possible set of control establishments within the same NAICS4 industry donor group in the unbounded states (control group). Then, we match establishment-, state-, county-, and ZIP code-level observable characteristics. Here we run regressions for the sample period 2005-2013. In Panel B, we restrict our sample to 2006-2013. Panel C and Panel D report the regression results where we attempt exact matching on Paydex scores in year 2004, 2005, and 2006. All regressions include matched-pair fixed effect and year fixed effects. Standard errors are in brackets and are clustered at the state level. * $p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$.

Panel A: Exact Matching in 2005 and 2006, Sample 2005-2013

| Dependent Variable: | Average Paydex Score |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Establishment-Level | State | Level | County-Level |  | Zip-Level |  | All |
|  | (1) <br> Establishment <br> Characteristics | (2) <br> Economic <br> Conditions | (3) <br> Political Conditions | (4) <br> Unemp. <br> Rate | (5) <br> Agg. Sales Growth | (6) <br> Personal Income | (7) <br> House Price | $\begin{aligned} & \text { (8) } \\ & \text { All } \end{aligned}$ |
| $\operatorname{Bound}_{s, t-1} \times \Delta M W(F)_{t}$ | $\begin{gathered} -0.59^{*} \\ {[0.31]} \end{gathered}$ | $\begin{gathered} -0.51^{* * *} \\ {[0.17]} \end{gathered}$ | $\begin{gathered} -0.62^{* *} \\ {[0.27]} \end{gathered}$ | $\begin{gathered} -0.43^{* *} \\ {[0.19]} \end{gathered}$ | $\begin{gathered} -0.60^{*} \\ {[0.32]} \end{gathered}$ | $\begin{gathered} -0.66^{* *} \\ {[0.32]} \end{gathered}$ | $\begin{gathered} \hline-0.47^{* *} \\ {[0.21]} \end{gathered}$ | $\begin{gathered} -0.53^{* * *} \\ {[0.18]} \end{gathered}$ |
| Bound $_{s, t-1}$ | $\begin{aligned} & 0.46^{* *} \\ & {[0.20]} \end{aligned}$ | $\begin{aligned} & 0.23^{*} \\ & {[0.14]} \end{aligned}$ | $\begin{gathered} 0.54^{* * *} \\ {[0.17]} \end{gathered}$ | $\begin{gathered} 0.01 \\ {[0.10]} \end{gathered}$ | $\begin{gathered} 0.49^{* *} \\ {[0.20]} \end{gathered}$ | $\begin{gathered} 0.51^{* *} \\ {[0.19]} \end{gathered}$ | $\begin{gathered} 0.41^{* * *} \\ {[0.15]} \end{gathered}$ | $\begin{gathered} 0.13 \\ {[0.11]} \end{gathered}$ |
| Matched-Pair Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Adjusted-R ${ }^{2}$ | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.38 | 0.39 |
| No. of Pairs | 634,894 | 634,999 | 634,876 | 628,531 | 634,946 | 632,377 | 481,040 | 475,770 |
| Observations | 9,131,694 | 9,179,604 | 9,103,585 | 9,090,540 | 9,132,699 | 8,567,077 | 6,908,727 | 6,493,993 |

Panel B: Exact Matching in 2005 and 2006, Sample 2006-2013

| Dependent Variable: | Average Paydex Score |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Establishment-Level <br> (1) <br> Establishment <br> Characteristics | State-Level |  | County-Level | Zip-Level |  |  |  |
|  |  | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|  |  | Economic | Political | Unemp. | Agg. Sales | Personal | House | All |
|  |  | Conditions | Conditions | Rate | Growth | Income | Price |  |
| $\operatorname{Bound}_{s, t-1} \times \Delta M W(F)_{t}$ | -0.66* | -0.57*** | -0.64** | -0.46** | $-0.67^{*}$ | -0.73* | -0.43* | $-0.50{ }^{* * *}$ |
|  | [0.36] | [0.19] | [0.29] | [0.20] | [0.37] | [0.37] | [0.22] | [0.18] |
| Bound $_{s, t-1}$ | 0.50** | 0.27* | $0.54{ }^{* * *}$ | 0.01 | 0.53 ** | 0.56 ** | $0.41^{* * *}$ | 0.10 |
|  | [0.23] | [0.15] | [0.18] | [0.12] | [0.23] | [0.23] | [0.15] | [0.11] |
| Matched-Pair Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Adjusted R ${ }^{2}$ | 0.38 | 0.39 | 0.38 | 0.39 | 0.38 | 0.39 | 0.39 | 0.39 |
| No. of Pairs | 634,893 | 634,998 | 634,875 | 628,530 | 634,945 | 632,375 | 481,026 | 475,757 |
| Observations | 8,380,636 | 8,424,236 | 8,356,650 | 8,341,450 | 8,380,113 | 7,840,034 | 6,346,972 | 5,952,354 |

Panel C: Exact Matching in 2004, 2005, and 2006, Sample 2004-2013

| Dependent Variable: | Average Paydex Score |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Establishment-Level | State-Level |  | County-Level | Zip-Level |  |  | All |
|  | (1) <br> Establishment Characteristics | (2) <br> Economic Conditions | (3) <br> Political Conditions | (4) <br> Unemp. <br> Rate | (5) <br> Agg. Sales Growth | (6) <br> Personal Income | (7) <br> House Price | $\begin{aligned} & \text { (8) } \\ & \text { All } \end{aligned}$ |
| $\operatorname{Bound}_{s, t-1} \times \Delta M W(F)_{t}$ | $\begin{gathered} -0.31^{*} \\ {[0.19]} \end{gathered}$ | $\begin{gathered} -0.33^{* *} \\ {[0.15]} \end{gathered}$ | $\begin{gathered} -0.38^{* *} \\ {[0.18]} \end{gathered}$ | $\begin{aligned} & -0.24 \\ & {[0.15]} \end{aligned}$ | $\begin{gathered} -0.33^{*} \\ {[0.19]} \end{gathered}$ | $\begin{gathered} -0.41^{*} \\ {[0.21]} \end{gathered}$ | $\begin{gathered} -0.38^{* *} \\ {[0.18]} \end{gathered}$ | $\begin{gathered} -0.41^{* *} \\ {[0.16]} \end{gathered}$ |
| Bound $_{s, t-1}$ | $\begin{gathered} 0.32^{* * *} \\ {[0.12]} \end{gathered}$ | $\begin{aligned} & 0.21^{*} \\ & {[0.11]} \end{aligned}$ | $\begin{gathered} 0.41^{* * *} \\ {[0.12]} \end{gathered}$ | $\begin{gathered} -0.01 \\ {[0.07]} \end{gathered}$ | $\begin{gathered} 0.33^{* * *} \\ {[0.12]} \end{gathered}$ | $\begin{gathered} 0.38^{* * *} \\ {[0.13]} \end{gathered}$ | $\begin{gathered} 0.31^{* *} \\ {[0.12]} \end{gathered}$ | $\begin{gathered} 0.12 \\ {[0.10]} \end{gathered}$ |
| Matched-Pair Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Adjusted R ${ }^{2}$ | 0.26 | 0.27 | 0.26 | 0.27 | 0.27 | 0.28 | 0.27 | 0.28 |
| No. of Pairs | 174,616 | 174,608 | 174,604 | 173,564 | 174,617 | 173,589 | 129,973 | 129,118 |
| Observations | 3,169,201 | 3,175,656 | 3,163,352 | 3,152,795 | 3,167,134 | 2,689,964 | 2,346,539 | 2,013,088 |

Panel D: Exact Matching in 2004, 2005, and 2006, Sample 2006-2013

| Dependent Variable: | Average Paydex Score |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Establishment-Level | State-Level |  | County-Level | Zip-Level |  |  | All |
|  | (1) <br> Establishment Characteristics | (2) <br> Economic <br> Conditions | (3) <br> Political <br> Conditions | (4) <br> Unemp. <br> Rate | (5) <br> Agg. Sales Growth | (6) <br> Personal Income | (7) <br> House <br> Price | $\begin{aligned} & \text { (8) } \\ & \text { All } \end{aligned}$ |
| $\operatorname{Bound}_{s, t-1} \times \Delta M W(F)_{t}$ | $\begin{aligned} & -0.46 \\ & {[0.28]} \end{aligned}$ | $\begin{gathered} -0.44^{* *} \\ {[0.19]} \end{gathered}$ | $\begin{gathered} -0.50^{* *} \\ {[0.23]} \end{gathered}$ | $\begin{gathered} -0.32^{*} \\ {[0.19]} \end{gathered}$ | $\begin{gathered} -0.47^{*} \\ {[0.28]} \end{gathered}$ | $\begin{gathered} -0.50^{*} \\ {[0.27]} \end{gathered}$ | $\begin{gathered} -0.38^{*} \\ {[0.21]} \end{gathered}$ | $\begin{gathered} -0.40^{* *} \\ {[0.16]} \end{gathered}$ |
| Bound $_{s, t-1}$ | $\begin{aligned} & 0.41^{* *} \\ & {[0.19]} \end{aligned}$ | $\begin{gathered} 0.25^{*} \\ {[0.14]} \end{gathered}$ | $\begin{gathered} 0.45^{* * *} \\ {[0.16]} \end{gathered}$ | $\begin{gathered} 0.00 \\ {[0.10]} \end{gathered}$ | $\begin{aligned} & 0.42^{* *} \\ & {[0.18]} \end{aligned}$ | $\begin{aligned} & 0.44^{* *} \\ & {[0.17]} \end{aligned}$ | $\begin{aligned} & 0.34^{* *} \\ & {[0.14]} \end{aligned}$ | $\begin{gathered} 0.11 \\ {[0.11]} \end{gathered}$ |
| Matched-Pair Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Adjusted R ${ }^{2}$ | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 |
| No. of Pairs | 174,614 | 174,606 | 174,602 | 173,562 | 174,615 | 173,586 | 129,966 | 129,110 |
| Observations | 2,528,481 | 2,536,858 | 2,526,693 | 2,518,918 | 2,529,349 | 2,358,719 | 1,879,987 | 1,770,727 |

Table IA5: Heterogeneity: Labor Cost

This table reports labor heterogeneity for our baseline regression Equation (1). We measure the establishment's labor cost as the number of employees $\times$ the average salary divided by sales. We use QCEW data to estimate average compensation at the county-NAICS4 level. We partition our sample into two groups using the median establishment labor cost. We define the labor cost median one year before the federal minimum wage change, and we define MoreLaborCost as an indicator variable equal to 1 if the establishment's labor-cost measure is above the median labor cost, otherwise zero. We define Less as 1-MoreLaborCost. For LessLaborCost and MoreLaborCost establishments, we run our baseline model(i.e., Column (6) of Table 2), and report results in Column (1) and Column (2), respectively. In Columns (3) and (4), we conduct this analysis using triple interaction. In Column (3), we include establishment controls, establishment fixed effects, and state $\times$ year fixed effects. In Column (4), we further include NAICS4 $\times$ year fixed effects. Standard errors are in brackets and are clustered at the state level. ${ }^{*} p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$.

| Dependent Variable: | Average Paydex Score |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (1) Less | (2) More | $\begin{aligned} & (3) \\ & \text { All } \end{aligned}$ | $\begin{aligned} & (4) \\ & \text { All } \end{aligned}$ |
| $\operatorname{Bound}_{s, t-1} \times \Delta M W(F)_{t}$ | -0.50 *** | -0.73** |  |  |
|  | [0.18] | [0.31] |  |  |
| Bound $_{s, t-1}$ | $\begin{aligned} & -0.09 \\ & {[0.16]} \end{aligned}$ | $\begin{aligned} & -0.07 \\ & {[0.16]} \end{aligned}$ |  |  |
| More Labor Cost $\times$ Bound $_{s, t-1} \times \Delta M W(F)_{t}$ |  |  | $\begin{gathered} -0.21^{* *} \\ {[0.09]} \end{gathered}$ | $\begin{gathered} -0.17^{* *} \\ {[0.08]} \end{gathered}$ |
| More Labor Cost $\times$ Bound $_{s, t-1}$ |  |  | $\begin{gathered} 0.01 \\ {[0.04]} \end{gathered}$ | $\begin{gathered} 0.05 \\ {[0.03]} \end{gathered}$ |
| More Labor Cost $\times \Delta M W(F)_{t}$ |  |  | $\begin{gathered} 0.44^{* * *} \\ {[0.05]} \end{gathered}$ | $\begin{gathered} 0.27^{* * *} \\ {[0.05]} \end{gathered}$ |
| Establishment Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year Fixed Effects | $\checkmark$ | $\checkmark$ |  |  |
| Establishment Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| State $\times$ Year Fixed Effects |  |  | $\checkmark$ | $\checkmark$ |
| NAICS4 $\times$ Year Fixed Effects |  |  |  | $\checkmark$ |
| Adjusted R ${ }^{2}$ | 0.58 | 0.68 | 0.62 | 0.62 |
| No. of Establishments | 1,821,320 | 2,431,749 | 3,778,189 | 3,778,182 |
| Observations | 12,634,843 | 12,106,979 | 25,084,109 | 25,084,109 |

# Table IA6: Exits After Minimum Wage Increases: Based on Credit Score Groups 

This table reports the results from regression Equation (1) estimating the differential effect of the federally mandated minimum wage on the probability of small business exits. We measure exit as last year of the establishment in the NETS database. Thus, $\operatorname{Exit}(=1)_{t+1}$ is a dummy variable measuring the probability of an exit in year $t+1$. SameGroup it $_{i t}(80+$ ) is a dummy variable that identifies the establishment-years in which the establishment remains in the " 80 and above" group both in year $t-1$ and year $t$. Downgrade ${ }_{i t}$ ( $80+$ to 70-79) is a dummy variable identifying establishment-years in which the establishment observes a drop in its average Paydex score from $80+$ group in year $t-1$ to " $70-79$ " group in year $t$. All other downgrade variables are similarly defined. In addition to reported coefficients, in all regressions, we include the dummy for each group and its interaction term with the bound dummy. In Column 6, we include state $\times$ year fixed effects. Standard errors are in brackets and are clustered at the state level. ${ }^{*} p<0.10,{ }^{* *} p<0.05,{ }^{* * *} p<0.01$.

| Dependent Variable: | $\operatorname{Exit}(=1)_{t+1}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| $\operatorname{Bound}_{s, t-1} \times \Delta M W(F)_{t}$ <br> $\times$ SameGroup $_{i}(80+)$ | $\begin{gathered} -0.011^{* *} \\ {[0.005]} \end{gathered}$ |  |  | $\begin{gathered} -0.010^{* *} \\ {[0.005]} \end{gathered}$ | $\begin{gathered} -0.009^{*} \\ {[0.005]} \end{gathered}$ | $\begin{gathered} -0.010^{* *} \\ {[0.004]} \end{gathered}$ |
| Bound $_{s, t-1} \times \Delta M W(F)_{t}$ <br> $\times$ Downgrade $_{i}$ (80+ to 70-79) |  | $\begin{gathered} 0.020^{* * *} \\ {[0.003]} \end{gathered}$ |  | $\begin{gathered} 0.016^{* * *} \\ {[0.002]} \end{gathered}$ | $\begin{gathered} 0.017^{* * *} \\ {[0.002]} \end{gathered}$ | $\begin{gathered} 0.017^{* * *} \\ {[0.002]} \end{gathered}$ |
| Bound $_{s, t-1} \times \Delta M W(F)_{t}$ <br> $\times$ Downgrade $_{i}$ (70-79 to 60-69) |  |  | $\begin{gathered} 0.021^{* * *} \\ {[0.002]} \end{gathered}$ |  | $\begin{gathered} 0.019^{* * *} \\ {[0.002]} \end{gathered}$ | $\begin{gathered} 0.020^{* * *} \\ {[0.002]} \end{gathered}$ |
| Bound $_{s, t-1} \times \Delta M W(F)_{t}$ | $\begin{gathered} -0.007 \\ {[0.005]} \end{gathered}$ | $\begin{gathered} -0.010^{* *} \\ {[0.004]} \end{gathered}$ | $\begin{gathered} -0.009^{* *} \\ {[0.004]} \end{gathered}$ | $\begin{gathered} -0.008^{*} \\ {[0.005]} \end{gathered}$ | $\begin{gathered} -0.009^{* *} \\ {[0.005]} \end{gathered}$ |  |
| Bound $_{s, t-1}$ | $\begin{gathered} 0.009^{* * *} \\ {[0.003]} \end{gathered}$ | $\begin{gathered} 0.008^{* * *} \\ {[0.003]} \end{gathered}$ | $\begin{gathered} 0.008^{* * *} \\ {[0.003]} \end{gathered}$ | $\begin{gathered} 0.009^{* * *} \\ {[0.003]} \end{gathered}$ | $\begin{gathered} 0.009^{* * *} \\ {[0.003]} \end{gathered}$ |  |
| Interaction terms | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Establishment Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Establishment Controls | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Year Fixed Effects | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |
| State $\times$ Year Fixed Effects |  |  |  |  |  | $\checkmark$ |
| Adjusted $\mathrm{R}^{2}$ | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| No. of Establishments | 3,274,815 | 3,274,815 | 3,274,815 | 3,274,815 | 3,274,815 | 3,274,815 |
| Observations | 22,316,622 | 22,316,622 | 22,316,622 | 22,316,622 | 22,316,622 | 22,316,622 |

