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ABSTRACT

Minimum Wage Analysis Using a Pre-Committed Research Design: Evidence through 2018[1]

This paper presents results from the fourth year of a multi-year, pre-committed research design for analyzing recent minimum wage changes. Using ACS and CPS data through 2018, we find that relatively large minimum wage increases reduced employment among low-skilled individuals by roughly 2.5 percentage points. The effects of smaller statutory increases and inflation-indexed increases vary across data sets and specifications, but are generally not distinguishable from zero. The relationship between minimum wage increases and employment is quite strongly negative in states that began enacting substantial increases between 2013 and 2015. In states that began enacting increases later in the economic expansion, estimates are more variable and tend towards zero.

JEL Classification: J08, J23, J38

Keywords: minimum wages, employment, pre-commitment

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[1] We thank Duncan Hobbs for excellent research assistance.

This paper presents results from the fourth year of a multi-year, pre-committed research design for analyzing recent minimum wage changes. The initial phases of our analysis are reported in a series of earlier papers (Clemens and Strain, 2017; 2018a; 2018b; 2019). In the current paper, we update our analyses to include 2018 data from both the American Community Survey (ACS) and the Current Population Survey (CPS). In our initial pre-analysis plan, we committed to analyzing data extending through 2019. The current paper is thus our project's penultimate update.

Pre-committed analyses are quite rare in economics research outside of experimental studies. An early effort along these lines comes from Neumark (2001). A more recent analysis from Neumark and Yen (2020) also undertakes a pre-specified analysis of local minimum wage increases within the United States.

In a recent review article, Miguel and Christensen (2018) point out that pre-committed observational studies are quite rare because they are difficult to execute. Among other demands, such studies require subject matter with which researchers are "intimately familiar" (Miguel and Christensen, 2018). They also require having a detailed, forward-looking knowledge of the policy environment. Importantly, these hurdles to executing pre-committed observational studies relate to their potential virtues. This leads Miguel and Christensen (2018) to conclude that "for important, intensely debated, and well-defined questions, it would be desirable in our view for more prospective observational research to be conducted in a prespecified fashion." The key advantage of such studies, when implemented successfully, is their potential to reduce concerns related to data mining, also known as p-hacking or specification searching.

As noted in our earlier analyses, the last decade of state and federal minimum

wage policy created an unusually suitable opportunity to lay out pre-committed analysis plans. After the Great Recession, there was a pause in both state and federal efforts to increase minimum wages. This pause, which creates a baseline (or "pre-period") for empirical purposes, was followed by substantial divergence in states' minimum wage policies. That is, a number of states have legislated and partially enacted minimum wage changes that vary dramatically in their magnitude. The policy environment's predictability created an opportunity to pre-commit to using a transparent set of program evaluation methods to assess the medium-run effects of relatively large minimum wage changes.

The current paper presents a concise update of our analyses using ACS and CPS data that extend through 2018. Readers interested in the development of our pre-commitment plan should turn to the first two papers from our project. Across these papers, we analyzed the very short-run effects of recent minimum wage increases, pre-committed to future analyses (Clemens and Strain, 2017), and refined minor aspects of our analysis plan in response to comments from referees of our initial analyses (Clemens and Strain, 2018a). Note that the text of the current paper is quite modestly updated from our previous update (Clemens and Strain, 2019). In our previous update, we presented analyses of ACS and CPS data that extended from 2011 through 2017.

Our reading of the evidence through 2018 is as follows. First, we estimate that relatively large increases in statutory minimum wages have reduced employment among individuals with low levels of experience and education by roughly 2.5 percentage points. Second, our estimates of the effects of relatively small minimum wage increases are variable and centered on zero. Third, our estimates of the effects of increases linked to

inflation-indexing provisions are also quite variable and centered on zero. Finally, our results suggest that the medium-run effects of large minimum wage changes are more negative than their short-run effects. Consistent with our previous analyses, our findings continue to imply considerable nonlinearities in the magnitude of states' minimum wage increases.

The remainder of this paper proceeds as follows. Section II provides further background regarding the minimum wage changes we analyze. Section III discusses the primary data sources we use. Section IV describes the regression specifications we implement and Section V presents the results. Section VI concludes and relates our estimates to the interpretive framework we sketched in the context of our pre-commitment plan (Clemens Strain, 2017).

Section II: Background on State Minimum Wage Changes Between 2011 and 2018

Our analysis plan involves dividing states into policy groupings based on their minimum wage regimes. For detailed descriptions of the rationale behind our approach, we refer readers to the earlier papers in this project (Clemens and Strain, 2017; 2018a; 2018b; 2019). We divide states into four groups designed to track several plausibly relevant differences in their minimum wage regimes. The first group consists of states that enacted no minimum wage changes between January 2013 and the later years of our sample. The second group consists of states that enacted minimum wage changes due to prior legislation that calls for indexing the minimum wage for inflation. The third and fourth groups consist of states that have enacted minimum wage changes through

relatively recent legislation. We divide the latter set of states into two groups based on the size of their minimum wage changes and based on how early in our sample they passed the underlying legislation.

As discussed in our previous work, updates to states' minimum wage policies pose challenges to the development of pre-committed research designs. Most notably, several of the states that entered our analysis sample with inflation-indexing provisions have subsequently enacted minimum wage changes through new statutes. Our approach has thus been to present three sets of results. We first present results that hold fixed the policy groupings we adopted in our initial analyses, for which our analysis samples extended through 2015. Second, we present results on samples that exclude states that legislated substantial minimum wage changes after our initial analyses. Third, we present results for which we adjust our groupings of states to account for minimum wage changes enacted as of January 2018.[2] This set of analyses is intended to maintain our analysis plan's transparency while incorporating new opportunities to investigate the dynamic effects of this period's minimum wage changes.

Tables 1 and 2 present the full divisions of states associated with the policy groupings we use. Several states shift between the "large" and "small" change groups as we move from the grouping based on changes enacted through January 2015 to the grouping that incorporates changes enacted between January 2015 and January 2018.

[2] From January 2013 to January 2018, roughly half of the population in states with recent minimum wage legislation were in states that had enacted changes equal to or greater than $2.50. We thus use $2.50 as the more recent cutoff between states with "large" and "small" increases. Note that the bulk of the states shifting out of the indexing regime into the "new increase" regimes are categorized as "small" increasers. This reflect the fact that, although their total increases are now substantially, an increase of roughly $2 was forecastable for these states from January 2011 through January 2018 due to their inflation-indexing regimes. The net new increases enacted by these states are thus more modest than they initially appear.

Hawaii shifts from the "small" change group to the "large" change group. Maine shifts from no change to large change group. Alaska, New Jersey, Rhode Island, and South Dakota shift from the "large" change group to the "small" change group. Finally, Arizona, Colorado, Oregon, and Washington shift from the indexer group to small change group. Figures 1 and 2 illustrate the dynamics of the changes in the average effective minimum wage rates across the groupings described in Tables 1 and 2.

Section III: Data Sources

As discussed in Clemens and Strain (2017; 2018a; 2018b; 2019), our primary data sources are the American Community Survey (ACS) and the Current Population Survey (CPS).[3] The ACS is the largest publicly available household survey data set containing the information required for our analysis, while the CPS is a common resource for estimating standard employment statistics across geographic areas and demographic groups. As summarized in Clemens and Strain (2018a), Kromer and Howard (2010) provide detailed documentation of differences between the sampling procedures and employment questions posed in the ACS relative to the smaller and more commonly analyzed CPS.[4]

Tables 3A, 3B, 4A, and 4B present summary statistics on the primary ACS and

[3] The remainder of this section quotes liberally from the text of this project's previous analyses.
[4] As summarized in our previous work, "The sampling universes of the ACS and CPS differ in that the ACS includes individuals residing in institutionalized group quarters while the CPS does not. The inclusion of these individuals in our primary analysis samples does not materially affect our results. Respondents to both surveys answer questions describing their employment status over the course of a reference week. In the ACS, the reference week is the previous calendar week; in the CPS, the reference week is the week containing the 12th day of the month. Kromer and Howard (2010) document that improvements to the ACS's employment questions, first implemented in 2008, significantly improved the comparability of estimates generated using the two surveys."

CPS samples we analyze. The first sample, described in Columns 1 and 2 of each table, consists of individuals ages 16 to 25 with less than a completed high school education. The second sample, which is described in Columns 3 and 4, consists of all individuals ages 16 to 21. Because the analysis in this paper is a straightforward extension of analyses from our prior work, we do not presently describe our analysis samples in further detail.

We supplement the ACS and CPS household survey data with data on macroeconomic covariates that may be relevant as control variables. Specifically, we investigate the relevance of departures in economic conditions across our policy groupings, which could bias our estimates, by tracking indicators of the performance of state-level housing markets, state aggregate income, and labor markets. We proxy for variations in the recovery of the housing market using a quarterly statewide median house price index from the Federal Housing Finance Agency (FHFA). We proxy for aggregate economic performance using data on aggregate state income *per capita* from the Bureau of Economic Analysis (BEA). Finally, we proxy for variations in broader labor market developments using employment among skill groups not directly affected by the minimum wage.

Figure 3 presents time series on aggregate income (Panel A) and the median house price index (Panel B) separately across the policy regimes we analyze. That is, it presents these series separately for states that enacted large minimum wage increases, small minimum wage increases, inflation-indexed minimum wage increases, and no minimum wage increases. The figure, which we discuss momentarily, thus presents two series that are relevant for gauging differences in the macroeconomic conditions facing

the groups of states we analyze. Figures 4 (ACS) and 5 (CPS) present additional evidence on the evolution of employment among prime-age adults (Panel D) and among a group consisting of young individuals with high school degrees and individuals over age 30 with less than a completed high school degree (Panel C). The latter individuals thus have education and/or experience modestly beyond that obtained by most minimum wage workers. Figures 6 (ACS) and 7 (CPS) plot the same employment rates as Figures 4 and 5, but omit any states that change policy categories when shifting from the grouping based on minimum wage changes enacted between 2013 and 2015 to the grouping based on changes enacted between 2013 and 2018. The panels from Figures 6 and 7 look similar to the corresponding panels from Figures 4 and 5, suggesting that the states that have shifted across policy groupings are not major drivers of the employment trends we observe. Additional tabulations of the data underlying Figures 3, 4, and 5 are in Tables 5a, 5b, 6a, 6b, 7a and 7b.

The house price index reveals that the housing recovery was quite strong in states that had, between January 2013 and January 2015, enacted minimum wage increases exceeding $1. Median house prices rose by roughly 44 percent in this group of states from the 2011–2013 base period through 2018 (Table 6a). They rose by roughly 54 percent in states that index their minimum wage rates for inflation. Across states that did not increase their minimum wage rates house prices rose roughly 30 percent and in states that enacted small minimum wage increases, median house prices rose by an average of roughly 26 percent. The BEA's income data show that *per capita* incomes grew almost $6,500 more in states that enacted minimum wage changes exceeding $1 than in states that enacted no minimum wage changes. Underlying macroeconomic conditions thus

appear to have improved to a greater degree in states that enacted large minimum wage changes than in other states. Similar differences prevail when we allocate states based on minimum wage changes enacted through January 2018.

The employment series similarly suggest that underlying economic conditions were moderately stronger in states that enacted minimum wage increases relative to other states. From the 2011–2013 baseline through 2018, the prime-age employment rate, for example, grew by an average of 4.5 percentage points in states that either enacted minimum wage changes exceeding $1 or that index their minimum wage rates for inflation. Across states that enacted no minimum wage increases, the prime-age employment rate increased by a more modest average of 3.5 percentage points (see Table 6a).

The remaining panels of Figures 5 and 6 display employment trends among the skill groups in our primary analysis samples. As summarized in Table 6a, employment among individuals ages 16 to 25 with less than a completed high school education, as measured in the ACS, expanded 3.0 percentage points less by 2018 in states that enacted minimum wage changes exceeding $1 than in states that enacted no minimum wage increase. In the CPS (Table 6b), the measured difference was –3.6 percentage points. Among all individuals ages 16 to 21, the difference measured in the ACS is –1.8 percentage points while the difference measured in the CPS is –1.2 percentage points.

Employment changes among individuals in states with small minimum wage changes exhibit a substantial divergence when comparing ACS and CPS data. In the ACS data, employment among low-skilled individuals rose modestly less in these states relative to individuals in states that enacted no minimum wage changes. In the CPS data,

by contrast, employment among low-skilled individuals rose nontrivially more in these states than in states that enacted no minimum wage changes. These variations both across skill groups and across data sources foreshadow relevant sources of instability and uncertainty in the regression specifications we implement below.

Section IV: Framework for Estimating the Effects of Minimum Wage Changes

This section presents our regression framework for estimating the effects of recent minimum wage increases. The framework is the same as that described in the pre-commitment plan outlined in Clemens and Strain (2017; 2018a). As with previous sections, the remaining text of this section is largely unchanged from our prior work.

Building on minimum wage analyses including Clemens and Wither (2019), Sabia Burkhauser, and Hansen (2012), and Hoffman, (2014), our analysis plan adopts a standard program evaluation approach in which we divide states into groups based on the minimum wage policy changes they have implemented over the time period we analyze. We then estimate standard difference-in-differences and triple-difference specifications to identify differential changes in employment among either low-skilled individuals or young individuals across groups of states. Our basic difference-in-differences specification is presented in equation (1):

$$Y_{i,s,g(s),t} = \sum_{g(s)\neq 0} \beta_{g(s)} Policy_{g(s)} \times Post_t + \alpha_{1s}\, State_s + \alpha_{2t}\, Time_t + X_{i,s,t}\,\gamma + \varepsilon_{i,s,t}, \qquad (1)$$

where $Y_{i,s,g(s),t}$ is a binary indicator of the employment of individual *i*, living in state *s*, which falls in policy category *g(s)*, in year *t*. We estimate equation (1) on samples

restricted to the population groups most likely to be affected by the minimum wage. These groups consist of young adults (individuals ages 16 to 21) and individuals ages 16 to 25 with less than a completed high school education.

Like any standard difference-in-differences specification, equation (1) controls for sets of state and time fixed effects. The vector *X* contains sets of control variables that vary across the specifications we estimate. In various specifications, it contains the median house price index, the log of aggregate personal income *per capita*, the employment rate among individuals with moderately higher skill levels than the individuals in the analysis sample, and individual-level demographic characteristics.

We use $Policy_{g(s)}$ to represent binary indicators for whether a state fits into a given policy group. As discussed above, we differentiate among states that increased their minimum wage rates due to inflation-indexing provisions, states that enacted relatively large statutory increases in total, and states that enacted relatively small statutory increases in total. The omitted group is group $g = 0$, which represents states that did not increase their minimum wage rates.

The coefficients of interest are the $\beta_{g(s)}$ on the interaction between $Policy_{g(s)}$ and $Post_t$. For all the estimates we present, we treat 2014 as a transition year and thus exclude it from the sample. Our initial specifications update the estimates from Clemens and Strain (2017; 2018a; 2018b, 2019) by simply adding 2018 to the sample. For this analysis, $Post_t$ is an indicator for observations that occur in 2015, 2016, 2017, or 2018. $\beta_{g(s)}$ thus describes differential changes in employment from a base period consisting of 2011, 2012, and 2013 through a post period consisting of 2015-2018 for each policy

group. In subsequent analysis we exclude 2014-2017 from the sample so that $\beta_{g(s)}$ describes differential changes in employment from a base period consisting of 2011, 2012, and 2013 through a post period consisting of 2018.

The coefficient $\beta_{g(s)}$ is an estimate of the causal effect of states' minimum wage policy changes on employment under standard, but nontrivial, assumptions. The key assumption is that employment among low-skilled individuals would, in the absence of the minimum wage changes we analyze, have evolved similarly across the various groups of states. We investigate threats to this assumption in multiple ways. First, we investigate the robustness of our estimates to changes in the variables used to control for variations in economic conditions. That is, we examine whether our estimates are robust to including no such controls, to controlling for the housing market's evolution, to controlling for the log of *per capita* income, and to controlling for changes in employment among individuals in moderately higher skill groups.

Second, we estimate a triple-difference extension of equation (1). The triple-difference framework is described by equation (2). The notation for equation (2) adds the subscript *d(i)* for demographic groups, which distinguishes between the within-state control groups and the groups that are "targeted" by minimum wages. Equation (2) augments equation (1) with three sets of two-way fixed effects. These include demographic group-by-time-period effects, group-by-state effects, and state-by-time-period effects. These controls account for differential changes in employment across skill groups over time, cross-state differences in the employment of the "target" group relative to other skill groups at baseline, and time-varying differences in states' economic conditions.

$$Y_{i,d(i),s,g(s),t} = \sum_{g(s)\neq 0} \beta_{g(s)} Policy_{g(s)} \times Post_t \times Target_{d(i)} + \alpha_{1s} State_s + \alpha_{2t} Time_t + \alpha_{3d(i)} Target_{d(i)} + \alpha_{4st} State_s \times Time_t + \alpha_{5sd(i)} State_s \times Target_{d(i)} + \alpha_{6td(i)} Time_t \times Target_{d(i)} + X_{i,s,t}\,\gamma + \varepsilon_{i,s,t}. \quad (2)$$

The implications of the triple-difference model's state-by-time-period effects depend on which skill groups are included in the sample. The inclusion of state-by-time-period effects enables the specification to control flexibly for economic factors that vary across states and over time. More specifically, they control for such factors as they manifest themselves through employment changes among the individuals included in the sample as "within-state control groups." In the triple-difference specifications presented below, the within-state control group consists of the full "prime-age" population (ages 26 to 54).

Section V: Regression Estimates of Recent Minimum Wage Changes' Effects

This section discusses our estimates of the effects of recent minimum wage changes on employment outcomes through 2018. The estimates reported in the tables include permutations of specifications across the following dimensions: (1) ACS or CPS data;[5] (2) analysis samples consisting of individuals ages 16 to 25 with less than a completed high school education (low-skilled workers)[6] or samples consisting of all

[5] For ACS estimates, see tables 8A, 9A, 10A, 11A, 12A, 13A, 14A, 15A 16A and 17A. For CPS estimates, see tables 8B, 9B, 10B, 11B, 12B, 13B, 14B, 15B 16B and 17B.

[6] For estimates on individuals ages 16 to 25 with less than a completed high school education, see columns 1 and 2 of tables 8A, 8B, 9A, 9B, 14A, 14B, and 16A, 16B and panel A of tables 10A-B, 11A-B, 12A-B, 13A-B, 15A-B, and 17A-B.

individuals ages 16 to 21 (young workers);[7] (3) difference-in-differences specifications described by equation (1) or triple-difference specifications described by equation (2);[8] (4) a "post" period consisting of 2015, 2016, 2017, and 2018 or a "post" period consisting solely of 2018;[9] (5) the barrier between "large" and "small" changes based on changes enacted through January 2015 or based on changes enacted through January 2018;[10] and (6) including all states in the analysis or omitting states which shift policy categories between January 2015 and January 2018.[11]

Rather than discuss results on an estimate-by-estimate basis, we summarize the patterns we observe across the various specifications. First, large statutory minimum wage changes are, on average, associated with an employment decline of roughly 2.6 percentage points across the full set of specifications we estimate using both of our primary analysis samples. Estimates for states with large statutory increases became systematically more negative with the addition of both 2017 and 2018 data to our analysis. In our analysis of data that extended through 2017, the equivalent average across coefficients was 2.1 percentage points. In our analysis of data that extended through 2016, the equivalent average across coefficients was 1.0 percentage point. Across the full set of estimates, roughly four-fifths are statistically distinguishable from zero. Estimates are systematically more negative for the sample consisting of individuals ages

[7] For estimates on all individuals ages 16 to 21, see columns 3 and 4 of tables 8A, 8B, 9A, 9B, 14A, 14B, and 16A, 16B and panel B of tables 10A-B, 11A-B, 12A-B, 13A-B, 15A-B, and 17A-B.
[8] For difference-in-differences specifications, see tables 10A-B, 11A-B, 12A-B, 13A-B, 15A-B, 17A-B. For triple- difference specifications, see tables: 8A, 8B, 9A, 9B, 14A, 14B, and 16A, 16B.
[9] For estimates in which the post-period is 2015–2018, see tables 8A-B, 10A-B, 14A-B, and 15A-B. For estimates in which the post-period is 2018 alone, see tables 9A-B, 11A-B, 12A-B, 13A-B, 16A-B, and 17A-B.
[10] For estimates using the division of states based on changes enacted as of January 2015, see tables 8, 9, 10, 11 14, 15, 16, 17A and B. For estimates using the division of states based on changes enacted as of January 2018, see tables 12 and 13A and B.
[11] For estimates including all states, see tables 8, 9, 10, 11, 12, and 13A and B. For estimates omitting states that shift policy categories between January 2015 and January 2018, see tables 14, 15, 16, and 17A and B.

16 to 25 with less than a completed high school education than for the larger sample of all individuals ages 16 to 21. Estimates tend to have greater precision in our triple-difference specifications than in our difference-in-differences specifications.

Second, the results imply that the "medium-run" effects of large minimum wage changes are nontrivially larger than their "short-run" effects. This is most immediately apparent by comparing the estimates in Tables 9A, 9B, 11A, and 11B with the overall distributions of point estimates. Tables 9A, 9B, 11A, and 11B are the tables in which states are categorized based on their earlier minimum wage changes (from January 2013 to January 2015) and in which 2015, 2016, and 2017 are excluded from the sample, such that we capture "medium-run" effects through 2018. The estimates in these tables average just under –2.9 percentage points. Equivalent estimates that include data from 2015, 2016, and 2017 average roughly -2.0 percentage points. Answering the question of whether estimates continue to become more negative with time since states enacted their minimum wage changes will be a key point of emphasis as our analysis incorporates data that extend through 2019.

Third, omitting the states that shift policy categories due to minimum wage changes enacted between 2015 and 2018 has modest effects on our results. The point estimates for large statutory increases are slightly smaller, but the estimates are still negative and statistically distinguishable from zero in a sizable majority of specifications.

Fourth, estimates for small statutory minimum wage changes are highly variable for both young and low-skilled individuals. For states with small statutory minimum wage changes, the average estimate across our ACS specifications is –0.4 percentage point. Very few of these estimates are statistically distinguishable from zero. The average

estimate across our CPS specifications is 0.8 percentage point. A modest number of CPS specifications yield positive and statistically significant point estimates for states with "small" minimum wage increases. Averaged across the ACS and CPS, the mean point estimate is 0.2 percentage point. The difference between our ACS and CPS results for states with small statutory increases has been persistent across our annual updates and remains the most puzzling discrepancy that we have encountered across the ACS and CPS data sets.

Fifth, estimates of the effects of increases linked to inflation-indexing provisions average 0.0 percentage points across our analyses of ACS and CPS data. For this group, the average estimate across our ACS specifications was 0.5 percentage point, while the average estimate across our CPS specifications was -0.6 percentage point. The average is thus quite close to zero; the difference in signs when comparing the ACS and CPS is the opposite of what we observe in our analysis of "small" minimum wage increases.

Section VI: Discussion and Conclusion

The conclusions we draw from our analysis are broadly similar to the conclusions we drew from our previous analysis of data that extended through 2017. A first key point involves time horizons. In states that enacted their first minimum wage changes between 2013 and 2015, our analysis of 2018 data can be considered an analysis of medium-run employment effects. For states that enacted their first minimum wage changes in 2016 or later, our analysis captures short-run effects. A fuller assessment of both the medium- and long-run analyses of this period's minimum wage changes will thus require additional years of data.

Second, as in our earlier analyses, our analysis to date suggests that large and small minimum wage changes may have qualitatively different effects. Our estimates of the short-to-medium-run effects of relatively large minimum wage changes are almost always negative, statistically distinguishable from zero, and nontrivial in economic magnitude. Notably, these estimates became nontrivially more negative with the addition of data for 2017 and 2018, suggesting that medium-run effects may differ substantively from short-run effects. By contrast, our estimates of the short-run effects of relatively small minimum wage changes are positive as often as they are negative.

We continue to interpret these findings through the lens of the framework we sketched in our initial analysis (Clemens and Strain, 2017). Our framework highlights that small and large minimum wage changes may indeed have qualitatively different effects. Specifically, it highlights that labor market frictions create space for small minimum wage changes to improve low-skilled individuals' earnings opportunities without closing off employment opportunities. If modest minimum wage changes stimulate labor market entry, the framework highlights they may have positive employment effects. By contrast, if large minimum wage changes push the wage floor beyond the value of what many workers are able to produce, then such increases may substantially reduce low-skilled individuals' employment opportunities. Through 2018, the data appear strongly consistent with this framework. A separate though related consideration involves the economic environment. Specifically, employers may more readily absorb small minimum wage increases without resorting to reducing employment in the context of an economic expansion.

Third, our updated analysis mirrors our previous analyses in that we continue to

find qualitatively different effects when we compare our estimates of the effects of large statutory minimum wage changes and inflation-indexed minimum wage changes. The estimated effects of inflation-indexed minimum wage changes are positive as often as they are negative. Motivated by insights from Brummund and Strain (forthcoming), our analysis plan allows for the potential importance of differences between newly legislated minimum wage changes and minimum wage changes driven by long-standing inflation-indexing provisions. Specifically, firms may have changed investment decisions when these provisions were initially enacted. Contemporaneous responses to each year's inflation-indexed update may thus be driven predominantly by low-skilled individuals' labor supply decisions. Firms' labor demand responses may have unfolded, at least in part, over previous years.

As in our previous analyses, our conclusions are tempered by the short-to-medium-run nature of the evidence to date, as well as by the variations we observe when comparing estimates across samples and specifications. As we observed previously, (Clemens and Strain, 2018b; 2019), analyses of additional years of data will be important for clarifying the extent to which differences we observe when comparing ACS and CPS estimates are driven by sampling variations. Finally, subsequent years of data will provide evidence on the medium- to-long-run effects of this period's minimum wage changes.

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Figures and Tables

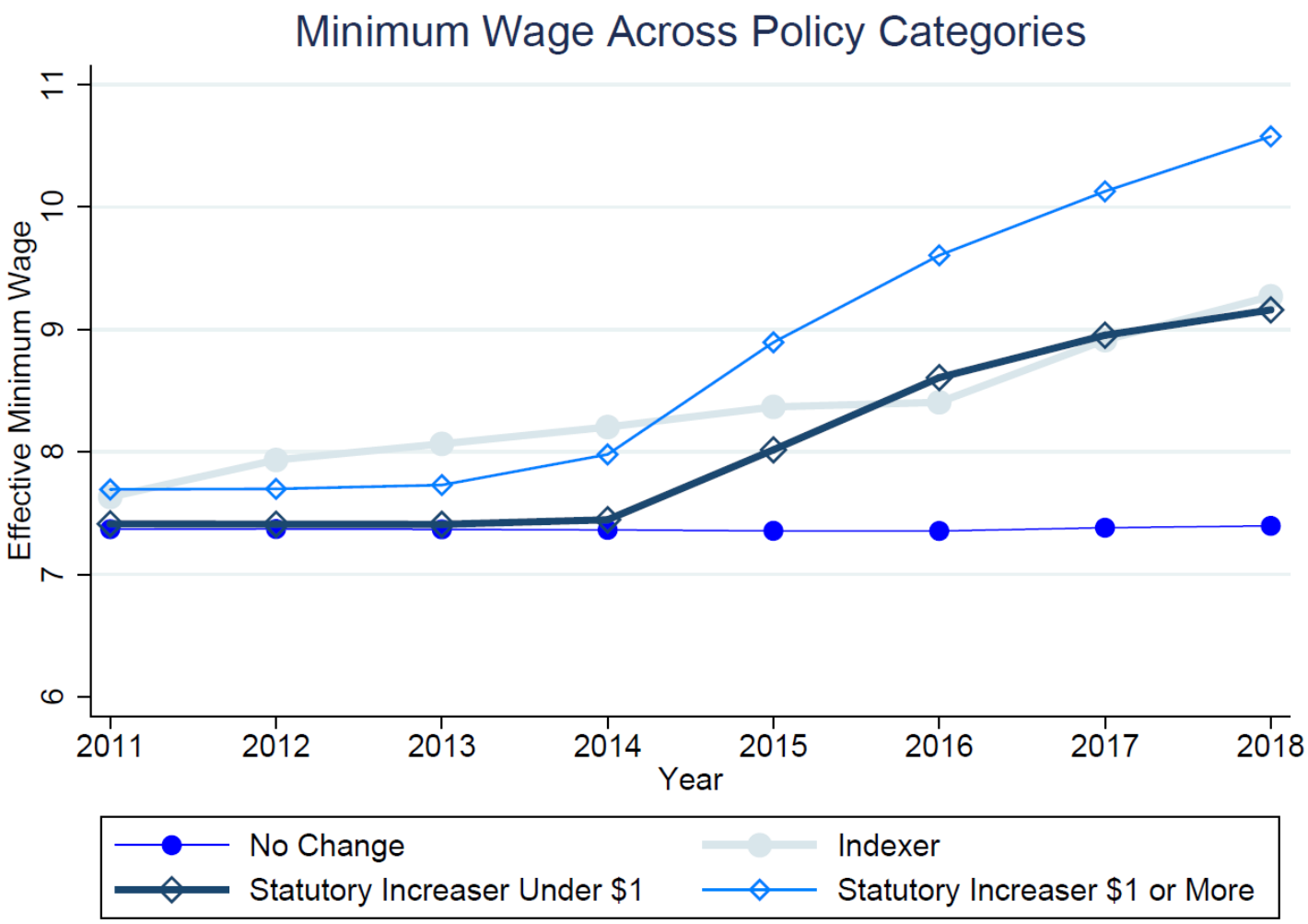

Figure 1. Average Minimum Wage Across Policy Categories: This figure plots the average annual effective minimum wage for states in each of our four policy categories from January 2011 to January 2018. States are defined as statutory increasers under $1 if the combined statutory increase in their minimum wage between January 2013 and January 2015 was under $1. States are defined as statutory increasers of $1 or more if the combined statutory increase in their minimum wage was $1 or greater. Indexers are states that index their minimum wage to inflation. The effective minimum wage is defined as the maximum of the state and federal minimum wage. Data on minimum wage rates come from the US Department of Labor. Data on minimum wage policies come from the National Conference of State Legislatures. Averages are weighted by population.

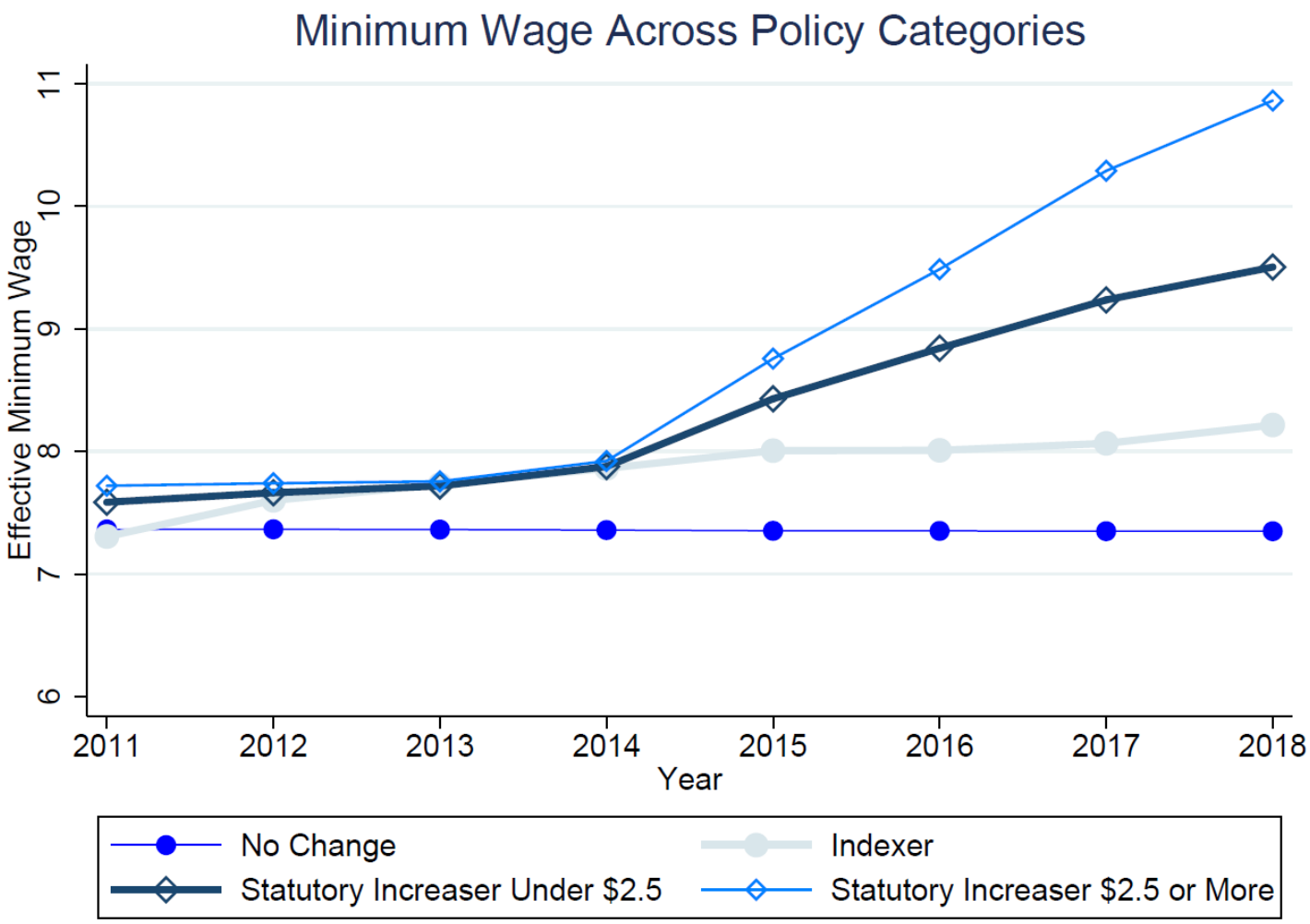

Figure 2. Average Minimum Wage Across Policy Categories: This figure plots the average annual effective minimum wage for states in each of our four policy categories from January 2011 to January 2018. States are defined as statutory increasers under $2.5 if the combined statutory increase in their minimum wage between January 2013 and January 2016 was under $2.5. States are defined as statutory increasers of $2.5 or more if the combined statutory increase in their minimum wage was $2.5 or greater. Indexers are states that index their minimum wage to inflation. The effective minimum wage is defined as the maximum of the state and federal minimum wage. Data on minimum wage rates come from the US Department of Labor. Data on minimum wage policies come from the National Conference of State Legislatures. Averages are weighted by population.

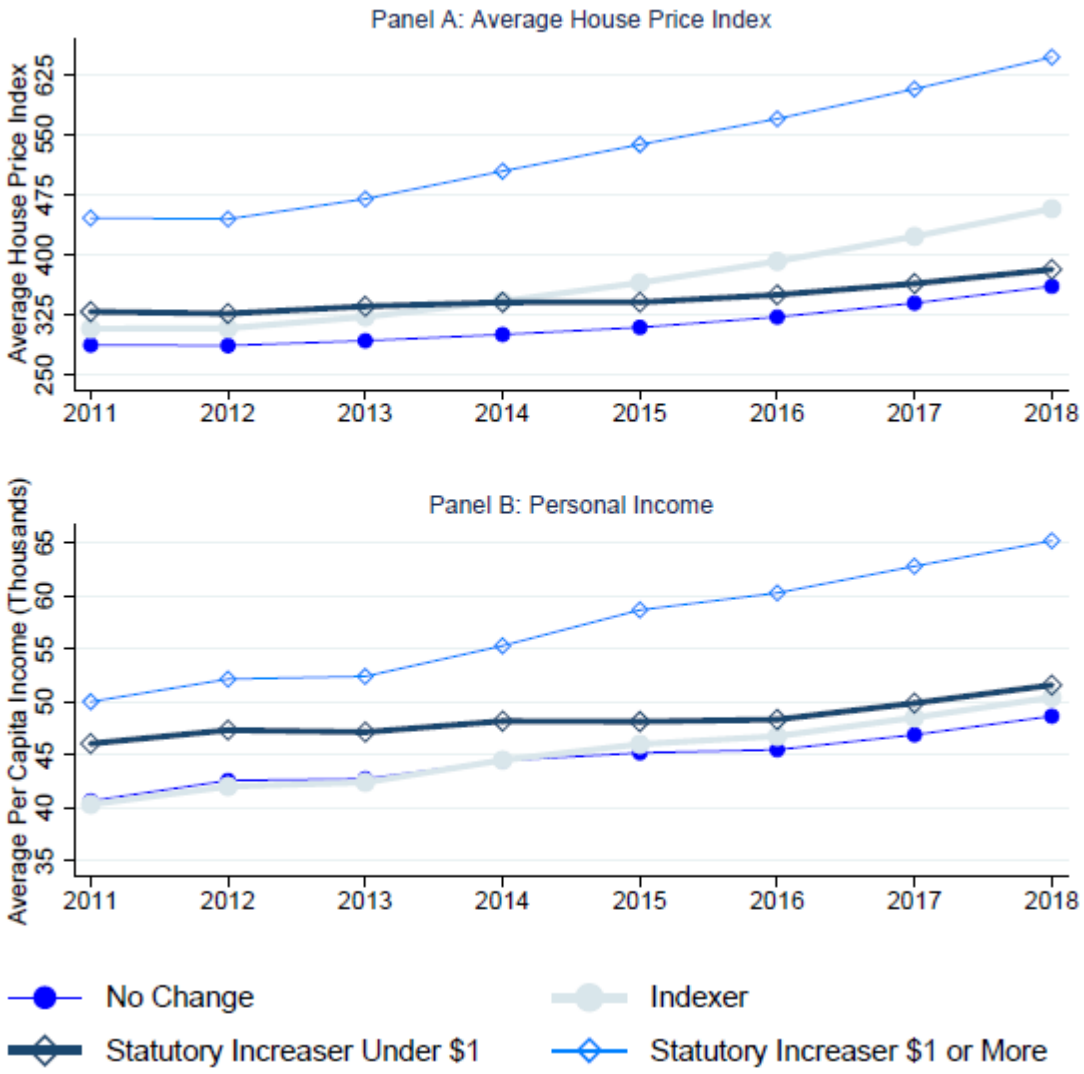

Figure 3. Macroeconomic Time Series Across Policy Categories: Panel A plots the average housing price index variable for each of our four policy categories from 2011 to 2018. Housing price index data come from the Federal Housing Finance Agency. Panel B plots average per capita income for each of our four policy categories from 2011 to 2018. Data on average per capita income come from the Bureau of Economic Analysis. States are defined as statutory increasers under $1 if the combined statutory increase in their minimum wage between January 2013 and January 2015 was under $1. States are defined as statutory increasers of $1 or more if the combined statutory increase in their minimum wage was $1 or greater. Indexers are states that index their minimum wage to inflation. Averages are weighted by population.

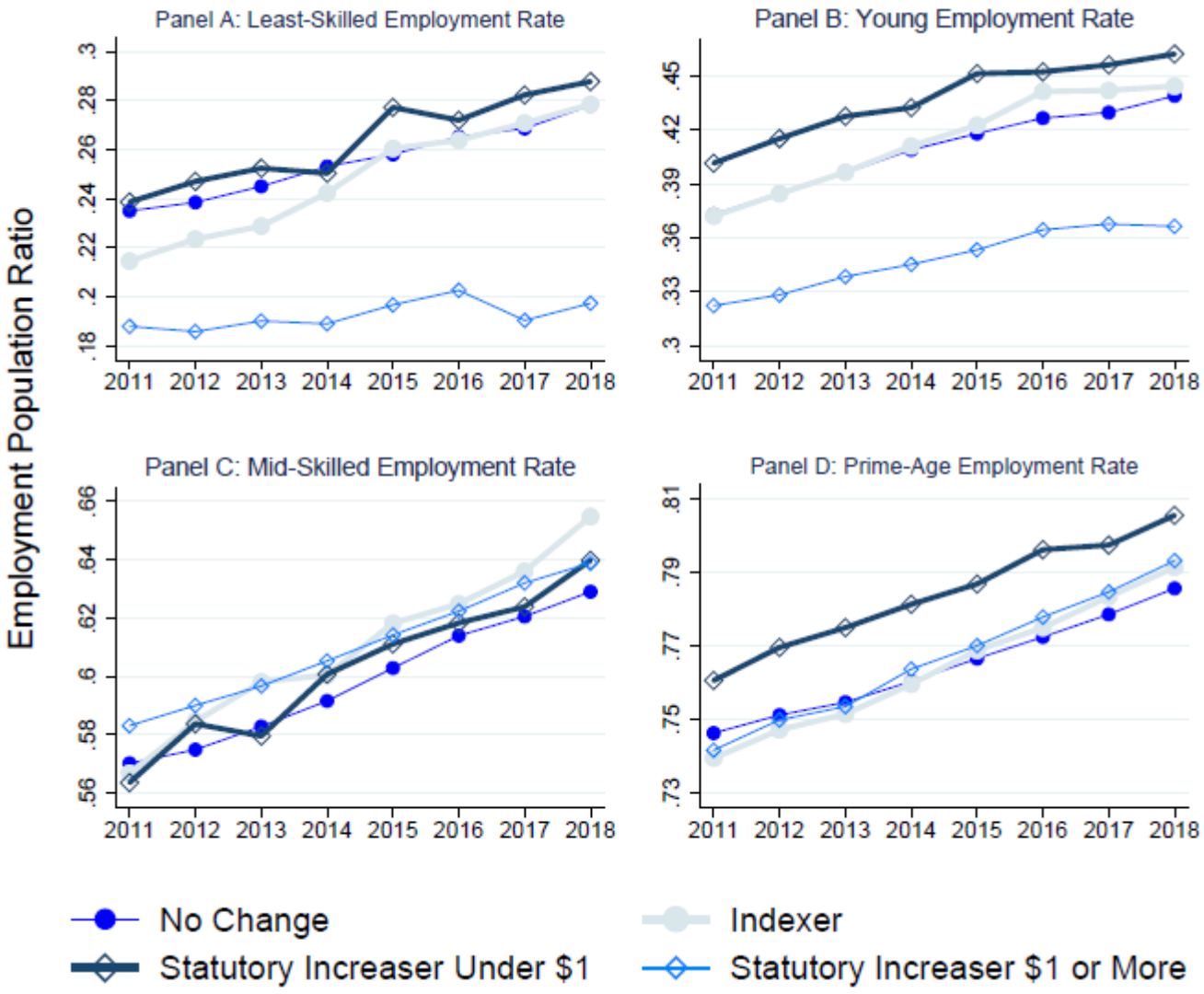

Figure 4. Employment Series in the ACS: This figure plots average annual employment rates for each of our four policy groups, broken out across four subsamples, from 2011 to 2018. Panel A plots employment rates for least-skilled individuals, defined as individuals ages 16 to 25 without a completed high school education. Panel B plots employment rates for young adults, defined as individuals ages 16 to 21. Panel C plots employment rates for mid-skill individuals, defined as individuals ages 22 to 30 with a high school degree and high school dropouts between the ages of 30 and 65. Panel D plots employment rates for prime-age individuals, defined as individuals between the ages of 26 and 54. Employment data come from the American Community Survey (ACS). States are defined as statutory increasers under $1 if the combined statutory increase in their minimum wage between January 2013 and January 2015 was under $1. States are defined as statutory increasers of $1 or more if the combined statutory increase in their minimum wage was $1 or greater. Averages are weighted by population.

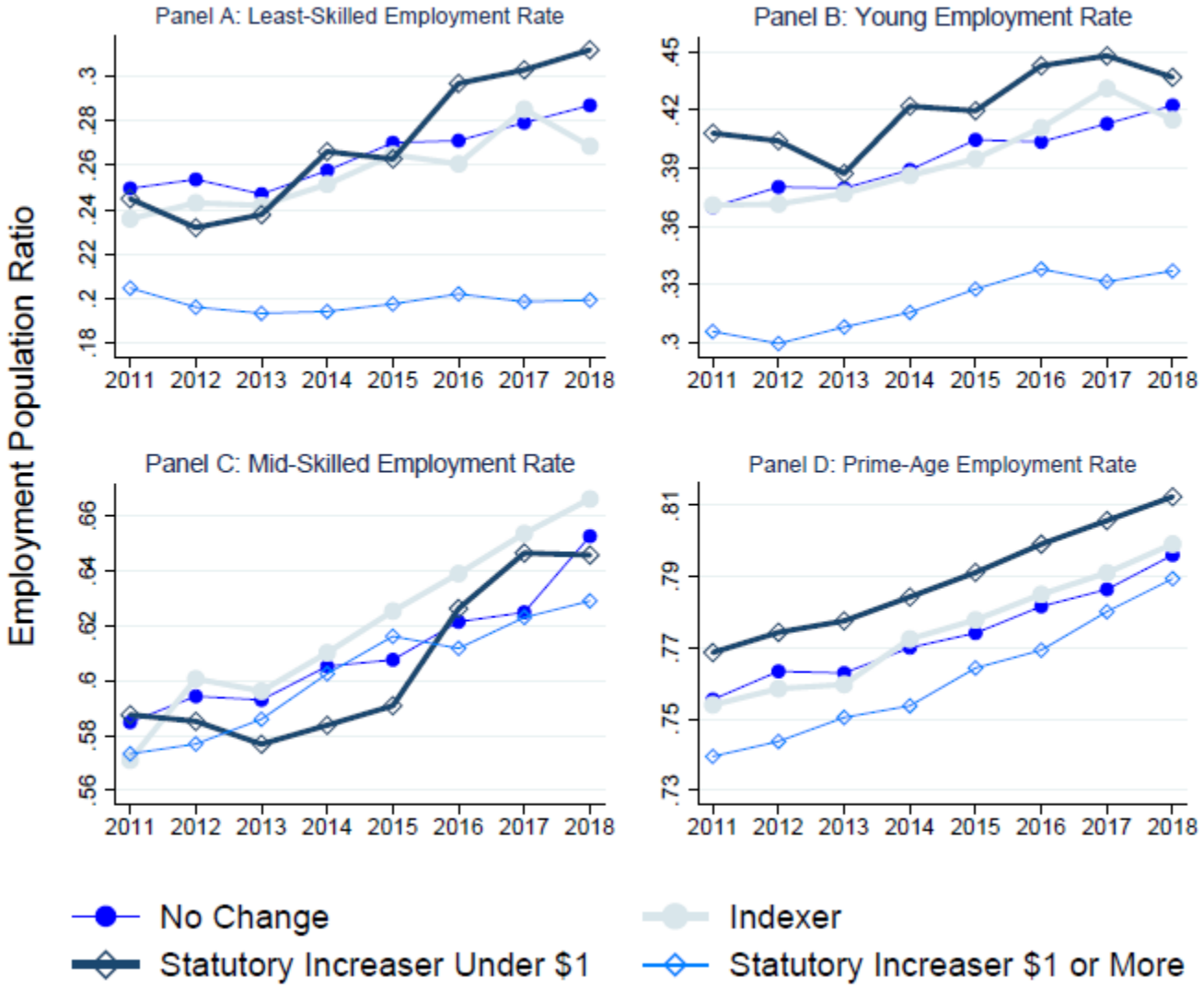

Figure 5. Employment Series in the CPS: This figure plots average annual employment rates for each of our four policy groups, broken out across four subsamples, from 2011 to 2018. Panel A plots employment rates for least-skilled individuals, defined as individuals ages 16 to 25 without a completed high school education. Panel B plots employment rates for young adults, defined as individuals ages 16 to 21. Panel C plots employment rates for mid-skill individuals, defined as individuals ages 22 to 30 with a high school degree and high school dropouts between the ages of 30 and 65. Panel D plots employment rates for prime-age individuals, defined as individuals between the ages of 26 and 54. Employment data come from the Current Population Survey (CPS). States are defined as statutory increasers under $1 if the combined statutory increase in their minimum wage between January 2013 and January 2015 was under $1. States are defined as statutory increasers of $1 or more if the combined statutory increase in their minimum wage was $1 or greater. Indexers are states that index their minimum wage to inflation. Averages are weighted by population

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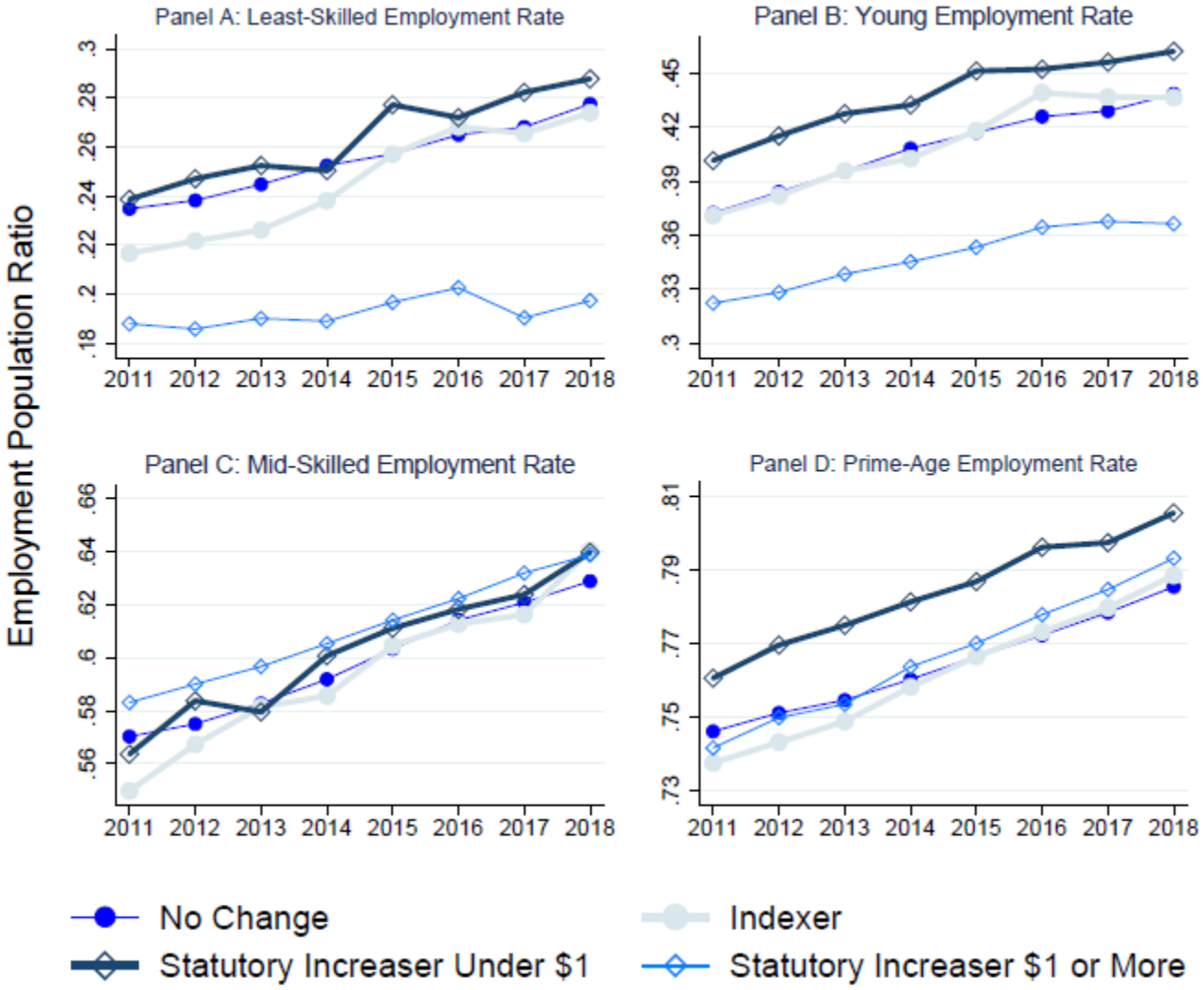

Figure 6. Employment Series in the ACS – No Switchers: This figure plots average annual employment rates for each of our four policy groups, broken out across four subsamples, from 2011 to 2018. We drop states that change policy categories when we move from using increases from 2013 to 2015 to using increases from 2013 to 2018 to define the categories. Panel A plots employment rates for least-skilled individuals, defined as individuals ages 16 to 25 without a completed high school education. Panel B plots employment rates for young adults, defined as individuals ages 16 to 21. Panel C plots employment rates for mid-skill individuals, defined as individuals ages 22 to 30 with a high school degree and high school dropouts between the ages of 30 and 65. Panel D plots employment rates for prime-age individuals, defined as individuals between the ages of 26 and 54. Employment data come from the American Community Survey (ACS). States are defined as statutory increasers under $1 if the combined statutory increase in their minimum wage between January 2013 and January 2015 was under $1. States are defined as statutory increasers of $1 or more if the combined statutory increase in their minimum wage was $1 or greater. Averages are weighted by population.

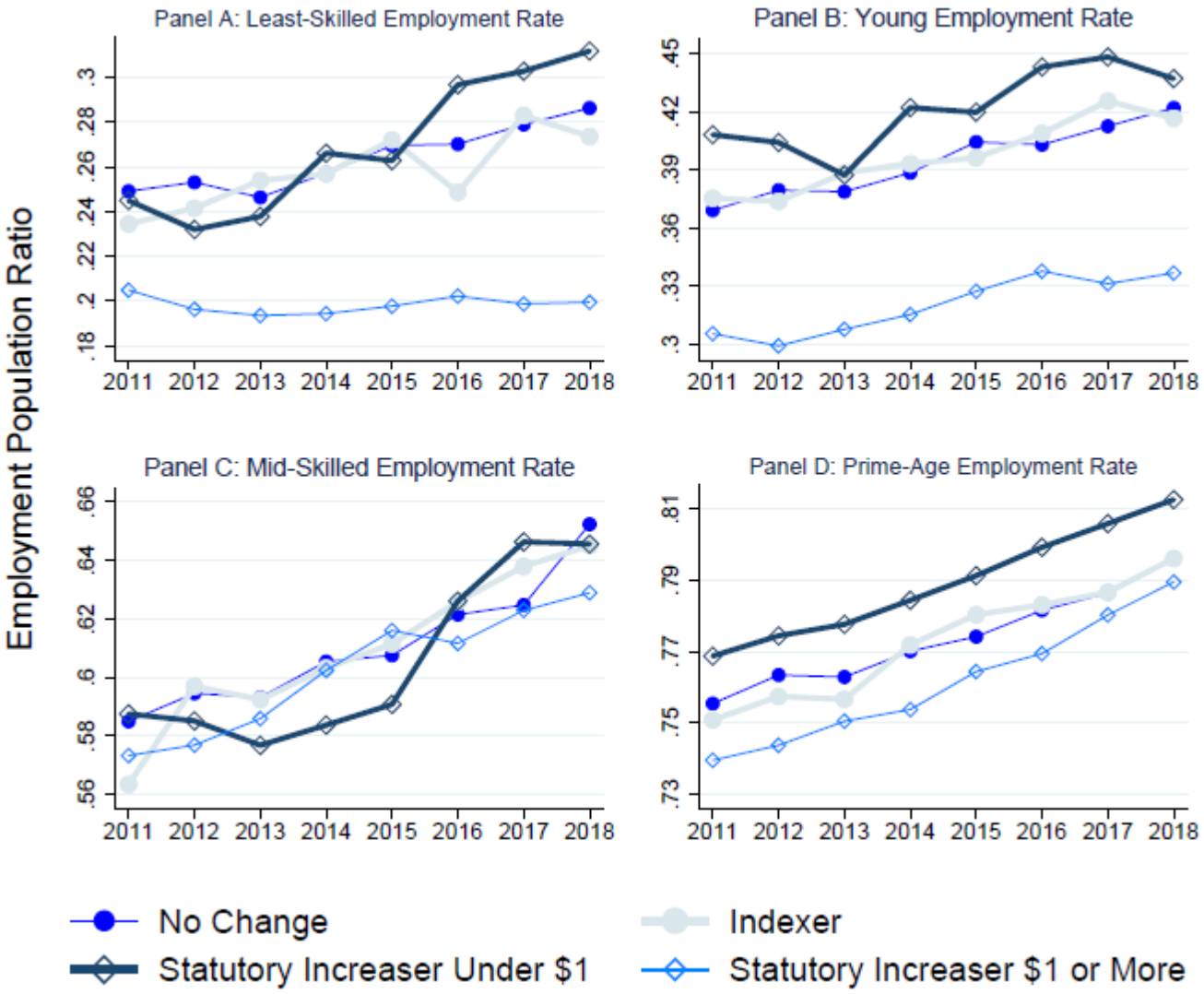

Figure 7. Employment Series in the CPS – No Switchers: This figure plots average annual employment rates for each of our four policy groups, broken out across four subsamples, from 2011 to 2018. We drop states that change policy categories when we move from using increases from 2013 to 2015 to using increases from 2013 to 2018 to define the categories. Panel A plots employment rates for least-skilled individuals, defined as individuals ages 16 to 25 without a completed high school education. Panel B plots employment rates for young adults, defined as individuals ages 16 to 21. Panel C plots employment rates for mid-skill individuals, defined as individuals ages 22 to 30 with a high school degree and high school dropouts between the ages of 30 and 65. Panel D plots employment rates for prime-age individuals, defined as individuals between the ages of 26 and 54. Employment data come from the Current Population Survey (CPS). States are defined as statutory increasers under $1 if the combined statutory increase in their minimum wage between January 2013 and January 2015 was under $1. States are defined as statutory increasers of $1 or more if the combined statutory increase in their minimum wage was $1 or greater.

Table 1: List of States with Statutory Minimum Wage Increases and Inflation-Indexed Increases Using Changes from 2013 to 2015 and $1 Cutoff

Statutory increasers of $1 or more	Statutory increasers under $1
Alaska	Arkansas
California	Connecticut
District of Columbia	Delaware
Massachusetts	Hawaii
New Jersey	Maryland
New York	Michigan
Rhode Island	Minnesota
South Dakota	Nebraska
	West Virginia
Indexers	
Arizona	
Colorado	
Florida	
Missouri	
Montana	
Ohio	
Oregon	
Vermont	
Washington	

Notes: Data on minimum wage indexing provisions comes from the National Council of State Legislatures. The states labeled as Indexers link annual updates to their effective minimum wage rates to a measure of inflation. Data on minimum wage changes comes from the U.S. Department of Labor. States are counted as statutory increasers of under $1 if the combined statutory increase in the minimum wage from January 1, 2013 through January 1, 2015 was under $1. States are counted as statutory increasers of $1 or more if the combined statutory increase in the minimum wage was $1 or more.

Table 2: List of States with Statutory Minimum Wage Increases and Inflation-Indexed Increases Using Changes from 2013 to 2018 and $2.5 Cutoff

Statutory increasers of $2.5 or more	Statutory increasers under $2.5
Arizona	Alaska
California	Arkansas
District of Columbia	Colorado
Hawaii	Connecticut
Massachusetts	Delaware
Maine	Maryland
New York	Michigan
	Minnesota
	Nebraska
Indexers	New Jersey
Florida	Oregon
Missouri	Rhode Island
Montana	South Dakota
Ohio	Vermont
	Washington
	West Virginia

Notes: Data on minimum wage indexing provisions comes from the National Council of State Legislatures. The states labeled as Indexers link annual updates to their effective minimum wage rates to a measure of inflation. Data on minimum wage changes comes from the U.S. Department of Labor. States are counted as statutory increasers of under $2.5 if the combined statutory increase in the minimum wage from January 1, 2013 through January 1, 2018 was under $2.5. States are counted as statutory increasers of $2.5 or more if the combined statutory increase in the minimum wage was $2.5 or more.

Table 3A: Sample Summary Statistics: ACS and Supplemental Data for 2011-2013 and 2015-2018

	(1)	(2)	(3)	(4)
Years	2011-2013	2015-2018	2011-2013	2015-2018
Skill Groups	Ages 16 to 25 w/ < High School		Ages 16 to 21	
Employment	0.225	0.253	0.374	0.417
	(0.417)	(0.435)	(0.484)	(0.493)
Age	17.90	17.66	18.58	18.54
	(2.444)	(2.275)	(1.704)	(1.705)
Black	0.166	0.156	0.153	0.148
	(0.372)	(0.363)	(0.360)	(0.355)
High School Degree	0	0	0.343	0.355
	(0)	(0)	(0.475)	(0.479)
Some College Education	0	0	0.247	0.243
	(0)	(0)	(0.431)	(0.429)
House Price Index	326.0	403.4	330.5	409.6
	(99.90)	(128.7)	(101.6)	(131.4)
Income Per Capita ($1000s)	43.80	50.56	44.04	50.94
	(6.323)	(8.003)	(6.418)	(8.134)
Effective Minimum Wage	7.531	8.279	7.536	8.324
	(0.422)	(1.172)	(0.424)	(1.195)
Observations	346,135	421,072	774,438	992,652

Notes: This table reports summary statistics for our two sample groups. Columns 1 and 2 report averages and standard errors (in parenthesis) of each of the variables for our subsample of low-skilled individuals, defined as individuals ages 16 to 25 with less than a high school education. Columns 3 and 4 report averages and standard errors (in parenthesis) for our subsample of young adult individuals, defined as individuals ages 16 to 21. Entries for employment, age, race, and education summarize data from the American Community Survey (ACS). The house price index variable uses data from the Federal Housing Finance Agency (FHFA). The income per capita variable uses data from the Bureau of Economic Analysis (BEA). The effective minimum wage variable uses data from the Bureau of Labor Statistics (BLS).

Table 3B: Sample Summary Statistics: CPS and Supplemental Data for 2011-2013 and 2015-2018

	(1)	(2)	(3)	(4)
Years	2011-2013	2015-2018	2011-2013	2015-2018
Skill Groups	Ages 16 to 25 w/ < High School		Ages 16 to 21	
Employment	0.234	0.260	0.360	0.395
	(0.424)	(0.439)	(0.480)	(0.489)
Age	17.97	17.75	18.50	18.46
	(2.423)	(2.271)	(1.730)	(1.736)
Black	0.164	0.157	0.155	0.151
	(0.370)	(0.363)	(0.362)	(0.358)
High School Degree	0	0	0.223	0.233
	(0)	(0)	(0.416)	(0.423)
Some College Education	0	0	0.299	0.290
	(0)	(0)	(0.458)	(0.454)
House Price Index	327.9	404.0	331.9	410.0
	(100.8)	(128.0)	(102.5)	(130.7)
Income Per Capita ($1000s)	43.90	50.61	44.15	51.02
	(6.390)	(7.990)	(6.474)	(8.080)
Effective Minimum Wage	7.535	8.295	7.541	8.334
	(0.423)	(1.175)	(0.426)	(1.191)
Observations	197,386	235,688	365,354	445,378

Notes: This table reports summary statistics for our two sample groups. Columns 1 and 2 report averages and standard errors (in parenthesis) of each of the variables for our subsample of low-skilled individuals, defined as individuals ages 16 to 25 with less than a high school education. Columns 3 and 4 report averages and standard errors (in parenthesis) for our subsample of young adult individuals, defined as individuals ages 16 to 21. Entries for employment, age, race, and education summarize data from the Current Population Survey (CPS). The house price index variable uses data from the Federal Housing Finance Agency (FHFA). The income per capita variable uses data from the Bureau of Economic Analysis (BEA). The effective minimum wage variable uses data from the Bureau of Labor Statistics (BLS).

Table 4A: Sample Summary Statistics: ACS and Supplemental Data for 2011-2013 and 2018

	(1)	(2)	(3)	(4)
Years	2011-2013	2018	2011-2013	2018
Skill Groups	Ages 16 to 25 w/ < High School		Ages 16 to 21	
Employment	0.225	0.262	0.374	0.425
	(0.417)	(0.439)	(0.484)	(0.494)
Age	17.90	17.58	18.58	18.54
	(2.444)	(2.192)	(1.704)	(1.697)
Black	0.166	0.154	0.153	0.147
	(0.372)	(0.361)	(0.360)	(0.354)
High School Degree	0	0	0.343	0.364
	(0)	(0)	(0.475)	(0.481)
Some College Education	0	0	0.247	0.239
	(0)	(0)	(0.431)	(0.427)
House Price Index	326.0	442.1	330.5	447.5
	(99.90)	(139.6)	(101.6)	(142.2)
Income Per Capita ($1000s)	43.80	53.17	44.04	53.50
	(6.323)	(8.482)	(6.418)	(8.605)
Effective Minimum Wage	7.531	8.605	7.536	8.656
	(0.422)	(1.479)	(0.424)	(1.499)
Observations	346,135	102,207	774,438	248,259

Notes: This table reports summary statistics for our two sample groups. Columns 1 and 2 report averages and standard errors (in parenthesis) of each of the variables for our subsample of low-skilled individuals, defined as individuals ages 16 to 25 with less than a high school education. Columns 3 and 4 report averages and standard errors (in parenthesis) for our subsample of young adult individuals, defined as individuals ages 16 to 21. Entries for employment, age, race, and education summarize data from the American Community Survey (ACS). The house price index variable uses data from the Federal Housing Finance Agency (FHFA). The income per capita variable uses data from the Bureau of Economic Analysis (BEA). The effective minimum wage variable uses data from the Bureau of Labor Statistics (BLS).

Table 4B: Sample Summary Statistics: CPS and Supplemental Data for 2011-2013 and 2018

	(1)	(2)	(3)	(4)
Years	2011-2013	2018	2011-2013	2018
Skill Groups	Ages 16 to 25 w/ < High School		Ages 16 to 21	
Employment	0.234	0.267	0.360	0.402
	(0.424)	(0.442)	(0.480)	(0.490)
Age	17.97	17.70	18.50	18.46
	(2.423)	(2.208)	(1.730)	(1.727)
Black	0.164	0.150	0.155	0.147
	(0.370)	(0.358)	(0.362)	(0.354)
High School Degree	0	0	0.223	0.233
	(0)	(0)	(0.416)	(0.423)
Some College Education	0	0	0.299	0.291
	(0)	(0)	(0.458)	(0.454)
House Price Index	327.9	441.5	331.9	447.1
	(100.8)	(138.9)	(102.5)	(141.4)
Income Per Capita ($1000s)	43.90	53.16	44.15	53.53
	(6.390)	(8.413)	(6.474)	(8.539)
Effective Minimum Wage	7.535	8.629	7.541	8.667
	(0.423)	(1.478)	(0.426)	(1.491)
Observations	197,386	55,036	365,354	105,738

Notes: This table reports summary statistics for our two sample groups. Columns 1 and 2 report averages and standard errors (in parenthesis) of each of the variables for our subsample of low-skilled individuals, defined as individuals ages 16 to 25 with less than a high school education. Columns 3 and 4 report averages and standard errors (in parenthesis) for our subsample of young adult individuals, defined as individuals ages 16 to 21. Entries for employment, age, race, and education summarize data from the Current Population Survey (CPS). The house price index variable uses data from the Federal Housing Finance Agency (FHFA). The income per capita variable uses data from the Bureau of Economic Analysis (BEA). The effective minimum wage variable uses data from the Bureau of Labor Statistics (BLS).

Table 5A: Unadjusted Differences Across Policy Regimes Using ACS Data and $1 Cutoff with 2015-2018 as the Post Period

	(1)	(2)	(3)	(4)
	2011-2013	2015-2018	Change	Change Relative to Non-Increasers
Young Adult Employment				
Non-Increasers	0.385	0.428	0.043	
Indexers	0.384	0.438	0.054	0.011
Increase < $1	0.415	0.455	0.040	-0.003
Increase >= $1	0.330	0.363	0.033	-0.010
Low-Skilled Employment				
Non-Increasers	0.239	0.267	0.028	
Indexers	0.222	0.268	0.046	0.018
Increase < $1	0.246	0.280	0.034	0.006
Increase >= $1	0.188	0.197	0.009	-0.019
Prime-Age Employment				
Non-Increasers	0.751	0.776	0.025	
Indexers	0.746	0.780	0.034	0.009
Increase < $1	0.768	0.797	0.029	0.004
Increase >= $1	0.748	0.782	0.034	0.009
Mid-Skilled Employment				
Non-Increasers	0.576	0.617	0.041	
Indexers	0.583	0.633	0.050	0.009
Increase < $1	0.576	0.623	0.047	0.006
Increase >= $1	0.590	0.627	0.037	-0.004
House Price Index				
Non-Increasers	274.0	327.9	53.9	
Indexers	290.6	396.4	105.8	51.9
Increase < $1	302.4	355.5	53.1	-0.8
Increase >= $1	455.2	595.1	139.9	86.0
Income Per Capita ($1000s)				
Non-Increasers	40.97	46.50	5.53	
Indexers	40.82	47.67	6.85	1.32
Increase < $1	44.70	51.21	6.51	0.98
Increase >= $1	50.61	60.86	10.25	4.72

Notes: This table reports employment rates for each our of our four policy groups (non-increasers, indexers, increase < $1, and increase >= $1) broken out across four types of individuals: young adults, low-skill, prime-age, and mid-skill. Young adults are defined as individuals ages 16 to 21. Low-skill adults are those ages 16 to 25 without a completed high school education. Prime age adults are defined as individuals between the ages of 26 and 54. Mid-skill individuals are those ages 22 to 30 years old with a high school degree, or high school dropouts between the ages of 30 and 65. This table also reports mean values of economic control variables (house price index and income per capita) for each of our four policy groups. The employment variables are constructed using ACS data, the income per capita variable uses BEA data, and the house price index variable uses FHFA data. Data sources are more fully described in the note to Table 2. Column 1 reports the average value between 2011 and 2013 for each row, Column 2 reports the average value between 2015 and 2018, and Column 3 reports the difference between the two. Column 4 reports the change in the average value for each row relative to the relevant non-increaser value. Averages are weighted by state population.

Table 5B: Unadjusted Differences Across Policy Regimes Using CPS Data and $1 Cutoff with 2015-2018 as the Post Period

	(1)	(2)	(3)	(4)
	2011-2013	2015-2018	Change	Change Relative to Non-increasers
Young Adult Employment				
Non-Increasers	0.377	0.411	0.034	
Indexers	0.373	0.413	0.040	0.006
Increase < $1	0.400	0.437	0.037	0.003
Increase >= $1	0.304	0.333	0.029	-0.005
Low-Skilled Employment				
Non-Increasers	0.250	0.277	0.027	
Indexers	0.240	0.270	0.030	0.003
Increase < $1	0.238	0.294	0.056	0.029
Increase >= $1	0.198	0.200	0.002	-0.025
Prime-Age Employment				
Non-Increasers	0.761	0.785	0.024	
Indexers	0.757	0.788	0.031	0.007
Increase < $1	0.774	0.802	0.028	0.004
Increase >= $1	0.745	0.776	0.031	0.007
Mid-Skilled Employment				
Non-Increasers	0.591	0.626	0.035	
Indexers	0.589	0.646	0.057	0.022
Increase < $1	0.583	0.627	0.044	0.009
Increase >= $1	0.579	0.620	0.041	0.006
House Price Index				
Non-Increasers	273.4	327.6	54.2	
Indexers	288.3	397.6	109.3	55.1
Increase < $1	301.3	354.7	53.4	-0.8
Increase >= $1	454.4	596.3	141.9	87.7
Income Per Capita ($1000s)				
Non-Increasers	41.01	46.39	5.38	
Indexers	40.69	47.69	7.00	1.62
Increase < $1	44.59	51.44	6.85	1.47
Increase >= $1	50.57	60.85	10.28	4.9

Notes: This table reports employment rates for each our of our four policy groups (non-increasers, indexers, increase < $1, and increase >= $1) broken out across four types of individuals: young adults, low-skill, prime-age, and mid-skill. Young adults are defined as individuals ages 16 to 21. Low skill adults are those ages 16 to 25 without a completed high school education. Prime age adults are defined as individuals between the ages of 26 and 54. Mid-skill individuals are those ages 22 to 30 years old with a high school degree, or high school dropouts between the ages of 30 and 65. This table also reports mean values of economic control variables (house price index and income per capita) for each of our four policy groups. The employment variables are constructed using CPS data, the income per capita variable uses BEA data, and the house price index variable uses FHFA data. Data sources are more fully described in the note to Table 2. Column 1 reports the average value between 2011 and 2013 for each row, Column 2 reports the average value between 2015 and 2018, and Column 3 reports the difference between the two. Column 4 reports the change in the average value for each row relative to the relevant non-increaser value. Averages are weighted by state population.

Table 6A: Unadjusted Differences Across Policy Regimes Using ACS Data and $1 Cutoff with 2018 as the Post Period

	(1)	(2)	(3)	(4)
	2011-2013	2018	Change	Change Relative to Non-Increasers
Young Adult Employment				
Non-Increasers	0.385	0.439	0.054	
Indexers	0.384	0.444	0.060	0.006
Increase < $1	0.415	0.462	0.047	-0.007
Increase >= $1	0.330	0.366	0.036	-0.018
Low-Skilled Employment				
Non-Increasers	0.239	0.278	0.039	
Indexers	0.222	0.279	0.057	0.018
Increase < $1	0.246	0.288	0.042	0.003
Increase >= $1	0.188	0.197	0.009	-0.030
Prime-Age Employment				
Non-Increasers	0.751	0.786	0.035	
Indexers	0.746	0.791	0.045	0.010
Increase < $1	0.768	0.806	0.038	0.003
Increase >= $1	0.748	0.793	0.045	0.010
Mid-Skilled Employment				
Non-Increasers	0.576	0.629	0.053	
Indexers	0.583	0.655	0.072	0.019
Increase < $1	0.576	0.640	0.064	0.011
Increase >= $1	0.590	0.639	0.049	-0.004
House Price Index				
Non-Increasers	274.0	356.8	82.8	
Indexers	290.6	446.9	156.3	73.5
Increase < $1	302.4	379.8	77.4	-5.4
Increase >= $1	455.2	656.7	201.5	118.7
Income Per Capita ($1000s)				
Non-Increasers	40.97	48.66	7.69	
Indexers	40.82	50.12	9.3	1.61
Increase < $1	44.70	53.52	8.82	1.13
Increase >= $1	50.61	64.74	14.13	6.44

Notes: This table reports employment rates for each our of our four policy groups (non-increasers, indexers, increase < $1, and increase >= $1) broken out across four types of individuals: young adults, low-skill, prime-age, and mid-skill. Young adults are defined as individuals ages 16 to 21. Low skill adults are those ages 16 to 25 without a completed high school education. Prime age adults are defined as individuals between the ages of 26 and 54. Mid-skill individuals are those ages 22 to 30 years old with a high school degree, or high school dropouts between the ages of 30 and 65. This table also reports mean values of economic control variables (house price index and income per capita) for each of our four policy groups. The employment variables are constructed using ACS data, the income per capita variable uses BEA data, and the house price index variable uses FHFA data. Data sources are more fully described in the note to Table 2. Column 1 reports the average value between 2011 and 2013 for each row, Column 2 reports the average value in 2018, and Column 3 reports the difference between the two. Column 4 reports the change in the average value for each row relative to the relevant non-increaser value. Averages are weighted by state population.

Table 6B: Unadjusted Differences Across Policy Regimes Using CPS Data and $1 Cutoff with 2018 as the Post Period

	(1)	(2)	(3)	(4)
	2011-2013	2018	Change	Change Relative to Non-increasers
Young Adult Employment				
Non-Increasers	0.377	0.422	0.045	
Indexers	0.373	0.415	0.042	-0.003
Increase < $1	0.400	0.437	0.037	-0.008
Increase >= $1	0.304	0.337	0.033	-0.012
Low-Skilled Employment				
Non-Increasers	0.250	0.287	0.037	
Indexers	0.240	0.269	0.029	-0.008
Increase < $1	0.238	0.312	0.074	0.037
Increase >= $1	0.198	0.199	0.001	-0.036
Prime-Age Employment				
Non-Increasers	0.761	0.796	0.035	
Indexers	0.757	0.799	0.042	0.007
Increase < $1	0.774	0.812	0.038	0.003
Increase >= $1	0.745	0.789	0.044	0.009
Mid-Skilled Employment				
Non-Increasers	0.591	0.652	0.061	
Indexers	0.589	0.666	0.077	0.016
Increase < $1	0.583	0.646	0.063	0.002
Increase >= $1	0.579	0.629	0.050	-0.011
House Price Index				
Non-Increasers	273.4	357.3	83.9	
Indexers	288.3	451.5	163.2	79.3
Increase < $1	301.3	380.9	79.6	-4.3
Increase >= $1	454.4	657.5	203.1	119.2
Income Per Capita ($1000s)				
Non-Increasers	41.01	48.62	7.61	
Indexers	40.69	50.27	9.58	1.97
Increase < $1	44.59	54.07	9.48	1.87
Increase >= $1	50.57	64.65	14.08	6.47

Notes: This table reports employment rates for each our of our four policy groups (non-increasers, indexers, increase < $1, and increase >= $1) broken out across four types of individuals: young adults, low-skilled, prime-age, and mid-skilled. Young adults are defined as individuals ages 16 to 21. Low-skilled adults are those ages 16 to 25 without a completed high school education. Prime age adults are defined as individuals between the ages of 26 and 54. Mid-skill individuals are those ages 22 to 30 years old with a high school degree, or high school dropouts between the ages of 30 and 65. This table also reports mean values of economic control variables (house price index and income per capita) for each of our four policy groups. The employment variables are constructed using CPS data, the income per capita variable uses BEA data, and the house price index variable uses FHFA data. Data sources are more fully described in the note to Table 2. Column 1 reports the average value between 2011 and 2013 for each row, Column 2 reports the average value in 2018, and Column 3 reports the difference between the two. Column 4 reports the change in the average value for each row relative to the relevant non-increaser value. Averages are weighted by state population.

Table 7A: Unadjusted Differences Across Policy Regimes Using ACS Data and $2.5 Cutoff with 2018 as the Post Period

	(1)	(2)	(3)	(4)
	2011-2013	2018	Change	Change Relative to Non-Increasers
Young Adult Employment				
Non-Increasers	0.384	0.438	0.054	
Indexers	0.383	0.436	0.053	-0.001
Increase < $2.5	0.402	0.451	0.049	-0.005
Increase >= $2.5	0.330	0.372	0.042	-0.012
Low-Skilled Employment				
Non-Increasers	0.239	0.278	0.039	
Indexers	0.221	0.274	0.053	0.014
Increase < $2.5	0.240	0.285	0.045	0.006
Increase >= $2.5	0.185	0.199	0.014	-0.025
Prime-Age Employment				
Non-Increasers	0.751	0.785	0.034	
Indexers	0.743	0.789	0.046	0.012
Increase < $2.5	0.767	0.808	0.041	0.007
Increase >= $2.5	0.743	0.788	0.045	0.011
Mid-Skilled Employment				
Non-Increasers	0.576	0.629	0.053	
Indexers	0.566	0.641	0.075	0.022
Increase < $2.5	0.593	0.657	0.064	0.011
Increase >= $2.5	0.588	0.639	0.051	-0.002
House Price Index				
Non-Increasers	272.9	334.4	61.5	
Indexers	266.3	362.9	96.6	35.1
Increase < $2.5	341.9	459.8	117.9	56.4
Increase >= $2.5	440.5	648.5	208.0	146.5
Income Per Capita ($1000s)				
Non-Increasers	40.98	46.92	5.94	
Indexers	40.30	46.96	6.66	0.72
Increase < $2.5	46.25	56.34	10.09	4.15
Increase >= $2.5	48.83	62.48	13.65	7.71

Notes: This table reports employment rates for each our of our four policy groups (non-increasers, indexers, increase < $2.5, and increase >= $2.5) broken out across four types of individuals: young adults, low-skilled, prime-age, and mid-skill. Young adults are defined as individuals ages 16 to 21. Low skill adults are those ages 16 to 25 without a completed high school education. Prime age adults are defined as individuals between the ages of 26 and 54. Mid-skilled individuals are those ages 22 to 30 years old with a high school degree, or high school dropouts between the ages of 30 and 65. This table also reports mean values of economic control variables (house price index and income per capita) for each of our four policy groups. The employment variables are constructed using ACS data, the income per capita variable uses BEA data, and the house price index variable uses FHFA data. Data sources are more fully described in the note to Table 2. Column 1 reports the average value between 2011 and 2013 for each row, Column 2 reports the average value in 2018, and Column 3 reports the difference between the two. Column 4 reports the change in the average value for each row relative to the relevant non-increaser value. Averages are weighted by state population.

Table 7B: Unadjusted Differences Across Policy Regimes Using CPS Data and $2.5 Cutoff with 2018 as the Post Period

	(1)	(2)	(3)	(4)
	2011-2013	2018	Change	Change Relative to Non-increasers
Young Adult Employment				
Non-Increasers	0.376	0.422	0.046	
Indexers	0.379	0.417	0.038	-0.008
Increase < $2.5	0.384	0.419	0.035	-0.011
Increase >= $2.5	0.304	0.342	0.038	-0.008
Low-Skill Employment				
Non-Increasers	0.250	0.286	0.036	
Indexers	0.243	0.274	0.031	-0.005
Increase < $2.5	0.239	0.284	0.045	0.009
Increase >= $2.5	0.197	0.205	0.008	-0.028
Prime-Age Employment				
Non-Increasers	0.761	0.796	0.035	
Indexers	0.755	0.796	0.041	0.006
Increase < $2.5	0.773	0.813	0.040	0.005
Increase >= $2.5	0.740	0.786	0.046	0.011
Mid-Skill Employment				
Non-Increasers	0.591	0.652	0.061	
Indexers	0.584	0.645	0.061	0.000
Increase < $2.5	0.603	0.663	0.060	-0.001
Increase >= $2.5	0.570	0.633	0.063	0.002
House Price Index				
Non-Increasers	272.2	356.3	84.1	
Indexers	265.2	392.7	127.5	43.4
Increase < $2.5	341.9	462.0	120.1	36.0
Increase >= $2.5	438.1	647.4	209.3	125.2
Income Per Capita ($1000s)				
Non-Increasers	41.01	48.62	7.61	
Indexers	40.28	48.60	8.32	0.7
Increase < $2.5	46.27	56.60	10.33	2.7
Increase >= $2.5	48.69	62.39	13.7	6.1

Notes: This table reports employment rates for each our of our four policy groups (non-increasers, indexers, increase < $2.5, and increase >= $2.5) broken out across four types of individuals: young adults, low-skill, prime-age, and mid-skill. Young adults are defined as individuals ages 16 to 21. Low-skilled adults are those ages 16 to 25 without a completed high school education. Prime age adults are defined as individuals between the ages of 26 and 54. Mid-skill individuals are those ages 22 to 30 years old with a high school degree, or high school dropouts between the ages of 30 and 65. This table also reports mean values of economic control variables (house price index and income per capita) for each of our four policy groups. The employment variables are constructed using CPS data, the income per capita variable uses BEA data, and the house price index variable uses FHFA data. Data sources are more fully described in the note to Table 2. Column 1 reports the average value between 2011 and 2013 for each row, Column 2 reports the average value in 2018, and Column 3 reports the difference between the two. Column 4 reports the change in the average value for each row relative to the relevant non-increaser value. Averages are weighted by state population.

Table 8A: Relationship Between Minimum Wage Increases and Employment Among Low-Skilled Groups Using ACS Data and $1 cutoff with 2015-2018 as the Post Period (D-in-D-in-D Estimates)

	(1)	(2)	(3)	(4)
	Ages 16 to 25 w/ Less than High School		Ages 16 to 21	
Treated x Large Statutory Increaser x Post	-0.0287***	-0.0276***	-0.0188***	-0.0222***
	(0.008)	(0.006)	(0.007)	(0.006)
Treated x Small Statutory Increaser x Post	0.0017	-0.0035	-0.0065	-0.0084
	(0.010)	(0.008)	(0.007)	(0.007)
Treated x Indexer x Post	0.0097	0.0056	0.0009	0.0017
	(0.009)	(0.008)	(0.005)	(0.005)
Age and education controls	No	Yes	No	Yes
Observations	8,753,439	8,753,439	9,753,322	9,753,322
R-squared	0.117	0.161	0.102	0.162

Notes: This table reports triple-difference estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the ACS. The treated group consists of individuals ages 25 and younger without a completed high school education in Columns 1 and 2 and individuals 16 to 21 in Columns 3 and 4. The control group consists of prime-age individuals ages 26 to 54. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 2 and 4 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 8B: Relationship Between Minimum Wage Increases and Employment Among Low-Skilled Groups Using CPS Data and $1 Cutoff with 2015-2018 as the Post Period (D-in-D-in-D Estimates)

	(1)	(2)	(3)	(4)
	Ages 16 to 25 w/ Less than High School		Ages 16 to 21	
Treated x Large Statutory Increaser x Post	-0.0320***	-0.0267***	-0.0115	-0.0142*
	(0.010)	(0.007)	(0.009)	(0.008)
Treated x Small Statutory Increaser x Post	0.0227**	0.0128	-0.0024	0.0024
	(0.011)	(0.009)	(0.008)	(0.008)
Treated x Indexer x Post	-0.0010	-0.0081	0.0008	0.0064
	(0.009)	(0.007)	(0.007)	(0.007)
Age and education controls	No	Yes	No	Yes
Observations	4,552,095	4,552,095	4,929,753	4,929,753
R-squared	0.129	0.166	0.115	0.166

Notes: This table reports triple-difference estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the CPS. The dependent variable is whether or not the respondent was employed in the previous week. The treated group consists of individuals ages 25 and younger without a completed high school education in Columns 1 and 2 and individuals 16 to 21 in Columns 3 and 4. The control group consists of prime age individuals ages 26 to 54. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 2 and 4 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 9A: Relationship Between Minimum Wage Increases and Employment Among Low-Skilled Groups using ACS data and $1 cutoff with 2018 as the Post Period (D-in-D-in-D Estimates)

	(1)	(2)	(3)	(4)
	Ages 16 to 25 w/ Less than High School		Ages 16 to 21	
Treated x Large Statutory Increaser x Post	-0.0409***	-0.0377***	-0.0285***	-0.0296***
	(0.010)	(0.008)	(0.008)	(0.007)
Treated x Small Statutory Increaser x Post	-0.0005	-0.0055	-0.0099	-0.0115
	(0.014)	(0.013)	(0.009)	(0.009)
Treated x Indexer x Post	0.0074	0.0044	-0.0047	-0.0039
	(0.010)	(0.009)	(0.006)	(0.006)
Age and education controls	No	Yes	No	Yes
Observations	5,036,249	5,036,249	5,610,604	5,610,604
R-squared	0.117	0.162	0.104	0.163

Notes: This table reports triple-difference estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the ACS. The treated group consists of individuals ages 25 and younger without a completed high school education in Columns 1 and 2 and individuals 16 to 21 in Columns 3 and 4. The control group consists of prime-age individuals ages 26 to 54. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 2 and 4 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 9B: Relationship Between Minimum Wage Increases and Employment Among Low-Skilled Groups Using CPS data and $1 Cutoff with 2018 as the Post Period (D-in-D-in-D Estimates)

	(1)	(2)	(3)	(4)
	Ages 16 to 25 w/ Less than High School		Ages 16 to 21	
Treated x Large Statutory Increaser x Post	-0.0435***	-0.0354***	-0.0222***	-0.0215***
	(0.014)	(0.010)	(0.006)	(0.006)
Treated x Small Statutory Increaser x Post	0.0308**	0.0192	-0.0144	-0.0054
	(0.015)	(0.014)	(0.009)	(0.012)
Treated x Indexer x Post	-0.0121	-0.0207**	-0.0080	-0.0032
	(0.014)	(0.010)	(0.007)	(0.007)
Age and education controls	No	Yes	No	Yes
Observations	2,641,168	2,641,168	2,859,838	2,859,838
R-squared	0.129	0.167	0.116	0.167

Notes: This table reports triple-difference estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the CPS. The dependent variable is whether or not the respondent was employed in the previous week. The treated group consists of individuals ages 25 and younger without a completed high school education in Columns 1 and 2 and individuals 16 to 21 in Columns 3 and 4. The control group consists of prime age individuals ages 26 to 54. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 2 and 4 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 10A: Relationship Between Minimum Wage Increases and Employment Using ACS Data and $1 Cutoff with 2015-2018 as the Post Period (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0203**	-0.0354***	-0.0159	-0.0185**	-0.0194***	-0.0250***
	(0.008)	(0.007)	(0.010)	(0.007)	(0.007)	(0.007)
Small Statutory Increaser x Post	0.0049	0.0026	0.0049	0.0040	0.0010	-0.0024
	(0.014)	(0.011)	(0.014)	(0.012)	(0.013)	(0.009)
Indexer x Post	0.0186**	0.0117	0.0214**	0.0152*	0.0148*	0.0110
	(0.009)	(0.009)	(0.010)	(0.009)	(0.008)	(0.007)
Ln(Income Per Capita)		0.2762***				0.3102***
		(0.097)				(0.084)
Housing Price Index Divided by 1000			-0.0554			-0.1293**
			(0.055)			(0.053)
State Mid-Skill Emp-to-Pop Ratio				0.4176***		0.2915***
				(0.097)		(0.095)
Age and education controls	No	No	No	No	Yes	Yes
Observations	767,207	767,207	767,207	767,207	767,207	767,207
R-squared	0.017	0.017	0.017	0.017	0.098	0.098

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0106	-0.0294***	-0.0207**	-0.0093	-0.0132	-0.0307***
	(0.009)	(0.005)	(0.008)	(0.009)	(0.009)	(0.006)
Statutory Increaser Small x Post	-0.0035	-0.0063	-0.0035	-0.0041	-0.0044	-0.0073
	(0.012)	(0.008)	(0.011)	(0.010)	(0.012)	(0.007)
Indexer x Post	0.0096	0.0010	0.0033	0.0074	0.0103*	0.0006
	(0.006)	(0.005)	(0.008)	(0.006)	(0.006)	(0.005)
Ln(Income Per Capita)		0.3461***				0.3086***
		(0.052)				(0.071)
Housing Price Index Divided by 1000			0.1269***			0.0178
			(0.038)			(0.045)
State Mid-Skill Emp-to-Pop Ratio				0.2880***		0.1498**
				(0.095)		(0.069)
Age and education controls	No	No	No	No	Yes	Yes
Observations	1,767,090	1,767,090	1,767,090	1,767,090	1,767,090	1,767,090
R-squared	0.015	0.015	0.015	0.015	0.148	0.148

Notes: This table reports difference-in-differences estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the ACS. Panel A includes individuals ages 25 and younger with less than a completed high school education and Panel B includes all individuals ages 16 to 21. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 5 and 6 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 10B: Relationship Between Minimum Wage Increases and Employment Using CPS Data and $1 Cutoff with 2015-2018 as the Post Period (D-in-D estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0248***	-0.0392***	-0.0240**	-0.0253***	-0.0202***	-0.0286***
	(0.009)	(0.010)	(0.010)	(0.008)	(0.007)	(0.008)
Small Statutory Increaser x Post	0.0273**	0.0252**	0.0273**	0.0264**	0.0192**	0.0162**
	(0.013)	(0.010)	(0.013)	(0.012)	(0.009)	(0.008)
Indexer x Post	0.0059	-0.0006	0.0065	0.0039	0.0002	-0.0044
	(0.008)	(0.007)	(0.009)	(0.008)	(0.007)	(0.006)
Ln(Income Per Capita)		0.2619**				0.2561**
		(0.127)				(0.107)
Housing Price Index Divided by 1000			-0.0107			-0.0770
			(0.068)			(0.064)
State Mid-Skill Emp-to-Pop Ratio				0.1305***		0.1255***
				(0.025)		(0.024)
Age and education controls	No	No	No	No	Yes	Yes
Observations	433,074	433,074	433,074	433,074	433,074	433,074
R-squared	0.022	0.022	0.022	0.022	0.109	0.109

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0043	-0.0214**	-0.0162**	-0.0047	-0.0077	-0.0245***
	(0.011)	(0.009)	(0.008)	(0.010)	(0.010)	(0.007)
Statutory Increaser Small x Post	0.0021	-0.0005	0.0020	0.0014	0.0082	0.0055
	(0.011)	(0.008)	(0.010)	(0.010)	(0.009)	(0.006)
Indexer x Post	0.0077	-0.0002	0.0002	0.0061	0.0132*	0.0037
	(0.006)	(0.006)	(0.007)	(0.006)	(0.007)	(0.007)
Ln(Income Per Capita)		0.3158***				0.2495***
		(0.060)				(0.079)
Housing Price Index Divided by 1000			0.1512***			0.0381
			(0.039)			(0.053)
State Mid-Skill Emp-to-Pop Ratio				0.1034***		0.0959***
				(0.025)		(0.021)
Age and education controls	No	No	No	No	Yes	Yes
Observations	810,732	810,732	810,732	810,732	810,732	810,732
R-squared	0.021	0.021	0.021	0.021	0.150	0.150

Notes: This table reports difference-in-differences estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1. and states that increased their minimum wage by $1 or more. between January 1, 2013 and January 1, 2015. The sample is from the CPS. The dependent variable is whether or not the respondent was employed in the previous week. Panel A includes individuals ages 25 and younger with less than a completed high school education and Panel B includes all individuals ages 16 to 21. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 5 and 6 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 11A: Relationship Between Minimum Wage Increases and Employment Using ACS Data and $1 Cutoff with 2018 as the Post Period (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0305**	-0.0519***	-0.0284*	-0.0253**	-0.0280***	-0.0325***
	(0.011)	(0.012)	(0.015)	(0.010)	(0.010)	(0.010)
Small Statutory Increaser x Post	0.0019	-0.0007	0.0018	-0.0007	-0.0011	-0.0058
	(0.019)	(0.016)	(0.020)	(0.016)	(0.017)	(0.013)
Indexer x Post	0.0184	0.0094	0.0198	0.0080	0.0154	0.0061
	(0.011)	(0.009)	(0.013)	(0.010)	(0.010)	(0.008)
Ln(Income Per Capita)		0.3061***				0.2695***
		(0.113)				(0.099)
Housing Price Index Divided by 1000			-0.0201			-0.0953
			(0.061)			(0.058)
State Mid-Skill Emp-to-Pop Ratio				0.5985***		0.4701***
				(0.120)		(0.114)
Age and education controls	No	No	No	No	Yes	Yes
Observations	448,342	448,342	448,342	448,342	448,342	448,342
R-squared	0.016	0.016	0.016	0.016	0.100	0.101

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0184	-0.0421***	-0.0339***	-0.0151	-0.0191*	-0.0413***
	(0.011)	(0.008)	(0.011)	(0.011)	(0.011)	(0.007)
Statutory Increaser Small x Post	-0.0078	-0.0106	-0.0073	-0.0093	-0.0080	-0.0108
	(0.015)	(0.011)	(0.014)	(0.012)	(0.014)	(0.009)
Indexer x Post	0.0058	-0.0042	-0.0042	-0.0003	0.0066	-0.0089
	(0.008)	(0.005)	(0.010)	(0.006)	(0.008)	(0.006)
Ln(Income Per Capita)		0.3407***				0.2538***
		(0.067)				(0.087)
Housing Price Index Divided by 1000			0.1420***			0.0604
			(0.043)			(0.047)
State Mid-Skill Emp-to-Pop Ratio				0.3677***		0.2315**
				(0.117)		(0.087)
Age and education controls	No	No	No	No	Yes	Yes
Observations	1,022,697	1,022,697	1,022,697	1,022,697	1,022,697	1,022,697
R-squared	0.015	0.015	0.015	0.015	0.145	0.146

Notes: This table reports difference-in-differences estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the ACS. Panel A includes individuals ages 25 and younger with less than a completed high school education and Panel B includes all individuals ages 16 to 21. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 5 and 6 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 11B: Relationship Between Minimum Wage Increases and Employment Using CPS Data and $1 Cutoff with 2018 as the Post Period (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0343**	-0.0528***	-0.0368**	-0.0331**	-0.0275**	-0.0406***
	(0.013)	(0.013)	(0.017)	(0.012)	(0.011)	(0.012)
Small Statutory Increaser x Post	0.0344*	0.0318**	0.0344*	0.0338**	0.0239	0.0210
	(0.017)	(0.015)	(0.017)	(0.017)	(0.015)	(0.013)
Indexer x Post	-0.0060	-0.0138	-0.0076	-0.0069	-0.0152	-0.0217*
	(0.014)	(0.014)	(0.016)	(0.014)	(0.013)	(0.012)
Ln(Income Per Capita)		0.2664**				0.2299
		(0.129)				(0.145)
Housing Price Index Divided by 1000			0.0233			-0.0150
			(0.085)			(0.085)
State Mid-Skill Emp-to-Pop Ratio				0.1114***		0.1125***
				(0.037)		(0.034)
Age and education controls	No	No	No	No	Yes	Yes
Observations	252,422	252,422	252,422	252,422	252,422	252,422
R-squared	0.021	0.021	0.021	0.021	0.112	0.113

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0129*	-0.0274***	-0.0261***	-0.0119	-0.0132	-0.0301***
	(0.007)	(0.009)	(0.006)	(0.007)	(0.008)	(0.008)
Statutory Increaser Small x Post	-0.0109	-0.0128	-0.0106	-0.0113	-0.0011	-0.0031
	(0.011)	(0.010)	(0.010)	(0.011)	(0.013)	(0.011)
Indexer x Post	-0.0021	-0.0082	-0.0107*	-0.0027	0.0012	-0.0083
	(0.007)	(0.008)	(0.006)	(0.007)	(0.009)	(0.007)
Ln(Income Per Capita)		0.2103**				0.1722
		(0.079)				(0.109)
Housing Price Index Divided by 1000			0.1242***			0.0555
			(0.037)			(0.055)
State Mid-Skill Emp-to-Pop Ratio				0.0879***		0.0875***
				(0.024)		(0.024)
Age and education controls	No	No	No	No	Yes	Yes
Observations	471,092	471,092	471,092	471,092	471,092	471,092
R-squared	0.021	0.021	0.021	0.021	0.150	0.150

Notes: This table reports difference-in-differences estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1. and states that increased their minimum wage by $1 or more. between January 1, 2013 and January 1, 2015. The sample is from the CPS. The dependent variable is whether or not the respondent was employed in the previous week. Panel A includes individuals ages 25 and younger with less than a completed high school education and Panel B includes all individuals ages 16 to 21. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 5 and 6 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 12A: Relationship Between Minimum Wage Increases and Employment Among Low-Skilled Groups Using ACS Data and $2.5 Cutoff with 2018 as the Post Period (D-in-D-in-D Estimates)

	(1)	(2)	(3)	(4)
	Ages 16 to 25 w/ Less than High School		Ages 16 to 21	
Treated x Large Statutory Increaser x Post	-0.0367***	-0.0338***	-0.0241***	-0.0254***
	(0.013)	(0.010)	(0.007)	(0.006)
Treated x Small Statutory Increaser x Post	-0.0002	-0.0033	-0.0114	-0.0118
	(0.013)	(0.012)	(0.009)	(0.010)
Treated x Indexer x Post	0.0044	-0.0000	-0.0113*	-0.0100*
	(0.010)	(0.009)	(0.006)	(0.006)
Age and education controls	No	Yes	No	Yes
Observations	5,036,249	5,036,249	5,610,604	5,610,604
R-squared	0.117	0.162	0.104	0.163

Notes: This table reports triple-difference estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $2.50 and states that increased their minimum wage by $2.50 or more between January 1, 2013 and January 1, 2018. The sample is from the ACS. The treated group consists of individuals ages 25 and younger without a completed high school education in Columns 1 and 2 and individuals 16 to 21 in Columns 3 and 4. The control group consists of prime age individuals ages 26 to 54. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 2 and 4 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 12B: Relationship Between Minimum Wage Increases and Employment Among Low-Skilled Groups Using CPS Data and $2.5 Cutoff with 2018 as the Post Period (D-in-D-in-D Estimates)

	(1)	(2)	(3)	(4)
	Ages 16 to 25 w/ Less than High School		Ages 16 to 21	
Treated x Large Statutory Increaser x Post	-0.0386***	-0.0308***	-0.0187***	-0.0161***
	(0.0144)	(0.0089)	(0.0050)	(0.0048)
Treated x Small Statutory Increaser x Post	0.0036	-0.0057	-0.0154*	-0.0094
	(0.0178)	(0.0156)	(0.0080)	(0.0099)
Treated x Indexer x Post	-0.0097	-0.0200	-0.0120	-0.0093
	(0.0166)	(0.0126)	(0.0100)	(0.0070)
Age and education controls	No	Yes	No	Yes
Observations	2,641,168	2,641,168	2,859,838	2,859,838
R-squared	0.129	0.167	0.116	0.167

Notes: This table reports triple-difference estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $2.5 and states that increased their minimum wage by $2.5 or more between January 1, 2013 and January 1, 2018. The sample is from the CPS. The dependent variable is whether or not the respondent was employed in the previous week.The treated group consists of individuals ages 25 and younger without a completed high school education in Columns 1 and 2 and individuals 16 to 21 in Columns 3 and 4. The control group consists of prime age individuals ages 26 to 54. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 2 and 4 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 13A: Relationship Between Minimum Wage Increases and Employment Using ACS Data and $2.5 Cutoff and 2018 as the Post Period (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0255*	-0.0474***	-0.0270	-0.0221**	-0.0232*	-0.0290**
	(0.014)	(0.016)	(0.018)	(0.010)	(0.012)	(0.014)
Small Statutory Increaser x Post	0.0054	-0.0027	0.0050	0.0017	0.0029	-0.0040
	(0.015)	(0.012)	(0.016)	(0.012)	(0.013)	(0.010)
Indexer x Post	0.0158	0.0117	0.0153	0.0044	0.0117	0.0016
	(0.011)	(0.010)	(0.013)	(0.010)	(0.010)	(0.008)
Ln(Income Per Capita)		0.3040**				0.2292**
		(0.123)				(0.105)
Housing Price Index Divided by 1000			0.0125			-0.0655
			(0.078)			(0.071)
State Mid-Skill Emp-to-Pop Ratio				0.6727***		0.5628***
				(0.107)		(0.120)
Age and education controls	No	No	No	No	Yes	Yes
Observations	448,342	448,342	448,342	448,342	448,342	448,342
R-squared	0.016	0.016	0.016	0.016	0.100	0.101

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0133	-0.0365***	-0.0312**	-0.0109	-0.0141	-0.0370***
	(0.010)	(0.010)	(0.013)	(0.009)	(0.010)	(0.009)
Statutory Increaser Small x Post	-0.0062	-0.0145*	-0.0111	-0.0083	-0.0059	-0.0155*
	(0.011)	(0.009)	(0.012)	(0.009)	(0.012)	(0.008)
Indexer x Post	-0.0003	-0.0044	-0.0059	-0.0073	0.0010	-0.0096
	(0.008)	(0.006)	(0.010)	(0.007)	(0.008)	(0.007)
Ln(Income Per Capita)		0.3228***				0.2198**
		(0.073)				(0.091)
Housing Price Index Divided by 1000			0.1472***			0.0726
			(0.048)			(0.052)
State Mid-Skill Emp-to-Pop Ratio				0.4293***		0.3079***
				(0.114)		(0.095)
Age and education controls	No	No	No	No	Yes	Yes
Observations	1,022,697	1,022,697	1,022,697	1,022,697	1,022,697	1,022,697
R-squared	0.015	0.015	0.015	0.015	0.145	0.146

Notes: This table reports difference-in-differences estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $2.5 and states that increased their minimum wage by $2.5 or more between January 1, 2013 and January 1, 2018. The sample is from the ACS. Panel A includes individuals ages 25 and younger with less than a completed high school education and Panel B includes all individuals ages 16 to 21. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 5 and 6 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 13B: Relationship Between Minimum Wage Increases and Employment Using CPS Data and $2.5 Cutoff with 2018 as the Post Period (D-in-D estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0278**	-0.0406***	-0.0227	-0.0280**	-0.0217**	-0.0275**
	(0.0137)	(0.0128)	(0.0160)	(0.0126)	(0.0098)	(0.0111)
Small Statutory Increaser x Post	0.0077	0.0027	0.0092	0.0078	-0.0011	-0.0038
	(0.0190)	(0.0180)	(0.0201)	(0.0179)	(0.0171)	(0.0157)
Indexer x Post	-0.0039	-0.0061	-0.0024	-0.0020	-0.0149	-0.0129
	(0.0177)	(0.0165)	(0.0193)	(0.0166)	(0.0160)	(0.0154)
Ln(Income Per Capita)		0.1793				0.1866
		(0.1350)				(0.1396)
Housing Price Index Divided by 1000			-0.0431			-0.0644
			(0.0852)			(0.0905)
State Mid-Skill Emp-to-Pop Ratio				0.1269***		0.1321***
				(0.0357)		(0.0350)
Age and education controls	No	No	No	No	Yes	Yes
Observations	252,422	252,422	252,422	252,422	252,422	252,422
R-squared	0.021	0.021	0.021	0.021	0.112	0.112

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0081	-0.0215**	-0.0222***	-0.0082	-0.0068	-0.0232**
	(0.0057)	(0.0095)	(0.0069)	(0.0062)	(0.0061)	(0.0088)
Statutory Increaser Small x Post	-0.0113	-0.0163*	-0.0152*	-0.0110	-0.0054	-0.0106
	(0.0082)	(0.0084)	(0.0077)	(0.0076)	(0.0109)	(0.0094)
Indexer x Post	-0.0064	-0.0088	-0.0107	-0.0051	-0.0054	-0.0075
	(0.0100)	(0.0097)	(0.0068)	(0.0094)	(0.0103)	(0.0081)
Ln(Income Per Capita)		0.1867**				0.1408
		(0.0788)				(0.1076)
Housing Price Index Divided by 1000			0.1169***			0.0507
			(0.0400)			(0.0587)
State Mid-Skill Emp-to-Pop Ratio				0.0897***		0.0977***
				(0.0252)		(0.0254)
Age and education controls	No	No	No	No	Yes	Yes
Observations	471,092	471,092	471,092	471,092	471,092	471,092
R-squared	0.020	0.020	0.020	0.020	0.150	0.150

Notes: This table reports difference-in-differences estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $2.50 and states that increased their minimum wage by $2.50 or more between January 1, 2013 and January 1, 2018. The sample is from the CPS. The dependent variable is whether or not the respondent was employed in the previous week. Panel A includes individuals ages 25 and younger with less than a completed high school education and Panel B includes all individuals ages 16 to 21. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 5 and 6 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 14A: Relationship Between Minimum Wage Increases and Employment Using ACS Data, $1 Cutoff, 2015-2018 as the Post Period, and Excluding States Which Change Policy Groups (D-in-D-in-D Estimates)

	(1)	(2)	(3)	(4)
	Ages 16 to 25 w/ Less than High School		Ages 16 to 21	
Treated x Large Statutory Increaser x Post	-0.0284***	-0.0274***	-0.0189***	-0.0222***
	(0.008)	(0.006)	(0.007)	(0.006)
Treated x Small Statutory Increaser x Post	0.0019	-0.0033	-0.0066	-0.0084
	(0.010)	(0.008)	(0.007)	(0.007)
Treated x Indexer x Post	0.0083	0.0031	-0.0026	-0.0006
	(0.011)	(0.010)	(0.005)	(0.005)
Age and education controls	No	Yes	No	Yes
Observations	8,050,687	8,050,687	8,789,507	8,789,507
R-squared	0.117	0.162	0.104	0.163

Notes: This table reports triple-difference estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. Data come from the ACS. The treated group consists of individuals ages 25 and younger without a completed high school education in Columns 1 and 2 and individuals 16 to 21 in Columns 3 and 4. The control group consists of prime age individuals ages 26 to 54. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 2 and 4 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 14B: Relationship Between Minimum Wage Increases and Employment Using CPS Data, $1 Cutoff, 2015-2018 as the Post Period, and Excluding States Which Change Policy Groups (D-in-D-in-D Estimates)

	(1)	(2)	(3)	(4)
	Ages 16 to 25 w/ Less than High School		Ages 16 to 21	
Treated x Large Statutory Increaser x Post	-0.0321***	-0.0269***	-0.0117	-0.0144*
	(0.0100)	(0.0070)	(0.0091)	(0.0078)
Treated x Small Statutory Increaser x Post	0.0227**	0.0127	-0.0026	0.0023
	(0.0108)	(0.0088)	(0.0076)	(0.0076)
Treated x Indexer x Post	-0.0042	-0.0113*	-0.0068	-0.0015
	(0.0097)	(0.0062)	(0.0058)	(0.0065)
Age and education controls	No	Yes	No	Yes
Observations	4,138,844	4,138,844	4,484,010	4,484,010
R-squared	0.129	0.167	0.116	0.166

Notes: This table reports triple-difference estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the CPS. The dependent variable is whether or not the respondent was employed in the previous week. The treated group consists of individuals ages 25 and younger without a completed high school education in Columns 1 and 2 and individuals 16 to 21 in Columns 3 and 4. The control group consists of prime age individuals ages 26 to 54. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 2 and 4 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 15A: Relationship Between Minimum Wage Increases and Employment Using ACS Data, $1 Cutoff, 2015-2018 as the Post Period, and Excluding States Which Change Policy Groups (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0199**	-0.0366***	-0.0135	-0.0179**	-0.0191***	-0.0242***
	(0.008)	(0.007)	(0.011)	(0.007)	(0.007)	(0.008)
Small Statutory Increaser x Post	0.0053	0.0027	0.0052	0.0042	0.0012	-0.0024
	(0.014)	(0.011)	(0.015)	(0.012)	(0.013)	(0.009)
Indexer x Post	0.0177	0.0138	0.0200**	0.0140	0.0126	0.0100
	(0.011)	(0.012)	(0.010)	(0.012)	(0.010)	(0.008)
Ln(Income Per Capita)		0.3030***				0.3300***
		(0.105)				(0.088)
Housing Price Index Divided by 1000			-0.0818			-0.1482***
			(0.059)			(0.052)
State Mid-Skill Emp-to-Pop Ratio				0.4639***		0.3066***
				(0.101)		(0.100)
Age and education controls	No	No	No	No	Yes	Yes
Observations	707,035	707,035	707,035	707,035	707,035	707,035
R-squared	0.018	0.018	0.018	0.018	0.098	0.098

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0106	-0.0303***	-0.0206**	-0.0091	-0.0131	-0.0316***
	(0.009)	(0.005)	(0.009)	(0.009)	(0.009)	(0.006)
Statutory Increaser Small x Post	-0.0035	-0.0065	-0.0035	-0.0041	-0.0044	-0.0074
	(0.012)	(0.008)	(0.011)	(0.010)	(0.012)	(0.007)
Indexer x Post	0.0065	0.0020	0.0030	0.0040	0.0079	0.0021
	(0.006)	(0.006)	(0.009)	(0.006)	(0.006)	(0.006)
Ln(Income Per Capita)		0.3620***				0.3225***
		(0.057)				(0.074)
Housing Price Index Divided by 1000			0.1259***			0.0209
			(0.045)			(0.046)
State Mid-Skill Emp-to-Pop Ratio				0.3214***		0.1618**
				(0.103)		(0.076)
Age and education controls	No	No	No	No	Yes	Yes
Observations	1,632,626	1,632,626	1,632,626	1,632,626	1,632,626	1,632,626
R-squared	0.016	0.016	0.016	0.016	0.147	0.147

Notes: This table reports difference-in-differences estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the ACS. Panel A includes individuals ages 25 and younger with less than a completed high school education and Panel B includes all individuals ages 16 to 21. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 5 and 6 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 15B: Relationship Between Minimum Wage Increases and Employment Using CPS Data, $1 Cutoff, 2015-2018 as the Post Period, and Excluding States Which Change Policy Groups (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0249***	-0.0393***	-0.0214*	-0.0255***	-0.0204***	-0.0286***
	(0.0091)	(0.0106)	(0.0106)	(0.0083)	(0.0069)	(0.0081)
Small Statutory Increaser x Post	0.0274**	0.0252**	0.0274**	0.0262**	0.0191**	0.0159**
	(0.0127)	(0.0104)	(0.0129)	(0.0116)	(0.0090)	(0.0077)
Indexer x Post	0.0036	0.0003	0.0048	0.0032	-0.0018	-0.0032
	(0.0088)	(0.0080)	(0.0097)	(0.0083)	(0.0070)	(0.0071)
Ln(Income Per Capita)		0.2635*				0.2623**
		(0.1388)				(0.1097)
Housing Price Index Divided by 1000			-0.0434			-0.0857
			(0.0717)			(0.0676)
State Mid-Skill Emp-to-Pop Ratio				0.1471***		0.1373***
				(0.0242)		(0.0250)
Age and education controls	No	No	No	No	Yes	Yes
Observations	395,152	395,152	395,152	395,152	395,152	395,152
R-squared	0.023	0.023	0.023	0.023	0.110	0.110

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0045	-0.0222**	-0.0157*	-0.0050	-0.0078	-0.0253***
	(0.0105)	(0.0088)	(0.0084)	(0.0105)	(0.0097)	(0.0079)
Statutory Increaser Small x Post	0.0019	-0.0008	0.0018	0.0011	0.0080	0.0051
	(0.0106)	(0.0078)	(0.0096)	(0.0097)	(0.0092)	(0.0061)
Indexer x Post	0.0009	-0.0031	-0.0029	0.0006	0.0066	0.0022
	(0.0065)	(0.0076)	(0.0081)	(0.0064)	(0.0080)	(0.0086)
Ln(Income Per Capita)		0.3262***				0.2642***
		(0.0668)				(0.0834)
Housing Price Index Divided by 1000			0.1417***			0.0350
			(0.0452)			(0.0546)
State Mid-Skill Emp-to-Pop Ratio				0.1048***		0.0907***
				(0.0240)		(0.0182)
Age and education controls	No	No	No	No	Yes	Yes
Observations	740,318	740,318	740,318	740,318	740,318	740,318
R-squared	0.022	0.022	0.022	0.022	0.150	0.150

Notes: This table reports difference-in-differences estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the CPS. The dependent variable is whether or not the respondent was employed in the previous week. Panel A includes individuals ages 25 and younger with less than a completed high school education and Panel B includes all individuals ages 16 to 21. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 5 and 6 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 16A: Relationship between Minimum Wage Increases and Employment Using ACS Data, $1 Cutoff, 2018 as the Post Period, and Excluding States Which Change Policy Groups (D-in-D-in-D Estimates)

	(1)	(2)	(3)	(4)
	Ages 16 to 25 w/ Less than High School		Ages 16 to 21	
Treated x Large Statutory Increaser x Post	-0.0407***	-0.0376***	-0.0288***	-0.0299***
	(0.010)	(0.008)	(0.008)	(0.007)
Treated x Small Statutory Increaser x Post	-0.0003	-0.0054	-0.0102	-0.0118
	(0.014)	(0.013)	(0.009)	(0.009)
Treated x Indexer x Post	0.0004	-0.0036	-0.0113*	-0.0100*
	(0.009)	(0.008)	(0.006)	(0.006)
Age and education controls	No	Yes	No	Yes
Observations	4,634,661	4,634,661	5,166,747	5,166,747
R-squared	0.117	0.163	0.105	0.164

Notes: This table reports triple-difference estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. Data come from the ACS. The treated group consists of individuals ages 25 and younger without a completed high school education in Columns 1 and 2 and individuals 16 to 21 in Columns 3 and 4. The control group consists of prime age individuals ages 26 to 54. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 2 and 4 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 16B: Relationship Between Minimum Wage Increases and Employment Using CPS Data and $1 Cutoff with 2018 as the Post Period and Excluding States Which Change Policy Groups (D-in-D-in-D Estimates)

	(1)	(2)	(3)	(4)
	Ages 16 to 25 w/ Less than High School		Ages 16 to 21	
Treated x Large Statutory Increaser x Post	-0.0437***	-0.0357***	-0.0225***	-0.0218***
	(0.0139)	(0.0097)	(0.0060)	(0.0063)
Treated x Small Statutory Increaser x Post	0.0308**	0.0191	-0.0147	-0.0057
	(0.0151)	(0.0141)	(0.0092)	(0.0116)
Treated x Indexer x Post	-0.0098	-0.0201	-0.0120	-0.0093
	(0.0166)	(0.0126)	(0.0101)	(0.0070)
Age and education controls	No	Yes	No	Yes
Observations	2,388,187	2,388,187	2,586,432	2,586,432
R-squared	0.129	0.167	0.116	0.167

Notes: This table reports triple-difference estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the CPS. The dependent variable is whether or not the respondent was employed in the previous week. The treated group consists of individuals ages 25 and younger without a completed high school education in Columns 1 and 2 and individuals 16 to 21 in Columns 3 and 4. The control group consists of prime age individuals ages 26 to 54. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 2 and 4 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 17A: Relationship Between Minimum Wage Increases and Employment using ACS Data, $1 cutoff, 2018 as the Post Period, and Excluding States Which Change Policy Groups (D-in-D estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0302**	-0.0538***	-0.0255	-0.0247**	-0.0278***	-0.0317***
	(0.011)	(0.012)	(0.016)	(0.010)	(0.010)	(0.010)
Small Statutory Increaser x Post	0.0022	-0.0007	0.0021	-0.0006	-0.0009	-0.0059
	(0.019)	(0.016)	(0.020)	(0.016)	(0.017)	(0.013)
Indexer x Post	0.0158	0.0113	0.0175	0.0050	0.0117	0.0038
	(0.011)	(0.010)	(0.012)	(0.010)	(0.010)	(0.007)
Ln(Income Per Capita)		0.3381***				0.2839***
		(0.124)				(0.102)
Housing Price Index Divided by 1000			-0.0438			-0.1083*
			(0.065)			(0.057)
State Mid-Skill Emp-to-Pop Ratio				0.6331***		0.4957***
				(0.124)		(0.117)
Age and education controls	No	No	No	No	Yes	Yes
Observations	413,513	413,513	413,513	413,513	413,513	413,513
R-squared	0.016	0.016	0.016	0.016	0.101	0.101

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0185	-0.0433***	-0.0339***	-0.0151	-0.0192*	-0.0431***
	(0.011)	(0.008)	(0.012)	(0.011)	(0.011)	(0.008)
Statutory Increaser Small x Post	-0.0080	-0.0110	-0.0075	-0.0096	-0.0081	-0.0112
	(0.015)	(0.011)	(0.014)	(0.012)	(0.014)	(0.009)
Indexer x Post	-0.0003	-0.0048	-0.0057	-0.0066	0.0010	-0.0088
	(0.008)	(0.005)	(0.010)	(0.007)	(0.008)	(0.007)
Ln(Income Per Capita)		0.3556***				0.2718***
		(0.076)				(0.092)
Housing Price Index Divided by 1000			0.1403***			0.0639
			(0.048)			(0.048)
State Mid-Skill Emp-to-Pop Ratio				0.3876***		0.2357**
				(0.126)		(0.092)
Age and education controls	No	No	No	No	Yes	Yes
Observations	945,599	945,599	945,599	945,599	945,599	945,599
R-squared	0.015	0.015	0.015	0.015	0.145	0.145

Notes: This table reports difference-in-differences estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the ACS. Panel A includes individuals ages 25 and younger with less than a completed high school education and Panel B includes all individuals ages 16 to 21. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 5 and 6 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1

Table 17B: Relationship Between Minimum Wage Increases and Employment Using CPS Data, $1 Cutoff, 2018 as the Post Period, and Excluding States Which Change Policy Groups (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0343**	-0.0557***	-0.0362*	-0.0326**	-0.0277**	-0.0437***
	(0.0132)	(0.0129)	(0.0183)	(0.0125)	(0.0109)	(0.0125)
Small Statutory Increaser x Post	0.0346*	0.0315**	0.0346*	0.0339**	0.0239	0.0207
	(0.0174)	(0.0145)	(0.0174)	(0.0167)	(0.0151)	(0.0127)
Indexer x Post	-0.0040	-0.0078	-0.0046	-0.0021	-0.0149	-0.0161
	(0.0177)	(0.0158)	(0.0182)	(0.0166)	(0.0160)	(0.0135)
Ln(Income Per Capita)		0.3070**				0.2603*
		(0.1373)				(0.1409)
Housing Price Index Divided by 1000			0.0178			-0.0045
			(0.0984)			(0.0924)
State Mid-Skill Emp-to-Pop Ratio				0.1280***		0.1240***
				(0.0392)		(0.0386)
Age and education controls	No	No	No	No	Yes	Yes
Observations	229,463	229,463	229,463	229,463	229,463	229,463
R-squared	0.022	0.022	0.022	0.022	0.113	0.113

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0130*	-0.0285***	-0.0278***	-0.0120	-0.0134*	-0.0329***
	(0.0070)	(0.0097)	(0.0070)	(0.0073)	(0.0080)	(0.0084)
Statutory Increaser Small x Post	-0.0110	-0.0131	-0.0108	-0.0113	-0.0014	-0.0033
	(0.0114)	(0.0100)	(0.0103)	(0.0109)	(0.0134)	(0.0107)
Indexer x Post	-0.0064	-0.0092	-0.0115*	-0.0052	-0.0054	-0.0092
	(0.0101)	(0.0098)	(0.0064)	(0.0095)	(0.0104)	(0.0079)
Ln(Income Per Capita)		0.2226**				0.1846
		(0.0860)				(0.1144)
Housing Price Index Divided by 1000			0.1379***			0.0704
			(0.0422)			(0.0568)
State Mid-Skill Emp-to-Pop Ratio				0.0823***		0.0688***
				(0.0275)		(0.0252)
Age and education controls	No	No	No	No	Yes	Yes
Observations	427,708	427,708	427,708	427,708	427,708	427,708
R-squared	0.021	0.021	0.021	0.021	0.150	0.150

Notes: This table reports difference-in-differences estimates for which the policy indicator variables distinguish between states in which the minimum wage was increased by less than $1 and states that increased their minimum wage by $1 or more between January 1, 2013 and January 1, 2015. The sample is from the CPS. The dependent variable is whether or not the respondent was employed in the previous week. Panel A includes individuals ages 25 and younger with less than a completed high school education and Panel B includes all individuals ages 16 to 21. Variable definitions and sources are discussed in the note to Table 2 (and in the paper). All specifications include year and state fixed effects. Age and education controls consist of a dummy variable for each education group and age (included in Columns 5 and 6 as indicated within the table). Standard errors are clustered at the state level. *** p<0.01, ** p<0.05, * p<0.1