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ABSTRACT

Minimum Wage Analysis Using a Pre-Committed Research Design: Evidence through 2017[1]

This paper presents results from the third year of a multi-year, pre-committed research design for analyzing recent minimum wage changes. Using ACS and CPS data through 2017, we find that relatively large minimum wage increases reduced employment among low-skilled individuals by just over 2 percentage points. The effects of smaller increases are more variable and estimates for inflation-indexed increases tend toward moderately positive values. The effects of smaller increases are relatively more positive when we analyze the CPS. The most recently enacted minimum wage changes tend to be positively correlated with employment among low-skilled individuals, while relatively early and large increases are strongly negatively correlated with employment. Analysis of future data will be needed to determine whether this apparent difference between short- and medium-run effects is systematic.

JEL Classification: J08, J23, J38

Keywords: minimum wages, employment, pre-commitment

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

As we have noted in earlier papers (Clemens and Strain, 2017; 2018a; 2018b), there was a pause in both state and federal efforts to increase minimum wages in the years following the Great Recession. Following that pause, states have legislated and partially enacted a set of substantial minimum wage increases. This environment — a pause, which creates a baseline (or "pre-period") for empirical purposes, followed by treatments that vary across states and time — creates an attractive opportunity to analyze the medium-run effects of relatively large minimum wage changes using transparent program evaluation methods.

In our initial analysis (Clemens and Strain, 2017; CS hereafter), disseminated in January 2017, we identified the unfolding policy environment as an opportunity to conduct analyses that are constrained by pre-committed research designs. We developed and refined our pre-commitment plan (in CS, 2017; 2018a) while analyzing household survey data that extended from 2011 through 2015.[2] We reported an initial update to this analysis, conducted using both American Community Survey (ACS) and Current Population Survey (CPS) data that extended through 2016, in April 2018 (CS, 2018b). The current paper contains the second of our pre-committed updates. In it, we present analyses that incorporate ACS and CPS data that extend through 2017. As they become available, we will incorporate data from the remainder of the decade into subsequent analyses.

Recent state minimum wage changes invite analysis using relatively transparent program evaluation methods. Over the period we consider, just under half of the states enacted no minimum wage changes.[3] Among the remainder, increases varied in both magnitude and

[2] The results from these papers found that relatively large minimum wage increases reduced employment among low-skilled workers by approximately 1 percentage point, with smaller effects for smaller increases.
[3] On a January-to-January basis, one-time or multiphase statutory minimum wage changes were enacted by one state from 2012 to 2013, four from 2013 to 2014, 17 from 2014 to 2015, and 16 from 2015 to 2016. Among those implementing new statutory increases between January 2013 and January 2016, the average combined increase was

forecastability, as several states' minimum wage rates have long been indexed for inflation. Our pre-commitment plan incorporates these dimensions of nuance through its division of states into (mutually exclusive and collectively exhaustive) policy groupings for use within standard difference-in-differences and triple-difference analyses. These groupings allow us to test for nonlinearity in minimum wage employment effects by separately estimating effects for relatively larger and smaller increases. We also allow for heterogeneity in the effect across time — specifically, a short-run effect and a medium-run effect. In addition to baseline analyses, our pre-commitment plan incorporates sets of robustness checks that are designed to investigate the relevance of several setting-specific sources of potential bias.

Our reading of the evidence through 2017 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 just over 2 percentage points. Second, our estimates of the effects of relatively small minimum wage increases are mixed, as they include both moderately large positive values and modest negative values. Taken together, these findings imply considerable nonlinearities in the employment effect of minimum wage increases. Third, our estimates of the effects of increases linked to inflation-indexing provisions are also quite variable, taking a moderately positive value on average across specifications. Finally, our results suggest that the medium-run effects of large minimum wage changes are more negative than their short-run effects.

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

$1.51 (20 percent). Over this same time period, the minimum wage rose by an average of $0.38 (5 percent) across nine states that were indexing their minimum wage rates annually for inflation. Between inflation-indexed increases and new statutory increases, 22 states increased their minimum wage rates between January 2016 and January 2017.

we use. Section IV then describes the regression specifications we implement, and Section V presents the results.[4] Section VI relates our estimates to the interpretive framework we sketched in the context of our pre-commitment plan (CS, 2017). We conclude by discussing the issues to which we will pay closest attention as we incorporate data from 2018 and beyond into our analysis.

Section II: Background on State Minimum Wage Changes Between 2011 and 2017

Our analysis plan, as also described in detail in CS (2017; 2018a; 2018b), calls for dividing states across policy groupings based on the minimum wage changes they have enacted over recent years. More specifically, we divide states into four groups and require that each state be in one and only one group: (1) those that have implemented no minimum wage changes, (2) those whose minimum wage changes are driven by long-standing inflation-indexing provisions, (3) those that have enacted small cumulative increases through recent legislation, and (4) those that have enacted large cumulative increases through recent legislation. While the first of these groups (i.e., the states with no minimum wage changes) is straightforward to define, there is discretion in our allocation of states across the latter three groupings. The analysis presented below considers three groupings of the remaining states.

When allocating states across policy groupings, discretion arises along several dimensions. The first is the precise cutoff we use to distinguish between "large" and "small" changes. The second involves time horizons: one of the objectives of our analysis plan is to capture any dynamic lags associated with minimum wage changes' effects. We thus consider

[4] Because this paper reports results from a pre-commitment plan, the text of our summaries of the research design, data sources, and policy context overlap significantly with the text of the papers in which we developed the analysis.

divisions of states into those with "large" and "small" changes as of January 2015 and with "large" and "small" changes as of January 2017. This helps us explore the relevance of the amount of time that has elapsed since the bulk of a state's minimum wage changes have been implemented.

An additional dimension of discretion involves states that have historically maintained provisions to index their minimum wage rates to inflation, but that have more recently implemented new statutory minimum wage changes. Our "inflation-indexation" designation is intended to capture states whose minimum wage changes have long been forecastable by firms. We thus shift states from "inflation indexer" status to "statutory increaser" status if and when they implement a newly legislated increase. Washington state, for example, shifts from "inflation indexer" into "statutory increaser" status when we categorize the states based on the changes they have enacted as of January 2017.[5] Data on state minimum wage rates from 2011 to 2017 come from many sources, which are compiled in Clemens, Hobbs, and Strain (2018).

Our groupings of states are designed to both maintain our analysis plan's transparency and to allow for dynamic effects of this period's minimum wage changes.[6] The first grouping is thus unchanged from the analyses in CS (2017; 2018a). For this grouping, we describe states as having "indexed" minimum wage changes if their minimum wage rates rose in accordance with inflation-indexation provisions, but had not been increased through new legislation as of January 2015. We describe states as having "large" statutory changes if the changes enacted between

[5] Sub-state minimum wage changes are also of interest. Our current designations focus exclusively on state-level changes. While we have not explicitly taken sub-state changes into account, we have conducted our analyses with an eye on their potential relevance for interpreting our results. Differences in sub-state minimum wage changes are relevant, for example, for interpreting the precise amount of minimum wage variation underlying any differential employment changes that we estimate.

[6] The dynamic effects we have in mind include effects on job *growth*, as emphasized by Meer and West (2016), and effects that will tend to unfold over cycles of firm birth and death, as emphasized in Sorkin (2015) and Aaronson, French, Sorkin, and To's (2018) analyses of new firms' production technology choices.

January 2013 and January 2015 were greater than or equal to $1 and as "small" statutory changes if less than $1.

Our second and third groupings incorporate information about minimum wage changes enacted between January 2015 and January 2017. Our second grouping is the same as the first, except that we drop from the sample all states that enacted their first statutory minimum wage changes between January 2016 and January 2017. This includes Arizona, Colorado, Oregon, and Washington, which had inflation-indexed increases between 2013 and 2015, as well as Maine, which had enacted no minimum wage changes during this earlier period. All of these states enacted recent statutory minimum wage increases that had taken effect as of January 2017.

Our third grouping reorganizes states across categories based on their full set of minimum wage changes enacted between January 2013 and January 2017. Over this time period, roughly half of the states with new statutory minimum wage changes had enacted changes equal to or greater than $2. We thus use $2 as the more recent cutoff between states with "large" and "small" increases. Further, we shift Arizona, Colorado, Oregon, and Washington, from the "inflation indexer" group into either the large or small "statutory increaser" group, depending on the size of the minimum wage change associated with each state's new legislation as of January 2017.

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 2017. Minnesota and Nebraska shift from the "small" change group to the "large" change group, while New Jersey and South Dakota shift from the "large" change group to the "small" change group. This change in the groupings

involves a modest but economically interesting shift in the dynamics of the policy effects the groups will track. Minnesota and Nebraska are states that have enacted larger minimum wage changes than New Jersey and South Dakota in total. However, New Jersey and South Dakota's initial minimum wage changes were larger and have been in effect for longer. Any effects these minimum wage changes may have had on firms' investment decisions will thus have had longer to take effect. 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 CS (2017; 2018a; 2018b), our primary data sources are the American Community Survey (ACS) and the Current Population Survey (CPS). 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 CS (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.[7]

[7] 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."

Tables 3A, 3B, 4A, and 4B present summary statistics on the primary ACS and 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 2017. 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 can be found in Tables 5, 6, and 7.

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 35 percent in this group of states from the 2011–2013 base period through 2017 (Table 6a). They rose by roughly 42 percent in states that index their minimum wage rates for inflation. Across states that either did not increase their minimum wage rates or that enacted small minimum wage increases, median house prices rose by an average of roughly 22 percent. The BEA's income data show that *per capita* incomes grew $5,000 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 2017.

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 2017, the prime-age employment rate, for example, grew by an average of 3.7 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 2.8 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 2.8 percentage points less by 2017 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 again –2.8 percentage points. Among all individuals ages 16 to 21, the difference measured in the ACS is –0.7 percentage point while the difference measured in the CPS is –0.9 percentage point.

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 Recent 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 CS (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):

$$Y_{i,s,t} = \sum_{p(t)\neq 0} \beta_{p(t)} Policy_s \times Post_{p(t)} + \alpha_{1s}\, State_s + \alpha_{2t}\, Time_t + X_{i,s,t}\,\gamma + \varepsilon_{i,s,t}, \quad (1)$$

where $Y_{i,s,t}$ is a binary indicator of the employment of individual *i*, living in state *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 $Policy_s$ 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 coefficients of interest are the $\beta_{p(t)}$ on the interaction between $Policy_s$ and $Post_{p(t)}$. 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 CS (2017; 2018a; 2018b) by simply adding 2017 to the sample. For this analysis, $Post_{p(t)}$ is an indicator for observations that occur in either 2015, 2016, or 2017. $\beta_{p(t)}$ thus describes differential changes in employment from a base period consisting of 2011, 2012, and 2013 through a post period consisting of 2015, 2016, and 2017. In subsequent analysis we exclude 2014, 2015, and 2016 from the sample so that $\beta_{p(t)}$ describes differential changes in employment from a base period consisting of 2011, 2012, and 2013 through a post period consisting of 2017.

The coefficient $\beta_{p(t)}$ 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):

$$Y_{i,s,t} = \sum_{p(t)\neq 0} \beta_{p(t)} Policy_s \times Post_{p(t)} \times Target_i + \alpha_{1s} State_s + \alpha_{2t} Time_t + \alpha_{3g} Target_g + \alpha_{4st} State_s \times Time_t + \alpha_{5gs} State_s \times Target_g + \alpha_{6gt} Time_t \times Target_g + X_{i,s,t}\gamma + \varepsilon_{i,s,t} \quad (2)$$

Equation (2) augments equation (1) with three sets of two-way fixed effects. These include 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 relative employment of the "target" group relative to other skill groups at baseline, and time-varying differences in states' economic conditions.

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 2017. The estimates reported in the tables include permutations of specifications across the following dimensions: (1) ACS or CPS data;[8] (2) analysis samples consisting of individuals ages 16 to 25 with less than a completed high school education (low-skilled workers) or samples consisting of all individuals ages 16 to 21 (young workers);[9] (3) difference-in-differences specifications described by equation (1) or triple-difference specifications described by equation (2);[10] (4) a "post" period consisting of 2015, 2016, and 2017 or a "post" period consisting solely of 2017;[11] (5) the barrier between "large" and "small" changes based on changes enacted through January 2015 or based on changes enacted through January 2017;[12] and (6) including all states in the analysis or omitting states which shift policy categories between January 2015 and January 2017.[13]

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 just over 2 percentage points across the full set of specifications we estimate using both of our primary analysis samples. Estimates for

[8] 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.
[9] 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. 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.
[10] 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.
[11] For estimates in which the post-period is 2015–2015, see tables 8A-B, 10A-B, 14A-B, and 15A-B. For estimates in which the post-period is 2017 alone, see tables 9A-B, 11A-B, 12A-B, 13A-B, 16A-B, and 17A-B.
[12] 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 2017, see tables 12 and 13A and B.
[13] 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 2017, see tables 14, 15, 16, and 17A and B.

states with large statutory increases became systematically more negative with the addition of 2017 data to our analysis. Across the full set of estimates, roughly three-quarters are statistically distinguishable from zero. Estimates are systematically more negative for the sample consisting of individuals ages 16 to 25 with less than a completed high school education than for the larger sample of all individuals ages 16 to 21. Estimates 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 and 2016 are excluded from the sample, such that we capture "medium-run" effects through 2017. The estimates in these tables average just under –3 percentage points, or roughly 0.7 percentage point more negative than the average across all estimates. Answering the question of whether estimates continue to become more negative with the time since states enacted their minimum wage changes will be a key point of emphasis as our analysis incorporates data that extend through 2018, 2019, and 2020.

Third, omitting the states which shift policy categories due to minimum wage changes enacted by 2015 and 2017 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 –0.003 percentage points. Two of these estimates are statistically distinguishable from zero while the remainder are not. ACS estimates are typically small and negative for the "least-skilled" group and small and positive for the larger "young adult" group. The average estimate across our CPS specifications is 0.015. A nontrivial number of CPS specifications are positive and statistically distinguishable from zero for the "young adult" group, while estimates are typically negative and statistically indistinguishable from zero for the "low-skilled" group. Averaged across the ACS and CPS, the mean point estimate is 0.007. The difference between our ACS and CPS results for states with small statutory increases remains the most puzzling discrepancy that we have encountered across the ACS and CPS data sets. Future data remain important for shedding light on whether the discrepancy is most likely a product of sampling variations or other factors.

Fifth, estimates of the effects of increases linked to inflation-indexing provisions average roughly 1.6 percentage points in our analyses of both ACS and CPS data. For this group, our difference-in-differences specifications estimated in the ACS frequently yield statistically significant and positive estimates. Triple-difference ACS specifications are positive, economically modest, and uniformly statistically indistinguishable from zero. In the CPS, both our difference-in-differences and triple-difference specifications are typically statistically indistinguishable from zero.

Section VI: Discussion and Conclusion

Several aspects of the estimates summarized above merit further discussion. First, our analysis thus far incorporates ACS and CPS data through the 2017 calendar year. The analysis

should thus be viewed as capturing relatively short-to-medium-run effects of recent minimum wage changes. Many states' minimum wage changes had yet to be fully phased in as of the December 2017 conclusion of our analysis window. Medium and long-run analyses of this period's minimum wage changes will thus require additional years of data.

Second, 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, 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 more often than they are negative. Jardim *et al*. (2017) find similarly divergent effects in their analysis of different stages of recent minimum wage changes enacted by the city of Seattle.

As noted in our previous analyses, the framework we sketched in CS (2017) 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 that 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 2017, the data appear quite strongly consistent with this framework. In

addition, it may be the case that small increases during an economic expansion are less likely to result in employment reductions. The data through 2017 appear to support this, as well.

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 often positive. 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.

We conclude as we have concluded our previous analyses. On all counts, our interpretation of the evidence is tempered by its short-to-medium-run nature and by the variations we observe when comparing estimates across specifications as well as across the ACS and CPS samples. As we observed in Clemens and Strain (2017), analyses of additional years of data will be important on two fronts. First, additional data will help clarify the extent to which differences we observe when comparing ACS and CPS estimates are driven by sampling variations. Second, subsequent years of data will provide much needed evidence on the medium-to-long-run effects of this period's minimum wage changes.

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Figures and Tables

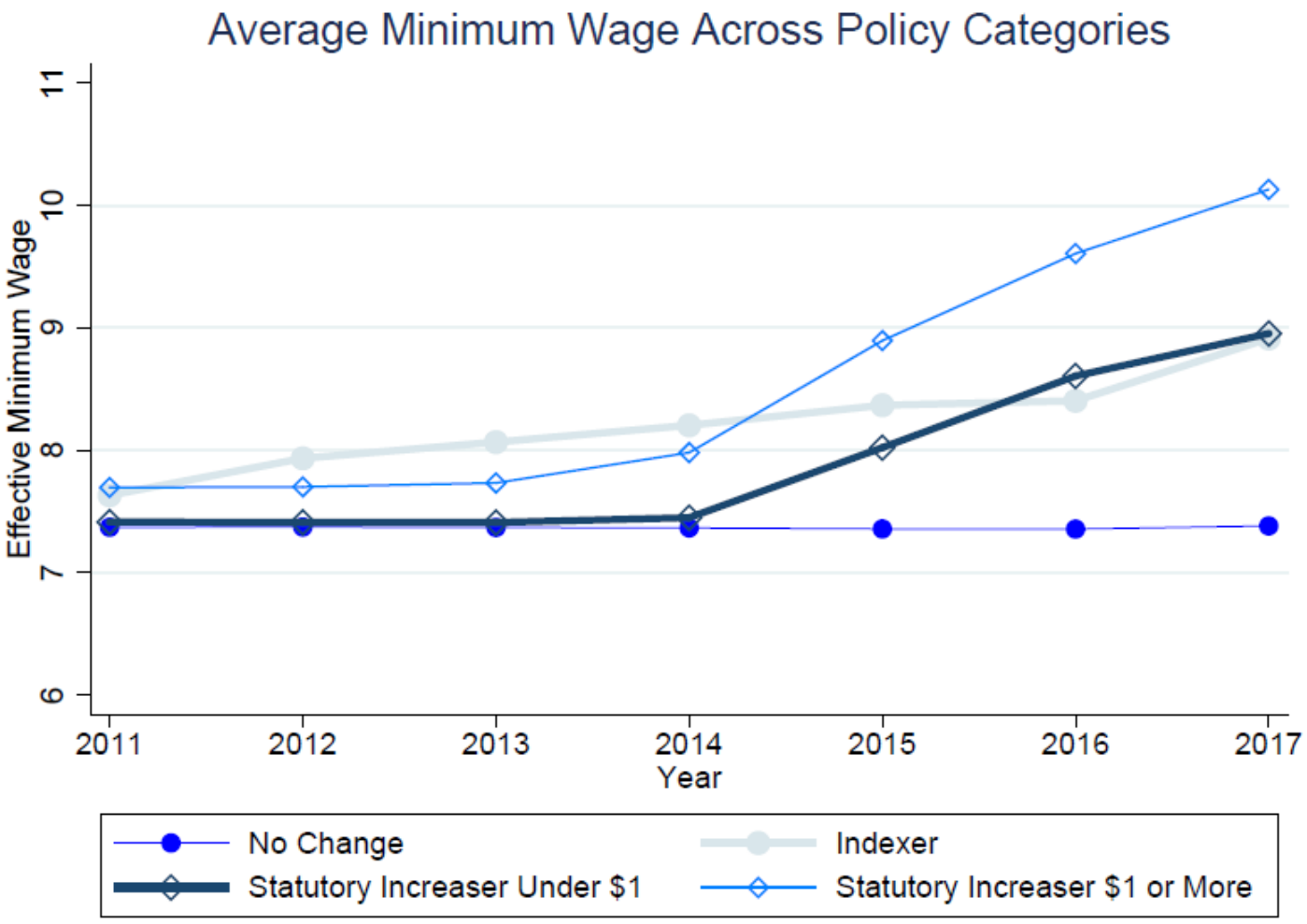

Figure 1. Average Minimum Wage Across Policy Categories: This figure plots the average annual effective minimum wage for states in each of our four policy categories from January 2011 to January 2017. States are defined as statutory increasers under $1 if the combined statutory increase in their minimum 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 state population.

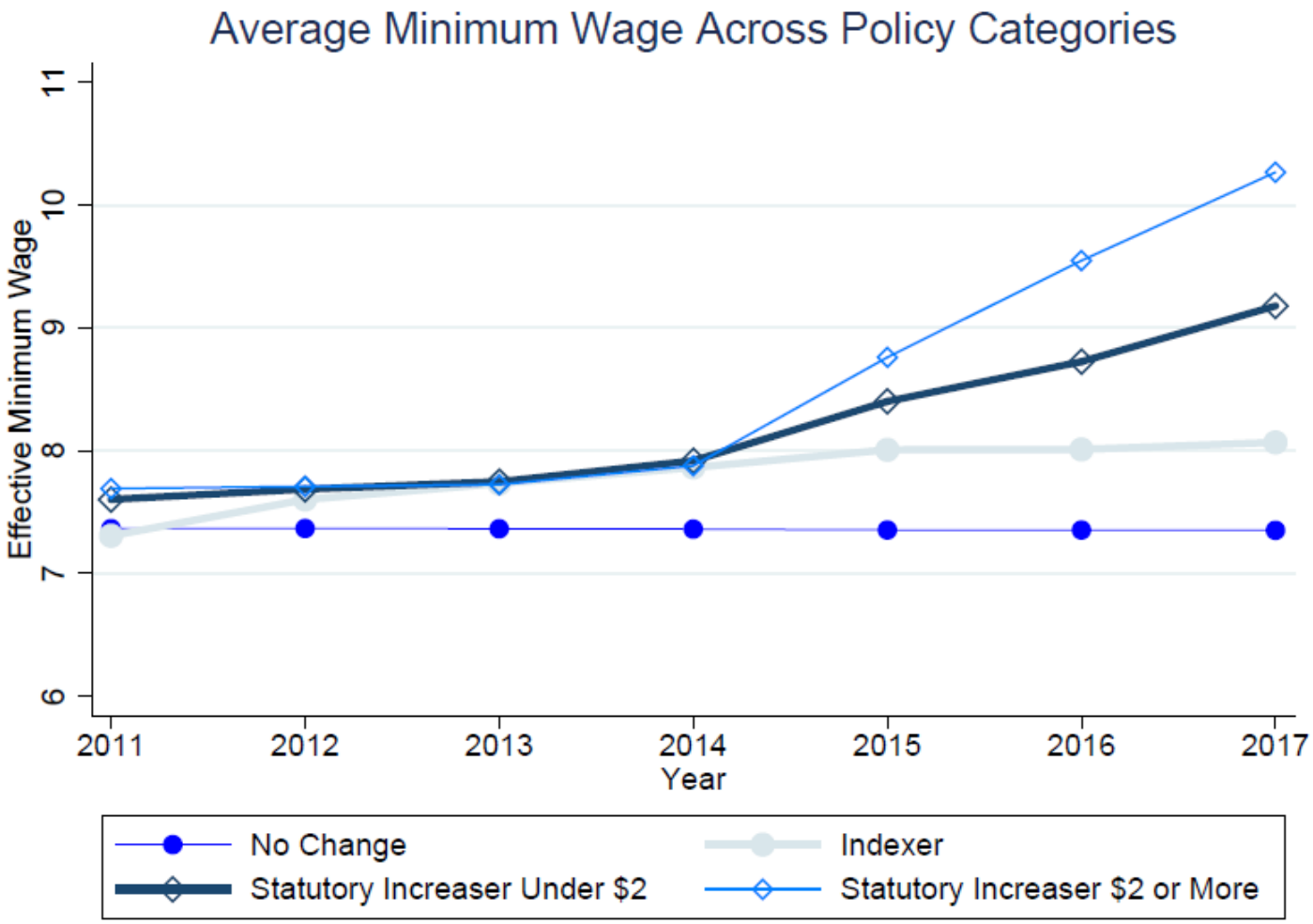

Figure 2. Average Minimum Wage Across Policy Categories: This figure plots the average annual effective minimum wage for states in each of our four policy categories from January 2011 to January 2017. States are defined as statutory increasers under $2 if the combined statutory increase in their minimum wage between January 2013 and January 2016 was under $2. States are defined as statutory increasers of $2 or more if the combined statutory increase in their minimum wage was $2 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 state population.

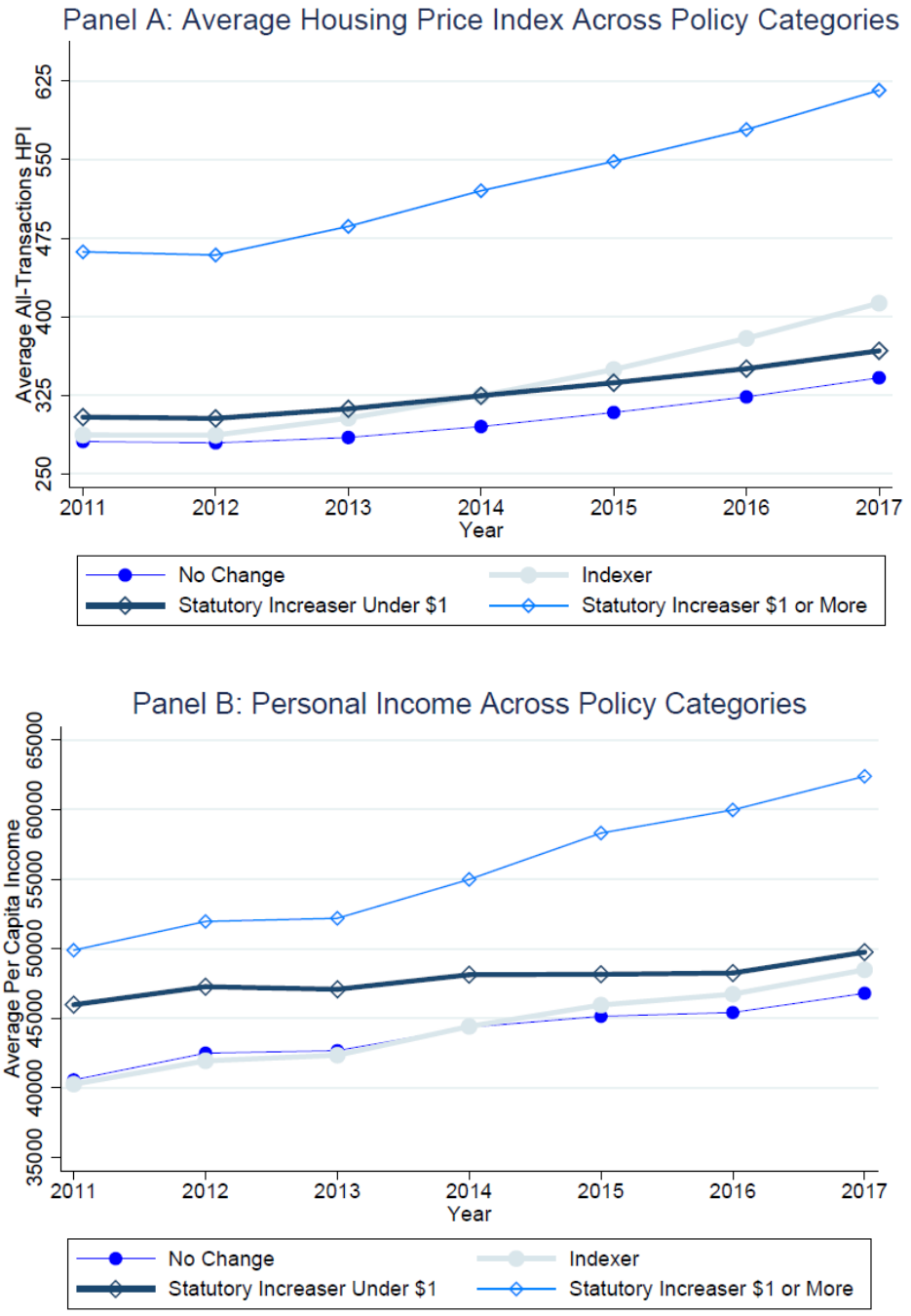

Figure 3. Macroeconomic Time Series Across Policy Categories: Panel A plots the average housing price index variable for each of our four policy categories from 2011 to 2017. Housing price index data come from the Federal Housing Finance Agency. Panel B plots average per capita income for each of our four policy categories from 2011 to 2016. 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 state 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 2017. 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 state 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 2017. 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 state population.

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 2017. We drop states which change policy categories when we move from using increases from 2013 to 2015 to using increases from 2013 to 2017 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 state population.

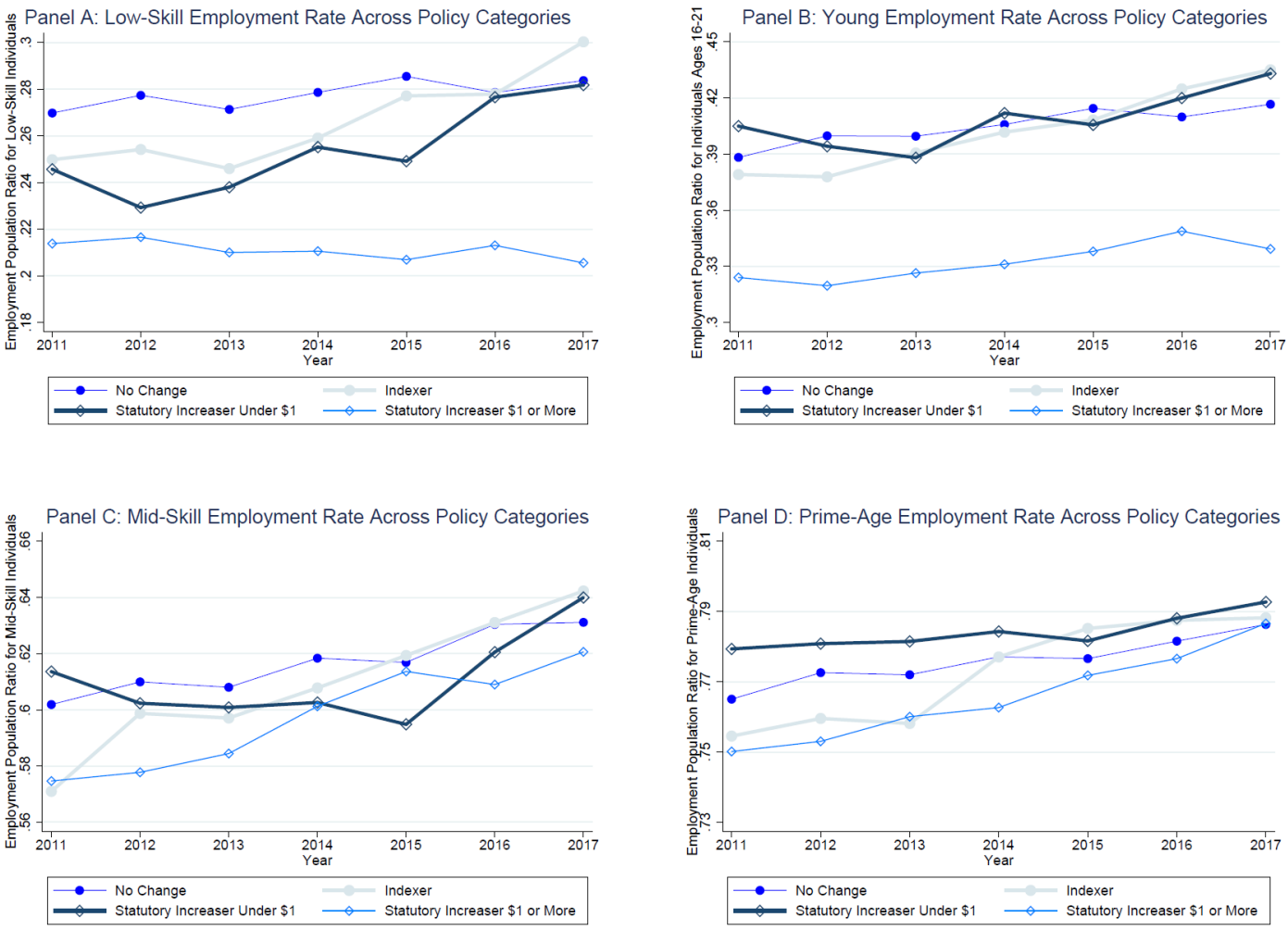

Figure 7. Employment Series in the CPS – No Switchers: This figure plots average annual employment rates for each of our four policy groups, broken out across four subsamples, from 2011 to 2017. We drop states which change policy categories when we move from using increases from 2013 to 2015 to using increases from 2013 to 2017 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. Indexers are states that index their minimum wage to inflation. Averages are weighted by state population.

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 come 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 come 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 2017 and $2 Cutoff

Statutory increasers of $2 or more	Statutory increasers under $2
Alaska	Arkansas
Arizona	Colorado
California	Connecticut
District of Columbia	Delaware
Hawaii	Maine
Massachusetts	Maryland
Minnesota	Michigan
New York	Nebraska
	New Jersey
Indexers	Oregon
Florida	Rhode Island
Missouri	South Dakota
Montana	Vermont
Ohio	Washington
	West Virginia

Notes: Data on minimum wage indexing provisions come 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 come from the U.S. Department of Labor. States are counted as statutory increasers of under $2 if the combined statutory increase in the minimum wage from January 1, 2013, through January, 1 2017 was under $2. States are counted as statutory increasers of $2 or more if the combined statutory increase in the minimum wage was $2 or more.

Table 3A: Sample Summary Statistics: ACS and Supplemental Data for 2011–2013 and 2015–2017

	(1)	(2)	(3)	(4)
Years	2011–2013	2015–2017	2011–2013	2015–2017
Skill Groups	Ages 16 to 25 w/ < High School		Ages 16 to 21	
Employment	0.225	0.250	0.374	0.415
	(0.417)	(0.433)	(0.484)	(0.493)
Age	17.90	17.68	18.58	18.55
	(2.444)	(2.301)	(1.704)	(1.707)
Black	0.166	0.157	0.153	0.148
	(0.372)	(0.364)	(0.360)	(0.355)
High School Degree	0	0	0.343	0.352
	(0)	(0)	(0.475)	(0.478)
Some College Education	0	0	0.247	0.244
	(0)	(0)	(0.431)	(0.430)
House Price Index	326.2	391.8	330.6	397.8
	(100.0)	(122.8)	(101.7)	(125.4)
Income Per Capita ($1000s)	43.78	49.66	44.02	50.01
	(6.286)	(7.535)	(6.381)	(7.665)
Effective Minimum Wage ($)	7.533	8.173	7.537	8.213
	(0.422)	(1.030)	(0.423)	(1.050)
Observations	346135	318865	774438	744393

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 2015–2017

	(1)	(2)	(3)	(4)
Years	2011–2013	2015–2017	2011–2013	2015–2017
Skill Groups	Ages 16 to 25 w/ < High School		Ages 16 to 21	
Employment	0.234	0.258	0.360	0.393
	(0.424)	(0.437)	(0.480)	(0.488)
Age	17.97	17.77	18.50	18.46
	(2.423)	(2.290)	(1.730)	(1.739)
Black	0.164	0.159	0.155	0.152
	(0.370)	(0.365)	(0.362)	(0.359)
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	328.1	392.5	332.1	398.4
	(100.9)	(122.1)	(102.6)	(124.8)
Income Per Capita ($1000s)	43.88	49.70	44.13	50.10
	(6.353)	(7.543)	(6.436)	(7.613)
Effective Minimum Wage ($)	7.536	8.185	7.542	8.222
	(0.423)	(1.031)	(0.426)	(1.046)
Observations	197386	180652	365354	339640

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 2017

	(1)	(2)	(3)	(4)
Years	2011–2013	2017	2011–2013	2017
Skill Groups	Ages 16 to 25 w/ < High School		Ages 16 to 21	
Employment	0.225	0.253	0.374	0.420
	(0.417)	(0.435)	(0.484)	(0.494)
Age	17.90	17.60	18.58	18.53
	(2.444)	(2.221)	(1.704)	(1.704)
Black	0.166	0.155	0.153	0.147
	(0.372)	(0.362)	(0.360)	(0.355)
High School Degree	0	0	0.343	0.355
	(0)	(0)	(0.475)	(0.478)
Some College Education	0	0	0.247	0.243
	(0)	(0)	(0.431)	(0.429)
House Price Index	326.2	415.3	330.6	421.4
	(100.0)	(129.7)	(101.7)	(132.3)
Income Per Capita ($1000s)	43.78	51.11	44.02	51.47
	(6.286)	(7.894)	(6.381)	(8.028)
Effective Minimum Wage ($)	7.533	8.416	7.537	8.468
	(0.422)	(1.271)	(0.423)	(1.291)
Observations	346135	105277	774438	248791

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 2017

	(1)	(2)	(3)	(4)
Years	2011–2013	2017	2011–2013	2017
Skill Groups	Ages 16 to 25 w/ < High School		Ages 16 to 21	
Employment	0.234	0.265	0.360	0.400
	(0.424)	(0.441)	(0.480)	(0.490)
Age	17.97	17.71	18.50	18.45
	(2.423)	(2.244)	(1.730)	(1.740)
Black	0.164	0.155	0.155	0.150
	(0.370)	(0.362)	(0.362)	(0.357)
High School Degree	0	0	0.223	0.230
	(0)	(0)	(0.416)	(0.421)
Some College Education	0	0	0.299	0.292
	(0)	(0)	(0.458)	(0.455)
House Price Index	328.1	414.0	332.1	420.5
	(100.9)	(128.9)	(102.6)	(131.8)
Income Per Capita ($1000s)	43.88	51.02	44.13	51.49
	(6.353)	(7.856)	(6.436)	(7.978)
Effective Minimum Wage ($)	7.535	8.421	7.541	8.472
	(0.423)	(1.277)	(0.426)	(1.291)
Observations	197386	58379	365354	110408

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 with 2015-2017 as the Post Period and $1 Cutoff

	(1)	(2)	(3)	(4)
	2011-2013	2015-2017	Change	Change Relative to Non-Increasers
Young Adult Employment				
Non-Increasers	0.385	0.425	0.040	
Indexers	0.384	0.435	0.051	0.011
Increase < $1	0.415	0.453	0.038	-0.002
Increase >= $1	0.330	0.362	0.032	-0.008
Low-Skill Emploment				
Non-Increasers	0.239	0.264	0.025	
Indexers	0.222	0.265	0.043	0.018
Increase < $1	0.246	0.277	0.031	0.006
Increase >= $1	0.188	0.197	0.009	-0.016
Prime-Age Employment				
Non-Increasers	0.751	0.773	0.022	
Indexers	0.746	0.776	0.030	0.008
Increase < $1	0.768	0.794	0.026	0.004
Increase >= $1	0.748	0.778	0.030	0.008
Mid-Skill Employment				
Non-Increasers	0.576	0.612	0.036	
Indexers	0.583	0.626	0.043	0.007
Increase < $1	0.576	0.618	0.042	0.006
Increase >= $1	0.590	0.623	0.033	-0.003
House Price Index				
Non-Increasers	274.1	318.8	44.7	
Indexers	290.8	380.5	89.7	45.0
Increase < $1	302.5	347.9	45.4	0.7
Increase >= $1	455.7	576.6	120.9	76.2
Income per Capita ($1000s)				
Non-Increasers	40.97	45.78	4.81	
Indexers	40.83	46.89	6.06	1.25
Increase < $1	44.69	50.40	5.71	0.90
Increase >= $1	50.52	59.33	8.81	4.00

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 2017, 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 with 2015-2017 as the Post Period and $1 Cutoff

	(1)	(2)	(3)	(4)
	2011-2013	2015-2017	Change	Change Relative to Non-Increasers
Young Adult Employment				
Non-Increasers	0.377	0.407	0.030	
Indexers	0.373	0.412	0.039	0.009
Increase < $1	0.400	0.437	0.037	0.007
Increase >= $1	0.304	0.332	0.028	-0.002
Low-Skill Employment				
Non-Increasers	0.250	0.273	0.023	
Indexers	0.240	0.270	0.030	0.007
Increase < $1	0.238	0.287	0.049	0.026
Increase >= $1	0.198	0.200	0.002	-0.021
Prime-Age Employment				
Non-Increasers	0.761	0.781	0.020	
Indexers	0.757	0.785	0.028	0.008
Increase < $1	0.774	0.799	0.025	0.005
Increase >= $1	0.745	0.771	0.026	0.006
Mid-Skill Employment				
Non-Increasers	0.591	0.618	0.027	
Indexers	0.589	0.639	0.050	0.023
Increase < $1	0.583	0.621	0.038	0.011
Increase >= $1	0.579	0.617	0.038	0.011
House Price Index				
Non-Increasers	273.5	318.4	44.9	
Indexers	288.5	380.9	92.4	47.5
Increase < $1	301.5	346.6	45.1	0.2
Increase >= $1	454.8	577.5	122.7	77.8
Income Per Capita ($1000s)				
Non-Increasers	41.01	45.66	4.65	
Indexers	40.70	46.89	6.19	1.54
Increase < $1	44.58	50.51	5.93	1.28
Increase >= $1	50.47	59.32	8.85	4.2

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 2017, 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 with 2017 as the Post Period and $1 Cutoff

	(1)	(2)	(3)	(4)
	2011-2013	2017	Change	Change Relative to Non-Increasers
Young Adult Employment				
Non-Increasers	0.385	0.430	0.045	
Indexers	0.384	0.442	0.058	0.013
Increase < $1	0.415	0.456	0.041	-0.004
Increase >= $1	0.330	0.368	0.038	-0.007
Low-Skill Emploment				
Non-Increasers	0.239	0.269	0.030	
Indexers	0.222	0.271	0.049	0.019
Increase < $1	0.246	0.282	0.036	0.006
Increase >= $1	0.188	0.190	0.002	-0.028
Prime-Age Employment				
Non-Increasers	0.751	0.779	0.028	
Indexers	0.746	0.783	0.037	0.009
Increase < $1	0.768	0.798	0.030	0.002
Increase >= $1	0.748	0.785	0.037	0.009
Mid-Skill Employment				
Non-Increasers	0.576	0.621	0.045	
Indexers	0.583	0.636	0.053	0.008
Increase < $1	0.576	0.624	0.048	0.003
Increase >= $1	0.590	0.632	0.042	-0.003
House Price Index				
Non-Increasers	274.1	336.4	62.3	
Indexers	290.8	412.8	122.0	59.7
Increase < $1	302.5	364.7	62.2	-0.1
Increase >= $1	455.7	613.8	158.1	95.8
Income per Capita ($1000s)				
Non-Increasers	40.97	46.89	5.92	
Indexers	40.83	48.32	7.49	1.57
Increase < $1	44.69	51.92	7.23	1.31
Increase >= $1	50.52	61.65	11.13	5.21

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 2017, 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 with 2017 as the Post Period and $1 Cutoff

	(1) 2011-2013	(2) 2017	(3) Change	(4) Change Relative to Non-Increasers
Young Adult Employment				
Non-Increasers	0.377	0.413	0.036	
Indexers	0.373	0.431	0.058	0.022
Increase < $1	0.400	0.448	0.048	0.012
Increase >= $1	0.304	0.331	0.027	-0.009
Low-Skill Employment				
Non-Increasers	0.250	0.279	0.029	
Indexers	0.240	0.285	0.045	0.016
Increase < $1	0.238	0.303	0.065	0.036
Increase >= $1	0.198	0.199	0.001	-0.028
Prime-Age Employment				
Non-Increasers	0.761	0.786	0.025	
Indexers	0.757	0.791	0.034	0.009
Increase < $1	0.774	0.806	0.032	0.007
Increase >= $1	0.745	0.780	0.035	0.010
Mid-Skill Employment				
Non-Increasers	0.591	0.625	0.034	
Indexers	0.589	0.653	0.064	0.030
Increase < $1	0.583	0.646	0.063	0.029
Increase >= $1	0.579	0.623	0.044	0.010
House Price Index				
Non-Increasers	273.5	336.0	62.5	
Indexers	288.5	415.2	126.7	64.2
Increase < $1	301.5	364.7	63.2	0.7
Increase >= $1	454.8	615.0	160.2	97.7
Income Per Capita ($1000s)				
Non-Increasers	41.01	46.81	5.80	
Indexers	40.70	48.43	7.73	1.93
Increase < $1	44.58	52.46	7.88	2.08
Increase >= $1	50.47	61.65	11.18	5.38

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-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 2017, 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 Cutoff

	(1) 2011-2013	(2) 2017	(3) Change	(4) Change Relative to Non-Increasers
Young Adult Employment				
Non-Increasers	0.384	0.429	0.045	
Indexers	0.383	0.437	0.054	0.009
Increase < $2	0.392	0.434	0.042	-0.003
Increase >= $2	0.341	0.386	0.045	0.000
Low-Skill Emploment				
Non-Increasers	0.239	0.268	0.029	
Indexers	0.221	0.266	0.045	0.016
Increase < $2	0.231	0.263	0.032	0.003
Increase >= $2	0.194	0.209	0.015	-0.014
Prime-Age Employment				
Non-Increasers	0.751	0.778	0.027	
Indexers	0.743	0.780	0.037	0.010
Increase < $2	0.761	0.795	0.034	0.007
Increase >= $2	0.749	0.784	0.035	0.008
Mid-Skill Employment				
Non-Increasers	0.576	0.621	0.045	
Indexers	0.566	0.616	0.050	0.005
Increase < $2	0.588	0.640	0.052	0.007
Increase >= $2	0.591	0.634	0.043	-0.002
House Price Index				
Non-Increasers	273.0	335.2	62.2	
Indexers	266.3	363.7	97.4	35.2
Increase < $2	348.3	440.9	92.6	30.4
Increase >= $2	433.8	593.8	160.0	97.8
Income per Capita ($1000s)				
Non-Increasers	40.98	46.90	5.92	
Indexers	40.28	46.95	6.67	0.75
Increase < $2	45.96	54.12	8.16	2.24
Increase >= $2	48.82	59.47	10.65	4.73

Notes: This table reports employment rates for each our of our four policy groups (non-increasers, indexers, increase < $2, and increase >= $2) 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 2017, 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 Cutoff

	(1)	(2)	(3)	(4)
	2011-2013	2017	Change	Change Relative to Non-Increasers
Young Adult Employment				
Non-Increasers	0.376	0.407	0.031	
Indexers	0.379	0.410	0.031	0.000
Increase < $2	0.375	0.406	0.031	0.000
Increase >= $2	0.314	0.351	0.037	0.006
Low-Skill Employment				
Non-Increasers	0.250	0.273	0.023	
Indexers	0.243	0.268	0.025	0.000
Increase < $2	0.230	0.265	0.035	0.010
Increase >= $2	0.206	0.216	0.010	-0.015
Prime-Age Employment				
Non-Increasers	0.761	0.781	0.020	
Indexers	0.755	0.783	0.028	0.000
Increase < $2	0.766	0.791	0.025	-0.003
Increase >= $2	0.747	0.774	0.027	-0.001
Mid-Skill Employment				
Non-Increasers	0.591	0.618	0.027	
Indexers	0.584	0.625	0.041	0.000
Increase < $2	0.597	0.635	0.038	-0.003
Increase >= $2	0.575	0.619	0.044	0.003
House Price Index				
Non-Increasers	272.2	317.3	45.1	
Indexers	265.2	336.3	71.1	0.0
Increase < $2	348.4	414.8	66.4	-4.7
Increase >= $2	431.9	556.3	124.4	53.3
Income Per Capita ($1000s)				
Non-Increasers	41.01	45.66	4.65	
Indexers	40.27	45.66	5.39	0.0
Increase < $2	45.97	52.49	6.52	1.1
Increase >= $2	48.69	57.23	8.54	3.2

Notes: This table reports employment rates for each our of our four policy groups (non-increasers, indexers, increase < $2, and increase >= $2) 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 2017, 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 Using ACS Data and $1 Cutoff with 2015–2017 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	-0.0247***	-0.0244***	-0.0157**	-0.0197***
	(0.007)	(0.005)	(0.006)	(0.006)
Treated x Small Statutory Increaser x Post	0.0024	-0.0028	-0.0054	-0.0073
	(0.008)	(0.007)	(0.006)	(0.006)
Treated x Indexer x Post	0.0104	0.0060	0.0028	0.0035
	(0.009)	(0.008)	(0.005)	(0.005)
Age and education controls	No	Yes	No	Yes
Observations	7,513,828	7,513,828	8,367,659	8,367,659
R-squared	0.116	0.161	0.102	0.161

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 age 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 Using CPS Data and $1 Cutoff with 2015–2017 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	-0.0282***	-0.0238***	-0.0080	-0.0118
	(0.009)	(0.007)	(0.011)	(0.009)
Treated x Small Statutory Increaser x Post	0.0200**	0.0105	0.0017	0.0051
	(0.010)	(0.008)	(0.008)	(0.007)
Treated x Indexer x Post	0.0029	-0.0039	0.0039	0.0097
	(0.009)	(0.007)	(0.008)	(0.008)
Age and education controls	No	Yes	No	Yes
Observations	3,953,883	3,953,883	4,280,839	4,280,839
R-squared	0.128	0.166	0.114	0.165

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 treated group consists of individuals age 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 Using ACS Data and $1 cutoff with 2017 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	-0.0376***	-0.0356***	-0.0161**	-0.0212***
	(0.009)	(0.006)	(0.007)	(0.006)
Treated x Small Statutory Increaser x Post	0.0049	-0.0007	-0.0058	-0.0094
	(0.008)	(0.007)	(0.007)	(0.008)
Treated x Indexer x Post	0.0095	0.0050	0.0030	0.0017
	(0.010)	(0.009)	(0.005)	(0.005)
Age and education controls	No	Yes	No	Yes
Observations	5,041,601	5,041,601	5,613,418	5,613,418
R-squared	0.116	0.162	0.103	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 age 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 Using CPS Data and $1 Cutoff with 2017 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	-0.0375***	-0.0355***	-0.0187	-0.0265**
	(0.009)	(0.009)	(0.013)	(0.013)
Treated x Small Statutory Increaser x Post	0.0295***	0.0185*	0.0044	0.0047
	(0.011)	(0.010)	(0.007)	(0.008)
Treated x Indexer x Post	0.0122	0.0023	0.0148	0.0160*
	(0.013)	(0.010)	(0.009)	(0.008)
Age and education controls	No	Yes	No	Yes
Observations	2,666,587	2,666,587	2,886,584	2,886,584
R-squared	0.128	0.166	0.114	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 treated group consists of individuals age 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 2015–2017 as the Post Period (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0170**	-0.0310***	-0.0128	-0.0160**	-0.0166**	-0.0227***
	(0.007)	(0.006)	(0.010)	(0.007)	(0.006)	(0.007)
Small Statutory Increaser x Post	0.0059	0.0035	0.0059	0.0054	0.0016	-0.0015
	(0.013)	(0.010)	(0.013)	(0.011)	(0.012)	(0.008)
Indexer x Post	0.0187**	0.0113	0.0213**	0.0171*	0.0146*	0.0113
	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)	(0.007)
Ln(Income Per Capita)		0.3018***				0.3630***
		(0.083)				(0.078)
Housing Price Index Divided by 1000			-0.0601			-0.1501**
			(0.063)			(0.061)
State Mid-Skill Emp-to-Pop Ratio				0.3156***		0.1668*
				(0.100)		(0.091)
Age and education controls	No	No	No	No	Yes	Yes
Observations	665,000	665,000	665,000	665,000	665,000	665,000
R-squared	0.016	0.016	0.016	0.016	0.098	0.098

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0081	-0.0251***	-0.0184**	-0.0073	-0.0113	-0.0272***
	(0.009)	(0.005)	(0.008)	(0.009)	(0.009)	(0.006)
Statutory Increaser Small x Post	-0.0021	-0.0049	-0.0022	-0.0025	-0.0033	-0.0060
	(0.011)	(0.007)	(0.011)	(0.010)	(0.011)	(0.007)
Indexer x Post	0.0109*	0.0020	0.0046	0.0098*	0.0115*	0.0027
	(0.006)	(0.005)	(0.008)	(0.006)	(0.006)	(0.006)
Ln(Income Per Capita)		0.3685***				0.3463***
		(0.044)				(0.066)
Housing Price Index Divided by 1000			0.1470***			0.0015
			(0.047)			(0.051)
State Mid-Skill Emp-to-Pop Ratio				0.2453**		0.0942
				(0.098)		(0.062)
Age and education controls	No	No	No	No	Yes	Yes
Observations	1,518,831	1,518,831	1,518,831	1,518,831	1,518,831	1,518,831
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 age 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 2015–2017 as the Post Period (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0217**	-0.0340***	-0.0220**	-0.0226***	-0.0178***	-0.0241***
	(0.008)	(0.010)	(0.010)	(0.008)	(0.006)	(0.007)
Small Statutory Increaser x Post	0.0248**	0.0229**	0.0248**	0.0241**	0.0173**	0.0147**
	(0.011)	(0.009)	(0.011)	(0.011)	(0.008)	(0.007)
Indexer x Post	0.0101	0.0037	0.0100	0.0080	0.0054	0.0010
	(0.008)	(0.007)	(0.008)	(0.008)	(0.006)	(0.006)
Ln(Income Per Capita)		0.2624*				0.2444**
		(0.133)				(0.114)
Housing Price Index Divided by 1000			0.0030			-0.0855
			(0.079)			(0.077)
State Mid-Skill Emp-to-Pop Ratio				0.1163***		0.1135***
				(0.030)		(0.028)
Age and education controls	No	No	No	No	Yes	Yes
Observations	378,038	378,038	378,038	378,038	378,038	378,038
R-squared	0.021	0.021	0.021	0.021	0.110	0.110

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0015	-0.0198**	-0.0173**	-0.0024	-0.0059	-0.0236***
	(0.012)	(0.008)	(0.008)	(0.012)	(0.011)	(0.007)
Statutory Increaser Small x Post	0.0064	0.0034	0.0061	0.0056	0.0113	0.0085
	(0.011)	(0.007)	(0.009)	(0.009)	(0.008)	(0.005)
Indexer x Post	0.0110	0.0015	0.0014	0.0088	0.0176**	0.0063
	(0.008)	(0.008)	(0.009)	(0.008)	(0.008)	(0.008)
Ln(Income Per Capita)		0.3952***				0.2633***
		(0.067)				(0.084)
Housing Price Index Divided by 1000			0.2261***			0.0675
			(0.057)			(0.062)
State Mid-Skill Emp-to-Pop Ratio				0.1252***		0.1152***
				(0.027)		(0.024)
Age and education controls	No	No	No	No	Yes	Yes
Observations	704,994	704,994	704,994	704,994	704,994	704,994
R-squared	0.021	0.021	0.021	0.021	0.151	0.151

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. Panel A includes individuals age 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 2017 as the Post Period (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0286***	-0.0493***	-0.0243**	-0.0266***	-0.0265***	-0.0380***
	(0.009)	(0.009)	(0.011)	(0.008)	(0.008)	(0.007)
Small Statutory Increaser x Post	0.0063	0.0021	0.0062	0.0063	0.0026	-0.0021
	(0.012)	(0.008)	(0.012)	(0.010)	(0.011)	(0.007)
Indexer x Post	0.0197*	0.0093	0.0226*	0.0189*	0.0161	0.0112
	(0.011)	(0.010)	(0.012)	(0.011)	(0.010)	(0.008)
Ln(Income Per Capita)		0.3437***				0.3763***
		(0.084)				(0.078)
Housing Price Index Divided by 1000			-0.0505			-0.1190**
			(0.060)			(0.055)
State Mid-Skill Emp-to-Pop Ratio				0.3318**		0.1390
				(0.124)		(0.106)
Age and education controls	No	No	No	No	Yes	Yes
Observations	451,412	451,412	451,412	451,412	451,412	451,412
R-squared	0.015	0.015	0.015	0.015	0.099	0.099

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0073	-0.0304***	-0.0191*	-0.0052	-0.0113	-0.0314***
	(0.010)	(0.006)	(0.010)	(0.010)	(0.010)	(0.006)
Small Statutory Increaser x Post	-0.0047	-0.0092	-0.0046	-0.0046	-0.0067	-0.0106
	(0.013)	(0.008)	(0.012)	(0.010)	(0.013)	(0.008)
Indexer x Post	0.0128*	0.0014	0.0052	0.0122**	0.0120*	0.0011
	(0.007)	(0.005)	(0.009)	(0.006)	(0.007)	(0.005)
Ln(Income Per Capita)		0.3828***				0.3327***
		(0.049)				(0.062)
Housing Price Index Divided by 1000			0.1337***			0.0128
			(0.046)			(0.041)
State Mid-Skill Emp-to-Pop Ratio				0.3585***		0.1767**
				(0.120)		(0.076)
Age and education controls	No	No	No	No	Yes	Yes
Observations	1,023,229	1,023,229	1,023,229	1,023,229	1,023,229	1,023,229
R-squared	0.014	0.014	0.014	0.014	0.146	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 Basic CPS Data and $1 Cutoff with 2017 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***	-0.0495***	-0.0375***	-0.0286***	-0.0262***	-0.0456***
	(0.010)	(0.010)	(0.013)	(0.009)	(0.010)	(0.009)
Small Statutory Increaser x Post	0.0356***	0.0315***	0.0357***	0.0332***	0.0267***	0.0216**
	(0.011)	(0.009)	(0.011)	(0.011)	(0.009)	(0.010)
Indexer x Post	0.0200	0.0094	0.0138	0.0177	0.0122	0.0009
	(0.012)	(0.010)	(0.012)	(0.012)	(0.009)	(0.007)
Ln(Income Per Capita)		0.3582***				0.2785**
		(0.108)				(0.120)
Housing Price Index Divided by 1000			0.1099			0.0216
			(0.073)			(0.072)
State Mid-Skill Emp-to-Pop Ratio				0.0943**		0.0798*
				(0.040)		(0.043)
Age and education controls	No	No	No	No	Yes	Yes
Observations	255,765	255,765	255,765	255,765	255,765	255,765
R-squared	0.020	0.020	0.020	0.020	0.111	0.111

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0090	-0.0334***	-0.0289***	-0.0101	-0.0173	-0.0444***
	(0.015)	(0.011)	(0.010)	(0.015)	(0.015)	(0.009)
Statutory Increaser Small x Post	0.0103	0.0057	0.0105	0.0071	0.0125	0.0063
	(0.008)	(0.006)	(0.007)	(0.007)	(0.008)	(0.006)
Indexer x Post	0.0227**	0.0109	0.0100	0.0196**	0.0246***	0.0079
	(0.010)	(0.008)	(0.012)	(0.010)	(0.008)	(0.008)
Ln(Income Per Capita)		0.4041***				0.2912***
		(0.070)				(0.087)
Housing Price Index Divided by 1000			0.2279***			0.0973*
			(0.054)			(0.053)
State Mid-Skill Emp-to-Pop Ratio				0.1283***		0.1173***
				(0.027)		(0.024)
Age and education controls	No	No	No	No	Yes	Yes
Observations	475,762	475,762	475,762	475,762	475,762	475,762
R-squared	0.021	0.021	0.021	0.021	0.151	0.151

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. 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-Skill Groups Using ACS Data and $2 Cutoff with 2017 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	-0.0257*	-0.0248**	-0.0095	-0.0147**
	(0.014)	(0.010)	(0.006)	(0.006)
Treated x Small Statutory Increaser x Post	-0.0036	-0.0065	-0.0093	-0.0121
	(0.011)	(0.010)	(0.008)	(0.009)
Treated x Indexer x Post	0.0061	0.0005	0.0001	-0.0004
	(0.012)	(0.010)	(0.005)	(0.005)
Age and education controls	No	Yes	No	Yes
Observations	5,041,601	5,041,601	5,613,418	5,613,418
R-squared	0.116	0.162	0.103	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 $2 and states that increased their minimum wage by $2 or more between January 1, 2013, and January 1, 2017. The sample is from the ACS. The treated group consists of individuals age 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-Skill Groups Using CPS Data and $2 Cutoff with 2017 as 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	-0.0281**	-0.0266***	-0.0081	-0.0155*
	(0.012)	(0.009)	(0.009)	(0.009)
Treated x Small Statutory Increaser x Post	0.0116	0.0018	-0.0007	-0.0013
	(0.018)	(0.015)	(0.015)	(0.015)
Treated x Indexer x Post	0.0098	-0.0016	0.0044	0.0076
	(0.010)	(0.007)	(0.007)	(0.007)
Age and education controls	No	Yes	No	Yes
Observations	2,666,587	2,666,587	2,886,584	2,886,584
R-squared	0.128	0.166	0.114	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 $2 and states that increased their minimum wage by $2 or more between January 1, 2013, and January 1, 2017. The sample is from the CPS. The treated group consists of individuals age 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 Cutoff and 2017 as the Post Period (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0171	-0.0344**	-0.0113	-0.0146	-0.0156	-0.0212
	(0.013)	(0.014)	(0.015)	(0.012)	(0.011)	(0.014)
Small Statutory Increaser x Post	0.0027	-0.0057	0.0046	0.0016	0.0005	-0.0055
	(0.012)	(0.010)	(0.013)	(0.011)	(0.011)	(0.010)
Indexer x Post	0.0158	0.0111	0.0178	0.0157	0.0107	0.0097
	(0.013)	(0.013)	(0.012)	(0.014)	(0.011)	(0.009)
Ln(Income Per Capita)		0.2910**				0.3080***
		(0.110)				(0.096)
Housing Price Index Divided by 1000			-0.0642			-0.1224
			(0.084)			(0.080)
State Mid-Skill Emp-to-Pop Ratio				0.3734***		0.2234*
				(0.124)		(0.118)
Age and education controls	No	No	No	No	Yes	Yes
Observations	451,412	451,412	451,412	451,412	451,412	451,412
R-squared	0.015	0.015	0.015	0.015	0.099	0.099

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0012	-0.0228***	-0.0132	0.0014	-0.0049	-0.0227**
	(0.009)	(0.008)	(0.011)	(0.008)	(0.009)	(0.009)
Statutory Increaser Small x Post	-0.0034	-0.0135*	-0.0072	-0.0044	-0.0056	-0.0150**
	(0.010)	(0.007)	(0.010)	(0.009)	(0.011)	(0.007)
Indexer x Post	0.0096	0.0040	0.0054	0.0097	0.0092	0.0042
	(0.007)	(0.005)	(0.009)	(0.006)	(0.007)	(0.006)
Ln(Income Per Capita)		0.3619***				0.3017***
		(0.057)				(0.066)
Housing Price Index Divided by 1000			0.1286**			0.0137
			(0.055)			(0.056)
State Mid-Skill Emp-to-Pop Ratio				0.3915***		0.2187**
				(0.124)		(0.088)
Age and education controls	No	No	No	No	Yes	Yes
Observations	1,023,229	1,023,229	1,023,229	1,023,229	1,023,229	1,023,229
R-squared	0.014	0.014	0.014	0.014	0.146	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 and states that increased their minimum wage by $2 or more between January 1, 2013, and January 1, 2017. The sample is from the ACS. Panel A includes individuals age 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 Cutoff with 2017 as the Post Period (D-in-D Estimates)

Panel A: Low-Skilled Workers	(1)	(2)	(3)	(4)	(5)	(6)
Large Statutory Increaser x Post	-0.0181	-0.0349**	-0.0239	-0.0198*	-0.0165*	-0.0302**
	(0.011)	(0.014)	(0.016)	(0.011)	(0.010)	(0.014)
Small Statutory Increaser x Post	0.0192	0.0112	0.0173	0.0165	0.0104	0.0020
	(0.017)	(0.016)	(0.017)	(0.016)	(0.015)	(0.014)
Indexer x Post	0.0158	0.0114	0.0139	0.0144	0.0073	0.0028
	(0.010)	(0.008)	(0.011)	(0.009)	(0.008)	(0.007)
Ln(Income Per Capita)		0.2829**				0.2229*
		(0.131)				(0.124)
Housing Price Index Divided by 1000			0.0626			-0.0121
			(0.099)			(0.092)
State Mid-Skill Emp-to-Pop Ratio				0.1102***		0.1010**
				(0.041)		(0.043)
Age and education controls	No	No	No	No	Yes	Yes
Observations	255,765	255,765	255,765	255,765	255,765	255,765
R-squared	0.020	0.020	0.020	0.020	0.111	0.111

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	0.0019	-0.0184	-0.0160	-0.0003	-0.0057	-0.0299**
	(0.011)	(0.012)	(0.012)	(0.012)	(0.011)	(0.014)
Statutory Increaser Small x Post	0.0067	-0.0025	0.0015	0.0035	0.0068	-0.0052
	(0.014)	(0.012)	(0.012)	(0.013)	(0.015)	(0.012)
Indexer x Post	0.0107	0.0055	0.0049	0.0089	0.0148**	0.0068
	(0.009)	(0.010)	(0.015)	(0.009)	(0.007)	(0.010)
Ln(Income Per Capita)		0.3392***				0.2327**
		(0.084)				(0.097)
Housing Price Index Divided by 1000			0.1925***			0.0873
			(0.068)			(0.077)
State Mid-Skill Emp-to-Pop Ratio				0.1377***		0.1386***
				(0.032)		(0.034)
Age and education controls	No	No	No	No	Yes	Yes
Observations	475,762	475,762	475,762	475,762	475,762	475,762
R-squared	0.021	0.021	0.021	0.021	0.151	0.151

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 and states that increased their minimum wage by $2 or more between January 1, 2013, and January 1, 2017. The sample is from the CPS. Panel A includes individuals age 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 and $1 cutoff with 2015–2017 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	-0.0244***	-0.0242***	-0.0156**	-0.0196***
	(0.007)	(0.005)	(0.006)	(0.006)
Treated x Small Statutory Increaser x Post	0.0027	-0.0026	-0.0054	-0.0072
	(0.008)	(0.007)	(0.006)	(0.006)
Treated x Indexer x Post	0.0095	0.0040	0.0000	0.0020
	(0.011)	(0.010)	(0.005)	(0.006)
Age and education controls	No	Yes	No	Yes
Observations	6,913,569	6,913,569	7,704,087	7,704,087
R-squared	0.117	0.162	0.103	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. Data come from the ACS. The treated group consists of individuals age 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 and $1 cutoff with 2015–2017 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	-0.0283***	-0.0241***	-0.0082	-0.0120
	(0.009)	(0.007)	(0.011)	(0.009)
Treated x Small Statutory Increaser x Post	0.0200**	0.0104	0.0014	0.0049
	(0.010)	(0.008)	(0.008)	(0.007)
Treated x Indexer x Post	-0.0022	-0.0084	-0.0050	0.0012
	(0.008)	(0.006)	(0.006)	(0.007)
Age and education controls	No	Yes	No	Yes
Observations	3,591,363	3,591,363	3,889,802	3,889,802
R-squared	0.128	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 treated group consists of individuals age 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 15B: Relationship Between Minimum Wage Increases and Employment Using CPS Data and $1 Cutoff with 2015–2017 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	-0.0218**	-0.0332***	-0.0178*	-0.0228***	-0.0181***	-0.0219***
	(0.008)	(0.010)	(0.009)	(0.008)	(0.006)	(0.007)
Small Statutory Increaser x Post	0.0248**	0.0230**	0.0248**	0.0239**	0.0172**	0.0145*
	(0.011)	(0.010)	(0.012)	(0.011)	(0.008)	(0.007)
Indexer x Post	0.0064	0.0034	0.0078	0.0053	0.0026	0.0014
	(0.007)	(0.007)	(0.008)	(0.007)	(0.006)	(0.007)
Ln(Income Per Capita)		0.2424*				0.2461**
		(0.143)				(0.119)
Housing Price Index Divided by 1000			-0.0569			-0.1218
			(0.068)			(0.076)
State Mid-Skill Emp-to-Pop Ratio				0.1322***		0.1225***
				(0.029)		(0.027)
Age and education controls	No	No	No	No	Yes	Yes
Observations	344,814	344,814	344,814	344,814	344,814	344,814
R-squared	0.022	0.022	0.022	0.022	0.111	0.111

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0018	-0.0204**	-0.0155*	-0.0026	-0.0061	-0.0230***
	(0.012)	(0.008)	(0.009)	(0.012)	(0.011)	(0.008)
Statutory Increaser Small x Post	0.0062	0.0031	0.0060	0.0054	0.0111	0.0082
	(0.011)	(0.007)	(0.009)	(0.009)	(0.008)	(0.005)
Indexer x Post	0.0034	-0.0015	-0.0012	0.0024	0.0109	0.0055
	(0.008)	(0.010)	(0.011)	(0.008)	(0.009)	(0.010)
Ln(Income Per Capita)		0.4021***				0.2855***
		(0.074)				(0.086)
Housing Price Index Divided by 1000			0.1974***			0.0428
			(0.064)			(0.063)
State Mid-Skill Emp-to-Pop Ratio				0.1242***		0.1110***
				(0.026)		(0.022)
Age and education controls	No	No	No	No	Yes	Yes
Observations	643,253	643,253	643,253	643,253	643,253	643,253
R-squared	0.022	0.022	0.022	0.022	0.151	0.151

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. Panel A includes individuals age 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 and $1 Cutoff with 2017 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	-0.0374***	-0.0354***	-0.0161**	-0.0213***
	(0.009)	(0.006)	(0.007)	(0.006)
Treated x Small Statutory Increaser x Post	0.0051	-0.0005	-0.0059	-0.0095
	(0.008)	(0.007)	(0.007)	(0.008)
Treated x Indexer x Post	0.0061	0.0005	0.0001	-0.0004
	(0.012)	(0.010)	(0.005)	(0.005)
Age and education controls	No	Yes	No	Yes
Observations	4,640,887	4,640,887	5,170,354	5,170,354
R-squared	0.117	0.163	0.104	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 age 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 2017 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	-0.0379***	-0.0361***	-0.0191	-0.0268**
	(0.010)	(0.009)	(0.013)	(0.013)
Treated x Small Statutory Increaser x Post	0.0291**	0.0182*	0.0040	0.0045
	(0.011)	(0.010)	(0.007)	(0.008)
Treated x Indexer x Post	0.0098	-0.0016	0.0045	0.0076
	(0.010)	(0.007)	(0.007)	(0.007)
Age and education controls	No	Yes	No	Yes
Observations	2,412,877	2,412,877	2,612,412	2,612,412
R-squared	0.128	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 treated group consists of individuals age 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 and $1 Cutoff with 2017 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	-0.0284***	-0.0508***	-0.0220*	-0.0261***	-0.0262***	-0.0384***
	(0.009)	(0.009)	(0.012)	(0.008)	(0.008)	(0.008)
Small Statutory Increaser x Post	0.0065	0.0020	0.0064	0.0066	0.0029	-0.0022
	(0.012)	(0.007)	(0.012)	(0.010)	(0.011)	(0.007)
Indexer x Post	0.0158	0.0098	0.0181	0.0157	0.0108	0.0085
	(0.013)	(0.013)	(0.012)	(0.014)	(0.011)	(0.009)
Ln(Income Per Capita)		0.3709***				0.3976***
		(0.090)				(0.081)
Housing Price Index Divided by 1000			-0.0741			-0.1281**
			(0.067)			(0.055)
State Mid-Skill Emp-to-Pop Ratio				0.3550**		0.1291
				(0.133)		(0.109)
Age and education controls	No	No	No	No	Yes	Yes
Observations	416,162	416,162	416,162	416,162	416,162	416,162
R-squared	0.016	0.016	0.016	0.016	0.099	0.099

Panel B: Young Workers	(1)	(2)	(3)	(4)	(5)	(6)
Statutory Increaser Large x Post	-0.0073	-0.0322***	-0.0189*	-0.0050	-0.0112	-0.0337***
	(0.010)	(0.006)	(0.010)	(0.010)	(0.010)	(0.006)
Statutory Increaser Small x Post	-0.0046	-0.0096	-0.0046	-0.0045	-0.0067	-0.0110
	(0.013)	(0.007)	(0.012)	(0.010)	(0.013)	(0.007)
Indexer x Post	0.0096	0.0032	0.0053	0.0097	0.0092	0.0031
	(0.007)	(0.006)	(0.009)	(0.006)	(0.007)	(0.006)
Ln(Income Per Capita)		0.4125***				0.3669***
		(0.052)				(0.063)
Housing Price Index Divided by 1000			0.1319**			0.0145
			(0.053)			(0.042)
State Mid-Skill Emp-to-Pop Ratio				0.3732***		0.1635**
				(0.133)		(0.080)
Age and education controls	No	No	No	No	Yes	Yes
Observations	945,629	945,629	945,629	945,629	945,629	945,629
R-squared	0.015	0.015	0.015	0.015	0.146	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 age 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 and $1 Cutoff with 2017 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	-0.0282***	-0.0489***	-0.0350**	-0.0292***	-0.0267***	-0.0445***
	(0.010)	(0.011)	(0.013)	(0.009)	(0.010)	(0.010)
Small Statutory Increaser x Post	0.0352***	0.0314***	0.0353***	0.0323***	0.0264***	0.0209**
	(0.011)	(0.009)	(0.011)	(0.011)	(0.009)	(0.010)
Indexer x Post	0.0159	0.0105	0.0135	0.0143	0.0073	0.0016
	(0.010)	(0.008)	(0.011)	(0.009)	(0.007)	(0.006)
Ln(Income Per Capita)		0.3402***				0.2648**
		(0.118)				(0.124)
Housing Price Index Divided by 1000			0.0771			0.0100
			(0.073)			(0.072)
State Mid-Skill Emp-to-Pop Ratio				0.1159***		0.0971**
				(0.041)		(0.044)
Age and education controls	No	No	No	No	Yes	Yes
Observations	232,880	232,880	232,880	232,880	232,880	232,880
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	-0.0093	-0.0331***	-0.0276**	-0.0104	-0.0175	-0.0441***
	(0.015)	(0.012)	(0.010)	(0.015)	(0.015)	(0.010)
Statutory Increaser Small x Post	0.0100	0.0055	0.0102	0.0067	0.0123	0.0060
	(0.008)	(0.006)	(0.007)	(0.007)	(0.008)	(0.007)
Indexer x Post	0.0107	0.0047	0.0044	0.0090	0.0148**	0.0062
	(0.009)	(0.010)	(0.015)	(0.009)	(0.007)	(0.010)
Ln(Income Per Capita)		0.3932***				0.2965***
		(0.084)				(0.095)
Housing Price Index Divided by 1000			0.2098***			0.0874
			(0.064)			(0.054)
State Mid-Skill Emp-to-Pop Ratio				0.1298***		0.1158***
				(0.030)		(0.030)
Age and education controls	No	No	No	No	Yes	Yes
Observations	432,415	432,415	432,415	432,415	432,415	432,415
R-squared	0.022	0.022	0.022	0.022	0.151	0.151

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. Panel A includes individuals age 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