The Labor Market Effects of Subminimum Wage Elimination: Evidence from a National Analysis

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Abstract

This study examines the labor market effects of eliminating subminimum wage employment (SWE) laws for people with disabilities (PWD) in the United States. Using data from the Current Population Survey and the staggered adoption of SWE reforms across states, we estimate causal effects using a difference-in-differences and event study framework. Our findings indicate states' efforts to eliminate SWE have reduced the prevalence of PWD earning subminimum wages under Section 14(c) employment, with no precise measurable reductions in overall employment, hours worked, and wage income. These findings suggest that SWE abolition meets its policy objectives without incurring notable employment costs. Moreover, we find suggestive evidence of reduced reliance on Supplemental Security Income, indicating that the policy change does not lead to increased dependency on public assistance and may even support greater economic self-sufficiency among people with disabilities. These findings provide the first national-level evidence on the labor market implications of SWE elimination, contributing to broader debates on wage policy and labor market regulation.

JEL Codes: H55, J14, J22, J71, J79

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I. Introduction

Section 14(c) of the Fair Labor Standards Act (FLSA) of 1938 has permitted employers to pay subminimum wages to people with disabilities (PWD) for over eight decades. The policy was originally designed to encourage employment of PWD by providing wage-setting flexibility for individuals with lower measured productivity (Department of Labor, 2008), and it remains in effect today. As of 2024, approximately 40,000 workers with disabilities were employed under 14(c) certificates, earning wages below the federal minimum wage (Department of Labor, 2024). Proponents of subminimum wage employment (SWE) argue that it provides essential employment opportunities for individuals who might otherwise struggle to enter the workforce (Bourne and Subramaniam, 2021). They caution that eliminating subminimum wages could lead to job losses for PWD and increase dependence on public assistance programs. However, critics content that SWE discourages skill development, limits labor market opportunities, and perpetuates dependency on sheltered work settings (Crandell, 2022; U.S. Commission on Civil Rights, 2020).

Previous research suggests that PWD employed under 14(c) face higher poverty rates (Maroto and Pettinicchio, 2023) and may impose greater fiscal costs on taxpayers compared to supporting competitive, integrated employment (Cimera, 2000). Some studies indicate that SWE reduces employer incentives to invest in productivity-enhancing training and workplace accommodations, reinforcing low-wage employment patterns (Crandell, 2022). This practice contributes to persistent wage gaps between individuals with and without disabilities (Yin et al., 2014) and increases reliance on public assistance programs such as SSI and SSDI, as low earnings fail to provide sufficient financial stability (Maroto and Pettinicchio, 2023). In 2023, 22.5% of PWD were employed, compared to 65.8% of those without disabilities, while the unemployment rate for PWD was 7.2%, more than double that of those without disabilities (3.5%) (Bureau of Labor Statistics, 2024).

In response to ongoing policy debates, several states have taken legislative action to phase out subminimum wages for PWD. Vermont was the first state to do so in 2002, transitioning affected workers into competitive employment through partnerships with the University of Vermont (Dague, 2018). New Hampshire followed in 2015, becoming the first state to legislatively eliminate subminimum wages. Since then, states including Alaska, Maryland, Maine, Washington, Hawaii,

Rhode Island, and Tennessee have passed similar measures. As of July 2023, fifteen states had enacted restrictions or eliminations of subminimum wage employment (Association of People Supporting Employment First, 2023)[1] On December 3, 2024, the U.S. Department of Labor proposed a rule to phase out the issuance of new 14(c) certificates, signaling a potential shift in federal labor policy (Office of the Federal Register, 2024).

Despite these recent policy developments, the labor market effects of eliminating subminimum wage for PWD remains uncertain. This study contributes to three key strands of the economics and disability employment literature. First, it adds to the extensive body of research examining the effects of general minimum wage policies on labor market outcomes. Reviews of the "New Minimum Wage Research," characterized by robust econometric methodologies and richer datasets, has generated mixed findings on employment: Neumark and Shirley (2022) highlight negative employment effects, particularly for teenagers, young adults, and less educated workers, while Dube and Zipperer (2024) find modestly positive to negligible employment impacts. Generally, this literature agrees that minimum wage increases boost hourly earnings and reduce wage inequality (Autor, Manning, and Smith, 2016; Cengiz et al., 2019; Derenoncourt and Montialoux, 2021). This paper extends this literature by specifically assessing the impacts of subminimum wage elimination—a targeted wage increase for a vulnerable population.

Second, this research contributes to studies examining the effects of minimum wage policies on the employment of PWD. Existing research is limited, and findings vary. Kim, Levere, and Magenheim (2025) found negligible employment effects for AbilityOne program participants following minimum wage increases, whereas Clemens, Gentry, and Meer (2025) documented negative employment effects and increased reliance on public assistance among individuals with severe disabilities due to minimum wage hikes in the 2010s. By focusing explicitly on the abolition of subminimum wages, this paper contributes crucial insights into whether such targeted policy changes impact labor market outcomes differently.

Finally, this study adds to the literature specifically addressing subminimum wage employment. Previous investigations into subminimum wages often centered on wage evasion practices for the general population (Clemens and Strain, 2022a, 2022b). Within the disability employment

[1] Table 1 provides a list of these states and the years in which they enacted such legislation.

literature, SWE under FLSA Section 14(c) has garnered criticism for perpetuating economic disparities and dependency (Crandell, 2022; Maroto and Pettinicchio, 2023). Only one empirical study directly examines the impacts of SWE elimination: Kakara et al. (2024) find employment gains for individuals with cognitive disabilities in New Hampshire, but no such effects in Maryland. Robust evidence from other states remains scarce, limiting broader policy conclusions.

This study addresses this gap by providing the first national-level quasi-experimental analysis of the labor market effects of abolishing subminimum wage laws. We utilize data from the Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC) and the Outgoing Rotation Group (ORG) from 2009 to 2024. In addition, we obtained data on 14(c) certificate holders through a Freedom of Information Act (FOIA) request to the U.S. Department of Labor. We employ event study and difference-in-differences methodologies to identify the causal effects of the policy change by exploiting the staggered timing of SWE elimination across different states.

Our findings indicate that the SWE elimination significantly reduced the proportion of PWD earning subminimum wages under Section 14(c)—by approximately 2000 employees within two years of the policy change. While these efforts have successfully reduced the prevalence of 14(c)-based employment, they have not been sufficient to eliminate SWE more broadly, as some subminimum wage employment may persist outside the 14(c) framework. Importantly, we find no evidence that SWE elimination negatively affected overall employment rates, hours worked, or wage income for PWD. This suggests that most affected individuals did not experience substantial declines in labor market outcomes following the policy change. Moreover, we find suggestive evidence of reduced reliance on Supplemental Security Income (SSI), indicating that SWE elimination does not increase dependency on public assistance and may, in fact, promote greater economic self-sufficiency among people with disabilities.

The next section provides a background on the elimination of SWE. Section III conceptual framework for the anticipated effects of eliminating subminimum wage employment. Section IV explains the data source, sample selection, and provides summary statistics. Section V details the empirical strategy, and the results are reported in Section VI. Section VII discusses the policy implications and concludes the paper.

II. Background on Elimination of Subminimum Wage Employment

Over the past decade, a growing number of U.S. states have taken action to eliminate the payment of subminimum wages to PWD under Section 14(c) of FLSA. Section 14(c) allows employers, upon receiving a certificate from the U.S. Department of Labor, to pay workers with disabilities less than the federal minimum wage based on productivity evaluations. In practice, wages under 14(c) can fall substantially below the minimum wage, sometimes amounting to just a few dollars per hour. Recent elimination efforts reflect a broader national movement toward promoting competitive, integrated employment and phasing out sheltered workshops. States have used various approaches—some implementing immediate bans, while others adopted phased transitions with lead times to allow employers and service providers to adjust.

Vermont was the first U.S. state to eliminate subminimum wage employment for people with disabilities, doing so through administrative reform rather than legislation. The process began with the 1993 closure of Brandon Training School and was formalized by the 1996 Developmental Disabilities Act, which prioritized individualized, community-based services (Dague et al., 2023). Vermont ended funding for new sheltered workshops in 2000 and closed its last one in 2002, making it the first state to stop using 14(c) certificates entirely. Since then, all employment services have focused on competitive, integrated, and individualized placements. Because Vermont was an early outlier with a long-standing commitment to eliminating subminimum wages, we exclude the state from our analysis.

Table 1 lists the states included in our analysis and the corresponding legislation or administrative announcements that provide clear-cut policy guidance on eliminating subminimum wages. In some states, including Alaska, Hawaii, Maine, Rhode Island, South Carolina, Tennessee, and New Hampshire, the elimination of subminimum wages was implemented through immediate or near-immediate bans that took effect upon passage or within a few months, with no transitional benchmarks required. For instance, Alaska issued Public Announcement No. 18-04 on February 16, 2018, which took immediate effect and discontinued the state's use of 14(c) certificates. New Hampshire's law prohibited employers from paying individuals with disabilities below the minimum wage—with narrow exceptions for practical experience or training programs and family businesses—and became effective 60 days after passage. However, consistent with federal

enforcement practices, employers who already held valid 14(c) certificates at the time of the law's enactment were permitted to continue using them until they expired, though they could not apply for renewals or new certificates. This administrative reality is common in states that implemented abrupt legislative bans but still allowed for the natural expiration of existing certificates.

Other states took a more gradual approach by enacting laws with delayed implementation timelines or transition requirements. California's SB-639, enacted in 2021, prohibited the issuance of new 14(c) certificates starting in 2022 and established benchmarks that must be met before the law fully takes effect on January 1, 2025. Similarly, Colorado's SB-39 and Nevada's AB-259 require employers to develop and submit transition plans, with subminimum wage employment scheduled to end in 2025 and 2028, respectively. Maryland and Oregon also adopted phased transitions, halting new certificate issuance early while allowing existing holders several years to comply. Virginia's HB-1924, enacted in 2023, outlines the longest timeline of all states included in our sample, with full elimination scheduled for July 1, 2030. These policies reflect a diverse set of institutional pathways toward eliminating subminimum wage employment for people with disabilities.

III. Conceptual Framework

The elimination of SWE laws can affect the labor market outcomes of PWD through multiple channels. To guide our empirical analysis, we develop a simple conceptual framework that formalizes how SWE elimination may affect both the supply of and demand for labor among PWD. We model the decision-making process of a person with disabilities using a utility function $U(c, l)$, where c denotes consumption and l represents leisure. We assume that the marginal utilities of consumption and leisure are both positive: $\partial U/\partial c \geq 0$ and $\partial U/\partial l \geq 0$. An individual decides whether to work ($h > 0$) or not ($h = 0$) based on their preferences, the market wage (w), and available government benefits.

To reflect the structure of income-tested transfer programs (e.g., SSI and SSDI), which often include work incentives and gradual benefit phase-outs, we model government transfers as a decreasing function of earnings: $B = b(wh)$, where $b'(wh) < 0$. Individuals who do not work receive the maximum benefit $b(0)$, while those with positive earnings receive reduced benefits,

$b(wh) < b(0)$. This captures the typical design of such programs, in which benefits taper off as labor income increases.

The PWD faces the following budget constraint:

$$c = wh + b(wh) - E \quad (1)$$

where E represents the fixed entry costs associated with labor market participation, such as job search efforts, transportation, or the need for accommodations. These costs may increase after the elimination of SWE laws, especially if previously accessible sheltered workshops close or if entering competitive employment settings requires greater investment.

After SWE elimination raises the minimum wage applicable to PWD, individuals compare their utility from working to that from not working. They choose to work if:

$$U(wh + b(wh) - E, 0) \geq U(b(0), l) \quad (2)$$

and not to work otherwise.

We also introduce a labor demand constraint. Suppose that firms only hire workers if their expected productivity (p) is at least as high as the wage: $p \geq w$. When the SWE is eliminated and the wage floor rises, some employers may no longer be willing to hire workers they perceive to be less productive. We model this with $D(w)$, the probability that a job is available at wage w, where $D'(w) < 0$. Thus, employment is only feasible if both the utility condition (2) is satisfied and a job is available: $D(w) > 0$.

Differentiating the utility condition with respect to the wage, we obtain the following condition for working:

$$\frac{\partial \mathrm{U}}{\partial \mathrm{c}}\left(h + wb'(wh)\right) \gtrless \frac{\partial \mathrm{U}}{\partial \mathrm{l}} \quad (3)$$

The sign of the term $h + wb'(wh)$ is ambiguous and reflects the interaction of three economic forces: the substitution effect, income effect, and the labor demand effect. The substitution effect arises because a higher wage increases the opportunity cost to leisure. As the return to working

rises, individuals are more likely to supply labor, leading to an increase in hours worked. This response makes the term $h + wb'(wh)$ more likely to be positive, as the incentive to shift time from leisure to work strengthens.

The income effect works in the opposite direction. When wages rise, individuals have the potential to earn more income even while working fewer hours. If leisure is a normal good, individuals may respond by choosing to enjoy more of it, reducing their labor supply. Additionally, because government benefits decline with earnings, the net gain from working may be muted, further discouraging labor supply and potentially making $h + wb'(wh)$ smaller or even negative.

The third force is the labor market effect. As wages rise due to SWE elimination, employers may reduce the number of jobs available, particularly for workers whose productivity is perceived to fall below the new wage threshold. This constraint can prevent individuals who are willing to work from securing employment, particularly in contexts where sheltered workshops or other low-wage positions are eliminated. Empirical evidence suggests this channel is relevant for PWD; for example, Kim et al. (2025) find that participants in the federal AbilityOne program are less likely to receive fringe benefits in states with large minimum wage increases. More broadly, Clemens (2021) documents that employers often respond to higher wage floors by adjusting on non-wage margins, such as cutting benefits or raising job demands.

This conceptual model shows that the theoretical effect of subminimum wage elimination on labor supply and employment for PWD is ambiguous. Higher wages may increase the incentive to work, but this can be counteracted by benefit reductions, higher entry costs, and diminished job availability. The overall effect remains an empirical question.

IV. Data

A. Data Source and Sample Selection

Current Population Survey

We use 2009-2024 data from the Current Population Survey (CPS), a nationally representative survey jointly conducted by the U.S. Census Bureau and the Bureau of Labor Statistics. Since

2008, the CPS has included six questions to identify disability status, covering difficulties in hearing, vision, cognition, mobility, self-care, and independent living. Our analysis draws on two components of the CPS: the Annual Social and Economic Supplement (ASEC) and the Outgoing Rotation Group (ORG). We use the CPS-ASEC to construct annual measures of total income, SSI income, employment status, competitive integrated employment status, and usual hours worked. It also serves as the primary source for our descriptive analysis of demographic and labor market characteristics by disability status.

The CPS-ORG provides monthly data on wages for wage and salaried workers. Hourly workers report their hourly wages directly, while non-hourly workers provide weekly earnings and usual weekly hours. Following Autor, Manning, and Smith (2016), we impute hourly wages for non-hourly workers by dividing weekly earnings by usual hours worked. Using the ORG sample is crucial for accurately identifying individuals earning subminimum wages, as alternative measurement methods can introduce significant measurement errors.[2] The CPS-ORG is widely used in economic research on minimum wage policy (Bernstein and Mishel, 1997; Clemens and Strain, 2022, 2023; EPI, 2019), and it is the source for our measures of subminimum wage employment and hourly wages.

Our primary outcome of interest is SWE status, indicating whether the person was employed with an hourly wage below their resident state's effective minimum wage level. Additional outcome variables include employment status, competitive integrated employment (CIE) status, and weekly work hours. CIE is defined as employment where the individual: (i) earns at or above the minimum wage, (ii) is enrolled in a workplace pension plan, (iii) holds a position offering insurance coverage, or (iv) is entitled to paid time off. We also examine wage and income-related outcomes, such as hourly wages, annual income, and SSI, which reflects the pre-tax income received from Social Security.

To examine the impact of SWE elimination, we restrict the sample using the following criteria: First, we restrict the sample to individuals aged 18 and 64. Second, following Autor, Manning, and

[2] Other methods to impute subminimum wage status include utilizing information on annual income, average weekly work hours, and annual number of weeks worked. Dividing the annual income by the approximate annual work hours leads to large measurement errors in imputing hourly wages.

Smith (2016), we exclude individuals who are self-employed or involved in unpaid family work to ensure that our analysis focuses on wage earners in traditional employment settings, where the effects of SWE elimination are most relevant. Next, we exclude Vermont as this state had eliminated subminimum wages prior to our analysis date. Similarly, we exclude Texas and Illinois as these states have eliminated subminimum wage related to state use contracts[3].

Department of Labor 14(c) Certificate Holder Data

We obtained data on 14(c) certificate holders through a Freedom of Information Act request to the Department of Labor. This dataset contains detailed information on employers authorized to pay workers with disabilities below the federal minimum under Section 14(c). The data includes the names of certificate holders, their locations, and the number of workers paid subminimum wages under each certificate, covering the period from 2015 to 2023. We calculate the average number of 14(c) certificates by year and state and merge this information with the CPS data using corresponding year and state identifiers. The 14(c) certificate data provides precise counts of workers employed at subminimum wages specifically under Section 14(c). This level of precision cannot be achieved using CPS data, which does not explicitly capture employment under 14 (c) certificates. However, the CPS data offers a broader scope by including information on workers earning subminimum wages beyond those employed by 14(c) certificate holders. Thus, the two datasets complement each other, with 14(c) certificates data offering a precise count that is likely to be a lower bound of all SWE and CPS data providing a more comprehensive view of the subminimum wage workforce.

B. Descriptive Statistics

Demographic and Labor Market Characteristics by Disability Status

We present the demographic and labor market characteristics of the working-age population by disability status in Table 2, using data from CPS-ASEC. Approximately 7.8% of the working-age

[3] State use contracts are agreements where state governments procure goods or services from entities that employ people with disabilities, often at subminimum wages. If these states have eliminated subminimum wages within these contracts, it introduces a unique context or policy environment that could confound the analysis. Including such states might make it harder to isolate the effects of broader subminimum wage elimination policies, as their labor market conditions are influenced by these specific state-level reforms.

population (ages 16-64) reports having a disability, with 4.5% having a single disability and 3.3% reporting multiple disabilities. On average, individuals with disabilities are older and less likely to be married compared to those without disabilities. Non-Hispanic white and Black populations are overrepresented among individuals with disabilities, while Hispanic individuals are underrepresented.

Individuals with disabilities, particularly those with multiple disabilities, experience significant disparities in education and economic outcomes. They are more likely to have a high school-level education or lower and are less likely to hold a bachelor's degree or higher compared to those without disabilities. Labor force participation also reflects these disparities: individuals with one disability participate at approximately 60% of the rate of those without disabilities (calculated as 0.45/0.76), and for those with multiple disabilities, the rate drops to 22% (calculated as 0.17/0.76). Among those in the labor force, individuals with disabilities have lower employment rates, higher unemployment rates, and work fewer hours compared to individuals without disabilities.

Income disparities are also large: individuals with one disability earn, on average, less than half, while individuals with multiple disabilities earn about 15% of non-disabled individuals. PWD have higher incomes from Social Security benefits, with Social Security Income accounting for approximately 11% of the total personal income for individuals with one disability and 28% for those with multiple disabilities.

Characteristics of Subminimum Wage Employment

To assess the prevalence and status of SWE, we analyze data from the CPS-ORG sample. Table 3 reports the characteristics of earners with disabilities, differentiating between those who report hourly wages below the effective minimum wage and those earning at or above it. Between 2008 and 2023, a total of 2,747 individuals with disabilities in our sample reported earning subminimum hourly wages, compared to 51,266 individuals with disabilities earning at or above the minimum wage.

The data reveal that women with disabilities are approximately 5 percentage points more likely to be employed in SWE than men with disabilities. PWD in SWE are on average 7 years younger, 21 percentage points less likely to be married, and more likely to be Black or Hispanic compared to

PWD paid at least minimum wage. Education levels also differ, with PWD in SWE more likely to have a high school education or less, while PWD paid at least minimum wage are more likely to have attended college.

PWD in SWE are also more likely to have disabilities related to memory, mobility, and personal care, while those earning at least minimum wage are more likely to have hearing, vision, or physical disabilities. Moreover, those earning subminimum wages are 11 percentage points more likely to report having multiple disabilities.

Individuals in SWE worked an average of 10 fewer hours per week compared to those earning above the minimum wage. Weekly earnings for workers in SWE averaged $250, significantly lower than the $619 reported by those earning at or above the minimum wage. The average hourly wage gap between the two groups was $9.52. Additionally, workers in SWE were 8 percentage points less likely to be union members or covered by union protections and 9 percentage points more likely to hold roles that included overtime, tips, or commissions.

Figure 1 illustrates the percentage of workers reporting wages below their state's effective minimum wage, categorized by disability status. While workers in SWE with a single disability show similar patterns to those without disabilities, individuals with multiple disabilities were more frequently employed in SWE. Figure 2 examines the prevalence of SWE by age group. Young adults, aged 16-24, were the most likely to report earning subminimum wages.

Trends in 14(c) Employment and Certificates

The Wage and Hour Division of the Department of Labor issues 14(c) certificates, which are valid for two years before employers have the option to renew. Between 2015 and 2023, employers held 14(c) certificates for an average duration of approximately 4.8 years, with a standard deviation of 2.9 years (ranging from a minimum of 0.4 years to a maximum of 18 years). This likely underestimates the true holding durations, as the data only provides a snapshot covering only the 2015-2023 period.

Figures 3 and 4 illustrate the trends in the number of Section 14(c) employees and employers over the past decade. The data show a steady decline in both the number of workers paid subminimum

wages in Section 14(c) settings and the number of 14(c) certificates issued to employers. Specifically, the number of workers paid subminimum wages under Section 14(c) fell sharply from approximately 202,000 in 2015 to around 40,500 in 2024, reflecting an 80% decrease. Similarly, the number of active 14(c) certificates decreased from about 2,000 in 2015 to roughly 750 in 2024, representing a 63% decline.

Comparing Figures 3 and 4 with Figures 1 and 2, we see a steady decline in both the number of 14(c) certificates issued and the number of workers employed under these certificates since 2014. In contrast, the share of workers with disabilities earning subminimum wages in the CPS data has remained relatively stable. The apparent divergence between the decline in the number of active Section 14(c) certificates and the relatively stable CPS-based rates of subminimum wage employment among individuals with disabilities likely reflects both definitional and measurement differences.

While 14(c) certificates are issued to employers who formally participate in the federal subminimum wage program—typically in more segregated or institutional settings—CPS respondents may report wages below the statutory minimum for a wider range of reasons. For example, workers with disabilities may be employed in tipped occupations (e.g., food service), piece-rate or gig work, or informal employment arrangements that fall outside the scope of 14(c) but still result in earnings below the minimum wage. Additionally, non-compliance with wage laws or reporting error in self-reported wages may further contribute to observed subminimum wages in the CPS. Thus, the CPS-based measure may be capturing a broader universe of subminimum wage arrangements than those captured in administrative data. Rather than indicating a flaw in the CPS, we interpret this discrepancy as highlighting the multifaceted nature of subminimum wage employment and the limits of relying on any single data source.

V. Empirical Strategy

To test whether the elimination of SWE was effective and worked as intended, we estimate an event-study model that allows us to assess the evolution of SWE for people with disabilities in states before and after the policy's implementation relative to those that did not eliminate SWE. We estimate the following specification using the DOL 14(c) data:

$$Y_{st} = \alpha + \sum_{\substack{r=-6 \\ r\neq -1}}^{r=2} \beta_1^r SWE_{elimination_{st}} \times 1[r = t - t_s^*] + \beta_2 X_{st} + \xi_s + \zeta_t + \varepsilon_{st} \quad (1)$$

where Y_{st} represents the labor market outcome of PWD in state s during year t. The indicator functions $1[r = t - t_s^*]$ represent time relative to the year of SWE elimination (t_s^*) for each state. $SWE_{elimination_{st}}$ equals one if state s had eliminated SWE by year t, and zero otherwise. The coefficients of interest are β_1^r for each $r \in [-6, 2]$, which measure the change in relative outcomes for year t in treatment states compared to control states. We use the year right before SWE elimination ($t = -1$) as the reference period. We include state-level control variables, X_{st}, which include effective minimum wages, state EITC rates as a percentage of the federal credit, state unemployment rates, per capita GDP, the share of SSI recipients with disabilities, and the poverty rate.[4] Standard errors are clustered at the state level. State fixed effects, ξ_s, account for both observable and unobservable characteristics of each state that remain constant over time. Year fixed effects, ζ_t, are included to capture time-invariant unobserved heterogeneity that might influence cohorts.

We also estimate a similar model at the individual level using CPS data to test whether SWE elimination led to changes in labor market outcomes for PWD. We use ORG data to test whether overall employment at subminimum wages and hourly wages, and the ASEC data to test effects on employment, CIE status, usual weekly work hours, and income.

$$Y_{ist} = \alpha + \sum_{\substack{r=-6 \\ r\neq -1}}^{r=3} \beta_1^r SWE_{elimination_{st}} \times 1[r = t - t_s^*] + \beta_2 X_{ist} + \beta_3 X_{st} + \xi_s + \zeta_t + \xi_s \times \zeta_t + \varepsilon_{ist} \quad (2)$$

We include individual-level control variables, such as sex, age, race and ethnicity, marital status, dummies for educational attainment (less than high school, high school degree, and some college), and number of children in the household. All other variables are as defined in Equation (1). We

[4] Our calculations show that states eliminating subminimum wages have generally experienced larger average increases in their general minimum wage compared to states that still allow subminimum wage employment. This raises a potential concern about whether the general minimum wage can be considered a "good control" in our analysis. To address this, we present results without controls for the general minimum wage as a robustness check.

add an additional year post-policy because we have an additional year of data for CPS. These models are weighted using the corresponding person-level weights for the ORG and ASEC data.

In model (2), we allow for state-specific time trends, $\xi_s \times \zeta_t$, which have been shown to be important in the extant minimum wage literature (Allegretto et al., 2017). However, as noted by Meer and West (2016), including state-specific trends in difference-in-differences models can introduce bias, especially when treatment effects evolve over time. To address this concern, we present results without state-specific trends in robustness checks.[5]

In addition, we use a difference-in-differences (DID) framework to examine the aggregated impact of subminimum wage elimination on annual labor market outcomes for PWD. Specifically, we compare changes in outcomes before and after the policy's implementation in states that have eliminated subminimum wages relative to those that have not:

$$Y_{ist} = \alpha + \beta_1 SWE_{elimination_{st}} + \beta_2 X_{ist} + \beta_3 X_{st} + \xi_s + \zeta_t + \xi_s \times \zeta_t + \varepsilon_{ist} \qquad (3)$$

where $SWE_{elimination_{st}}$ now indicates the proportion of year t during which SWE was eliminated in state s.[6] All other variables are as defined in Equation (1).

Recent studies have shown that varying treatment effects across cohorts with different treatment timings can complicate the interpretation of event study findings. In our case, there are six treatment cohorts: one state eliminated SWE in 2015, two states in 2018, two states in 2020, two states in 2021, two states in 2022, and two states in 2023. Sun and Abraham (2021) demonstrate that if these cohorts exhibit distinct patterns of time-dependent treatment effects, event study estimates may be biased due to contamination from effects in other time periods. To address this issue, we apply the method introduced by Sun and Abraham (2021) to estimate Equations (1) and (2), which corrects for biases commonly found in traditional two-way fixed effects and event study models.

[5] We exclude state-specific trends in Model (1) because their inclusion produces spurious pre-trends.
[6] For example, Alaska's subminimum wage elimination law went into effect on February 16, 2018. Accordingly, the variable for Alaska takes a value of 0.875 in 2018, a value of 1 for in the years 2019-2023, and a value of 0 for all other years.

A. Identifying Assumptions

Our identification strategy relies on the key assumption of parallel trends to accurately estimate the impact of subminimum wage elimination. This assumption requires that, in the absence of subminimum wage elimination, trends in the likelihood of working at subminimum wages and other labor market outcomes for people with disabilities would have evolved similarly in both treatment and control states. To validate this assumption, we examine pre-treatment trends using event-study specifications. As shown in Figure 5, the number of workers working at subminimum wages for individuals with disabilities was largely comparable between treatment and control states in the six years prior to the elimination of subminimum wages, showing no significant differences. Similarly, Figure 7 shows that other key labor market outcomes such as employment rates, hours worked, and earnings also exhibit no evidence of differential pre-trends.

Another assumption underlying the identification strategy is the absence of anticipation effects, requiring that treatment effects are not observed prior to the policy's actual implementation. This assumption is likely to hold in our context for two reasons. First, as previously discussed, the estimated pre-treatment coefficients for up to six years before the elimination of subminimum wages are close to zero and statistically insignificant, indicating no preemptive changes in outcomes attributable to the policy. Second, we conducted an additional analysis using the law enactment dates—rather than the implementation dates—as the treatment period to assess whether the announcement or passage of the law influenced outcomes prior to its implementation. These results also show no significant changes in outcomes following the enactment or announcement of the law, further supporting the validity of this assumption.

VI. Results

A. Subminimum Wage Employment Under Section 14(c)

Number of 14(c) workers. In this section, we assess the effectiveness of state legislation eliminating SWE by evaluating its impact on the likelihood of individuals with disabilities being employed at subminimum wages under Section 14(c) and the number of 14(c) employers. We estimate an event study model based on Equation (1), using the number of 14(c) workers and employers as the outcome variables. Figure 5 presents the results.

Panel A of Figure 5 shows the impact of SWE elimination on the number of 14(c) workers in treatment states relative to control states over the six years prior to and two years following the policy change. The year prior to implementation ($t = -1$) serves as the omitted category, normalized to zero by construction. The results show no significant differences in the number of 14(c) workers between treatment and control states during the six years preceding SWE elimination, as the estimated coefficients are close to zero and statistically insignificant. Post-implementation, the estimated coefficients become negative and statistically significant, by two years after SWE elimination with a decline of around 2,000 workers.[7]

Number of 14(c) certificate holders. The number of 14(c) certificate holders plays a crucial role in shaping the SWE status of PWD, as changes in the issuance or renewal of these certificates likely mediate the effects of SWE elimination on labor market outcomes. To explore this relationship, panel B of Figure 5 presents an event study result using the number of active 14(c) employers from Department of Labor data as the outcome. The results show mostly no significant differences in the number of 14(c) employers between elimination and non-elimination states in the six years prior to legislative change. However, this pattern diverges a few years after the legislative change, with the number of 14(c) employers in elimination states becoming notably smaller than in non-elimination states. Two years post-elimination, the number of 14(c) certificates decreased by an average of 14 certificates.[8]

The decline in the number of 14(c) employers and employees lagged by a couple of years is expected, as employers who currently hold a 14(c) certificate can continue to use it until its expiration date, but they cannot renew or apply for new certificates. Taken together, our analysis indicates that SWE elimination significantly reduced the total number of employers and employees participating in the 14(c) program, as reflected in Department of Labor data.

General Subminimum Wage Employment. In addition to evaluating whether the policies had the intended effect of reducing official SWE through 14(c) certificates, we test whether they impacted the general SWE rates and hourly wages among PWD using CPS-ORG data. Figure 6 presents event study estimates of the effects of SWE elimination on (Panel A) the probability of

[7] Panel A of Figure A1 shows robustness to excluding state minimum wage levels as a control variable.
[8] Panel B of Figure A1 shows robustness to excluding state minimum wage levels as a control variable.

subminimum wage employment and (Panel B) hourly wages. In both panels, the pre-treatment coefficients are flat and statistically indistinguishable from zero, supporting the parallel trends assumption. Following SWE elimination (year 0), point estimates for subminimum wage employment decline modestly, while hourly wages remain largely unchanged. However, the post-treatment estimates are imprecise, with wide confidence intervals that include zero in all years. Overall, we find no statistically significant evidence that eliminating subminimum wage employment led to changes in either subminimum wage employment rates or hourly wages in the three years following policy implementation. Figure A-2 shows that these findings are robust to excluding state-specific time trends and controls for state minimum wage levels.

Columns (1) and (2) of Table 4 report the DID estimates of the impact of SWE elimination on general SWE and hourly wages, respectively. Consistent with the event study results, there are no statistically significant effects of SWE elimination on subminimum wage employment or hourly wages. This suggests the policy had no detectable short-term impact on these outcomes.

Together, these results imply that while states' efforts to eliminate SWE has reduced the prevalence of employment through 14(c) certificates, these efforts have not been enough to reduce SWE prevalence among the wider PWD population that may happen outside of the 14(c) context.

B. Labor Supply

In this section, we test whether eliminating SWE came at a cost of limiting employment opportunities for PWD who may struggle to compete in the job market at standard minimum wage rates as some have contended (Bourne and Subramaniam, 2021). To examine this possibility, we estimate the effects of SWE elimination on overall employment rates and other labor market outcomes among PWD using the CPS-ASEC data. Panels A–C in Figure 7 and columns (3)–(5) of Table 4 present the event study and DID estimates on employment outcomes, respectively. The DID estimates in columns (3) and (4) show a statistically significant 6 percentage point increase in both overall employment and competitive integrated employment (CIE), suggesting modest gains in labor market participation following the policy change. While the event study coefficients for these outcomes show generally positive post-treatment trends, the confidence intervals are wide and overlap zero, indicating some imprecision. For hours worked per week, both the event study

and DID results show no significant effects, suggesting the policy increased the likelihood of employment without affecting work intensity.

C. Wages and Income

This section examines the effects of SWE elimination on the wages and income of PWD. Panels D and E of Figure 7 and Columns (6) and (7) of Table 4 present the event study and DID estimates on log annual wage income and log annual welfare income, respectively.[9] The DID estimate indicates a statistically significant 19.7% increase in log wage income; however, the event study coefficients in Panel D are imprecise, with wide confidence intervals that include zero throughout, suggesting caution in interpreting the timing and persistence of this effect. In contrast, both the DID estimate and the event study results show a statistically significant decline in log welfare income—particularly in years 2 and 3 after the policy—indicating a more robust and sustained reduction in public assistance following SWE elimination. These results are robust to excluding state-specific time trends and minimum wage controls, as shown in Figure A-3.

D. Occupational Sorting

Understanding how subminimum wage workers adapt to the elimination of SWE provides critical insights into their labor market transitions and potential barriers to achieving competitive, integrated employment. To explore this, we analyze whether these workers remain in the same occupations following SWE elimination or shift to different sectors. We classify PWD into 12 distinct occupation groups and estimate Equation (3) separately for each group, as shown in Table 5. The results show no statistically significant changes in the distribution of PWD across occupation groups in the post-elimination period. This suggests that eliminating SWE did not lead to widespread reallocation of workers across sectors or occupational roles. In other words, we find no evidence of substantial occupational mobility among PWD following the policy change, which may reflect either limited opportunities for transitions or persistence in existing job placements.

[9] To analyze wage and welfare income, we keep individuals with non-zero income and adjust the income to 2019 dollars using CPI data. After normalization, we take the natural logarithm of the income.

VII. Conclusion and Policy Implications

This study provides timely and policy-relevant evidence on the labor market effects of eliminating SWE. Using a difference-in-differences framework and event study analyses, we find that states eliminating SWE experience a decline in the prevalence of PWD earning subminimum wages under Section 14(c) employment, with no precise measurable reductions in overall employment, hours worked, and wage income. These findings suggest that SWE abolition meets its policy objectives without incurring notable employment costs. Moreover, we find suggestive evidence of reduced reliance on Supplemental Security Income, indicating that the policy change does not lead to increased dependency on public assistance and may even support greater economic self-sufficiency among people with disabilities.

While the results provide evidence on the immediate and short-term effects of SWE elimination, this study has several limitations. First, the sample size is constrained by the number of states that have adopted SWE reforms during the study period, limiting the precision of estimates for certain subpopulations and heterogeneous effects. Second, the study focuses on short-term outcomes due to data availability, leaving open questions about longer-term employment trajectories and economic mobility. Future research should examine whether SWE elimination influences career advancement, earnings growth, and labor force attachment over time, providing a more comprehensive assessment of policy impacts.

Although our empirical analysis does not directly evaluate complementary policies, the findings highlight the importance of complementary measures to support PWD transitioning from sheltered or subminimum wage employment. In particular, employer incentives (e.g., wage subsidies), modeled on successful international programs such as Sweden's (Angelov and Eliason, 2018), could further incentivize employers to hire and train workers with disabilities, enhancing labor market integration. Similarly, investments in job training, workplace accommodations, and career advancement opportunities can address barriers to long-term employment and human capital accumulation for PWD. These measures align with calls for comprehensive support systems that prioritize sustained economic independence over temporary job placement (Friedman and Rizzolo, 2020).

In conclusion, this study provides the first national-level empirical analysis of the labor market effects of SWE elimination and demonstrates that targeted wage reforms can meaningfully reduce subminimum wage employment under 14(c) certificates without reducing labor market efficiency. These findings are particularly relevant as policymakers consider phasing out Section 14(c), offering evidence to inform the ongoing debate. Continued policy evaluation, along with investments in workforce development, will be essential to maximizing the long-term benefits of these reforms.

References

Association of People Supporting Employment First. (2023). *State Legislative Watch*. https://apse.org/state-legislation/

Autor, D. H., Manning, A., and Smith, C. L. (2016). The Contribution of the Minimum Wage to US Wage Inequality over Three Decades: A Reassessment. *American Economic Journal: Applied Economics*, *8*(1), 58–99. https://doi.org/10.1257/app.20140073

Bernstein, J., and Mishel, L. (1997). Has wage inequality stopped growing? *Monthly Labor Review (Bureau of Labor Statistics)*, *120*(12), 3–16.

Bourne, R., and Subramaniam, B. (2021, August 10). Eliminating the Subminimum Wage Would Reduce Opportunities for America's Most Vulnerable. *Cato Institute*. https://www.cato.org/blog/eliminating-subminimum-wage-would-reduce-opportunities-americas-most-vulnerable

Clemens, J. (2021). How Do Firms Respond to Minimum Wage Increases? Understanding the Relevance of Non-Employment Margins. *Journal of Economic Perspectives*, *35*(1), 51–72. https://doi.org/10.1257/jep.35.1.51

Clemens, J., and Strain, M. R. (2022). Does measurement error explain the increase in subminimum wage payment following minimum wage increases? *Economics Letters*, *217*, 110638. https://doi.org/10.1016/j.econlet.2022.110638

Clemens, J., and Strain, M. R. (2023). How important are minimum wage increases in increasing the wages of minimum wage workers? *Contemporary Economic Policy*, *41*(4), 594–612. https://doi.org/10.1111/coep.12608

Crandell, D. (2022). Twenty-Two Cents an Hour: Disability Rights and the Fight to End Subminimum Wages. *Cornell University Press*. https://www.cornellpress.cornell.edu/book/9781501763588/twenty-two-cents-an-hour/

Dague, B., Suter, J. C., Salisbury, J. M., Masterson, J., and Bascom, J. (2023). *Supported Employment in Vermont [Data Brief]*. Center on Disability and Community Inclusion, University of Vermont.

Department of Labor. (2024). *14(c) Certificate Holders*. https://www.dol.gov/agencies/whd/workers-with-disabilities/section-14c/certificate-holders

EPI. (2019). Methodology for measuring wages and benefits. *Economic Policy Institute*. https://www.epi.org/data/methodology/

Kim, J., Levere, M., and Magenheim, E. (2025). Do minimum wage increases induce changes in work behavior for people with disabilities? Evidence from the AbilityOne program. *Labour Economics*, *92*, 102663. https://doi.org/10.1016/j.labeco.2024.102663

Maroto, M., and Pettinicchio, D. (2023). Worth Less? Exploring the Effects of Subminimum Wages on Poverty among U.S. Hourly Workers. *Sociological Perspectives*, *66*(3), 455–475. https://doi.org/10.1177/07311214221124630

Meer, J., and West, J. (2016). Effects of the Minimum Wage on Employment Dynamics. *Journal of Human Resources*, *51*(2), 500–522. https://doi.org/10.3368/JHR.51.2.0414-6298R1

Neumark, D., and Shirley, P. (2022). Myth or measurement: What does the new minimum wage research say about minimum wages and job loss in the United States? *Industrial Relations: A Journal of Economy and Society*, *61*(4), 384–417. https://doi.org/10.1111/irel.12306

Office of the Federal Register. (2024). *Employment of Workers With Disabilities Under Section 14(c) of the Fair Labor Standards Act. Part III: Proposed Rules* (National Archives and Records Administration. https://www.govinfo.gov/app/details/FR-2024-12-04/2024-27880

Sun, L., and Abraham, S. (2021). Estimating dynamic treatment effects in event studies with heterogeneous treatment effects. *Journal of Econometrics*, *225*(2), 175–199. https://doi.org/10.1016/j.jeconom.2020.09.006

U.S. Commission on Civil Rights. (2020). *Subminimum Wages: Impacts on the Civil Rights of People with Disabilities*. https://www.usccr.gov/files/2020/2020-09-17-Subminimum-Wages-Report.pdf

Yin, M., Shaewitz, D., and Megra, M. (2014). *An Uneven Playing Field: The Lack of Equal Pay for People with Disabilities*. American Institutes for Research.

Figures

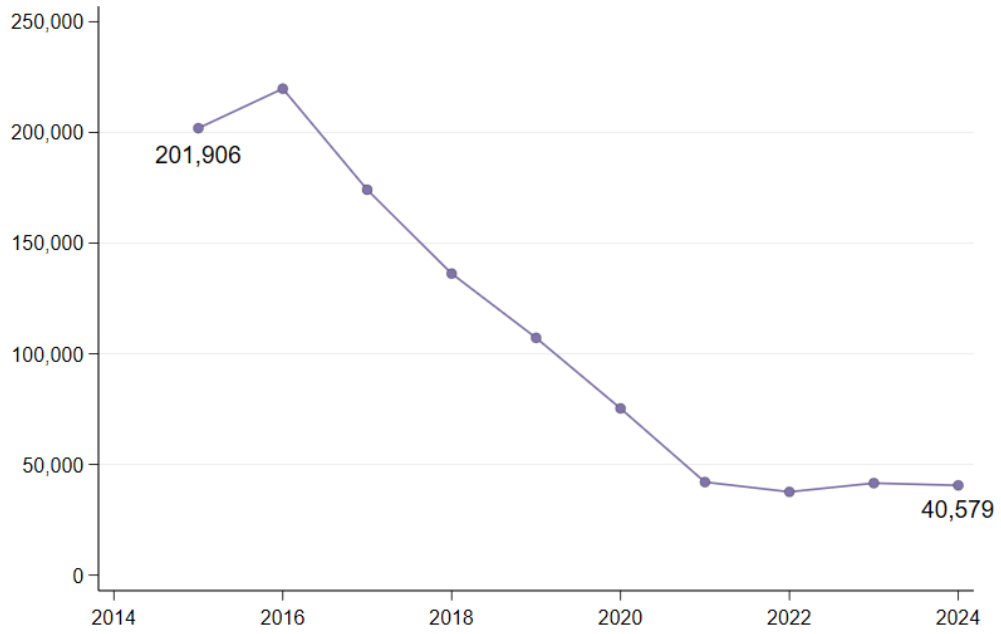
Figure 1: Share of working-age earners with subminimum wages

Data source: Current Population Survey Outgoing Rotation Group (CPS-ORG) Earnings Data, 2008-2024, excluding 2019.

Figure 2: Share of working-age earners with disabilities earning subminimum wages by age group

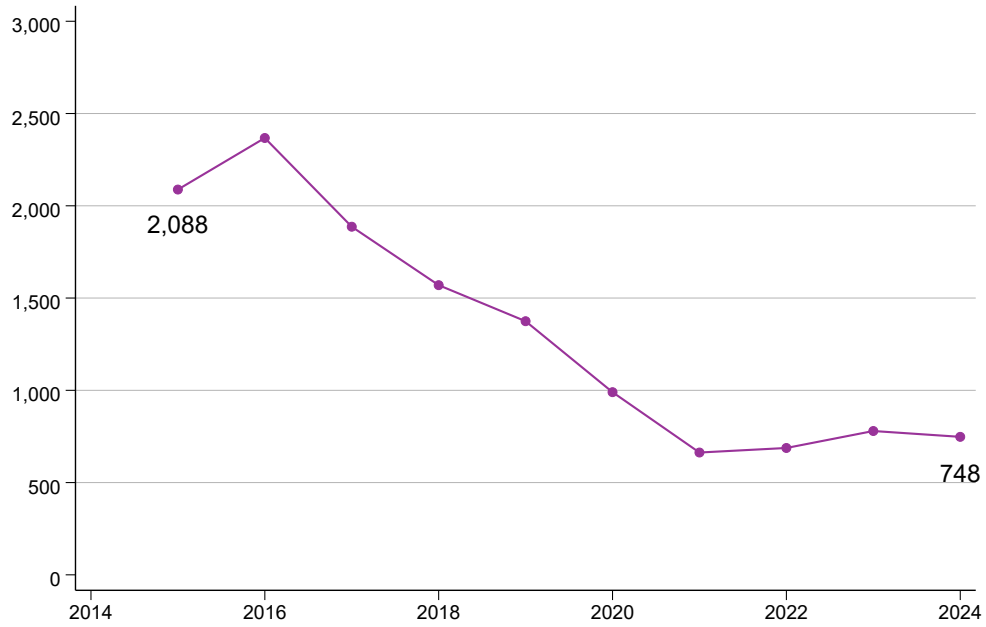
Data source: Current Population Survey Outgoing Rotation Group (CPS-ORG) Earnings Data, 2008-2024, excluding 2019.

Figure 3: Number of Workers Paid Subminimum Wage Under 14(c) Certificates



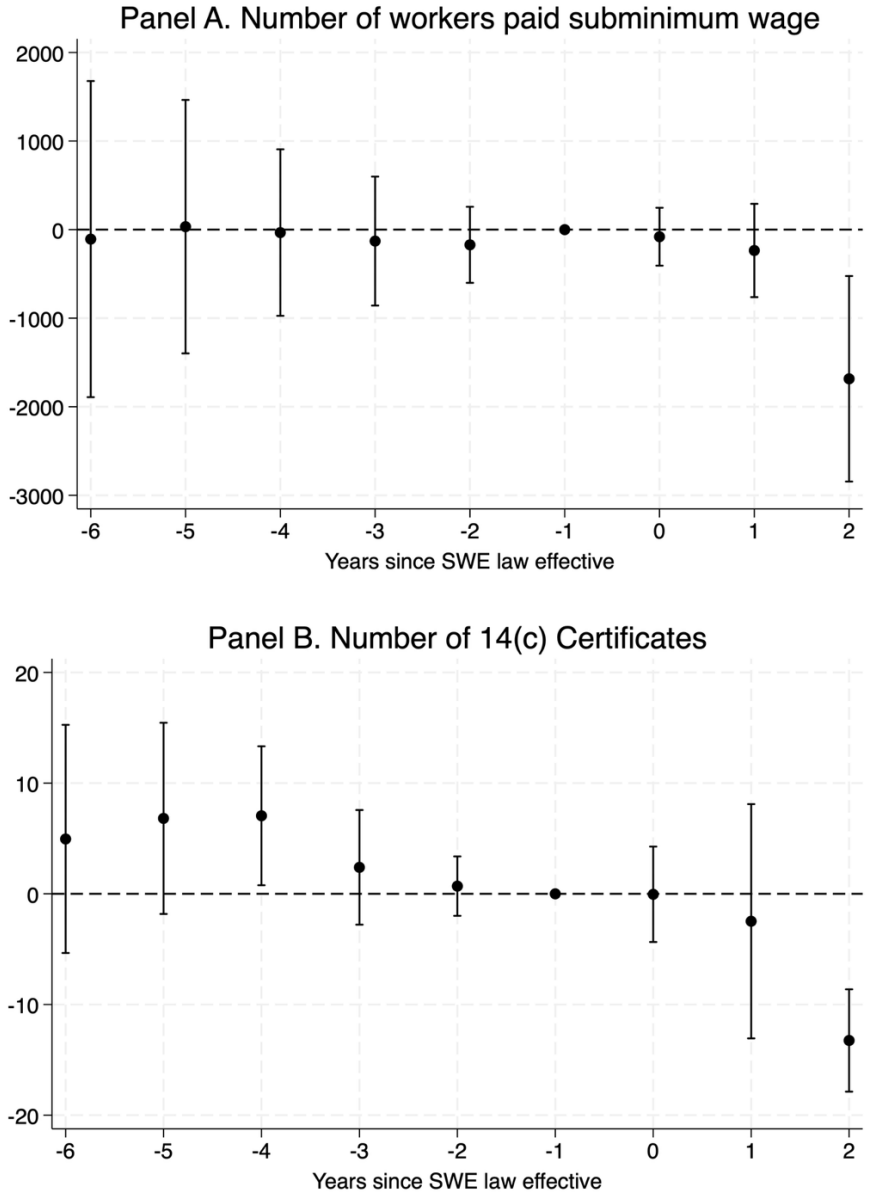
Data source: 14(c) Certificate Holder Data, Department of Labor Wage and Hour Division, 2015-2023

Figure 4: Number of active14(c) Certificates



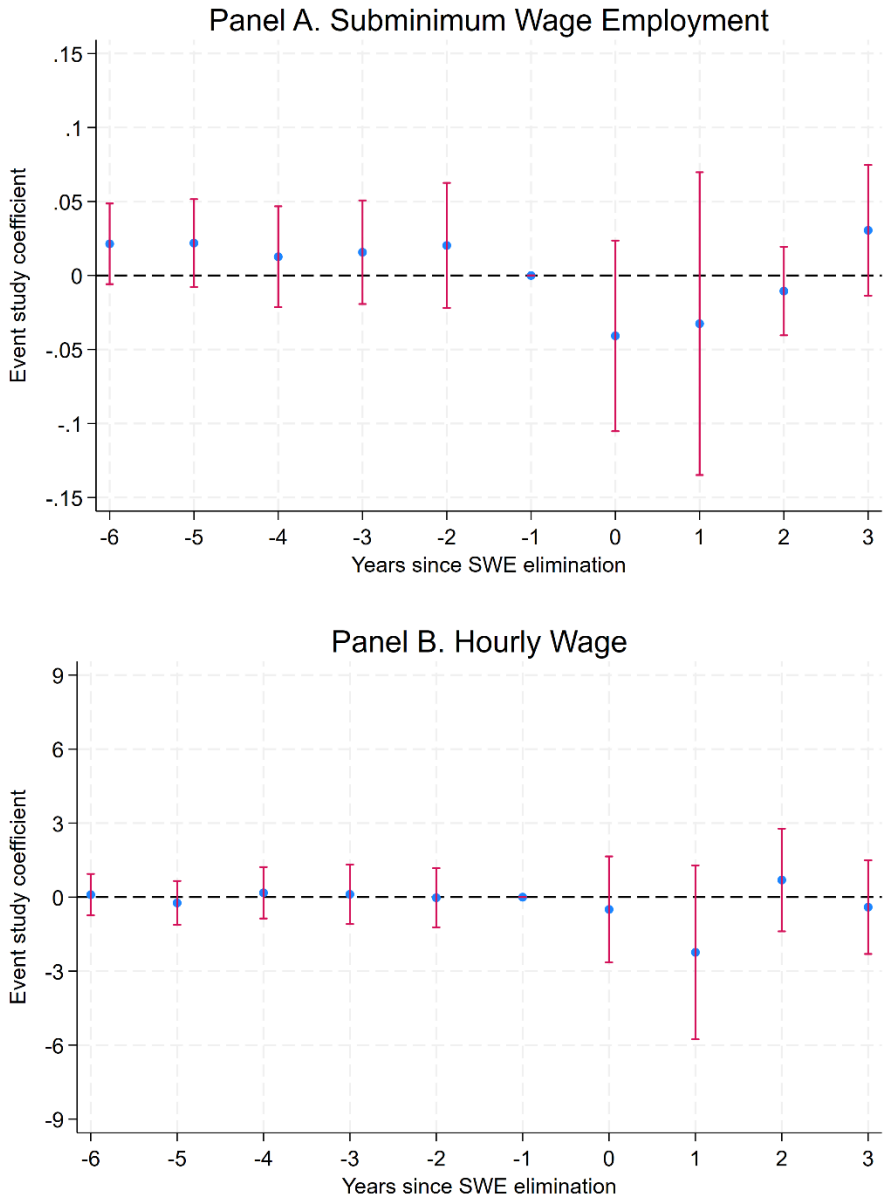
Data source: 14(c) Certificate Holder Data, Department of Labor Wage and Hour Division, 2015-2023

Figure 5: Effects of SWE elimination on number workers paid subminimum wage and 14(c) employers



Notes. Data are from 14(c) Certificate Holder Data, Department of Labor Wage and Hour Division, 2015-2023. Regressions include controls for state-level EITC rate, state minimum wage level, state unemployment rates, per capita GDP, the share of SSI recipients with disabilities, and the poverty rate

Figure 6: Effects of SWE elimination on SWE using CPS-ORG data



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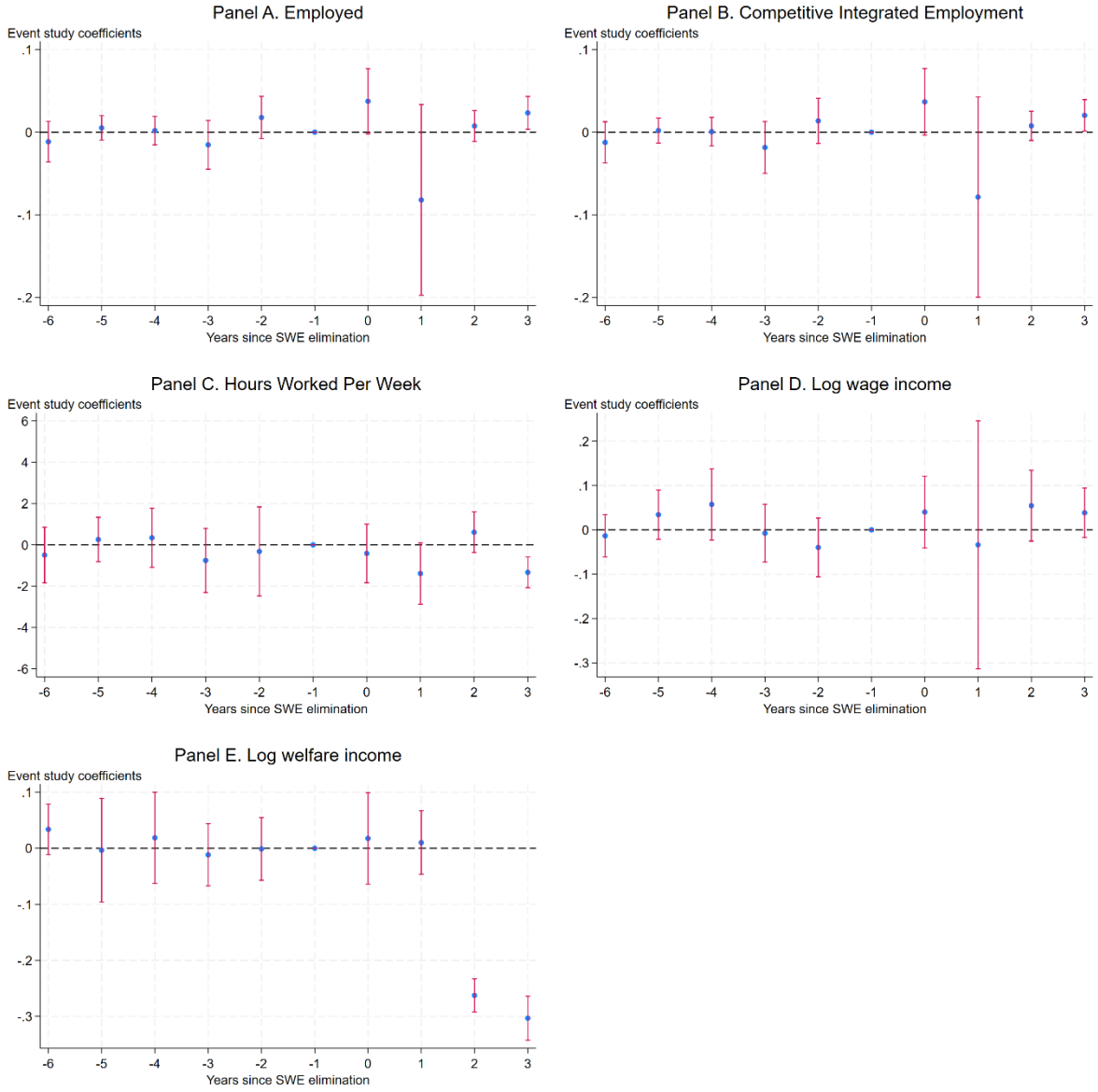
Notes. Data are from CPS-ORG 2009-2024. All regressions include controls for state-level EITC rate, state minimum wage level, state unemployment rates, per capita GDP, the share of SSI recipients with disabilities, and the poverty rate as well as individual-level control variables: including sex, age, race and ethnicity, marital status, dummies for educational attainment (less than high school degree, high school degree, bachelor's degree, and some college), and number of children in the household. All specifications are weighted by CPS-ORG earnings weights.

Figure 7: Effects of SWE elimination on labor market outcomes using CPS-ASEC data



Notes. Data are from CPS-ASEC 2009-2024. Coefficient estimates for panels A, B, C, and D are reported in percentage points. All regressions include controls for state-level EITC rate, state minimum wage level, state unemployment rates, per capita GDP, the share of SSI recipients with disabilities, and the poverty rate as well as individual-level control variables: including sex, age, race and ethnicity, marital status, dummies for educational attainment (less than high school degree, high school degree, bachelor's degree, and some college), and number of children in the household. All specifications are weighted by CPS-ASEC earnings weights.

Tables

Table 1: State Legislations to Eliminate Subminimum Wage Employment

State	Bill No.	Enacted date	Effective date
Alaska	Public announcement No.18-04	2/16/2018	2/16/2018
California	2021 SB-639	9/27/2021	1/1/2025
Colorado	2021 SB-39	6/29/2021	7/1/2025
Delaware	2021 HB-122	10/20/2021	1/31/2024
Hawaii	2021 SB-793	6/21/2021	6/21/2021
Maine	2020 LD-1874	3/17/2020	3/17/2020
Maryland	2016 SB-417	5/19/2016	10/1/2020
Nevada	2023 AB-259	6/16/2023	1/1/2028
New Hampshire	2015 SB-47	5/11/2015	7/6/2015
Oregon	2019 SB-494	6/21/2019	7/1/2023
Rhode Island	2022 HB-7511	6/15/2022	6/15/2022
South Carolina	2021 S-553	6/1/2022	1/1/2023
Tennessee	2022 SB-2042	4/26/2022	7/1/2022
Virginia	2023 HB-1924	4/12/2023	7/1/2030
Washington	2021 SB-5284	4/16/2021	7/25/2021

Table 2: Characteristics of Working Age Individuals by Disability Status

	No disability	One disability	Multiple disabilities
Demographic Characteristics			
Female	0.51	0.49	0.52
Age	40.14	46.86	48.19
Married	0.53	0.42	0.33
Non-Hispanic White	0.61	0.67	0.63
Non-Hispanic Black	0.12	0.15	0.18
Hispanic	0.18	0.13	0.13
Educational Attainment			
Less than HS degree	0.14	0.16	0.22
HS degree or GED	0.28	0.36	0.39
Some college or associate's	0.29	0.30	0.27
Bachelor's degree or higher	0.33	0.17	0.12
Labor Market Characteristics			
In labor force	0.79	0.46	0.17
Employed	0.94	0.88	0.86
Unemployed	0.06	0.12	0.14
Usual weekly work hours	39.84	37.98	33.19
Income			
Total personal income	$ 45,737	$ 28,319	$ 17,842
Wage and salary income	$ 39,435	$ 18,254	$ 5,773
Social security income	$ 446	$ 3,066	$ 5,041
N	1,535,774	71,114	52,389

Data source: Current Population Survey Annual Social and Economic Supplement (ASEC), 2009-2024

Notes: Employment and unemployment rates are conditional on being in the labor force, and usual weekly work hours are conditional on being employed.

Table 3 : Characteristics of Workers with Disabilities by SWE Status

	In SWE	Not in SWE	Difference
Demographic Characteristics			
Female	0.55	0.50	0.05
Age	38.44	44.59	-6.15
Married	0.21	0.41	-0.20
Non-Hispanic White	0.65	0.74	-0.09
Non-Hispanic Black	0.13	0.10	0.03
Hispanic	0.14	0.10	0.04
Educational Attainment			
Less than HS degree	0.18	0.10	0.08
HS degree or GED	0.44	0.38	0.06
Some college or associate's	0.31	0.37	-0.06
Bachelor's degree or higher	0.07	0.15	-0.08
Disability Type			
Hearing	0.18	0.30	-0.12
Vision	0.14	0.16	-0.02
Memory	0.53	0.32	0.21
Physical	0.29	0.35	-0.06
Mobility	0.27	0.13	0.14
Personal care	0.06	0.05	0.01
Multiple types of disability	0.33	0.22	0.11
Labor Market Characteristics			
Usual weekly work hours	26.22	35.64	-9.42
Weekly earnings	$ 254.1	$ 622.9	-$ 368.7
Hourly wage	$ 7.42	$ 17.12	-$ 9.70
Member of or covered by union	0.05	0.13	-0.08
Receives overtime, tips, or commissions	0.24	0.15	0.09
N	2,998	57,732	

Data source: Current Population Survey Outgoing Rotation Group (ORG) Earnings Data, 2009-2024

Notes: All differences are statistically significant at the 1% level.

Table 4: Effects of Subminimum Wage Elimination on Labor Market Outcomes Among People with Disabilities

	Subminimum Wage Status	Hourly Wage	Employed	Competitive Integrated Employment	Hours Worked Per Week	Log Wage Income	Log Welfare Income
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
SWE law effective	-0.018	-0.123	0.060**	0.061**	-0.946	0.197**	-0.124***
	(0.032)	(1.088)	(0.026)	(0.026)	(0.722)	(0.074)	(0.040)
State minimum wage level	0.054***	-0.003	0.002	0.001	0.003	0.072	-0.014
	(0.006)	(0.178)	(0.008)	(0.008)	(0.034)	(0.317)	(0.018)
Observations	46,762	46,762	97,241	97,241	24,460	33,708	97,241
State and year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes. Columns 1 and 2 used CPS-ORG 2009-2024 data. Columns 3-6 used CPS-ASEC 2009-2024 data. Competitive Integrated Employment is defined as employment where the individual: (i) earns at or above the minimum wage, (ii) is enrolled in a workplace pension plan, (iii) holds a position offering insurance coverage, or (iv) is entitled to paid time off. Standard errors, clustered on state-level, are in parentheses. Controls include state-level EITC rate, state minimum wage level, state unemployment rates, per capita GDP, the share of SSI recipients with disabilities, and the poverty rate and individual-level control variables, including sex, age, race and ethnicity, marital status, dummies for educational attainment (less than high school degree, high school degree, bachelor's degree, and some college), and number of children in the household. All specifications are weighted by ASEC weights. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

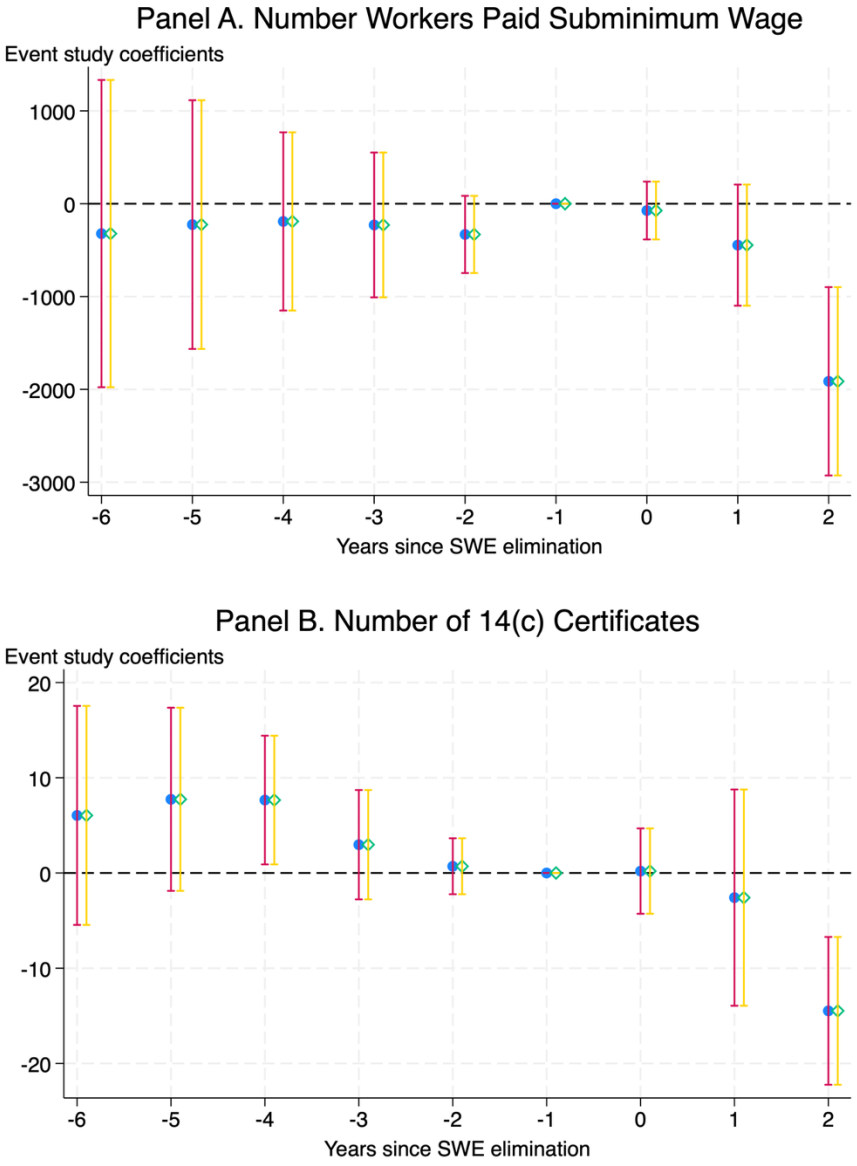
Table 5: Subminimum Wage Elimination and Occupation Sorting Among People with Disabilities

	(1) Managerial	(2) Professional	(3) Technicians	(4) Mechanics	(5) Construction	(6) Extractive	(7) Machine	(8) Administrative	(9) Transportation	(10) Sales	(11) Farming	(12) Service
SWE law effective	-0.00771	0.00916	0.00338	0.00038	-0.00126	0.00017	0.01257*	0.00209	-0.01022	-0.00751	-0.00132	-0.00435
	(0.00634)	(0.00738)	(0.00343)	(0.00389)	(0.00363)	(0.00339)	(0.00667)	(0.00775)	(0.00644)	(0.00628)	(0.00249)	(0.00949)
N	97,241	97,241	97,241	97,241	97,241	97,241	97,241	97,241	97,241	97,241	97,241	97,241
R2	0.03	0.09	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.00	0.02

Notes. Data are from CPS-ASEC 2009-2024 data. Standard errors, clustered on state-level, are in parentheses. Controls include state-level EITC rate, state minimum wage level, state unemployment rates, per capita GDP, the share of SSI recipients with disabilities, and the poverty rate and individual-level control variables, including sex, age, race and ethnicity, marital status, dummies for educational attainment (less than high school degree, high school degree, bachelor's degree, and some college), and number of children in the household. All specifications are weighted by ASEC weights. *** p<0.01, ** p<0.05, * p<0.1

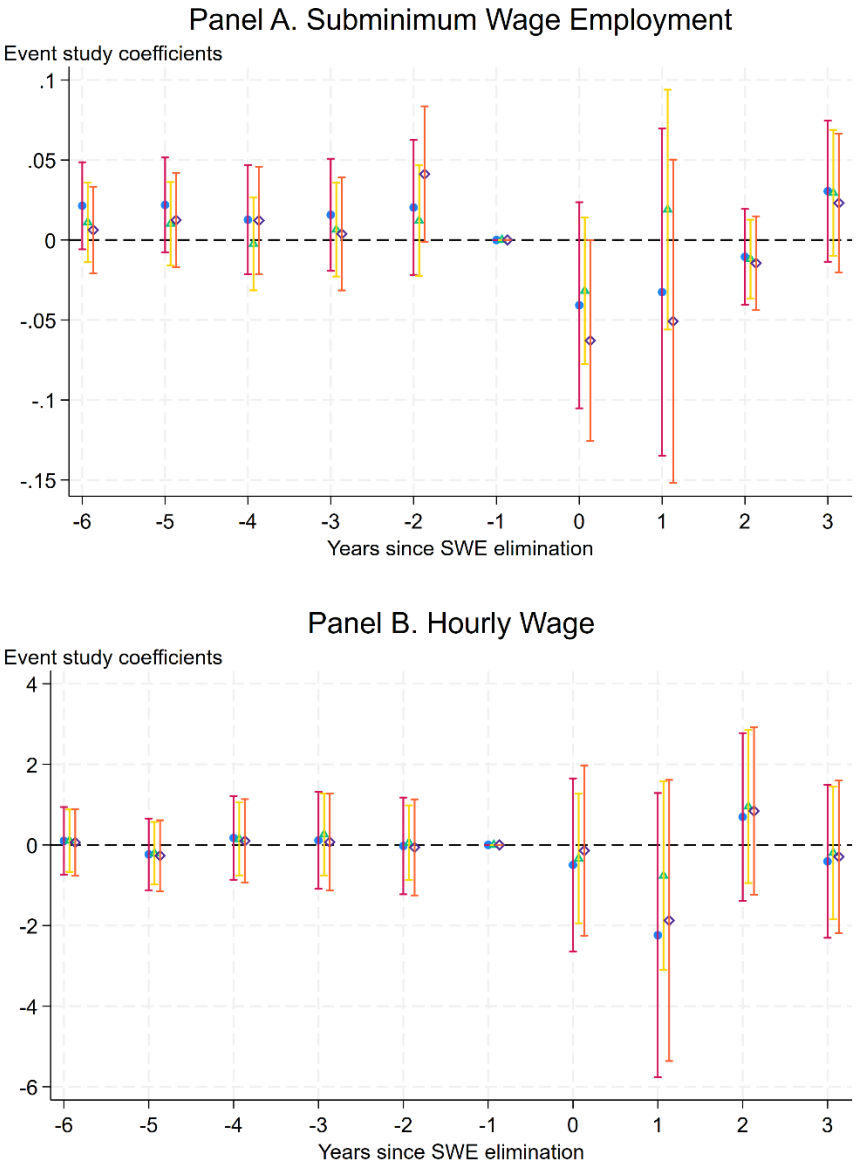
Appendix

Figure A - 1: Robustness check: Effects of subminimum wage elimination on number workers paid subminimum wage and 14(c) employers



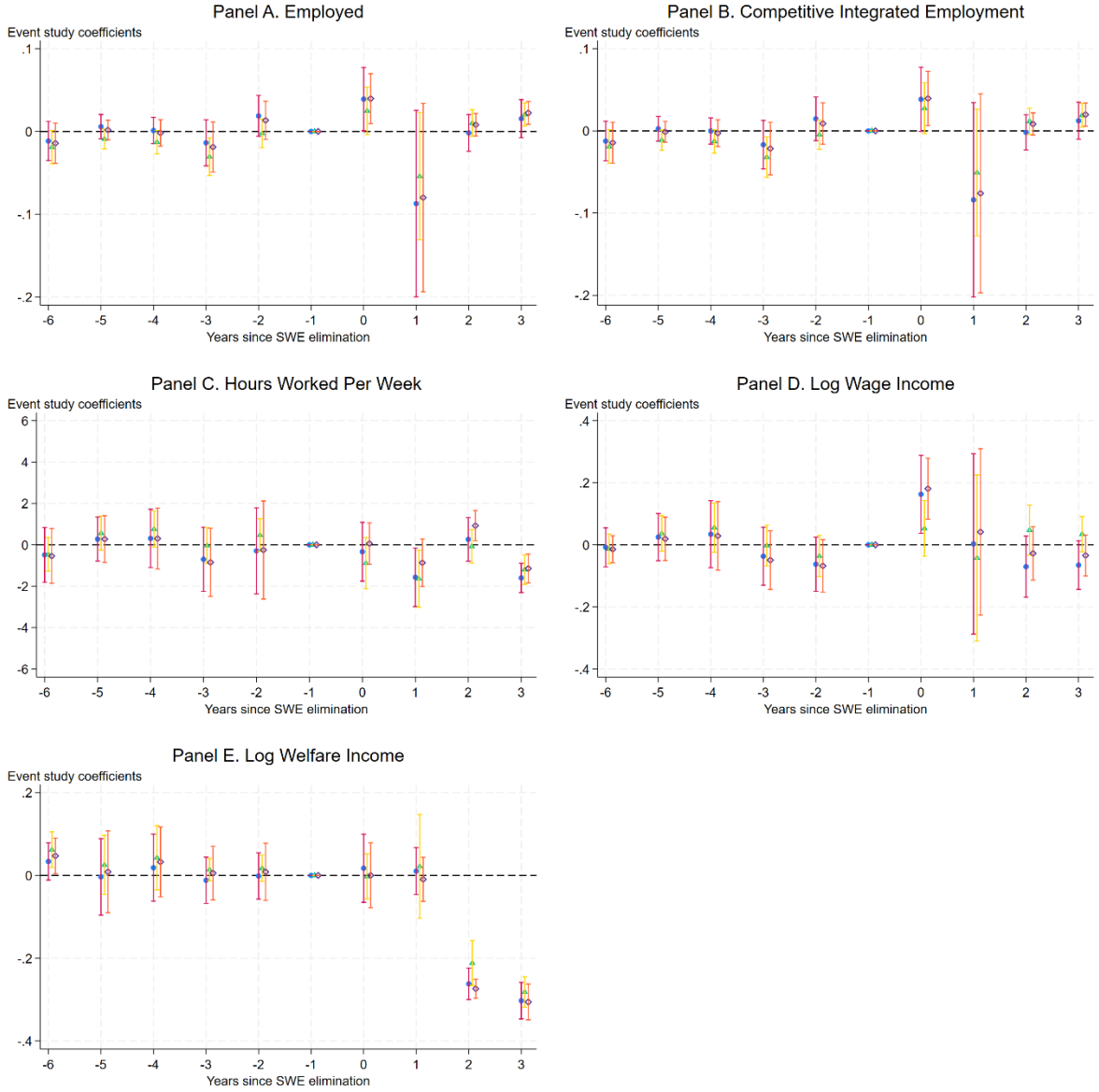
Data are from 14(c) Certificate Holder Data, Department of Labor Wage and Hour Division, 2015-2023. The blue circle represents the **baseline** estimate ***with controls for state minimum wage levels***. The diamond indicates estimates ***excluding controls for state minimum wage levels***. All regressions include controls for state-level EITC rate, state unemployment rates, per capita GDP, the share of SSI recipients with disabilities, and the poverty rate.

Figure A - 2: Robustness check: Effects of subminimum wage elimination on subminimum wage status and hourly wage



Data are from CPS-ORG 2009-2024. The circle represents the baseline estimate ***with state-specific time trends***. The hollow triangle shows estimates ***excluding state-specific time trends***. The diamond indicates estimates ***excluding controls for state minimum wage levels***. All regressions include controls for state-level EITC rate, state minimum wage level, state unemployment rates, per capita GDP, the share of SSI recipients with disabilities, and the poverty rate as well as individual-level control variables: including sex, age, race and ethnicity, marital status, dummies for educational attainment (less than high school degree, high school degree, bachelor's degree, and some college), and number of children in the household. All specifications are weighted by CPS-ORG earnings weights.

Figure A - 3: Robustness check: Effects of subminimum wage elimination on labor market outcomes



Notes. Data are from CPS-ASEC 2009-2024. Coefficient estimates for panels A, B, C, and D are reported in percentage points. The black circle represents the baseline estimate ***with state-specific time trends***. The hollow triangle shows estimates ***excluding state-specific time trends***. The diamond indicates estimates ***excluding controls for state minimum wage levels***. All regressions include controls for state-level EITC rate, state minimum wage level, state unemployment rates, per capita GDP, the share of SSI recipients with disabilities, and the poverty rate as well as individual-level control variables: including sex, age, race and ethnicity, marital status, dummies for educational attainment (less than high school degree, high school degree, bachelor's degree, and some college), and number of children in the household. All specifications are weighted by CPS-ASEC earnings weights.