The 2019 Increase in the Greek Minimum Wage: Evidence on Wages, Employment, and Worker Reallocation*

Effrosyni Adamopoulou† Manolis Galenianos‡
Nicholas Giannakopoulos§ Ioannis Laliotis ¶

June 2026

Abstract

We study the effects of the 2019 increase in the Greek minimum wage using matched employer-employee administrative records covering nearly the universe of private-sector employment relationships. The reform raised hourly wages by 7.2 percent among directly affected workers and by 3.1 percent among workers earning between one and two times the minimum wage, indicating substantial spillover effects beyond the statutory wage floor. We find no evidence that the reform reduced employment. Employment retention, days worked, and transitions from part-time to full-time employment remained broadly unchanged, while more exposed local labor markets did not experience weaker employment growth. We also find no evidence that the reform induced worker reallocation across firms. Exposed workers were no more likely to change employers, move to higher-paying firms, or move to larger firms. The results suggest that the reform operated primarily through wage adjustments within existing employment relationships.

*We are grateful to EFKA Director Alexandros Varveris for his instrumental role in securing access to the data. We thank Manos Matsaganis and Panos Tsakloglou for their assistance with the data, and Thanos Bourlos for helping us decipher the evolution of the Greek social security system. We thank Attila Lindner for useful discussions.

†ZEW, Deutsche Bundesbank, University of Mannheim, and CEPR

‡Royal Holloway, University of London

§University of Patras

¶University of Patras and Hellenic Observatory Centre, London School of Economics

1 Introduction

The Greek labor market experienced dramatic changes during the 2010s. Following the sovereign debt crisis, output fell by more than one quarter and unemployment increased from below 10 percent in 2008 to over 27 percent in 2013. [1] A series of labor-market reforms sought to restore competitiveness by reducing labor costs and decentralizing wage setting. Among the most important was the reform of February 2012 which reduced the statutory minimum wage by 22 percent, introduced a sub-minimum wage for young workers and weakened the role of collective bargaining in wage determination. These reforms contributed to a substantial decline in wages during the crisis years and fundamentally altered the institutional environment in which wages are set.

By the second half of the decade, the Greek economy had entered a period of gradual recovery. Employment was increasing and unemployment was declining, but labor-market conditions remained weak by European standards. In this context, in February 2019 the Greek government increased the statutory minimum wage by 11 percent, from €586 to €650 per month, and abolished the sub-minimum wage. The reform represented the first major increase in the minimum wage following the crisis-period reforms and partially reversed the sharp reductions implemented earlier in the decade.

The effects of the 2019 reform were far from obvious. On the one hand, a substantial body of evidence suggests that moderate increases in minimum wages can raise earnings with limited employment consequences (Dube and Lindner, 2024). On the other hand, the Greek labor market differed markedly from the settings examined in much of the existing literature. The reform was implemented when unemployment remained close to 20 percent, collective bargaining coverage was limited, and many firms were still recovering from a prolonged economic crisis. Whether firms would absorb higher labor costs through wage compression, employment adjustment, or worker reallocation was therefore an open question.

[1] See Gourinchas, Philippon, and Vayanos (2017) and Chodorow-Reich, Karabarbounis, and Kekre (2023) for macroeconomic studies of the crisis.

This paper examines the effects of the 2019 minimum wage increase on wages, employment, and worker reallocation across firms. We use matched employer-employee administrative records from the Greek social security system covering nearly the universe of private-sector employment relationships. The data allow us to follow workers and firms at monthly frequency and to study not only wages and employment outcomes but also worker mobility and the allocation of labor across firms.

We find three main results. First, the reform generated substantial wage gains among low-paid workers. Hourly wages increased by approximately 7.2 percent among directly affected workers and by 3.1 percent among workers earning between one and two times the minimum wage, adding up to an overall rise of 1.8 percent in the average wage. The spillover effects emerged rapidly following the reform despite the absence of any legal requirement to increase the wages of spillover workers and accounted for one-third of the increase in the average wage. Second, we find no evidence that the reform reduced employment. Employment retention, days worked, and transitions from part-time to full-time employment remained broadly unchanged, while regions more exposed to the reform did not experience weaker employment growth. Third, we find little evidence that the reform altered worker mobility or induced reallocation toward larger or higher-paying firms.

Our paper relates to two broad strands of the literature. First, it contributes to the growing body of evidence on the effects of minimum wages on wages and employment. Recent surveys conclude that minimum wages generally increase earnings while generating small employment effects, although substantial uncertainty remains regarding the magnitude of these effects and the mechanisms through which firms adjust (Dube and Lindner, 2024). Second, it contributes to the literature on wage spillovers and labor-market allocation. Previous work has documented spillover effects above the statutory minimum wage (Stewart, 2012; Autor, Manning, and Smith, 2016) and, in the case of Germany, evidence that minimum wages may induce productivity-enhancing worker reallocation across firms (Dustmann, Lindner, Schönberg, Umkehrer, and vom Berge, 2022). Our findings differ from the German

experience. While we document substantial and rapidly emerging spillovers, we find little evidence that the reform induced worker mobility or reallocation across firms. The results suggest that the effects of the reform operated primarily through wage adjustments within existing employment relationships.

In the case of the Greek labor market, the minimum wage has played a central role, particularly during the period of economic adjustment and recovery. For reviews of the institutional framework and the relevant empirical literature, see Nicolitsas (2025). Empirical evidence remains relatively limited, however, despite the large policy changes that occurred during the sovereign debt crisis and its aftermath. Using administrative matched employer–employee data, Georgiadis, Kaplanis, and Monastiriotis (2018) examine the effects of the minimum-wage increases of 2009–2011 and the subsequent reduction in 2012, documenting substantial wage responses and significant spillovers above the minimum wage but limited evidence of systematic employment effects. Exploiting the larger reduction in the youth minimum wage introduced in 2012, Georgiadis, Kaplanis, and Monastiriotis (2020) find heterogeneous responses across firms and show that employment adjustments operated primarily through hiring rather than separations. More recently, Roupakias (2025) studies the 2019 increase in the statutory minimum wage and the simultaneous abolition of the youth subminimum wage, providing new evidence on wage and employment effects during the post-crisis recovery period. Our paper contributes to this literature by providing comprehensive evidence on the effects of the 2019 reform on wages, employment, and worker reallocation using administrative data covering virtually the entire private-sector workforce.

A related literature studies the broader transformation of labor market institutions during the adjustment-program period and its implications for wage flexibility. The reforms implemented after 2010 substantially decentralized collective bargaining and expanded the scope for firm-level wage setting. Using administrative data on collective agreements, Daouli, Demoussis, Giannakopoulos, and Laliotis (2016) show that the 2011 industrial-relations reform led to a rapid expansion of firm-level bargaining and facilitated nominal wage reductions,

while Giannakopoulos and Laliotis (2020) exploit the reform's firm-size threshold to identify its causal effect on bargaining outcomes and negotiated wage floors. More generally, a number of studies have examined whether the reforms increased the responsiveness of wages to labor market conditions. While some evidence points to the emergence of a temporary wage curve following the reforms (Cholezas and Kanellopoulos, 2015; Daouli, Demoussis, Giannakopoulos, and Laliotis, 2017), subsequent work concludes that wage flexibility remained limited and that wages continued to be only weakly linked to local labor market conditions (Laliotis, 2019). Related evidence suggests that the reforms altered wage-setting institutions and labor market adjustment mechanisms, although important questions remain regarding their effects on worker allocation and firm dynamics (Gatopoulos, Louka, Polycarpou, and Vettas, 2026).

The remainder of the paper proceeds as follows. Section 2 describes the institutional background and the data. Section 3 presents the empirical methodology. Section 4 examines wage effects, with particular emphasis on spillovers along the wage distribution. Section 5 studies employment outcomes. Section 6 analyzes worker reallocation across firms. Section 7 concludes.

2 Institutional Background and Data

2.1 Institutional Background

The Greek labor market underwent substantial institutional and economic changes during the 2010s. Following the sovereign debt crisis, output contracted sharply and unemployment rose from below 10 percent in 2008 to more than 27 percent in 2013. The recession was accompanied by major labor-market reforms aimed at improving competitiveness and reducing labor costs.

A central component of these reforms was the reduction of the statutory minimum wage in February 2012. The monthly minimum wage for workers aged 25 and over was reduced

by 22 percent, from €751 to €586 and a sub-minimum wage was introduced for workers under 25 at €511. At the same time, collective bargaining arrangements were substantially decentralized and the role of sectoral agreements was weakened. These reforms contributed to significant declines in wages during the crisis period.

Beginning in 2014 and more consistently after 2017, the Greek economy entered a period of gradual recovery. Employment increased steadily and unemployment declined, although it remained among the highest in Europe. Against this backdrop, the Greek government raise the statutory minimum wage in February 2019 from €586 to €650 per month and abolished the sub-minimum wage for young workers, so that all workers were covered by the statutory same minimum wage. This change represented an increase in the minimum wage of approximately 11 percent for the over-25s and 27 percent for the under-25s and it directly affected almost 20 percent of private-sector workers.

The 2019 reform is particularly well suited for empirical analysis for three reasons. First, it was the first major increase in the minimum wage following the institutional reforms of the crisis period. Second, it represented a large change in the wage floor. Third, it occurred before the disruptions associated with the COVID-19 pandemic, allowing the effects of the policy to be studied in a relatively stable economic environment.[2]

2.2 Administrative Data

The analysis uses matched employer-employee administrative records from the Greek social security system (EFKA) for the years 2015-2020. The data cover nearly the universe of private-sector employment relationships and contain monthly information on workers, firms, and employment outcomes.

Because the data have been described extensively in Adamopoulou, Galenianos, Giannakopoulos, Kammas, and Laliotis (2026), we provide only a brief overview here and focus

[2]See Betcherman, Giannakopoulos, Laliotis, Pantelaiou, Testaverde, and Tzimas (2023) for a study of the effect of the COVID-19 lockdown on employment, hiring and separations, particularly on tourism-related activities.

on the variables relevant for the present analysis.

For each employment relationship, the data report monthly earnings, occupation, full-time or part-time employment status, insurance days, worker demographics, and firm identifiers. The employer identifiers allow workers to be linked to firms over time and make it possible to study both worker mobility and firm characteristics.

The primary advantage of the data is the ability to observe wages, employment outcomes, and worker-firm matches within a unified framework. This feature is particularly important for studying both the direct effects of the minimum wage increase and its potential effects on labor-market allocation.

For computational purposes, we use a 12% random sample from this dataset. The sample is selected according to the worker's day of birth. Our sample includes roughly 5 million worker-month observations.

2.3 Construction of Hourly Wages

To measure exposure to the reform among all workers, including those employed part-time, we transform monthly compensation into hourly wages.

We observe each worker's monthly compensation and the corresponding days of full-time or part-time insurance directly in the administrative data. We label a worker-month as full-time if it consists of 20 or more days of full-time employment and as part-time otherwise. Note that part-time months include both workers who work a small number of full-time days ("vertical" part-time workers) and workers who work any number of part-time days ("horizontal" part-time workers).

We use the administrative data to to construct daily compensation for full-time days and for part-time days. The administrative data does not include information on hours of work, a limitation that is particularly relevant for part-time workers.

The Greek Labor Force Survey (LFS) includes detailed information on the usual hours of work for full-time and for part-time workers. We find that full-time workers work 8 hours each

day with very little variation across gender, age, sector and occupation. Part-time workers who work more than 6 hours per day (corresponding to the vertical part-time workers) also work essentially 8 hours each day with little variation across worker and job characteristics. Finally, the daily work hours for part-time workers who work fewer than 6 hours per day (corresponding to horizontal part-time workers) vary considerably across gender and sector.

We combine the information from EFKA and the LFS to construct the hourly wage rate for all workers. We assign 8 hours of work to each full-time day of insurance, i.e. to all full-time workers and to vertical part-time workers. For horizontal part-time workers, we impute their hours of work according to the following procedure. We use the LFS to compute the average hours of work of horizontal part-time workers for each gender-quarter-sector combination. We then assign that number of hours to each worker in the corresponding cell of the EFKa data.

The resulting measure allows workers to be compared on a common basis regardless of differences in working time and provides a more accurate measure of exposure to the minimum wage increase.

Figure 1: Distribution of hourly wages before the reform

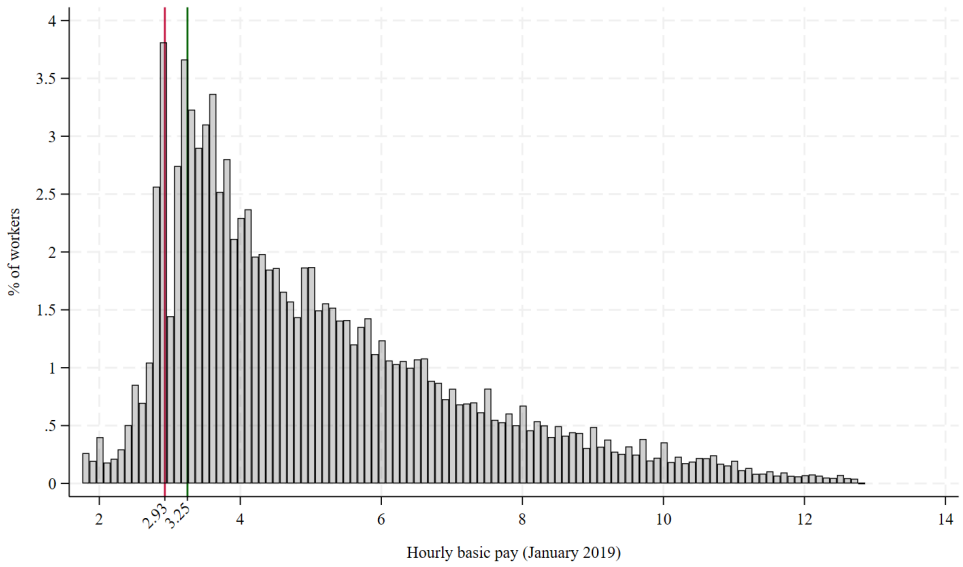


Figure 1 presents the distribution of hourly wages immediately prior to the reform. The

figure shows substantial concentration of workers near the minimum wage and highlights the potential importance of the policy for a sizeable fraction of the workforce.

2.4 Exposure to the Minimum Wage

To assess the extent of exposure to the reform, we classify workers according to their hourly earnings prior to the policy change. Table 1 reports the share of workers affected by the reform across demographic and labor-market groups.

Exposure varies substantially across worker groups. Younger workers, part-time employees, and workers in lower-wage regions are more likely to be affected by the reform than older workers, full-time employees, and workers in higher-wage regions. Overall, approximately one-fifth of private-sector workers earned less than the new minimum wage prior to its implementation, indicating that the reform had the potential to affect a substantial portion of the labor market.

3 Empirical Methodology

This section describes the empirical methodology that we follow to estimate the causal effects of the rise in the minimum wage on various outcomes including wages, employment, and worker reallocation across firms. We adopt the methodology of Dustmann, Lindner, Schönberg, Umkehrer, and vom Berge (2022) to our dataset and to our topics of interest.

3.1 Individual-Level Identification Strategy

There are two key challenges in evaluating the effects of the minimum wage increase. First, workers located in different parts of the wage distribution exhibit systematically different outcome dynamics. For example, low-wage workers typically experience faster wage growth, greater employment turnover, and higher mobility than workers with higher earnings. Second, there might be underlying trends in the outcomes of interest.

Table 1: Exposure to the minimum wage increase

	Coverage	Bite
Total sample	0.099	0.193
Female	0.094	0.203
Male	0.103	0.184
Attica region	0.091	0.171
Thessaloniki region	0.089	0.190
Rest of Greece	0.117	0.233
16-24 years old	0.327	0.486
25-44 years old	0.094	0.198
45-64 years old	0.066	0.130
Greek citizenship	0.096	0.189
Non-Greek citizenship	0.127	0.230
Part-time worker	0.152	0.256
Full-time worker	0.069	0.158
Low-skilled occupation	0.117	0.194
Medium-skilled occupation	0.093	0.199
Highly-skilled occupation	0.107	0.172
Mining-Quarrying	0.017	0.035
Manufacturing; Energy; Constructions	0.060	0.109
Wholesale-Retail Trade	0.082	0.207
Transportation; Accommodation; Food Services	0.133	0.252
IT; Finance; Real Estate	0.062	0.103
Professional, Admin, Support Services	0.147	0.252
Education; Human Health	0.190	0.264
Arts, Entertainment, Other Services	0.090	0.182
Plant size: 1-4 employees	0.164	0.328
Plant size: 5-9 employees	0.134	0.252
Plant size: 10-19 employees	0.100	0.191
Plant size: 20-49 employees	0.062	0.121
Plant size: 50+ employees	0.033	0.068

To address this issue, we first classify workers according to their hourly wage twelve months earlier and estimate year-on-year outcome growth rates separately for each wage group, controlling for characteristics of the worker and his employer. This approach allows outcomes to be compared among workers occupying similar positions in the wage distribution.

Formally, we denote the outcome of worker i at time t by y_{it} and his wage bin at $t-12$ by $b(it)$ and we estimate

$$y_{it} - y_{it-12} = \sum_{k,m,s} \mathbf{1}_{b(it)=k} \times \mathbf{1}_{M(t)=m} \times \mathbf{1}_{S(t)=s} \times \gamma_{k,s,m} + \beta X_{i,t-12} + e_{it} \quad (1)$$

where $M(t)$ and $S(t)$ denote the calendar month and calendar year, respectively, of time t, k indexes wage bins and the variables X_{it} consists of dummy variables for gender, age, citizenship, full-time or part-time employment status, occupation, establishment sector, NUTS 2 location of establishment, and establishment size. The parameter $\gamma_{k,s,m}$ captures the growth in bin k between month m of years $s-1$ and s.

Our identification strategy relies on two differencing steps. The first differencing step compares outcome growth during the placebo year (2017–18) and the post-policy year (2018–19) with growth observed during the baseline year (2016–17). This comparison removes persistent differences in outcome dynamics across wage groups.

Formally, we let $s = \{b, c\}$ where b is the baseline year and c are the comparison years and we estimate

$$y_{it} - y_{it-12} = \sum_{k,m,s} \mathbf{1}_{b(it)=k} \times \mathbf{1}_{M(t)=m} \Big(\gamma_{k,b,m} + \mathbf{1}_{S(t)=c} \times \delta_{k,c,m} \Big) + \beta X_{i,t-12} + e_{it} \quad (2)$$

where the parameter $\delta_{k,m,s}$ captures the excess growth of outcome y_{it} in comparison to the baseline year.

The second differencing step compares treated and spillover workers with a control group K whose earnings place them sufficiently above the minimum wage that they are unlikely to

be affected by the reform. This comparison removes aggregate labor-market developments common to all workers.

We estimate

$$\begin{aligned} y_{it} - y_{it-12} &= \sum_{k,m,s} \mathbf{1}_{b(it)=k} \times \mathbf{1}_{M(t)=m} \Big(\gamma_{k,b,m} + \mathbf{1}_{S(t)=c,k=K} \times \gamma_{K,c,m} + \mathbf{1}_{S(t)=c,k<K} \times \delta_{k,c,m} \Big) \\ &\quad + \beta X_{i,t-12} + e_{it} \end{aligned} \tag{3}$$

where the parameter $\delta_{k,m,s}$ captures the excess growth of outcome y_{it} in comparison to the baseline year and to the top wage bin K.

The resulting estimates can be interpreted as a difference-in-differences design in which identification comes from differential changes among workers exposed to the minimum wage increase.

3.2 Event-Study Specification

We repeat our estimation procedure in an event-study framework. This serves two purposes. First, it provides a graphical representation of the evolution of outcomes before and after the reform. Second, it allows the presence of differential pre-trends to be assessed directly. This framework is only possible by leveraging the monthly frequency of the underlying data.

We estimate the following specification on three worker groups denoted by k: treated, spillover, and control:

$$\begin{aligned} y_{it} - y_{it-12} &= \sum_{k,m} \mathbf{1}_{b(it)=k} \times \mathbf{1}_{M(t)=m} \Big(\alpha_{k,m} + \sum_{s} \Big(\gamma_{k,b,m} + \mathbf{1}_{S(t)=c} \times \gamma_{k,c,m} \Big) \Big) \\ &\quad + \beta X_{i,t-12} + e_{it} \end{aligned} \tag{4}$$

where the calendar month and worker group interactions $\alpha_{k,m}$ are included to control for group-specific seasonality. The parameter $\gamma_{k,c,m}$ captures the excess outcome growth in comparison to the same calendar month of the baseline year.

As before, we also difference outcomes with respect to the control group and estimate

$$\begin{aligned}\Delta_{12} y_{it} &= \sum_{k,m} \mathbf{1}_{b(it)=k} \times \mathbf{1}_{M(t)=m} \Big(\alpha_{k,m} + \sum_{s} \Big(\gamma_{k,b,m} + \mathbf{1}_{S(t)=c,k=K} \times \gamma_{K,c,m} + \mathbf{1}_{S(t)=c,k<K} \times \delta_{k,c,m} \Big) \Big) \\ &\quad + \beta X_{i,t-12} + e_{it} \end{aligned} \tag{5}$$

where the parameter $\delta_{k,c,m}$ captures the excess outcome growth over the same calendar month of the baseline year and over the control group.

3.3 Regional Employment Design

While the individual-level approach is well suited for studying wages and worker mobility, it is less compelling for employment outcomes because workers located in different parts of the wage distribution exhibit different employment trajectories even before the reform. To address this concern, we complement the worker-level analysis with a regional design that exploits variation in exposure to the minimum wage increase across local labor markets.

For each regional unit, we construct an exposure measure based on the average wage adjustment required to comply with the new minimum wage. Regions with a larger concentration of low-paid workers are therefore more heavily exposed to the reform.

The exposure measure is constructed as follows. Letting $w_{irt} =$ denote the hourly wage of worker i, in region r, at (pre-policy) time t, we define the gap $gap_{irt} = \max\{\bar{w} - w_{irt}, 0\}$ which measures how much does worker i's wage need to rise (if at all) to satisfy new minimum wage $\bar{w}$. Then, the exposure of region r at time t to the rise in the minimum wage is given by

$$exposure_{rt} = \frac{\sum_i gap_{irt}}{\sum_i w_{irt}} \tag{6}$$

which measures the required percentage increase in the pre-policy average wage in order to satisfy the new minimum wage.

Figure 2 displays the distribution of the exposure measure across NUTS-3 regions for 2017. Exposure varies substantially across local labor markets, ranging from roughly 0.01 to 0.05. This cross-sectional variation provides the basis for the difference-in-differences analysis that follows.

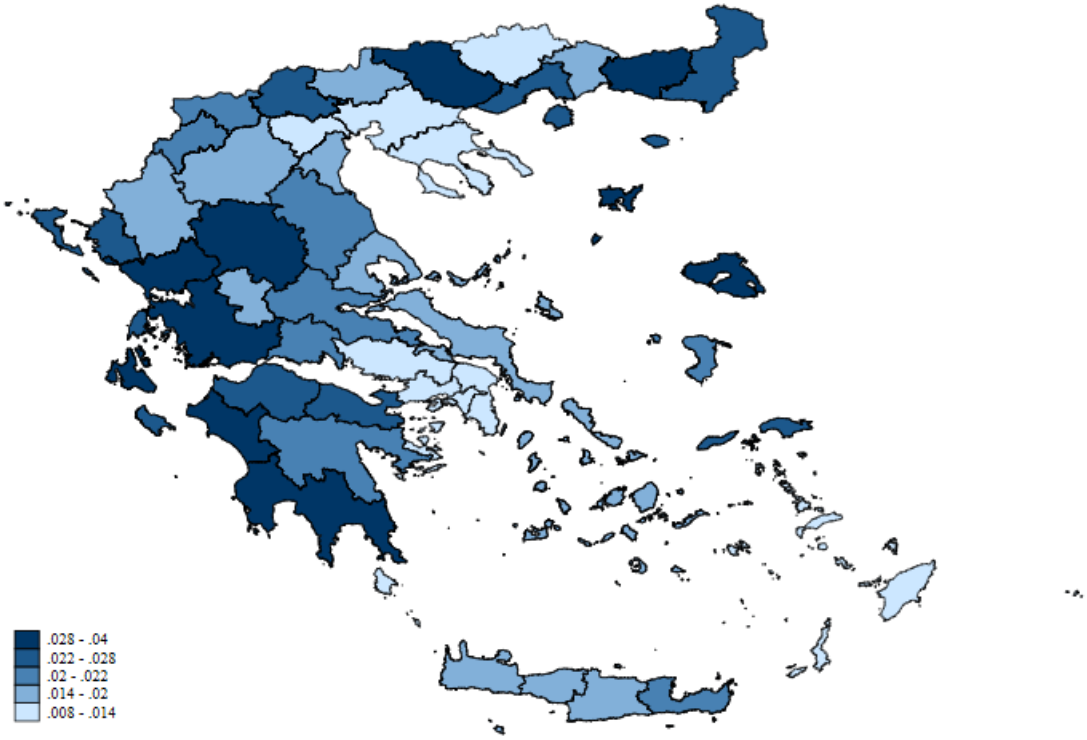


Figure 2: Regional exposure in 2017 to the 2019 minimum wage increase

Notes: The figure plots the pre-reform exposure measure across NUTS-3 regions. Exposure is computed as the 2017 relative wage gap. Higher values indicate a larger pre-reform wage shortfall relative to the regional wage bill and therefore greater exposure to the minimum wage increase.

We then estimate the relationship between regional exposure and outcome growth while controlling for region and time fixed effects. We use 12-month growth in the outcome variable y_{rt} to control for the significant seasonality that is present in the Greek data.

The main specification is

$$y_{rt} - y_{rt-12} = \beta \left(Exposure_r \times Post_t \right) + \alpha_r + \gamma_t + \varepsilon_{rt}, \tag{7}$$

where y_{rt} is the outcome variable in region r and month t. Region fixed effects α_r absorb permanent differences across local labor markets, while month fixed effects γ_t absorb aggregate shocks common to all regions. Standard errors are clustered at the regional level.

We repeat the event-study analysis:

$$y_{rt} - y_{rt-12} = \sum_{\tau \neq Jan2019} \beta_\tau \left(Exposure_r \times 1\{t = \tau\} \right) + \alpha_r + \gamma_t + \varepsilon_{rt} \tag{8}$$

Finally, we control for trends at the region level by estimating a linear trend using the pre-policy event-study coefficients and plotting deviations from this extrapolated trend. Let $\hat{\beta}_\tau$ denote the estimated coefficient on regional exposure in month τ. Using only the pre-reform coefficients, we estimate a linear trend

$$\hat{\beta}_\tau = a + b\tau + u_\tau,$$

and extrapolate this trend into the post-reform period. We then construct the detrended coefficient series

$$\tilde{\beta}_\tau = \hat{\beta}_\tau - (\hat{a} + \hat{b}\tau).$$

The detrended coefficients therefore measure deviations from the trajectory implied by the pre-policy evolution of the event-study coefficients.

This design provides an independent source of variation for evaluating employment effects and avoids relying on comparisons between workers whose employment trajectories may differ systematically for reasons unrelated to the minimum wage increase.

4 Wage Effects

This section examines the effect of the 2019 minimum wage increase on wages. We proceed in three steps. First, we document wage growth across the wage distribution and show that workers near the minimum wage experienced unusually strong wage growth following the rise in the minimum wage. Second, we remove wage-bin-specific growth patterns by comparing post-reform outcomes with earlier years. Third, we remove aggregate wage trends by comparing exposed workers with a higher-wage control group. The resulting estimates provide our preferred measures of the wage effects of the reform.

4.1 Wage Growth Across the Distribution

We begin by examining annual wage growth across the wage distribution.

Figure 3: Annual wage growth by initial hourly wage bin

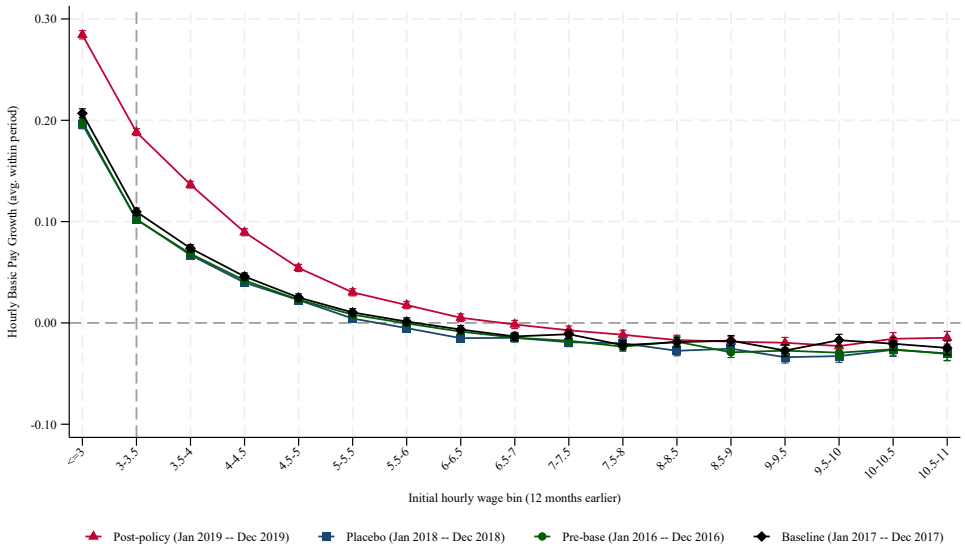


Figure 3 plots annual wage growth for workers grouped according to their hourly wage twelve months earlier, i.e. the estimates of $\gamma_{k,s,m}$ from equation (1) averaged over 12 calendar months of the respective year. Separate lines are shown for the baseline year, placebo year, and post-policy year.

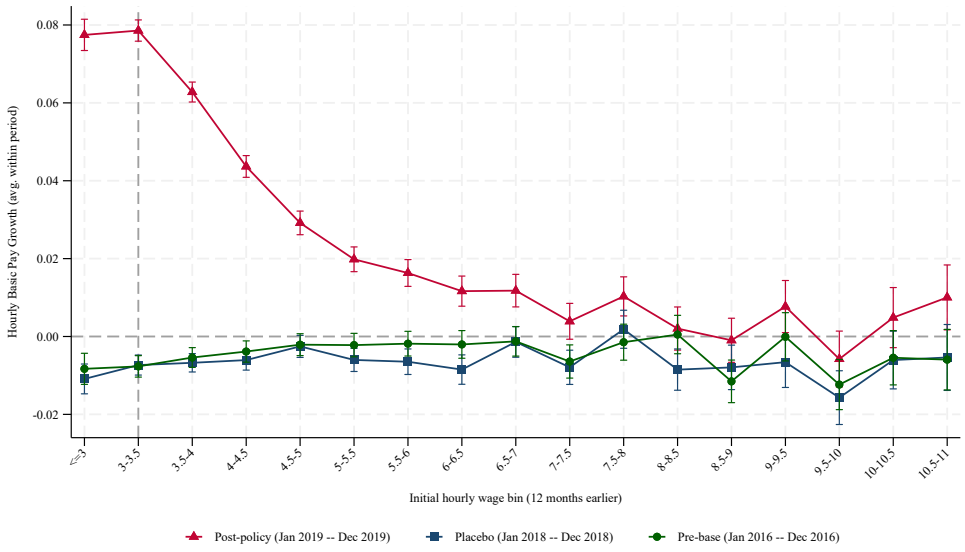
The figure reveals two important patterns. First, low-wage workers consistently experience faster wage growth than higher-paid workers. This pattern is present in every year of the sample and likely reflects a combination of career progression, worker mobility, measurement error, and mean reversion.

Second, wage growth among workers near the minimum wage is substantially higher following the 2019 policy change than in earlier years. The divergence is concentrated among workers in the lower tail of the wage distribution, suggesting a role for the minimum wage increase.

4.2 Removing Wage-Bin-Specific Growth Patterns

Figure 4 shows plots excess wage growth for each wage bin relative to the baseline year, i.e. the estimates of $\delta_{k,m,s}$ from equation (2).

Figure 4: Excess wage growth relative to the baseline year by wage bin



The placebo year exhibits little systematic deviation from zero across the wage distribution. This finding suggests that wage-growth patterns were broadly stable before the reform and provides support for the empirical strategy. By contrast, the post-policy year displays

substantial positive excess wage growth among workers in the lower part of the wage distribution. The largest effects are concentrated among workers whose initial earnings place them near or below the new minimum wage.

The contrast between the placebo and post-policy years indicates that the acceleration of wage growth following 2019 cannot be explained solely by the normal wage dynamics of low-paid workers. Instead, the results point to a distinct shift in wage growth that coincides with the implementation of the reform.

To summarize these patterns more parsimoniously, we classify workers into three groups according to their initial hourly wage. The treated group consists of workers earning less than €3.50 per hour and therefore directly affected by the increase in the minimum wage. The spillover group consists of workers earning between €3.50 and €6.50 per hour, corresponding approximately to workers earning between one and two times the minimum wage. The control group consists of workers earning more than €6.50 per hour and is expected to be largely unaffected by the reform.

Table 2: Excess wage growth

	Treated	Spillover	Control	Treated	Spillover
Post-policy (Feb '19–Jan '20)	0.078	0.037	0.006	0.072	0.031
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Placebo (Feb '18–Jan '19)	-0.009	-0.005	-0.005	-0.004	0.000
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Baseline (Feb '17–Jan '18)	0.140	0.021	-0.024	0.140	0.021
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
R-sq	0.130	0.130	0.130	0.130	0.130
Observations	4,843,898	4,843,898	4,843,898	4,843,898	4,843,898

The first three columns of Table 2 reports estimates based on this three-group classification. Relative to the baseline year, wage growth rises substantially among both treated and spillover workers during the post-policy period. The estimated effects are economically large and precisely estimated.

These estimates provide the first evidence that the reform increased wages not only

among workers directly affected by the new minimum wage but also among workers earning above the statutory threshold.

4.3 Removing Aggregate Wage Trends

Although the preceding estimates account for differences in wage-growth patterns across the wage distribution, they may still reflect broader macroeconomic developments. The Greek economy was recovering throughout the period under study, unemployment was declining, and wages were gradually increasing across much of the labor market. Consequently, some of the excess wage growth documented above may be attributable to aggregate economic conditions rather than the minimum wage increase itself.

To address this concern, we compare changes in wage growth among treated and spillover workers with contemporaneous changes observed among the control group. This additional differencing removes wage movements common to all workers and isolates changes specific to those exposed to the reform.

The identifying assumption is that, absent the policy change, aggregate labor-market developments would have affected treated, spillover, and control workers similarly once differences in their normal wage-growth patterns have been accounted for. Under this assumption, remaining differences in wage growth can be interpreted as causal effects of the minimum wage increase.

Figure 5: Annual wage growth by wage group

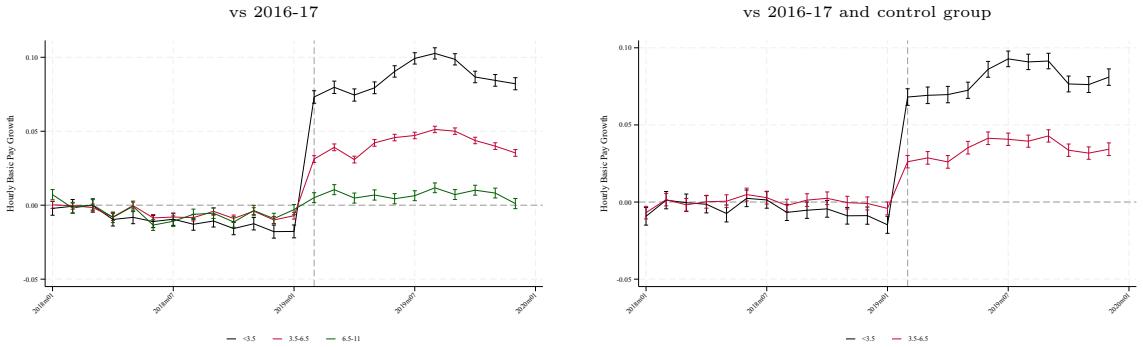


Figure 5 presents monthly event-study estimates for the treated and spillover groups after subtracting growth in the baseline year (left-hand side panel) and growth in the baseline year and the control group (right-hand side panel). Several features of the figure are noteworthy. First, there is little evidence of differential trends between groups prior to the implementation of the reform. Second, wage growth increases sharply for the treated and spillover groups immediately following the February 2019 increase in the minimum wage. Third, the effects remain visible throughout the post-policy period rather than dissipating after a few months. The timing of the estimates closely matches the implementation of the reform and provides additional support for a causal interpretation of the results.

The final two columns of Table 2 report the corresponding average treatment effects. Relative to both the baseline year and the control group, hourly wages increase by approximately 7.2 percent among directly affected workers and by approximately 3.1 percent among workers in the spillover group.

These estimates constitute our preferred measures of the wage effects of the reform. By controlling for both wage-bin-specific growth patterns and aggregate labor-market trends, they isolate the component of wage growth that is most plausibly attributable to the increase in the minimum wage.

4.4 Spillover Effects

The preferred estimates reported in the final two columns of Table 2 indicate that the effects of the reform extend well beyond workers whose wages were directly constrained by the new minimum wage.

The estimated wage gain for the spillover group is approximately 3.1 percent, compared with 7.2 percent for directly affected workers. Thus, workers earning above the minimum wage experienced wage gains that were roughly forty percent as large as those received by workers directly affected by the reform. Given that spillover workers constitute a substantially larger share of employment than directly affected workers, these effects are economi-

cally important.

The magnitude of the spillover effect suggests that firms responded to the reform by adjusting broader wage structures rather than merely raising wages to comply with the new statutory minimum. Several mechanisms may contribute to such adjustments.

One possibility is the preservation of internal wage hierarchies. Firms may seek to maintain wage differentials between occupations, experience groups, or responsibility levels and therefore increase the wages of workers positioned above the minimum wage when the earnings of lower-paid workers rise. A second possibility is that compensation is organized around wage ladders that are indirectly linked to the statutory minimum wage. In this case, an increase in the wage floor can generate adjustments throughout multiple layers of the wage distribution. A third possibility is that the reform improved outside options for low- and middle-wage workers, strengthening bargaining positions and inducing firms to increase wages more broadly.

Distinguishing among these mechanisms lies beyond the scope of the present paper. Nevertheless, the evidence clearly indicates that the incidence of the reform extended substantially beyond workers directly affected by the statutory wage floor. Understanding these spillovers is therefore essential for evaluating the full impact of minimum wage policy.

4.5 Aggregate Wage Effects

We now compute the effect of the rise in the minimum wage on the average wage. To do so, we sum the estimated bin-specific rise in the wage after controlling for baseline year effects and macroeconomic trends, weighing by bin employment in the pre-policy period. The outcome is that the average wage increased by 1.8% due to the rise in the Minimum Wage.

Furthermore, we can compute the share of this rise that comes from the spillover group by setting the wage rise of the treated group to zero and repeating the calculation. We find that more than one-third of the rise in the average wage is due to the rise in wages in the

spillover bins and slightly less than two-thirds is due to the rise in the treated group.

Although directly affected workers experienced larger individual wage gains, workers in the spillover group account for a substantially larger share of employment. Consequently, spillovers contribute an important fraction of the overall increase in labor earnings generated by the reform.

This finding highlights the importance of accounting for wage spillovers when evaluating minimum wage policy. Analyses focusing exclusively on workers below the statutory threshold may substantially understate the aggregate consequences of minimum wage increases.

4.6 Discussion

The wage results yield three main conclusions. First, the 2019 minimum wage increase substantially raised wages among directly affected workers. The estimated effects are large, precisely estimated, and closely aligned with the timing of the reform.

Second, the reform generated economically meaningful spillovers extending to workers earning up to approximately twice the minimum wage. These spillovers remain substantial after controlling for both wage-bin-specific growth patterns and aggregate labor-market trends.

Third, spillovers account for an important share of the aggregate wage effects of the reform. The increase in labor earnings therefore reflects not only higher wages among workers directly affected by the minimum wage but also broader changes in wage-setting throughout the lower part of the wage distribution.

Taken together, the evidence suggests that the reform affected wage formation more broadly than a purely mechanical interpretation of minimum wage policy would imply. Understanding these spillovers is therefore central to understanding both the distributional and aggregate consequences of the 2019 minimum wage increase.

5 Employment Effects

The effect of minimum wages on employment remains one of the central questions in the minimum wage literature. Higher labor costs may induce firms to reduce employment, decrease working time, or adjust the composition of employment relationships, particularly at low-paid jobs. This section examines these possibilities using several complementary measures of employment outcomes.

We begin with worker-level analyses of employment retention, days worked, and transitions from part-time to full-time employment. These outcomes provide a detailed picture of how employment relationships evolve following the reform. We then turn to a regional design that exploits variation in exposure to the minimum wage increase across local labor markets. As discussed below, the regional approach provides a more credible framework for identifying employment effects because worker groups exposed to the reform exhibit different employment trends even before the policy change.

5.1 Worker-Level Employment Outcomes

5.1.1 Employment Retention

We first examine whether the increase in the minimum wage affected the probability that workers remained employed.

Figure 6: Employment retention by initial wage bin

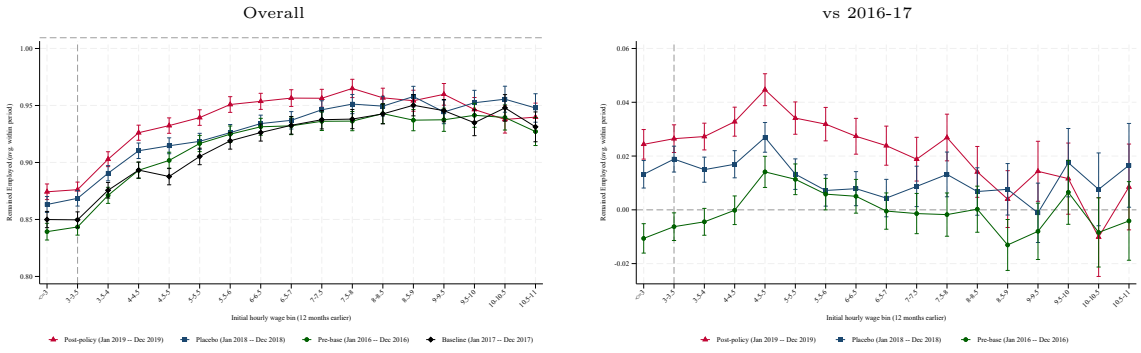


Figure 6 plots year-on-year employment retention rates across the wage distribution (left panel) and in compasion with the baseline year 2016-17 (right panel). As expected, lower-paid workers are less likely to remain employed than higher-paid workers. However, there is little evidence of a discrete deterioration in employment retention following the 2019 reform. To summarize the evidence, we aggregate workers into the treated, spillover, and control groups introduced in Section 4.

Figure 7: Year-on-year probability of remaining employed

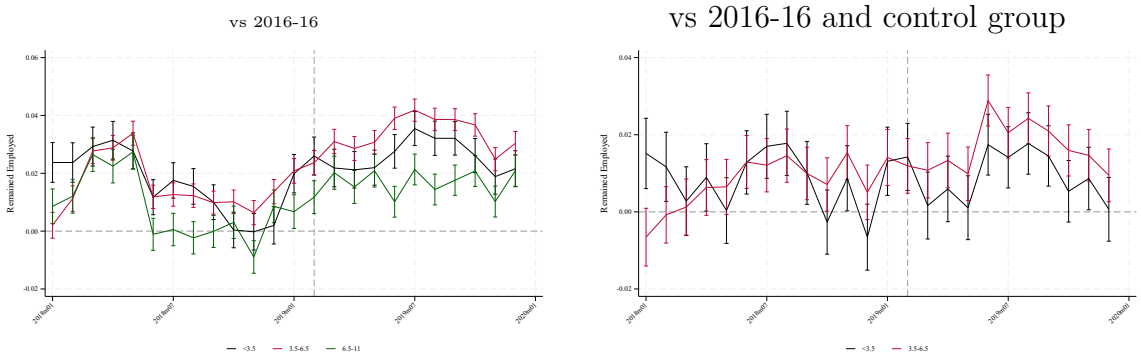


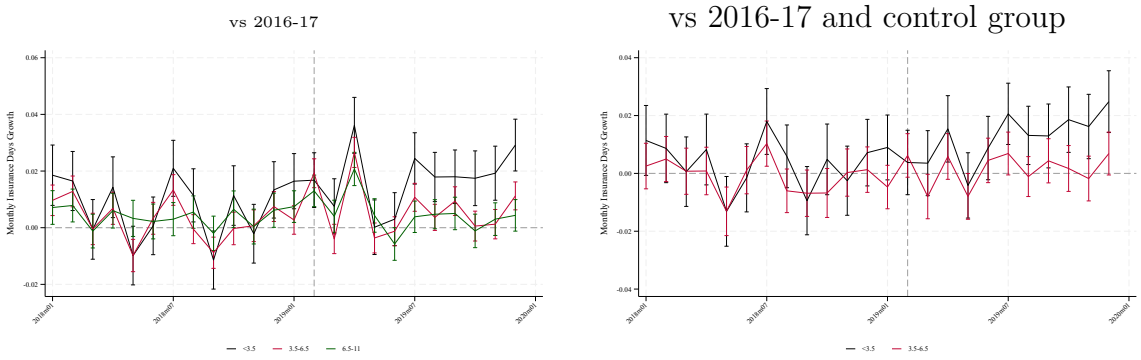
Figure 7 presents event-study estimates relative to the baseline year. The estimates reveal no visible decline in employment retention among either treated or spillover workers following the implementation of the reform.

Table 3: Employment retention effects

	Treated	Spillover	Control	Treated	Spillover
Post-policy (Feb '19–Jan '20)	0.025	0.032	0.016	0.010	0.016
	(0.002)	(0.001)	(0.002)	(0.003)	(0.002)
Placebo (Feb '18–Jan '19)	0.016	0.015	0.008	0.008	0.007
	(0.002)	(0.001)	(0.002)	(0.003)	(0.002)
Pre-base (Jan '17)	-0.008	0.005	-0.003	-0.006	0.008
	(0.002)	(0.001)	(0.002)	(0.003)	(0.002)
Baseline (Feb '17–Jan '18)	0.856	0.901	0.942	0.856	0.901
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
R-sq	0.809	0.809	0.809	0.809	0.809
Observations	6,081,060	6,081,060	6,081,060	6,081,060	6,081,060

Table 3 reports the corresponding average treatment effects. The estimates are mostly

Figure 8: Days worked by initial wage group



small, positive and statistically insignificant, providing no evidence that the rise in the minimum wage reduced the probability of remaining employed.

5.1.2 Days Worked

Employment effects may arise not only through job separations but also through adjustments in the intensity of employment relationships. Firms facing higher labor costs may respond by reducing the number of days worked while maintaining existing employment relationships. Such adjustments are particularly relevant in labor markets characterized by widespread use of part-time employment, temporary contracts, and flexible work arrangements. We therefore examine changes in the number of days worked during the year following the reform.

Figure 8 presents event-study estimates for annual growth in days worked among treated, spillover, and control workers. At first glance, the figure provides no indication of a deterioration in employment outcomes following the reform. If anything, employment growth remains positive throughout the post-policy period. However, the figure also reveals an important limitation of the worker-level approach. Both treated and spillover workers exhibit stronger employment growth than control workers even before the implementation of the minimum wage increase.

These differential trends complicate the interpretation of the estimates. Although subtracting the growth of the control group removes aggregate labor-market developments,

it does not necessarily eliminate differences in underlying employment trajectories across worker groups. Consequently, positive post-reform estimates should not be interpreted as evidence that the minimum wage increased employment.

Table 4: Effects on days worked

	Treated	Spillover	Control	Treated	Spillover
Post-policy (Feb '19–Jan '20)	0.017	0.006	0.005	0.012	0.001
	(0.002)	(0.001)	(0.001)	(0.003)	(0.002)
Placebo (Feb '18–Jan '19)	0.007	0.003	0.004	0.003	-0.001
	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)
Pre-base (Jan '17)	-0.006	0.005	-0.001	-0.005	0.005
	(0.002)	(0.001)	(0.001)	(0.003)	(0.002)
Baseline (Feb '17–Jan '18)	-0.040	-0.043	-0.034	-0.040	-0.043
	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)
R-sq	0.041	0.041	0.041	0.041	0.041
Observations	4,843,898	4,843,898	4,843,898	4,843,898	4,843,898

Table 4 reports the corresponding average treatment effects. The estimates are generally positive and sometimes statistically significant. However, given the presence of differential pre-existing trends, these estimates are difficult to interpret causally.

The most appropriate conclusion is therefore a negative one: the data provide no evidence that the minimum wage increase reduced days worked among affected workers. Nevertheless, a more convincing identification strategy is required to determine whether the reform altered employment growth. We return to this issue below.

5.1.3 Transitions from Part-Time to Full-Time Employment

A further possibility is that firms adjusted to the minimum wage increase by changing the composition of employment relationships rather than reducing employment directly. In particular, firms may have become less willing to convert part-time jobs into full-time positions following the reform. To investigate this possibility, we examine transitions from part-time to full-time employment.

Figure 9: Event-study estimates for transitions from part-time to full-time employment

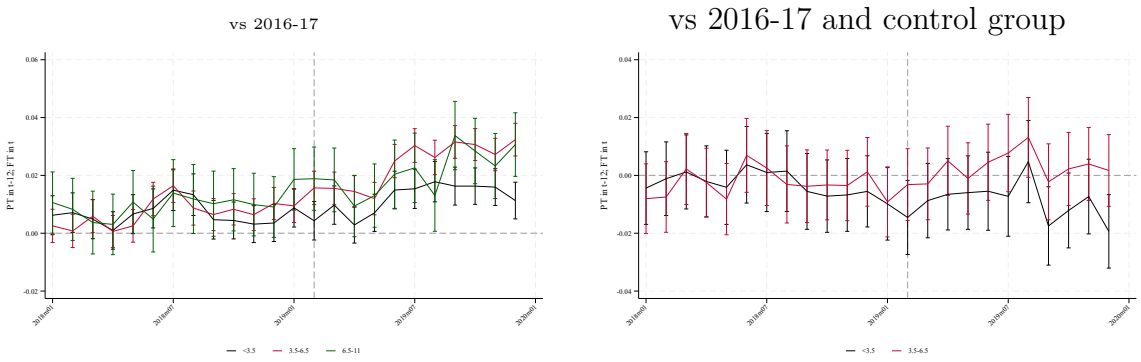


Figure 9 plots event-study estimates for the probability that a worker employed part-time twelve months earlier is employed full-time in the current period. The figure reveals no obvious deterioration following the implementation of the reform. The estimated transition rates remain broadly stable throughout the post-policy period, and there is no indication of a discrete break coinciding with the increase in the minimum wage.

Table 5: Effects on transitions from part-time to full-time employment

	Treated	Spillover	Control	Treated	Spillover
Post-policy (Feb '19–Jan '20)	0.012	0.023	0.021	-0.009	0.002
	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)
Placebo (Feb '18–Jan '19)	0.007	0.007	0.009	-0.002	-0.002
	(0.002)	(0.001)	(0.003)	(0.003)	(0.003)
Baseline (Feb '17–Jan '18)	0.229	0.231	0.225	0.229	0.231
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
R-sq	0.159	0.159	0.159	0.159	0.159
Observations	2,398,952	2,398,952	2,398,952	2,398,952	2,398,952

Table 5 reports the corresponding average treatment effects. The estimates are small and statistically insignificant. We therefore find no evidence that firms responded to the reform by slowing the conversion of part-time jobs into full-time positions.

Taken together, the worker-level analyses of employment retention, days worked, and part-time-to-full-time transitions yield a consistent message. Across a range of employment outcomes, we find no indication that the increase in the minimum wage generated adverse

employment effects. However, the analysis of days worked also highlights an important challenge: workers exposed to the reform exhibit systematically different employment trends from higher-paid workers even before the policy change.

5.2 Limitations of the Worker-Level Approach

The worker-level analyses provide useful evidence on the evolution of employment outcomes following the reform, but they do not fully resolve concerns regarding identification.

The central difficulty is that workers located in different parts of the wage distribution exhibit different employment dynamics even in the absence of policy changes. In particular, the treated and spillover groups experienced stronger employment growth than the control group during the recovery period preceding the reform. These differences likely reflect broader labor-market developments affecting low-wage workers disproportionately as the economy recovered from the deep recession of the previous decade.

As a result, comparing employment outcomes across wage groups may confound the effects of the minimum wage increase with underlying differences in employment trajectories. While the worker-level evidence clearly rejects the hypothesis of large negative employment effects, it is less informative about the magnitude of any potential employment response.

To address this concern, we adopt an alternative identification strategy based on regional variation in exposure to the reform. Rather than comparing workers at different points of the wage distribution, this approach compares local labor markets that differed in the extent to which the minimum wage increase affected their workforce.

5.3 Regional Employment Effects

The regional design exploits variation in the exposure of local labor markets to the minimum wage increase. The key idea is that regions with a larger concentration of low-paid workers should be more strongly affected by the reform than regions in which relatively few workers earned wages near the minimum wage. If the reform reduced employment, employment

growth should weaken more in highly exposed regions than in less exposed regions following the implementation of the policy.

Figure 10: Minimum wage exposure and local employment growth

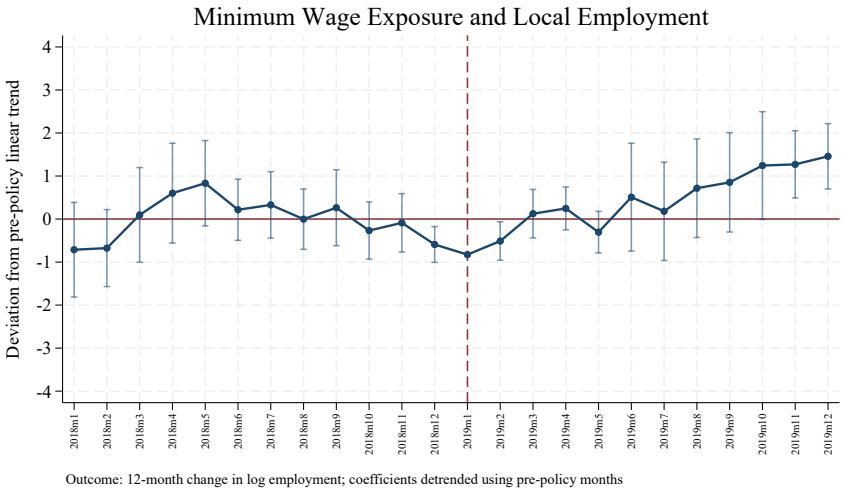


Figure 10 presents event-study estimates relating regional exposure to subsequent employment growth. The estimates provide little evidence that regions more heavily exposed to the reform experienced weaker employment growth following the increase in the minimum wage. Coefficients remain close to zero throughout the post-policy period and display no systematic deterioration after February 2019. Importantly, the event-study estimates also show no evidence of differential trends immediately prior to the reform. This pattern supports the identifying assumptions underlying the regional design and increases confidence in the interpretation of the results.

In sum, the regional evidence suggests that the 2019 minimum wage increase did not reduce employment growth in local labor markets with greater exposure to the reform.

5.4 Discussion

The employment analysis yields two main conclusions.

First, we find no evidence of adverse employment effects across a broad range of worker-level outcomes. Employment retention, days worked, and transitions from part-time to

full-time employment remain broadly unchanged following the reform.

Second, the regional analysis provides no indication that local labor markets more heavily exposed to the reform experienced weaker employment growth. This finding is particularly notable given the size of the increase in the minimum wage and the relatively large share of affected workers.

The absence of detectable employment effects may appear surprising given that unemployment remained close to 20 percent at the time of implementation. Several explanations are possible. One possibility is that labor demand was sufficiently strong during the recovery period to absorb the increase in labor costs. A second possibility is that wages remained below competitive levels following the substantial wage reductions of the crisis years, allowing firms to accommodate higher minimum wages without reducing employment. A third possibility is that employers adjusted through margins other than employment, including profits, prices, or reductions in informal compensation arrangements.

While the present analysis cannot distinguish among these mechanisms, the evidence consistently indicates that the 2019 minimum wage increase raised wages without generating measurable reductions in employment.

6 Worker Reallocation Across Firms

The analysis thus far has shown that the 2019 minimum wage increase generated substantial wage gains without reducing employment. An important remaining question is whether the reform altered the allocation of workers across firms.

Recent theoretical and empirical research has emphasized that minimum wages may affect labor-market outcomes not only through wages and employment but also through worker reallocation. In labor markets characterized by firm heterogeneity and search frictions, higher minimum wages may encourage workers to move away from lower-productivity firms and toward more productive employers. Such reallocation can improve aggregate productivity

and potentially offset some of the costs associated with higher labor costs.

The importance of this mechanism depends on whether minimum wages alter worker mobility and whether workers move toward firms offering better employment opportunities. The matched employer-employee structure of our data allows us to examine these questions directly.

We begin by studying job-to-job mobility. We then examine whether workers become more likely to move toward higher-paying firms or larger firms following the reform.

6.1 Employer Switching

We first examine whether the minimum wage increase affected the probability that workers change employers.

If the reform increased the attractiveness of employment opportunities at more productive firms, one might expect mobility rates among affected workers to rise following the policy change. Conversely, if workers were already constrained by limited outside opportunities, mobility may remain largely unchanged.

Figure 11: Employer-switching rates by initial wage group

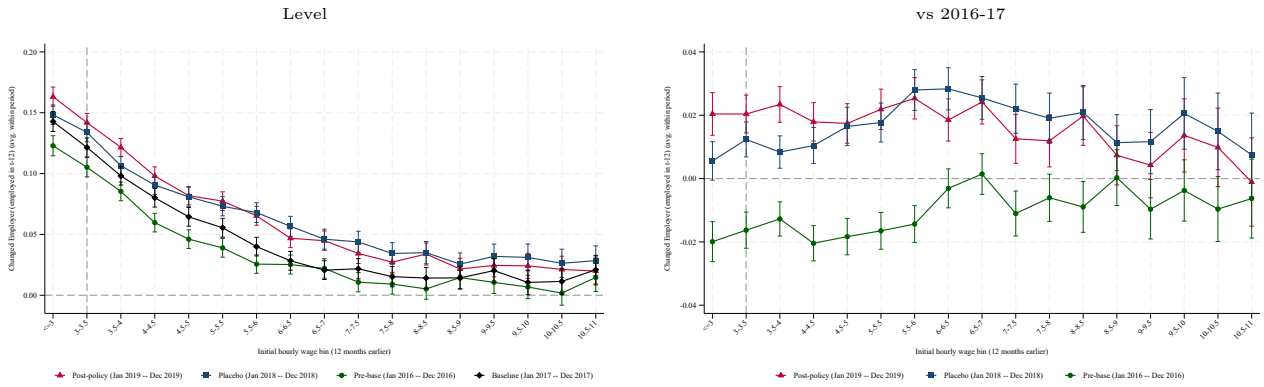


Figure 11 presents employer-switching rates across the wage distribution. Mobility is generally higher among lower-paid workers than among workers higher in the wage distribution, a pattern that is consistent with previous evidence on labor-market dynamics. How-

ever, there is little indication of a discrete increase in mobility following the 2019 reform. Employer-switching rates evolve smoothly through the policy period and do not display unusual movements among workers most exposed to the increase in the minimum wage.

To examine these patterns more formally, we estimate treatment effects using the same framework developed in Section 4. Figure 12 presents event-study estimates for treated and spillover workers relative to the control group.

The estimates reveal little evidence that employer-to-employer mobility increased following the reform. Coefficients remain close to zero throughout the post-policy period, and there is no visible break coinciding with the implementation of the minimum wage increase.

Table 6: Effects on employer switching

	Treated	Spillover	Control	Treated	Spillover
Post-policy (Feb '19–Jan '20)	0.020	0.022	0.014	0.006	0.008
	(0.002)	(0.001)	(0.002)	(0.003)	(0.002)
Placebo (Feb '18–Jan '19)	0.009	0.017	0.019	-0.010	-0.003
	(0.002)	(0.001)	(0.002)	(0.003)	(0.002)
Baseline (Feb '17–Jan '18)	0.123	0.061	0.014	0.123	0.061
	(0.004)	(0.003)	(0.003)	(0.004)	(0.003)
R-sq	0.265	0.265	0.265	0.265	0.265
Observations	4,843,898	4,843,898	4,843,898	4,843,898	4,843,898

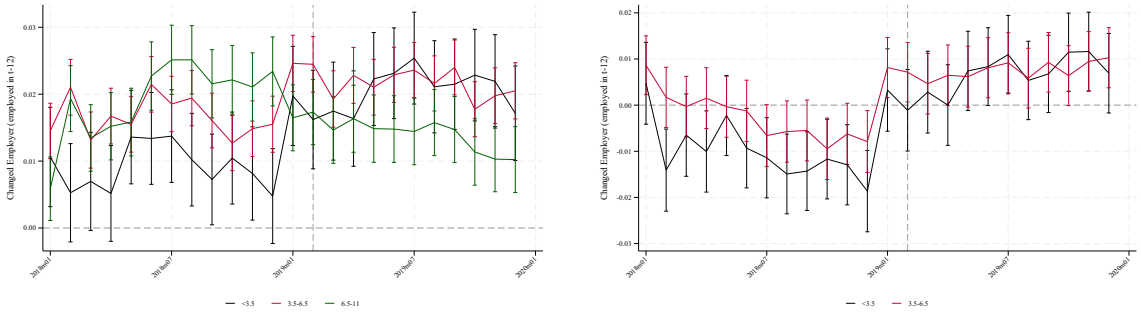
Table 6 reports the corresponding average treatment effects. The estimated coefficients are small and statistically insignificant, indicating that the reform did not increase worker mobility across firms.

6.2 Movement Toward Higher-Paying Firms

A lack of increased mobility does not necessarily imply an absence of reallocation. Even if overall mobility rates remain unchanged, workers may become more likely to move toward firms offering better employment opportunities.

We therefore examine whether workers exposed to the reform became more likely to move

Figure 12: Event-study estimates for employer switching



to firms with higher average wages.

For each worker who changes employer, we compare the average wage paid by the destination firm with the average wage paid by the origin firm. We then examine whether the probability of moving to a higher-paying employer changes following the reform.

Figure 13: Transitions to higher-paying firms

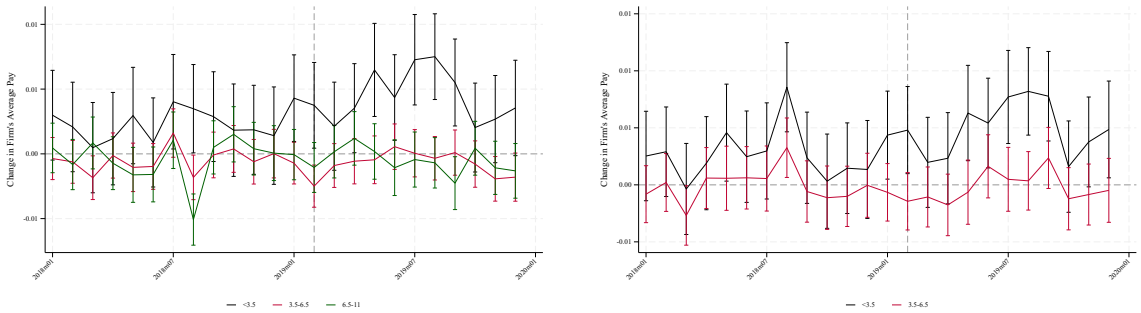


Figure 13 presents event-study estimates for transitions to higher-paying firms.

The figure provides little evidence that the reform altered the direction of worker flows across firms. The probability that workers move to higher-paying employers remains broadly stable throughout the sample period and does not increase following the implementation of the minimum wage increase.

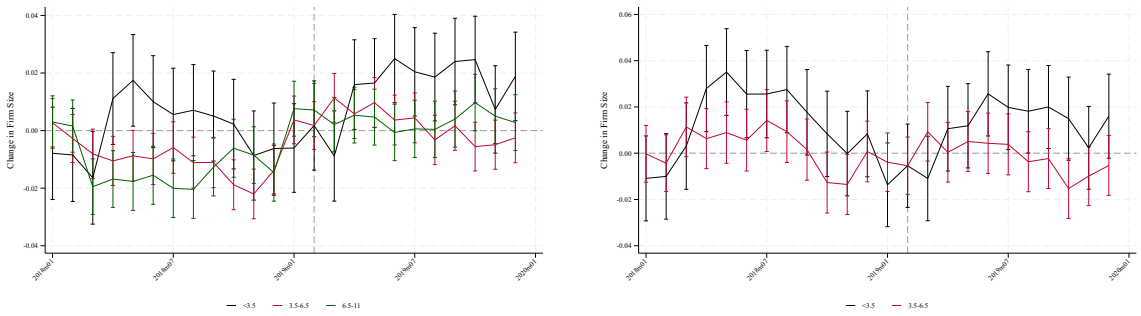
Table 7 confirms this conclusion. The estimated treatment effects are economically small and statistically indistinguishable from zero.

These results suggest that the wage gains documented in Section 4 did not arise because

Table 7: Effects on transitions to higher-paying firms

	Treated	Spillover	Control	Treated	Spillover
Post-policy (Feb '19–Jan '20)	0.004	-0.001	-0.000	0.005	-0.000
	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)
Placebo (Feb '18–Jan '19)	0.002	-0.000	-0.000	0.003	-0.000
	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)
Baseline (Feb '17–Jan '18)	0.038	0.000	-0.009	0.038	0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
R-sq	0.017	0.017	0.017	0.017	0.017
Observations	4,657,448	4,657,448	4,657,448	4,657,448	4,657,448

Figure 14: Transitions to larger firms



workers reallocated toward firms paying systematically higher wages.

6.3 Movement Toward Larger Firms

We next examine whether the reform affected transitions toward larger employers. Firm size is often correlated with productivity, pay premia, and employment opportunities. If higher minimum wages encourage workers to move toward more productive firms, one might expect mobility toward larger employers to increase following the reform.

Using the same framework as above, we examine whether workers become more likely to move to firms with larger employment levels.

Figure 14 presents event-study estimates for transitions toward larger firms. As with the previous outcomes, the estimates reveal little evidence of a response to the reform. The

probability of moving to a larger employer remains broadly stable before and after the policy change.

Table 8: Effects on transitions to larger firms

	Treated	Spillover	Control	Treated	Spillover
Post-policy (Feb '19–Jan '20)	0.013	0.002	0.004	0.009	-0.002
	(0.005)	(0.003)	(0.003)	(0.006)	(0.004)
Placebo (Feb '18–Jan '19)	0.001	-0.010	-0.012	0.013	0.002
	(0.004)	(0.003)	(0.003)	(0.005)	(0.004)
Baseline (Feb '17–Jan '18)	-0.232	-0.260	-0.236	-0.232	-0.260
	(0.007)	(0.006)	(0.006)	(0.007)	(0.006)
R-sq	0.020	0.020	0.020	0.020	0.020
Observations	4,657,448	4,657,448	4,657,448	4,657,448	4,657,448

Table 8 reports the corresponding treatment effects. The estimates are small and statistically insignificant.

Taken together, the evidence indicates that the reform did not alter the direction of worker mobility across firms, either in terms of wages or firm size.

6.4 Discussion

The reallocation results contrast with the strong wage effects documented in Section 4. While the minimum wage increase substantially raised earnings among affected workers, we find little evidence that it altered worker mobility patterns or the allocation of labor across firms.

Three findings stand out. First, the reform did not increase employer-to-employer mobility among exposed workers. Job-to-job transition rates evolved similarly before and after the reform and did not display unusual movements following the increase in the minimum wage.

Second, workers did not become more likely to move toward higher-paying firms. The wage gains documented earlier therefore appear to reflect adjustments within existing employment relationships rather than improved matching between workers and employers.

Third, workers did not become more likely to move toward larger firms. We therefore find no evidence that the reform encouraged labor reallocation toward firms that are potentially more productive or offer better employment opportunities.

These findings suggest that worker reallocation played little role in transmitting the effects of the 2019 minimum wage increase. The reform raised wages, but it did not appear to alter the allocation of labor across firms.

One possible explanation is that labor-market slack remained substantial throughout the period. Even though unemployment was declining, workers may have faced limited outside opportunities and therefore remained attached to existing employers. A second possibility is that the time horizon considered in the analysis is too short for reallocation effects to emerge fully. Productivity-enhancing reallocation may occur gradually through firm entry, firm exit, and long-run worker mobility rather than through immediate job-to-job transitions. Finally, firms employing low-wage workers may not have differed sufficiently in productivity for the reform to induce substantial reallocation.

Regardless of the underlying mechanism, the evidence suggests that the principal effect of the 2019 minimum wage increase operated through higher wages within existing employment relationships rather than through changes in labor-market allocation.

Taken together, the wage, employment, and reallocation results paint a consistent picture. The reform generated substantial wage gains, including large spillover effects, without reducing employment and without inducing measurable worker reallocation across firms.

7 Conclusion

This paper studies the effects of the 2019 increase in the Greek minimum wage on wages, employment, and worker reallocation across firms. The reform raised the statutory minimum wage by 11 percent, from €586 to €650 per month, at a time when unemployment remained close to 20 percent and the labor market was still recovering from the deep recession of the

previous decade.

We use matched employer-employee administrative records covering nearly the universe of private-sector employment relationships. The richness of the data allows us to examine not only wage and employment effects but also worker mobility and the allocation of labor across firms.

Three main findings emerge. First, the reform generated substantial wage gains among low-paid workers. Workers directly affected by the increase in the minimum wage experienced wage gains of approximately 7.2 percent. More importantly, the reform also generated sizable spillover effects among workers earning above the statutory minimum wage. Workers earning between one and two times the minimum wage experienced wage gains of approximately 3.1 percent. These spillovers account for one-third of the aggregate increase in labor earnings generated by the reform.

Second, we find no evidence that the reform reduced employment. Employment retention, days worked, and transitions from part-time to full-time employment remained broadly unchanged following the policy change. Moreover, local labor markets with greater exposure to the reform did not experience weaker employment growth than less exposed regions. These findings are notable given both the magnitude of the increase in the minimum wage and the high unemployment rate prevailing at the time of implementation.

Third, we find no evidence that the reform induced productivity-enhancing worker reallocation across firms. Workers did not become more likely to change employers, move to higher-paying firms, or move to larger firms following the increase in the minimum wage. The wage gains generated by the reform therefore appear to have arisen primarily through adjustments within existing employment relationships rather than through changes in the allocation of labor across firms.

Taken together, these findings suggest that the principal effect of the 2019 minimum wage increase was to raise wages throughout the lower portion of the wage distribution. The reform substantially increased labor earnings while leaving employment and worker

allocation largely unchanged.

The results contribute to several strands of the literature. First, they add to a growing body of evidence showing that minimum wages frequently generate spillover effects extending beyond workers whose earnings are directly constrained by the statutory wage floor. In the Greek case, these spillovers are economically important and account for a substantial share of the aggregate wage impact of the reform.

Second, the findings contribute to the literature on employment effects. The Greek reform provides a particularly demanding test because it was implemented in a labor market characterized by persistently high unemployment and substantial labor-market slack. Despite these conditions, we find no evidence of adverse employment effects.

Third, the paper contributes to the emerging literature examining the role of minimum wages in shaping labor-market allocation. Recent research has emphasized the possibility that higher minimum wages may improve productivity by encouraging labor reallocation toward more productive firms. Our findings provide little support for this mechanism in the short run. While the reform raised wages substantially, it did not alter worker mobility patterns or induce measurable reallocation across firms.

These findings have several policy implications. Evaluations of minimum wage policy should account not only for direct effects on workers earning at or below the minimum wage but also for spillovers throughout the wage distribution. In settings where spillovers are large, focusing exclusively on directly affected workers may substantially understate the aggregate consequences of minimum wage increases.

At the same time, the absence of employment effects should not be interpreted as evidence that minimum wage increases are costless. The present analysis does not examine other adjustment margins such as profits, prices, investment, firm entry and exit, or informal compensation arrangements. Understanding how firms absorbed the higher labor costs associated with the reform remains an important topic for future research.

More broadly, the results suggest that minimum wages can have substantial effects on

wage formation even in labor markets characterized by decentralized wage-setting institutions and relatively weak collective bargaining coverage. The 2019 reform influenced earnings well beyond the statutory minimum wage itself, highlighting the importance of considering broader wage-setting mechanisms when evaluating minimum wage policy.

Finally, the absence of worker reallocation effects raises important questions for future work. If minimum wages do not substantially alter worker mobility or labor allocation, then the productivity consequences of minimum wage policy may be more limited than some recent theories suggest, at least over short horizons. Future research using longer post-reform horizons and richer measures of firm performance may provide additional insight into these mechanisms.

Overall, the evidence from Greece indicates that the 2019 minimum wage increase substantially raised wages, generated sizable spillover effects, and did so without measurable reductions in employment. The reform therefore offers an important example of how minimum wage policy can influence wage formation throughout the lower part of the wage distribution while leaving broader labor-market adjustment relatively limited.

References

Adamopoulou, E., M. Galenianos, N. Giannakopoulos, P. Kammas, and I. Laliotis (2026): "Earnings Dynamics Through Boom, Crisis, and Recovery: Evidence from Greece," ZEW Discussion Paper 26-024, ZEW – Leibniz Centre for European Economic Research, Mannheim.

Autor, D. H., A. Manning, and C. L. Smith (2016): "The Contribution of the Minimum Wage to U.S. Wage Inequality over Three Decades: A Reassessment," American Economic Journal: Applied Economics, 8(1), 58–99.

Betcherman, G., N. Giannakopoulos, I. Laliotis, I. Pantelaiou, M. Testaverde, and G. Tzimas (2023): "The Short-Term Impact of the 2020 Pandemic Lockdown on Employment in Greece," Empirical Economics, 65(3), 1273–1307.

Chodorow-Reich, G., L. Karabarbounis, and R. Kekre (2023): "The Macroeconomics of the Greek Depression," American Economic Review, 113(9), 2411–2457.

Cholezas, I., and N. C. Kanellopoulos (2015): "Labour Market Reforms in Greece and the Wage Curve," Economics Letters, 136, 19–21.

Daouli, J., M. Demoussis, N. Giannakopoulos, and I. Laliotis (2016): "The 2011 Industrial Relations Reform and Nominal Wage Adjustments in Greece," Journal of Labor Research, 37(4), 460–483.

——— (2017): "The Wage Curve Before and During the Greek Economic Crisis," Empirical Economics, 52(1), 59–77.

Dube, A., and A. Lindner (2024): "Minimum Wages in the 21st Century," in Handbook of Labor Economics, ed. by C. Dustmann, and T. Lemieux, vol. 5, pp. 261–383. Elsevier, Amsterdam.

Dustmann, C., A. Lindner, U. Schönberg, M. Umkehrer, and P. vom Berge (2022): "Reallocation Effects of the Minimum Wage," The Quarterly Journal of Economics, 137(1), 267–328.

Gatopoulos, G., A. Louka, I. Polycarpou, and N. Vettas (2026): "Policy lessons from labor market reforms during crisis: Success and failure of the Greek bailout programs," Journal of Policy Modeling.

Georgiadis, A., I. Kaplanis, and V. Monastiriotis (2018): "The Impact of Minimum Wages on Wages and Employment: Evidence from Greece," Discussion Paper 131, Hellenic Observatory, London School of Economics.

——— (2020): "Minimum Wages and Firm Employment: Evidence from a Minimum Wage Reduction in Greece," Economics Letters, 193, 109255.

Giannakopoulos, N., and I. Laliotis (2020): "Industrial Relations Reform, Firm-Level Bargaining and Nominal Wage Floors," The Manchester School, 88(1), 37–59.

Gourinchas, P.-O., T. Philippon, and D. Vayanos (2017): "The Analytics of the Greek Crisis," NBER Macroeconomics Annual, 31(1), 1–81.

Laliotis, I. (2019): "Did the Economic Adjustment Programmes Deliver Wage Flexibility in Greece?," Discussion Paper 141, Hellenic Observatory, London School of Economics.

Nicolitsas, D. (2025): "The Minimum Wage in Greece: A Review of Institutional Features, Developments and Effects Between 1975 and 2023," Journal of Economics and Statistics, 245(1–2), 79–111.

Roupakias, S. (2025): "Employment and Distributional Effects of Greece's National Minimum Wage," LABOUR, 39(1), 43–60.

Stewart, M. B. (2012): "Wage Inequality, Minimum Wage Effects, and Spillovers," Oxford Economic Papers, 64(4), 616–634.