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Minimum wage effects: adjustment through labour market dynamics and alternative work arrangements

A report for the Low Pay Commission

Pinjas Albagli, Rui Costa and Stephen Machin

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Abstract
This report investigates the UK's 2016 National Living Wage (NLW) introduction, focusing on firm adjustment through labour market transitions and job contract amendments. The NLW boosted worker wages, and whilst there was no change in total employment, firms adjusted through changes in employment composition and by altering employment contracts. The NLW spurred increased transitions from temporary to permanent roles, reduced underemployment, and shifted workers away from non-standard arrangements like part-time roles. However, a modest rise in zero-hour contracts among exposed workers reflects the nuanced nature of these adjustments. These contract changes, and shifts in composition and transition dynamics, provide insights into ways in which employers adjustment to cost shocks induced by minimum wage increases, and how at the same time they maintain employment stability and reshape within-firm job and career structures.

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Pinjas Albagli London School of Economics and Centre for Economic Performance at London School of Economics. Rui Costa, London School of Economics and Centre for Economic Performance at London School of Economics. Stephen Machin London School of Economics and Centre for Economic Performance at London School of Economics.

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P. Albagli, R. Costa and S. Machin, submitted 2024.

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Executive Summary

Empirical study of minimum wages has evolved in recent years to consider margins of adjustment that go beyond the labour demand effects that the majority of research traditionally studied. This report looks at how labour market dynamics and alternative work arrangements feature in these different margins of adjustment that can impact workers and firms. The study primarily focuses on the introduction of the National Living Wage in April 2016 in the UK and exploits variation in pre-policy exposure to minimum wages across different regions and ages, in a similar vein to Manning (2016) and Dube (2019), as a means to estimate the causal effects.

The study begins by confirming the significant wage effects from the NLW that feature in earlier research. Wage boosts from the minimum wage occur, especially for workers in low-paid industries. Whilst there is no overall negative employment effect from the NLW introduction, there are some negative and positive estimated effects on the net stock change of unemployed and inactive individuals.

One key part of the report delves into the effects on labour market flows. The finding of a decrease in the probability of being unemployed is primarily driven by increased job retention, marked by substantially lower flows to unemployment, predominantly fuelled by a decrease in involuntary separations (i.e. layoffs). This decrease in layoff probabilities is notably pronounced among those facing job loss after the termination of a temporary contract. The reduction in layoff probabilities aligns with the findings of Brochu and Green (2014) and Dube et al (2016) in the US and Canada, but there is no evidence of significant reductions in voluntary separations or job-to-job transitions. Additionally, there is no evidence of changes in on-the-job search.

Furthermore, it turns out that a substantial part of the employment retention effect is observed among those on full-time contracts. At the same time, in line with a strong income effect occurring among those remaining in part-time employment, positive effects are estimated in both the probability of reporting voluntary part-time and the probability of transitioning from voluntary to involuntary part-time without an increase in hours worked. Consistent with these findings of altered transitions for full-time and part-time workers, the chances of a worker reporting to be underemployed fell as a result of the policy sustained by reduced flows from non-underemployment to underemployment and non-employment. Additionally, modest effects of workers moving from variable to fixed-hour contracts are also seen.

The other major part of the report focuses on other job attributes and contract features to provide an understanding of adjustment margins related to alternative work arrangements. Whilst there is no evidence of minimum wage policy pushing workers into self-employment, the incidence of zero-hour contracts increased among those most exposed to the minimum wage, a finding consistent with the earlier work of Datta et al. (2019). Overall, the combined effects of increased flows from variable to fixed hours, temporary to permanent positions, and enhanced job retention of full-time workers result in an overall reduction in what the OECD classifies as non-standard work arrangements.

It is important to note that the potentially favourable effects for hours sufficiency and job security primarily benefited low-tenure incumbent workers. This raises questions for future research about whether these can generate net benefits for firms' productivity and profitability, or for workers' career progression opportunities.

1. Introduction

After several decades, minimum wage policy continues to be one of the most popular and contentious debates within the political and academic spectrums. While extensive research has focused on its impact on wage growth and employment levels (Manning, 2021), less attention has been given to its broader economic effects at the individual- and firm-level. In particular, the impacts of minimum wage policy on non-wage aspects of employment, such as predictable hour schedules and contract types, has been relatively neglected in both theoretical and empirical studies until recently (Clemens, 2021). Within a context of scarce evidence of employment stocks responses and consistent positive wage growth effects resulting from minimum wages, job characteristics which directly affect sufficiency and stability of working hours and job security via the use of alternative work arrangements (AWA) are of particular importance as potential labour-saving margins of adjustment. Furthermore, in an era marked by the rise of alternative work arrangements across advanced economies (Katz and Krueger, 2018; Boeri et al., 2020; Mas and Pallais, 2020), exacerbated by the seismic shifts brought about by the COVID-19 pandemic (Barrero, Bloom, and Davis, 2023), understanding the intricate dynamics between minimum wage policies and contractual arrangements gains renewed relevance.

This report aims to fill this gap by examining the impact of minimum wage policies on employment dynamics, hours conditions, and contract types. Leveraging on the unexpected introduction of the National Living Wage (NLW) in the United Kingdom in 2016, we move beyond traditional analyses of effects on employment levels to delve into the underlying labour market transitions, job search behaviour, job hours conditions and contractual arrangements. Similar to the analysis of Manning (2016) and Dube (2019), we employ a differences-in-differences model to identify the effects of the minimum wage change on cross-sectional and longitudinal outcomes, considering pre-policy exposure (bite and coverage) across region-age groups as a measure of treatment intensity.

In the first part of our analysis, we focus on assessing the effects of the NLW on employment dynamics and search behaviour. While previous studies in the US (Dube et al., 2016) and Canada (Brochu and Green, 2013) have explored the impact of minimum wage policy on hiring, firing, and quitting transitions, empirical work in the UK has predominantly

centred on the study of job retention (Stewart, 2004; Dickens, Riley, and Wilkinson, 2015; Aitken, Dolton, and Riley, 2019). Our study extends this research by examining a broader spectrum of employment dynamics, including hires, job retentions, voluntary and involuntary separations and job-to-job moves. Additionally, we investigate how workers responded to the minimum wage increase through both on-the-job and off-the-job search behaviour, another dimension of individual responses to minimum wages which has been overlooked by previous literature.

Our findings on labour market transitions are supportive of significant reductions in moves from employment to non-employment driven by a lower probability of workers experiencing involuntary separation while the likelihood of voluntary separation remains broadly unchanged. In contrast to the evidence for the US and Canada, we do not find significant effects in favour of a reduction in hires from unemployment or other employers (job-to-job moves). Additionally, we find limited evidence of responses in both on-the-job and off-the-job search as a result of NLW policy implementation, suggesting that, on average, employed and unemployed individuals most exposed to the minimum wage increases have not felt incentivized to change their search for new jobs, as theoretical frameworks such as job ladder models might have predicted.

The subsequent segment of this report delves into a less explored facet of minimum wage research, focusing on how various dimensions of hours conditions and contract types might respond to policies like the NLW. Early investigations by Dickens et al. (2015) and Aitken et al. (2019) highlighted a decline in job retention among female part-time workers subsequent to minimum wage increases in the UK which could affect the composition of full-time vs part-time work in the labour market. Similarly, Cengiz, Dube, Lindner, and Zentler-Munro (2022) observed reductions in the proportion of part-time workers in the US following such increments, while Dustmann et al. (2022) documented a shift favouring full-time employment over casual work in Germany after the introduction of a national minimum wage.

Nevertheless, these studies have not thoroughly scrutinized the underlying transitions between full-time and part-time employment, nor have they examined the extent of involuntary part-time work in response to changes in the minimum wage. Our findings echo a composition shift favouring full-time employment among those most impacted by the minimum wage rise. However, among part-time workers, we observed a transition toward voluntary part-time positions without a substantial alteration in hours worked, suggesting a significant and

dominant income effect for these individuals. Crucially, we discovered that the shift toward full-time employment was not primarily driven by transitions from part-time to full-time work, but rather by heightened retention and decreased layoffs among full-time employees.

Further analysis unveils a decline in the probability of underemployment owing to the significant reductions in separations among workers not facing underemployment. However, flows of workers experiencing underemployment exhibited little responsiveness to the NLW. Additionally, we observed modest shifts from variable to fixed-hour schedules and a noteworthy reduction in movements toward non-employment among individuals with fixed-hour jobs.

Regarding adjustments through contracts, particularly in terms of employment status (employee vs. self-employment), prior research by Cenzig et al. (2022) in the US found no evidence supporting an effect of minimum wage hikes on the share of self-employment in the labour market. Our analysis supports this finding, indicating no significant impact on the probability of workers being self-employed following the implementation of the new UK minimum wage policy. However, there is some evidence of increased transitions from solo self-employment to non-employment due to involuntary separations and personal reasons.

Concerning responses through the utilization of alternative contracts, such as zero-hour contracts, which can be viewed as labour cost-saving measures for firms, Datta et al. (2019) found strong evidence of an increased use of zero-hour contracts by firms following the NLW introduction, but no effects on the utilization of temporary jobs and agency work employment in the care sector. Expanding on this analysis using worker-level data across all sectors, we find that the NLW has led to an increased likelihood of workers being on zero-hour contracts, along with a modest reduction in the probability of being on temporary contracts. Additionally, examining transitions between temporary and permanent contracts, we find an increased likelihood of moving from a temporary to a permanent position, coupled with a decrease in transitions to non-employment for workers in temporary jobs. These findings resonate with recent work by Bossler et al (2024) showing a decrease in minijobs due to transitions to regular employment induced by the introduction of the national minimum wage in Germany.

Finally, we demonstrate that the combined effects of increased job retention biased towards full-time workers, null effects on the share of solo self-employed individuals, and a moderate shift from temporary to permanent work arrangements have resulted in a slight

decrease in non-standard work, as defined by the OECD (part-timers, temporary workers, and self-employed workers).

The rest of the report is structured as follows. In Section 2, we describe the data used in the analysis and detail the institutional setting of the NLW policy. The presentation and discussion of the model identification and empirical specifications is given in Section 3. In Section 4, we report and discuss our empirical findings. We present our conclusions in Section 5.

2. Data and Institutional Setting

2.1 - Data

Our main data source is the Labour Force Survey (LFS). It is the largest household study in the UK, providing the official measures of employment and unemployment. From 1992, quarterly data were made available with a quarterly sample size approximately equivalent to the previous annual data, 100,000 respondents. The LFS offers a wealth of data on work hours, hours and working conditions and contract types, which is essential for studying the impacts of the NLW on hours contracted (including their sufficiency and variability), employment status (employee, solo and non-solo self-employed) and other alternative work arrangements margins. Importantly, the fact that the LFS collects a quarterly sample with monthly interview indicators throughout the year enables us to clearly identify the timings in which the NLW has taken effect throughout the period of analysis. Furthermore, the LFS contains detailed occupation and industry identifiers, enabling the use of the classification of low-paying industries produced by the Low Pay Commission in their successive annual reports to study a sub-population of workers more exposed to the effect of minimum wage policy changes.

While the LFS was originally designed to produce cross-sectional data, it was recognised that its rotating panel design provides a rich source of longitudinal data by linking together the records on each individual across quarters. The longitudinal nature of the LFS relies on each respondent being interviewed at five consecutive quarters, and, consequently, two-quarter and five-quarter longitudinal datasets have been produced using weighting methods that adjust for non-response. While the two-quarter datasets link observations from two consecutive waves, the five-quarter datasets link five successive waves. Both include a subset of the most used variables from the quarterly LFS, covering the main areas of the survey

and the outcomes of interest of this study. The longitudinal design enables us to study effects on flows of the minimum wage policy and therefore offer novel and important insights into these mechanisms of adjustment.

Our analysis focuses on LFS respondents aged 16 to 65 over a time window spanning the eight quarters before and after the introduction of the NLW in April 2016. We use the cross-sectional quarterly LFS to construct a set of indicator variables capturing the incidence of different hour contract types and AWA at the individual level. We complement our stocks analysis with the corresponding flows, leveraging the longitudinal LFS to construct flow variables capturing the transitions into and out of the same set of hours schedules, contract types and AWA. We also measure more standard margins of adjustment such as wages, hours worked, employment status, job search, and turnover. Details are provided in Appendix A.

As detailed in the following section, our analysis builds on a grouping methodology where exposure units are based on a combination of region of work and (predefined) age band of the worker. We complement the individual LFS data with grouped data from the Annual Survey of Hours and Earnings (ASHE) to construct more accurate measures of exposure to the NLW at this level of aggregation. With its sample drawn from National Insurance records for working individuals, the ASHE is the most comprehensive source of information on earnings in the UK, covering nearly 1% of the working population and providing the official source for estimates of the number of jobs paid below the National Minimum Wage. While limited in terms of personal characteristics compared to the LFS, the ASHE provides more accurate wage data both thanks to its larger sample size and the fact that responses are provided by employers rather than employees. The increased accuracy of wages and hours in ASHE becomes particularly relevant in reducing the measurement error present in the data available in LFS for the same variables.

2.2 - Institutional Setting: National Living Wage

In July 2015, during an emergency budget, the newly elected Conservative Government in the UK announced a new 'National Living Wage' (NLW) to be implemented for workers aged 25 or above starting from April 1, 2016. Set at £7.20 per hour, the resulting monthly wage increase of approximately 7.5% was significantly larger than previous and subsequent

upratings, both in nominal and real terms.[1] Moreover, the Government also announced plans to adjust the rate to reach 60% of median earnings by 2020, which were ambitious and unexpected, particularly from a political party historically unsupportive of minimum wage policies. Figure 1, which plots the real terms increases in the minimum wage since its introduction in 1999, shows clearly how the magnitude of the introduction of NLW meant an implied increase which stands out in terms of magnitude, 7.2% in real terms compared to a mean of 3.9% for the average uprating.[2]

The NLW quickly became a central component of the UK's minimum wage framework. After achieving the 60% of median earnings target in 2020, a new goal of reaching 2/3 of median earnings by 2024 was established. Despite initially targeting workers aged 25 and above, the NLW rate became the prevailing standard even for younger workers, who were subject to lower legally binding rates (Low Pay Commission, 2023; Giupponi and Machin, 2023). Subsequently, the minimum entitlement age for the NLW was reduced to 23 in 2021, and further reductions to age 21 are anticipated by April 2024.

Of particular significance for our analysis is the "unexpected" nature of the NLW announcement and implementation. This provides plausibly exogenous and substantial variation, enabling us to study the effects of minimum wage policy on employment dynamics and work arrangements.

[1] The introduction of the NLW resulted in a 10% year-on-year real increase in the adult minimum wage rate, the largest in the history of minimum wages in the UK so far. In nominal terms, the corresponding 10.8% year-on-year increase is on par with the earlier 10.8% year-on-year nominal uprating (9.2% in real terms) in 2001.
[2] The three highest uprating before 2016 were 10.8% in October, 2001; 7.1% in October, 2003 and 7.8% in October, 2004.

3. Identification and Empirical Modelling

Despite the unexpected and sizable minimum wage shift as the one provided by the NLW introduction, modelling the data to discern causal effects of national-level minimum wage changes on the economic outcomes of workers, firms, or other economic agents presents a significant challenge due to the absence of unaffected jurisdictions. In contrast with the US context, where researchers can exploit variations across states in both the timing and magnitude of minimum wage increases to establish plausible control and treatment groups, empirical investigations in the United Kingdom and other nations with national-level minimum wages (such as Germany, Hungary, etc.) have had to employ alternative identification designs to achieve this objective. In examining worker outcomes, as undertaken in this paper, the two main empirical modelling approaches used have been: i) *individual approach*: compare workers earning at or below the minimum wage with a control group of workers who were earning just slightly above the minimum wage rate prior to the policy change,[3] and ii) *grouping approach*: defining groups of workers according to individual characteristics such as age, gender, and region of work, which face different levels of pre-policy exposure to minimum wage change.[4]

In our analysis, we adopt a grouping methodology akin to that employed by Manning (2016) and Dube (2019), wherein we delineate exposure units based on combination of region of work and age band of the worker.[5] Specifically, we utilize the 12 administrative regions of the UK along with predefined age bands (16-17, 18-20, 21-24, 25-29, 30-39, 40-49, 50-64, and 65+) to define our groups and calculate their exposure to minimum wage hikes. The rationale behind our selection of geographical aggregation is twofold: firstly, opting for a relatively higher level of spatial aggregation at the workplace diminishes potential spillover effects across contiguous local labour markets, thereby mitigating biases in the estimation of the causal effects; secondly, employing more granular "local" labour market aggregations would entail significant estimation variance owing to small or absent sample sizes for each treatment unit.

[3] See Stewart (2004), Dickens and Draca (2005) and Dickens, Riley and Wilkinson (2015) for early examples of studies using the individual modelling approach in the UK context.
[4] See Dickens, Riley & Wilkinson (2009) and Dolton, Rosazza-Bondibene and Stops (2012) for early examples of studies using the grouping (area) modelling approach in the UK context.
[5] Manning (2016) and Dube (2019) both extend the grouping to allow for differential exposure by gender.

Regarding the age dimension within our treatment grouping framework, we band lower ages to account for varying levels of legally binding minimum wage rates.[6]

Our measures of exposure to the minimum wage are what is commonly referred in the literature as: "bite" and "coverage" of the minimum wage. More precisely, "bite" is defined as the ratio of the minimum wage rate and the median hourly wage for each grouping in the year prior to the minimum wage change. In the case of "coverage", we calculate it as the proportion of workers earning below the new minimum wage hourly rate in the preceding year. Despite the fact that younger workers face lower binding minimum wage rates compared to their older counterparts, the wage setting policies of most firms have been mostly consistent with the higher adult rate serving as norm even for younger workers (Aitken et al. (2019), Low Pay Commission (2019, 2023) and Giupponi and Machin (2023)), therefore we calculate both measures of exposure for younger workers relative to the highest minimum wage rate, the NLW rate.[7] Both the "bite" and "coverage" metrics measure the relative degree of anticipated compliance with the updated minimum wage rate and exhibit a high degree of correlation, as depicted in Figure 2. Throughout our analysis, we adopt "bite" as our preferred exposure metric; however, the results remain identical when using "coverage" and are available in the Appendix.

We proceed to model the data according to the differences-in-differences design using the variation in pre-policy minimum exposure as our continuous treatment in order to identify the causal effects of the policy on our outcomes. The regression specification reads as follows:

$$Y_{iart} = \beta Z_{ar} \times I[t \geq t^{MW}] + X'_{iar}\gamma_t + \alpha_{ar} + \alpha_t + \varepsilon_{iart}, \qquad (1)$$

where Y_{iart} stands for different outcomes of interest (wages, hours, economic activity, employment status, types of contracts,…) of individual i, in age band a, working in region r and quarter-year t; Z_{ar} denotes the minimum wage bite in each region-age cell ar; $I[t \geq t^{MW}]$ is an indicator function for time periods after the minimum wage hike has taken place; X_{iar} is a vector of individual characteristics; α_{ar} and α_t are unit of region-age and quarter-year fixed effects respectively; ε_{iart} is an error term. In our preferred specification we include pre-

[6] In the UK minimum wage rates vary depending on the age of workers. In particular, younger individuals have lower minimum wage rates.

[7] Supplementary analysis in Figure C.1 of the Appendix shows mass points at the adult NLW rate in the wage distributions for younger age bands. This finding is consistent with the significant wage spillovers across ages in the care sector after the introduction of the NLW found by Giupponi and Machin (2023).

determined or time-invariant covariates (gender, race and nationality) as controls in line with the recommendations of the difference-in-difference literature.[8]

Equation (1) identifies parameter of interest β as the causal effect of the minimum wage on the outcomes of interest, provided that the model satisfies the conditions of no anticipation effects and parallel trends.[9] These assumptions collectively imply that the outcomes in more or less exposed units would have evolved at the same rate in the absence of the policy intervention. The conventional practice of assessing the presence of pre-trends as corroborative evidence in favour of parallel trends poses increased complexity in the context of the UK's minimum wage framework, characterized by annual uprates. This feature makes the utilization of extended pre- and post-policy periods devoid of prior or subsequent minimum wage adjustments more challenging. While aware of the caveats, we extend Equation (1) to allow for differential time effects of exposure pre and post reform (event-study modelling) and test for existence pre-trends and gain a better understanding of the timing of the dynamic effects. Specifically, we incorporate an 8-quarter window (i.e., 2 years) prior to and following each minimum wage hike event in our preferred specifications for estimating both differences-in-differences and event study models.[10] Additionally, following the most recent developments in the econometric literature concerning differences-in-differences models (Wooldridge, 2021), we allow our covariates to exhibit time-varying effects (γ_t), thereby helping to relax the unconditionality of the common trends assumption.

The modelling framework delineated in Equation (1) is used to study the effects of the minimum wage on both individual cross-sectional and longitudinal flow outcomes. In analysing binary outcomes such as employment status and contract types, the cross-sectional estimates of parameter β will reflect the average effects on individual probabilities, approximating the aggregate net changes in shares of stocks of the given outcome. Conversely, the longitudinal estimates will capture the effects of the policy on alterations in the likelihood of flow dynamics underlying the changes in stocks estimated in the cross-sectional analysis.

[8] The exception to the time-invariant choice of controls is the inclusion of student status which becomes a relevant covariate since we do not exclude younger workers from our sample.

[9] The absence of spillover effects across treatment units is another important assumption to retrieve the causal effects. As pointed out priorly the higher level of geographical aggregation helps to mitigate the possibility of spatial spillovers, while the choice of age bands tries to reduce the employment substitution patterns across ages which could result in spillover effects.

[10] Robustness tests are conducted for shorter windows of 4 quarters (1 year) before and after event and despite some precision decreases, the results remain qualitatively the same.

4. Results and Discussion

4.1 Wage, Hours, and Employment

In this section, we commence by estimating Equation (1) in order to analyse the effects of minimum wage upratings on commonly studied outcomes: hourly wages, hours worked, and employment probabilities. Table 1 reveals significant wage increases for groups most exposed (higher minimum wage bites) to the NLW, with effects particularly concentrated in low-pay industries (LPI). In column (1), our point estimate for the average wage effect is 0.038, compared to 0.042 reported by Butcher and Dickens (2023) using ASHE data.[11] Focusing on low-paid industries (column 2), we find stronger and more precisely estimated wage effects of 0.055, as expected, considering this sub-sample of workers is more representative of those for whom the NLW is binding (compliers) and those plausibly affected by spillovers due to their lower position in the wage distribution (Autor et al, 2016 ; Cengiz et al, 2019; Dustmann et al, 2022). For the benefit of easing the interpretation of results, we calculate the effect between individuals at the 25th and the 75th percentiles (1st and 3rd quartiles) of exposure in order to provide a more intuitive estimate of the size of effects reported. In the case of the wage effect of column (1), the interquartile (IQ) difference of the minimum wage bite, 0.085,[12] implies that a worker at the higher quartile of exposure has felt a 0.3 per cent faster growth in hourly real wages compared to a worker in the lower quartile.

To understand the time dynamics of the wage effects and test for pre-trends, we further estimate the event study model. Panel (a) of Figure 3 displays the event study estimates for the sample of workers in low paid industries, showing gradual and persistent wage effects following the quarter of the NLW implementation (2nd quarter of 2016). Additionally, it illustrates flat and insignificant effects preceding it, allowing for the testing of the no pre-trends assumption (formal F-test rejects pre-trend effects with a p-value of 0.522).

In columns (3) and (4) of Table 1, we proceed to estimate the effect of the NLW on average hours worked. Column (3) shows a statistically insignificant pooled effect on the average hours per worker of 0.008, aligning with the effect estimated by Butcher and Dickens

[11] Note that Butcher and Dickens (2023) use log of bite instead of levels, however their estimated wage effect for workers above 25 using coverage as treatment variable is 0.148, quite close to our estimated effect of 0.165 when using the same age sample restrictions in LFS.
[12] The 3rd quartile of bite is 0.635 (50-64 of Yorkshire and Humber) and the 1st quartile of bite is 0.550 (40-49 of Scotland), therefore IQ = 0.635 – 0.550 = 0.085.

(2023) of 0.008 on total hours worked aggregated at the level of the unit of exposure. When restricting the sample to LPI in column (4), we find negative, albeit insignificant, effect on average hours worked of -0.015. Overall, these results reinforce previous findings in the minimum wage literature of null pooled effects on average hours worked.

Table 2 presents the estimated effect of the NLW uprating on the probability of an individual being employed (E), unemployed (U), or inactive (I) between less and more exposed groups. Columns (1) to (3) in Panel A of Table 2 show the respective estimated coefficients for each state: an insignificant and small positive effect on being employed of 0.009, a significant decrease in the probability of being unemployed of -0.030, and a significantly increased probability of being inactive of 0.021.[13] Although the coefficient on employment probability closely aggregates to effects on employment rates at the unit of exposure, the effect for unemployment only aggregates to the unemployment rate if the sample is constrained to individuals in the labour force. Subject to the aggregation considerations previously highlighted, our results are not directly comparable to Butcher and Dickens (2023) who find insignificant effects of the NLW on employment and unemployment rates between 2014 and 2019 for adult workers above 25 years of age.[14] When interpreting the results of (un)employment probabilities, it is important to emphasize that they measure net changes in stocks and therefore do not inform about the different entry and exit flows that ultimately compose those changes.

The most novel and relevant results emerge from the analysis of flows, which we are able to model and estimate thanks to the LFS longitudinal wave design. Panel B of Table 2 presents the results of the flow analysis across the state space of economic activity transitions (E, U, I and N=U+I). Examining the estimated effects on flows for individuals starting from employment (Panel B), we estimate that exposure to the National Living Wage (NLW) has primarily led already employed workers to remain employed (EE) thanks to significant reductions in flows to unemployment (EU)[15] – the interquartile effect being equivalent to 7.4% lower probability of moving to unemployment relative to the pre-NLW mean. The estimated

[13] Figure 4, Panel (a) shows that the event study estimates for employed, unemployed and inactive probabilities are insufficient to establish a persistent effect of the NLW policy and show existence of divergent pre-trends when looking at unemployment.
[14] We can approximate Butcher and Dickens (2023) analysis by restricting our sample to workers above 25 and conditioning the unemployment sample to those in the labour force. When we do so we find an insignificant employment effect of 0.029 and an unemployment effect of -0.041 statistically significant at the 1% level (see Table C.1in the Appendix.).
[15] Despite a negative effect being estimated for the flow EI, this is not statistically significant and smaller in magnitude.

effects for the sub-sample of LPI workers are similar in absolute and relative magnitude but less precise. The corresponding analysis for those starting from unemployment shows estimated coefficients consistent with increased flows into employment (UE) and inactivity (UI) paired with reductions among those staying unemployed (UU). However, the results on transitions from unemployment are not statistically significant and plausibly lack of statistical power due to the smaller sample sizes. Lastly, columns (5) and (6) of Panel B indicate that the estimated effects for flows from inactivity are small in magnitude and imprecise, suggesting null effects of the NLW on flows out of inactivity. The correspondent event study estimates in Panels (b)-(d) of Figure 4, support the results of the difference-in-difference model with effects being persistent over the eight quarters following the NLW introduction for EE and EU flows albeit lacking some level of precision when estimated at that level of time disaggregation.

Taken together, the results on the flows between employment states provide useful insights for decomposing and understanding the results of Table 2 (Panel A) on net change in stocks. The null impact on employment probability and the negative effect on unemployment mask a significant reduction in flows from employment to unemployment, aligning with the literature findings on the effect of minimum wages on hires and separations (firing and quitting), which we will explore in more detail in the next section.

4.2 - Job Search, Hiring and Separations

Following the findings on employment flows, we proceed to explore the mechanisms underpinning the heightened employment retention concomitant with diminished flows from employment to unemployment (EU). Prior research examining the impacts of minimum wages on hiring and separation dynamics in other countries consistently reveals offsetting reductions in workers' hiring and turnover following minimum wage increases. These reductions, in turn, result in no significant changes to overall employment levels despite significant flow movements (Portugal and Cardoso (2006), Brochu and Green (2013), and Dube et al (2016)).

The findings on employment flows and stock in these studies can be rationalized by search models with endogenous separations, theoretically motivated by job ladder or match quality learning dynamics. Although both models predict declines in employment flows that exceed those changes in employment levels, as consistent with our results in section 4.1, the

underlying channels driving these declines differ. While the job ladder model predicts a reduction in job-to-job transitions (EE', where E' means employed in a new job) due to lower quitting rates in the face of a minimum wage rises that reduce the attractiveness of outside options, the match quality framework advocates that declines in employment flows are mainly driven by a reduction in employment to unemployment or inactivity (EN) transitions as consequence of falls in layoff rates resulting from costly learning of the match quality during probationary periods.

4.2.1 - Job Search

To shed light on the possible channels at play that underlie the transition analysis results, we start by investigating the effects of the minimum wage hike on job search behaviour of individuals. Importantly, our data allow us to explore how workers reacted to the rise in minimum wage through their decisions of on-the-job and off-the-job search. Whereas the match quality model proposed by Brochu and Green (2013) explicitly excludes on-the-job search and hence any prediction on this margin, Dube et al (2016) job ladder model predicts a reduction of on-the-job search following a minimum wage increase as incentives to look for a better paid job are reduced.

Table 3 starts by displaying the estimated effects of on-the-job search probability, effort, duration and motivation. Despite the estimated negative coefficient (-0.009), we cannot reject null effects of the minimum wage on the likelihood of on-job-search across exposure groups (Columns (1) and (2)). Similarly, defining long duration as workers searching for a job for more than 6 months, we find no evidence of statistically significant increases in on-the-job search long duration in spite of positive estimated effects (0.023 for all workers and 0.025 for LPI workers). For both previous outcomes of on-job-search, event studies in Figure 5 Panels (a) and (b) show consistent flat insignificant effects. In addition, following Shimer (2004) and Mukoyama et al. (2018) we approximate search effort by the number of different methods used in the search process we find an economically small but significant drop in search effort of -0.258 corresponding to a 1.3% IQ drop for the all sample of workers in Column (5) and no effects for LPI workers in Column (6). Finally, in Columns (7) and (8), we look into what motivates the on-the-job search if looking for an additional or replacement job and do not find statistically significant and economically meaningful effects in both samples. The on-the-job search combined findings point towards the absence of a behavioural response by workers to the minimum wage that would align with the predictions of job ladder models and it is, to the

best of our knowledge, the first empirical analysis of this margin of adjustment in the context of minimum wage studies. Interestingly, when analysing the event studies in Figure 5 panel (d), the results suggest a timid anticipation effect in the quarter before the NLW implementation followed by a steady fading away of this response for both additional and replacement job motivations of on-the-job search.

After exploring the effects on on-the-job search behaviour, we proceed to look at the off-the-job search behaviour responses in terms of effort and duration. Columns (9) and (10) of Table 3, present the estimated effects on both effort and duration margins which fail to provide robust evidence of significant and sizeable effects of a response by off-the-job searchers. In particular, the effect on search effort is estimated to be 0.145 but statistically insignificant at the conventional levels and small in economic terms (1.1% in IQ effect terms) and the point estimate for the probability of searching for a job for longer than 6 months is equally small and insignificant, -0.9% relative to pre-reform mean. The previous results for off-the-job search aligns with the Adams, West and Sloan (2022) findings of a transitory spike in search effort around the minimum wage hike month which quickly fades away in the subsequent months – our event study estimates found in Figure 5 panel (f) do not show any spike in search effort, at least when measured by the number of different methods used in the search process

Although there is no compelling evidence in favour of increased on-the-job and off-the-job search following the implementation of the NLW, it is of interest to understand if the preferences of those searching for a job have changed as a result. We examine self-declared preferences of individuals searching for a job in terms of employment status (employee and self-employed) and contract hours type (full-time and part-time), separately for on and off-the-job searchers in Table C.2. The consistently insignificant and small point estimates confirm that the preferences of those searching for a job while employed remained broadly unaffected regarding the desired employment status (Panel A) and hours contract (Panel B) for those most exposed to the minimum wage rise. Similarly, the point estimates for off-the-job searchers in the same table confirms their unchanged preferences with respect to seeking employment as an employee or self-employed. It provides a marginally significant and though economically small effect (1.9% in IQ effect) for a compositional change in favour of full-time contracts among those searching from unemployment. An increase in off-the-job search for full-time positions can reflect a first-order effect with a strong substitution effect in the intensive margin of labour

supply decisions which made complete hour work schedules more attractive for prospective workers.

4.2.2 - Job Hiring and Separations

Following our investigation into individual job search responses to the minimum wage policy, which yielded no robust evidence of adjustments at these margins, we delve deeper into potential responses pertaining to hiring, quitting, and firing decisions. Despite the fact that our early results on EN transitions seem to favour the mechanisms proposed by match quality learning models, we cannot rule out that empirical predictions of both modelling approaches are correct without further investigation. In order to further assess the different channels, we start by breaking down the effects of the implementation of the NLW into voluntary (quitting), involuntary (layoff) and other motivated job separations as shown in Panel B of Table 4.

Contrasting with previous findings by Brochu and Green (2013) and Dube et al (2016), our analysis does not reveal significant evidence supporting a negative impact of NLW exposure on hiring. In Columns (1)-(4) of Panel A, one can observe that estimates regarding job-to-job transitions (EE') and hires from unemployment (UE) are statistically insignificant, with the point estimates for UE flows being positive for both pooled and LPI samples. Panels (a) to (c) of Figure 6, show dynamic effects of hiring consistent with the difference-in-difference results. Additionally, when dissecting flows from employment to unemployment (UE) into voluntary, involuntary, or other motivated separations,[16] we observe that the majority of the reduction in UE flows resulting from NLW exposure is concentrated among involuntary moves. While, in Columns (1) and (2) of Panel B, estimated effects of the NLW on voluntary separations are small in relative magnitude and statistically insignificant, Columns (3) and (4) show significant IQ effects for involuntary separations, indicating decreases in the probability of layoff by -0.1 (-18.1%) and -0.2 (-29.8%) percentage points for pooled and LPI, respectively. The persistency of the drop in involuntary separations following the NLW is illustrated in panel (e) of Figure 6 event studies – in particular for the sample of all workers. Table C.3 of the Appendix further disaggregates the effects by reason of job exit, showing that the fall in involuntary exits can be attributed to substantial reductions in job losses due to redundancies (-14%) and end of temporary contracts (-27%). Estimates of the effect of NLW across exposure

[16] See Table A.2 in the Appendix for the detailed classification.

groups on separations driven by family, personal and other reasons are positive albeit imprecise.

Lastly, combining the lack of response on job search behaviour with the reduction in layoff probabilities, we should expect a decrease in new job initiations. Indeed, columns (1) to (6) of Table 5 present the estimates of the impact of exposure to the NLW on the probability of job initiation across various tenure definitions, consistently revealing significant negative effects on the likelihood of an individual commencing a new employment position. The magnitude of these effects is, nonetheless, relatively small ranging from 1% to 2% relative to the pre-reform mean in IQ terms. Effects estimated for the sample of LPI workers are also negative but exhibit less precision.[17]

Overall, we find that the NLW introduction did not produce a strong effect with respect to on- and off-the-job search behaviour, but it has affected employment dynamics through an increase in job retention for most exposed groups supported by a sizeable reduction of involuntary job separations which can contribute to a reduction in firms' turnover costs.

4.3 - Contract Types

Having concluded that the impact of the implementation of NLW on employment dynamics has mostly occurred through a sustained reduction in layoff probabilities, we now probe how such effects impacted the composition of different types of work contracts. In this section, we study features of contracts which inform about the level of job insecurity and hours insufficiency workers can be exposed to, therefore developing a better understanding about other margins of adjustment through non-wage costs and job attributes that firms could use to respond to the labour cost pressures.

4.3.1 - Contract Types I – Hours I: Full-time and Part-time

Firstly, we estimate the impact of the NLW on the change in net stock for contracted hours conditions, namely, full-time and part-time contracts. In column (1) of Table 6 (Panel A) we show that among those employed the probability of being in a full-time contract has

[17] Figure 7 presents the correspondent events study estimates for new job initiations consistent with the difference-in-difference results.

increased as demonstrated by the positive and significant coefficients of 0.02 for the all-workers sample and 0.04 for workers in low-paid industries. These estimates translate, respectively, into relatively small increases of 0.2 pp (0.2%) and 0.6 pp (1.0%) in the probability of being in a full-time job when comparing workers in the 25th and 75th percentile of exposure in the different samples. In Panel B, we study the effects on the flows between full-time, part-time and non-employment in order to understand what has driven the previous compositional effect on stocks of full-time work. Decomposing the flows of workers originally in full-time contracts highlights the importance of the increased persistence in full-time employment and reduced flows into non-employment, both consistent with the findings of EU transitions previously discussed. Being more precise, the probability of remaining in full-time work increased by 0.2 percentage points (0.2%) while the probability of transitioning from full-time work into non-employment has fallen by 0.2 percentage points (9.6%) between workers at the end points of the interquartile of exposure. The estimates for workers in LPI are more pronounced in terms of their magnitudes with IQ effects corresponding to a 0.4% increased full-time job retention and 12.7% reduction in the probability of leaving a job. The dynamics of the effects on full-time flows described previously are shown in the event studies of Figure 8 panel (b) as, albeit noisy, being persistent over the post-period.

In panel (c) we show the results for analogous analysis focusing on individuals starting in part-time contracts and find no evidence of statistically or economically significant effects of the NLW in altering the flows from part-time to either full-time or non-employment. Interestingly, a closer look at the dynamic of effects on part-timer flows in Figure 8 panel (c) shows a short-lived spike in the probability of remaining in part-time and drop in likelihood of moving from part-time to non-employment which quickly subsides after the first quarter following the NLW introduction. The results on full-time and part-time flows combined suggest that most of the reduction in separations (EN) is driven by a significant and sizeable drop in full-time workers leaving or losing their jobs.

4.3.2 - Contract Types I - Hours II: Voluntary and Involuntary Part-Timers

Interestingly, although we do not find significant changes in flows to and from part-time status, our data allows us to distinguish part-timers between voluntary and involuntary part-timers hence enabling us to test for compositional effects within this group of workers and assess the impacts of the policy at this margin of hours insufficiency (Table 6). The effect on the probability of being in a voluntary part-time position in column (3) of Table 6 (Panel A)

points to a significant compositional shift towards this status with an implied 0.8 p.p. IQ effect corresponding to a 0.9% increase relative to the pre-reform mean. Once more, the effect among low-pay industry workers is even more acute and equivalent to an increase of voluntary part-time of 2.3 pp (3%) in IQ terms. When looking at the flows underlying this result and despite the small samples, we find that the compositional effect was sustained by flows from involuntary to voluntary part-time among those in low-paid industries.[18] Adding to this finding, we can test if hours worked among the group of switchers has significantly changed. This exercise is of particular interest as it allows us to understand, albeit indirectly, the strength of the intensive margin of labour supply response and its opposing substitution and income effects. Interestingly, we find no evidence of changes in hours worked among those moving from involuntary to voluntary part-time, therefore suggesting that for this group the income effect is the most likely mechanism at play.

4.3.3 - Contract Types I - Hours III: Underemployment and Variable Hours

In addition to studying full and part-time hour contracts, our data allow us to explore further features of working conditions that are relevant to understanding hours sufficiency and volatility. In Table 7, we examine how workers' reported underemployment and the incidence of variable hours have changed as a result of the minimum wage policy. Panel A of Table 7 displays the estimated impacts on the extensive margin of the previous two outcomes, revealing a significant decrease in the levels of underemployment experienced by workers (2.1% for all and 3.0% for LPI workers over the interquartile range) and no statistically discernible change in the probability of facing variable hours in a job.

To better understand the results, we proceed to estimate the effects of the NLW on the flows between the states for each of the outcomes in Panel B (Table 7). Concerning underemployment transitions, we find a set of effects consistent with our full-time and involuntary part-time flow results. With insignificant and relatively small magnitude estimates for flows originating from underemployment, most of the change in stocks seems to be driven by an increased probability of remaining in non-underemployment over consecutive quarters (0.5%), sustained by significant decreases in the likelihood of moving out of non-underemployment to either underemployment (4.1%) or non-employment (9.5%). The estimated effects for LPI workers are quantitively similar yet less precisely estimated. Panels

[18] Panels (d) and (e) of Figure 8 present the estimated coefficients of the event study designs for voluntary and involuntary part-time flows which, despite being noisy, corroborate the findings of the static difference-in-differences estimate.

(b) and (d) of Figure 9 shows the event studies for the different flows with respect to underemployed and non-underemployed which show the persistency of the effects highlighted in the differences-in-differences in the likelihood of moving out of non-underemployment to either underemployment and non-employment.

Although stocks on variable hours do not seem responsive, when focusing on effects of flows between variable hours, fixed hours, and non-employment, one finds evidence supporting small and statistically significant increases in switching from variable to fixed hours work schedules (2.2% IQ effect) and again reduced flows to non-employment among those with fixed hours schedules (6.7% IQ effect). Considering that most fixed hours workers are in full-time contracts (73.4%) and do not report being underemployed (91.8%), the results on EN transitions are expected and in line with the previous findings. Perhaps the most interesting point is to note that the rise in transitions from variable to fixed hours schedules is not a necessary consequence of previous results regarding full-time and underemployment flows but can be compatible with a mechanism of job retention and reduced separations resulting from match learning costs of a probationary period in which hours schedules are less stable until the transition to a permanent position. The dynamics of the effects on transitions between variable and fixed hours and fixed hours and non-employment plotted in the event studies of Figure 9 panels (c) and (e) show that while most of the effect of those transitioning to fixed hours is concentrated after the subsequent NLW uprating four quarters after the introduction, the response of EU flows from fixed hours workers was immediate and not as persistent in time.

4.3.4 - Contract Types II - Employees, Solo Self-Employed and Non-Solo Self-Employed

After examining the consequences for job hours' attributes following the introduction of the NLW, we proceed to study complementary features that are more closely related to job security. This part of the analysis begins by exploring possible shifts in employee employment and self-employment. As documented in previous work by Katz and Krueger (2018) and Boeri et al. (2020), alternative work arrangements, particularly solo self-employment, have increased in recent decades in several developed economies. Given that hiring a worker as a solo self-employed often entails possible lower labour costs for employers, due to reduced national insurance and benefits contributions and no need for compliance with minimum wage rates, a natural question arises: whether rises in minimum wages may contribute to increases in solo self-employment.

Table 8 presents the estimates of minimum wage bite coefficients on stocks (Panel A) and flows (Panel B) of employees, solo self-employed, and non-solo self-employed. From the results presented in Panel A, we can conclude that, conditional on employment, there is no evidence of sizeable compositional changes in terms of employment contract status—all coefficients are small in magnitude and statistically insignificant. Turning to the results on flows (Panel B), we find a familiar pattern regarding flows whose initial employment status is that of an employee: a small increase in the likelihood of remaining as an employee (0.2 %), coupled with a sizeable reduction in the chances of moving to non-employment (6.8 %). The results for LPI workers are relatively similar in magnitude although not statistically significant at the conventional significance levels. Considering that employees represent 86% of workers in our sample, it is not entirely surprising that these findings closely align with those found for employed individuals more generally and for full-time workers in terms of their importance in relation to EE and EN transitions.

More interesting are the significant, sizeable, and positive estimated effects of EN transitions from solo self-employment, translating into 0.5 pp interquartile difference (16.0 %). When looking at the nature of these EN transitions, we find that separations motivated by family, personal and other reasons and layoffs (involuntary) are responsible for the positive effects previously mentioned. In particular, we estimate effects for workers in low-pay industries with interquartile magnitudes of 54.1% for involuntary moves and 39.4% for other motivated moves significant at 10% significance levels which should be interpreted with caution considering small samples and low pre-policy mean of these outcomes. The event studies of Figure 10 panel (c) corroborate the findings of an inflow of self-employed to non-employment right after the implementation date and subsisting for at least the following 3 quarters – a pattern which is particularly strong among LPI workers. The fact that solo self-employed workers face involuntary separations is suggestive that some of these workers are indeed "employed" by firms which can effectively fire them. The effect on involuntary job losses of solo self-employed can reflect a labour cost saving adjustment by firms as the costs of making a contractor/freelancer redundant are smaller compared to those incurred with an employee since the previous are not entitled to statutory redundancy pay by law.

Despite the fact that we study transitions starting from non-solo self-employment in columns (5) and (6) of Panel B of Table 8, sample sizes for this type of employment are particularly small and therefore estimating credible effects is challenging. Although estimates point towards a positive effect on non-solo self-employed moving to solo self-employed and

simultaneous negative effect on persistence in non-solo self-employment as result of NLW exposure, one should be cautious in drawing conclusions considering the abovementioned limitations.

4.3.5 - Contract Types III - Temporary Jobs, Agency Work and Zero-Hour Contracts

Finally, we investigate the impact of the NLW on alternative contracts such as temporary jobs, agency work, and zero-hour contracts (ZHCs). All these contract types share levels of insecurity regarding the continuation and/or constancy of employment, which tend to benefit employers in terms of labour cost savings. Following this reasoning, one can consider these work arrangements as potential intensive margins of employment adjustment for firms needing to compensate for the larger wage bill resulting from the minimum wage rise.

The estimated impacts of NLW exposure on the net stock changes of these types of contracts are presented in Panel A of Table 9. Despite the small and marginally statistically significant aggregate impact of NLW exposure in reducing the relative importance of employees in temporary contracts (0.1 pp) (Panel A Column (1)), this result does not hold for employees in the LPI worker sample. The point estimate of the coefficient in Column (2) is not only positive but also very far from being statistically significant at any conventional significance level. However, when examining the flows in Panel B columns (1) to (4), we observe for both samples that almost the entirety of the aggregate compositional effect is driven by sizable and significant moves from temporary to permanent contracts (15.9% in entire sample and 29% in LPI sample) and concurrent reductions in flows from temporary work to non-employment (-17.7% in entire sample and -26.5% in LPI sample). Event study estimates presented in Figure 11 panels (b) and (c), show that the decrease in flows from temporary jobs to non-employment is particularly strong in quarters after the policy implementation with a gradual fading in the latter quarters. Additionally, there are small and insignificant flows from permanent jobs to either temporary or non-employment states. These findings, indicating a decrease in the share of temporary work due to expanding flows into permanent contracts and a reduction in separations, are consistent with the early findings of reductions in the likelihood of layoffs caused by the end of a temporary job.

When considering adjustments through the use of agency work, we find little support in favour of an increased use of agency work (temporary and permanent)[19] with insignificant and small estimated coefficients on NLW bite exposure. On the other hand, column (7) of Panel A shows an increase in the incidence of ZHCs which translates into 0.1 pp faster growth in ZHCs between the 25th and 75th percentile of NLW bite exposure (5.7 % of pre-policy mean). The estimated effect for the LPI sample is similar in relative magnitude (6.6 % of pre-policy mean) despite not being significant at the 10% significance level. Figure 11 panel (a) results show how the increase in ZHCs has been persistent up to 2 years of the post event period. This result is consistent with work by Datta et al (2019) which finds a positive impact of the NLW on ZHCs in the social care sector in the UK without significant increases in either temporary or agency work. Unfortunately, due to data limitations and small sample sizes, it is not possible to estimate the impact on the flows in and out of agency work or ZHCs with a credible level of statistical precision.

Finally, we consider the OECD aggregated measure of "non-standard" work which combines workers in temporary positions, part-time contracts or self-employment.[20] Unsurprisingly, considering our previous results on part-time and temporary job reductions, Panel A of Table 10 shows a small albeit statistically significant decrease in the probability of a worker being found in non-standard work employment of 0.7% relative to the pre-reform mean. When looking at the flows (Panel B), we again find a familiar pattern of an increased probability of keeping a standard work position coupled with a reduced chance of transitioning to non-employed for both samples. Notably, the flows between standard and non-standard work in either direction are economically small and insignificant, suggesting that the compositional change in the stock was mainly driven by the retention of standard positions rather than switchers.

[19] Note that according to UK law "after 12 weeks' continuous employment in the same role, agency workers get the same terms and conditions as permanent employees, including pay, working time, rest periods, night work, breaks and annual leave".
[20] See OECD (2018) for details.

5. Conclusion

In this report, we offer nuanced insights into the multifaceted impacts of the National Living Wage (NLW) on labour market dynamics. We begin by confirming the significant wage effects and lack of hours response, particularly for workers in low-paid industries, resulting from the introduction of the NLW, aligning with earlier research.

Furthermore, our analysis delves into the intricate interplay between the NLW and employment dynamics. Our results on changes in stocks following the NLW point to mixed effects: modest insignificant positive impacts on employment coupled with reductions in unemployment and a corresponding rise in inactivity. However, our scrutiny of employment flows uncovers a pivotal aspect: the NLW primarily impacted job retention rather than creation. Notably, there was a marked decrease in involuntary job separations, primarily driven by declines in layoffs, suggesting a tangible enhancement in job security for some of the workers affected by the NLW, namely incumbents.

Moreover, our examination of on- and off-the-job search behaviour suggests limited adjustments in response to the NLW, contrary to the empirical predictions of some theoretical models previously cited in the literature. In particular, we found no discernible sustained changes in the incidence, effort, or duration of on- and off-the-job search.

Regarding contract types, our findings indicate compositional shifts favouring full-time employment and voluntary part-time positions, alongside reductions in involuntary part-time roles and underemployment. Additionally, we observe increased transitions from temporary to permanent contracts, indicative of firms' adjustments to labour cost pressures likely relied on the retention of early-tenured incumbents, thus reducing screening costs of finding new matches.

Despite robust evidence of an increase in the use of ZHCs, the impact on other alternative contract types such as agency work and solo self-employment appears relatively subdued, highlighting the necessity for further research in this domain. A better understanding of the degree of wage spillovers of minimum wage rates on hourly earnings rates of solo self-employed individuals not covered by the mandated minimum may offer an explanation for the lack of flows between employees and solo self-employed.

Overall, our study substantially contributes to a deeper understanding of the complexities surrounding minimum wage policies and their ramifications for various facets of the labour market. By disentangling the effects of the NLW on employment dynamics, job search behaviour, and contract types, we provide valuable insights on how workers and firms adjusted to a significant wage reform, thereby informing policymakers and researchers in crafting and assessing future labour market interventions.

References

Aitken, Andrew, Peter Dolton, and Rebecca Riley. 2019. "The Impact of the Introduction of the National Living Wage on Employment, Hours and Wages." National Institute of Economic and Social Research.

Autor, David H., Alan Manning, and Christopher L. Smith. 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.

Barrero, Jose Maria, Nicholas Bloom, and Steven J. Davis. 2023. "Long Social Distancing." *Journal of Labor Economics* 41 (S1): S129-S172.

Boeri, Tito, Giulia Giupponi, Alan B. Krueger, and Stephen Machin. 2020. "Solo Self-Employment and Alternative Work Arrangements: A Cross-Country Perspective on the Changing Composition of Jobs." *Journal of Economic Perspectives* 34 (1): 170-95.

Bossler, Mario, Ying Liang, and Thorsten Schank. 2024. "The Devil Is in the Details: Heterogeneous Effects of the German Minimum Wage on Working Hours and Minijobs." IZA Discussion Papers 16964, Institute of Labor Economics (IZA).

Brochu, Pierre, and David A. Green. 2013. "The Impact of Minimum Wages on Labour Market Transitions." *The Economic Journal* 123 (573): 1203-1235.

Butcher, Tim, and Richard Dickens. 2023. "Impact of the National Living Wage using Geographic, Age and Gender Wage Variation."

Cengiz, Doruk, Arindrajit Dube, Attila Lindner, and Ben Zipperer. 2019. "The Effect of Minimum Wages on Low-Wage Jobs." *The Quarterly Journal of Economics* 134 (3): 1405-1454.

Cengiz, Doruk, Arindrajit Dube, Attila Lindner, and David Zentler-Munro. 2022. "Seeing beyond the Trees: Using Machine Learning to Estimate the Impact of Minimum Wages on Labor Market Outcomes." *Journal of Labor Economics* 40 (S1): S203-S247.

Clemens, Jeffrey. 2021. "How Do Firms Respond to Minimum Wage Increases? Understanding the Relevance of Non-employment Margins." *Journal of Economic Perspectives* 35 (1): 51-72.

Commission, Low Pay. 2019. "National Minimum Wage: Low Pay Commission Report 2019." Low Pay Commission.

Commission, Low Pay. 2023. "National Minimum Wage: Low Pay Commission Report 2023." Low Pay Commission.

Datta, Nikhil, Giulia Giupponi, and Stephen Machin. 2020. "Zero-Hours Contracts and Labour Market Policy." *Economic Policy* 34 (99): 369-427.

Dickens, Richard, and Mirko Draca. 2005. "Dickens, Richard; Draca, Mirko (2005). The Employment Effects of the October 2003 Increase in the National Minimum Wage." University of Sussex.

Dickens, Richard, Rebecca Riley, and David Wilkinson. 2015. "A Re-examination of the Impact of the UK National Minimum Wage on Employment." *Economica* 82 (328): 841-864.

Dickens, Richard, Rebecca Riley, and David Wilkinson. 2009. "The Employment and Hours of Work Effects of the Changing National Minimum Wage." University of Sussex.

Dolton, Peter, Chiara Rosazza Bondibene, and Michael Stops. 2015. “Identifying the Employment Effect of Invoking and Changing the Minimum Wage: A Spatial Analysis of the UK.” *Labour Economics* 37: 54-76.

Dube, Arindrajit. 2019. “Impacts of Minimum Wages: Review of the International Evidence.” London: HM Treasury.

Dube, Arindrajit, T. William Lester, and Michael Reich. 2016. “Minimum Wage Shocks, Employment Flows, and Labor Market Frictions.” *Journal of Labor Economics* 34 (3): 663-704.

Dustmann, Christian, Attila Lindner, Uta Schönberg, Matthias Umkehrer, and Philipp vom Berge. 2022. “Reallocation Effects of the Minimum Wage.” *The Quarterly Journal of Economics* 137 (1): 267-328.

Giupponi, Giulia, and Stephen Machin. 2024. “Company Wage Policy in a Low-Wage Labor Market.” CEP Discussion Paper No. 1869, Centre for Economic Performance, London School of Economics and Political Science, London, UK.

Katz, Lawrence F., and Alan B. Krueger. 2019. “The Rise and Nature of Alternative Work Arrangements in the United States, 1995–2015.” *ILR Review* 72 (2): 382-416.

Manning, Alan. 2016. “The Elusive Employment Effect of the Minimum Wage.” CEP Discussion Paper No. 1428, Centre for Economic Performance, London School of Economics and Political Science, London, UK.

Manning, Alan. 2021. “The Elusive Employment Effect of the Minimum Wage.” *Journal of Economic Perspectives* 35 (1): 3-26.

Mas, Alexandre, and Amanda Pallais. 2020. “Alternative Work Arrangements.” *Annual Review of Economics* 12 (1): 631-658.

Mukoyama, Toshihiko, Christina Patterson, and Ayşegül Şahin. 2018. “Job Search Behavior over the Business Cycle.” *American Economic Journal: Macroeconomics* 10 (1): 190-215.

OECD. 2018. *Job Creation and Local Economic Development 2018: Preparing for the Future of Work.* Paris: OECD Publishing.

Portugal, Pedro, and Ana Rute Cardoso. 2006. “Disentangling the Minimum Wage Puzzle: An Analysis of Worker Accessions and Separations.” *Journal of the European Economic Association* 4 (5): 988-1013.

Shimer, Robert. 2004. “Search Intensity.”

Stewart, Mark B. 2004. “The Impact of the Introduction of the U.K. Minimum Wage on the Employment Probabilities of Low-Wage Workers.” *Journal of the European Economic Association* 2 (1): 67-97.

Wooldridge, Jeffrey M. 2021. “Two-Way Fixed Effects, the Two-Way Mundlak Regression, and Difference-in-Differences Estimators.” *Available at SSRN 3906345.*

Tables and Figures

Table 1: Effect of NLW Exposure (Bite) on Hourly Wages and Hours Worked

	Log hourly wage		Log usual hours	
	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
Post-NLW x bite	0.038*	0.055**	0.008	-0.015
	(0.022)	(0.021)	(0.017)	(0.035)
Pre-NLW mean of dep. var.	2.457	2.144	3.483	3.345
IQ effect	0.003	0.008	0.001	-0.002
Control Variables	Yes	Yes	Yes	Yes
Observations	154,592	47,515	154,592	47,515

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, British nationality, and public sector indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. Columns (2) and (4) restrict the sample to respondents employed in an LPI industry.

Table 2: Effect of NLW Exposure (Bite) on Employment Stocks and Flows

Panel A: Stocks	**Employed**		**Unemployed**		**Inactive**	
(Cross-Sectional)	(1)		(2)		(3)	
Post-NLW x bite	0.009		-0.030***		0.021**	
	(0.009)		(0.007)		(0.008)	
Pre-NLW mean of dep. var.	0.726		0.044		0.230	
IQ effect	0.001		-0.004		0.002	
% IQ effect	0.001		-0.080		0.011	
Control Variables	Yes		Yes		Yes	
Observations	927,758		927,758		927,758	
Panel B: Flows	**State in period t**					
(Longitudinal)	**Employed**		**Unemployed**		**Inactive**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Employed						
Post-NLW x bite	0.019***	0.015	0.039	0.013	-0.015	0.002
	(0.007)	(0.013)	(0.036)	(0.030)	(0.012)	(0.009)
Pre-NLW mean of dep. var.	0.970	0.958	0.269	0.126	0.058	0.030
IQ effect	0.001	0.002	0.012	0.004	-0.003	0.000
% IQ effect	0.002	0.002	0.044	0.032	-0.059	0.015
Unemployed						
Post-NLW x bite	-0.010**	-0.008	-0.065		0.001	
	(0.005)	(0.010)	(0.053)		(0.010)	
Pre-NLW mean of dep. var.	0.011	0.015	0.545		0.048	
IQ effect	-0.001	-0.001	-0.020		0.000	
% IQ effect	-0.074	-0.075	-0.036		0.006	
Inactive						
Post-NLW x bite	-0.009	-0.007	0.026		0.013	
	(0.006)	(0.011)	(0.036)		(0.017)	
Pre-NLW mean of dep. var.	0.019	0.027	0.186		0.894	
IQ effect	-0.001	-0.001	0.008		0.003	
% IQ effect	-0.036	-0.038	0.042		0.003	
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	317,450	94,831	15,601	15,281	105,291	104,975

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Column (2) of Panel B restricts the sample to individuals who were employed in an LPI industry in period t. In columns (4) and (6) of Panel B, the outcome is an indicator for employment in an LPI industry in period t + 1, and the sample comprises the unemployed or inactive respondents accordingly in period t.

Table 3: Effect of NLW Exposure (Bite) on Job Search

	On-the-job search								Off-the-Job search	
	Incidence		Long duration		Effort		Replacing current job		Long duration	Effort
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	Pooled
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Post-NLW x bite	-0.009	-0.009	0.023	0.025	-0.258**	-0.044	0.020	0.000	0.145	-0.015
	(0.008)	(0.011)	(0.027)	(0.039)	(0.118)	(0.187)	(0.027)	(0.049)	(0.136)	(0.030)
Pre-NLW mean of dep. var.	0.069	0.094	0.409	0.411	2.849	2.920	0.864	0.860	3.889	0.500
IQ effect	-0.001	-0.001	0.003	0.007	-0.036	-0.012	0.003	0.000	0.044	-0.005
% IQ effect	-0.011	-0.013	0.008	0.016	-0.013	-0.004	0.003	0.000	0.011	-0.009
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	675,621	213,836	42,264	17,840	42,246	17,838	42,264	17,840	33,467	33,873

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Search effort is measured as the number of search methods used from a predefined list. Columns (5) and (6) additionally control for preference over employment status in the new job (employee, self-employed, or indifferent), which determines the number of search methods available (see Appendix A for details). Long search duration is defined as 6 months or longer. Replacing current job sample in columns (7) and (8) conditions on on-the-job search, and the alternative is looking for an additional job. Columns (2), (4), (6), and (8) restrict the sample to individuals employed in a low-paying industry.

Table 4: Effect of NLW Exposure (Bite) on Job Hiring and Separations

Panel A: Hiring (Longitudinal)	**State in period t**					
	Employed		**Unemployed**		**Non-employed**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Employed in new job						
Post-NLW x bite	-0.002	0.002	0.039	0.013	-0.009	-0.001
	(0.010)	(0.008)	(0.036)	(0.030)	(0.014)	(0.010)
Pre-NLW mean of dep. var.	0.036	0.014	0.269	0.126	0.093	0.046
IQ effect	-0.000	0.000	0.012	0.004	-0.002	-0.000
% IQ effect	-0.005	0.011	0.044	0.032	-0.026	-0.007
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	317,450	300,604	15,601	15,281	120,892	120,256
Panel B: Separations (Longitudinal)	**Reason for separation**					
	Voluntary		**Involuntary**		**Other**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Unemployed						
Post-NLW x bite	0.001	0.003	-0.014***	-0.015***	0.002	0.004
	(0.003)	(0.006)	(0.003)	(0.005)	(0.002)	(0.004)
Pre-NLW mean of dep. var.	0.002	0.004	0.006	0.007	0.003	0.004
IQ effect	0.000	0.000	-0.001	-0.002	0.000	0.001
% IQ effect	0.029	0.089	-0.181	-0.298	0.066	0.160
Non-employed						
Post-NLW x bite	-0.004	-0.002	-0.014***	-0.010	-0.001	-0.003
	(0.005)	(0.009)	(0.003)	(0.007)	(0.004)	(0.006)
Pre-NLW mean of dep. var.	0.011	0.018	0.010	0.011	0.009	0.013
IQ effect	-0.000	-0.000	-0.001	-0.001	-0.000	-0.000
% IQ effect	-0.025	-0.018	-0.115	-0.129	-0.012	-0.030
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	317,450	94,831	317,450	94,831	317,450	94,831

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British national identity indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Employment status in period t = employed in all columns of panel B. In columns (2), (4), and (6) of Panel A, the dependent variable is an indicator for employment in an LPI industry in period t + 1, and the sample comprises the employed, unemployed, or non-employed respondents in period t, respectively. Columns (2), (4), and (6) of Panel B restrict the sample to individuals who were employed in an LPI industry in period t, and the dependent variable is an indicator for the corresponding status in period t + 1.

Table 5: Effect of NLW Exposure (Bite) on New Job Initiation

	New job (past 12 months)		New job (past 6 months)		New job (past 3 months)	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
Post-NLW x bite	-0.022*	-0.012	-0.023***	-0.017	-0.015**	-0.006
	(0.012)	(0.018)	(0.008)	(0.013)	(0.007)	(0.012)
Pre-NLW mean of dep. var.	0.166	0.217	0.087	0.116	0.054	0.075
IQ effect	-0.002	-0.002	-0.002	-0.002	-0.001	-0.001
% IQ effect	-0.010	-0.008	-0.020	-0.021	-0.022	-0.012
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	671,703	212,650	671,703	212,650	671,703	212,650

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, British nationality, and public sector indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Column (2), (4), and (6) restrict the sample to respondents employed in an LPI industry.

Table 6: Effect of NLW Exposure (Bite) on Contract Hours Type Stocks and Flows

Panel A: Stocks	**Full-time**		**Voluntary part-time | part-time**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
Post-NLW x bite	0.020*	0.042**	0.072***	0.083***
	(0.010)	(0.021)	(0.018)	(0.029)
Pre-NLW mean of dep. var.	0.746	0.614	0.833	0.791
IQ effect	0.002	0.006	0.008	0.023
% IQ effect	0.002	0.010	0.009	0.030
Control Variables	Yes	Yes	Yes	Yes
Observations	674,310	213,185	177,860	83,437

Panel B: Flows	**State in period t**							
(Longitudinal)	**Full-time**		**Part-time**		**Involuntary part-time**		**Voluntary part-time**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State in period t + 1								
Full-time								
Post-NLW x bite	0.019*	0.034*	0.001	0.004				
	(0.010)	(0.018)	(0.014)	(0.017)				
Pre-NLW mean of dep. var.	0.962	0.946	0.057	0.057				
IQ effect	0.002	0.003	0.000	0.001				
% IQ effect	0.002	0.004	0.002	0.018				
Part-time								
Post-NLW x bite	-0.003	-0.004	0.009	-0.007				
	(0.005)	(0.011)	(0.020)	(0.025)				
Pre-NLW mean of dep. var.	0.020	0.030	0.887	0.877				
IQ effect	-0.000	-0.000	0.001	-0.002				
% IQ effect	-0.014	-0.014	0.001	-0.002				
Non-employed								
Post-NLW x bite	-0.016**	-0.030**	-0.010	0.003				
	(0.007)	(0.014)	(0.017)	(0.023)				
Pre-NLW mean of dep. var.	0.018	0.024	0.056	0.066				
IQ effect	-0.002	-0.003	-0.001	0.001				
% IQ effect	-0.096	-0.127	-0.019	0.014				
Involuntary part-time								
Post-NLW x bite					-0.066	-0.113	0.004	0.016*
					(0.071)	(0.075)	(0.008)	(0.010)
Pre-NLW mean of dep. var.					0.742	0.763	0.017	0.022
IQ effect					-0.012	-0.029	0.000	0.005
% IQ effect					-0.016	-0.038	0.019	0.234
Voluntary part-time								
Post-NLW x bite					0.027	0.093**	0.020	-0.007
					(0.033)	(0.042)	(0.021)	(0.029)
Pre-NLW mean of dep. var.					0.088	0.077	0.882	0.865
IQ effect					0.005	0.024	0.002	-0.002
% IQ effect					0.054	0.312	0.002	-0.003
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	228,321	56,097	87,104	38,191	11,371	6,658	75,733	31,533

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2) and (4) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2), (4), (6), and (8) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Table 7: Effect of NLW Exposure (Bite) on Hours Insufficiency and Volatility Stocks and Flows

Panel A: Stocks	**Underemployed**		**Variable hours**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
Post-NLW x bite	-0.028***	-0.033***	0.011	0.020
	(0.007)	(0.012)	(0.014)	(0.021)
Pre-NLW mean of dep. var.	0.100	0.145	0.445	0.432
IQ effect	-0.002	-0.004	0.001	0.003
% IQ effect	-0.021	-0.030	0.002	0.006
Control Variables	Yes	Yes	Yes	Yes
Observations	629,013	194,367	656,776	207,062

Panel B: Flows	**State in period t**							
(Longitudinal)	**Underemployed**		**Non-underemployed**		**Variable hours**		**Fixed hours**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State in period t + 1								
Underemployed								
Post-NLW x bite	-0.008	0.009	-0.022**	-0.019				
	(0.044)	(0.064)	(0.010)	(0.017)				
Pre-NLW mean of dep. var.	0.580	0.607	0.056	0.076				
IQ effect	-0.001	0.002	-0.002	-0.002				
% IQ effect	-0.002	0.004	-0.041	-0.033				
Non-underemployed								
Post-NLW x bite	0.022	-0.005	0.045***	0.044*				
	(0.045)	(0.061)	(0.014)	(0.023)				
Pre-NLW mean of dep. var.	0.382	0.347	0.920	0.887				
IQ effect	0.003	-0.001	0.005	0.006				
% IQ effect	0.008	-0.004	0.005	0.006				
Non-employed								
Post-NLW x bite	-0.014	-0.005	-0.023***	-0.025	-0.015	-0.023	-0.023**	-0.020
	(0.019)	(0.026)	(0.008)	(0.016)	(0.012)	(0.022)	(0.009)	(0.015)
Pre-NLW mean of dep. var.	0.038	0.047	0.025	0.037	0.031	0.047	0.029	0.041
IQ effect	-0.002	-0.001	-0.002	-0.003	-0.002	-0.003	-0.002	-0.003
% IQ effect	-0.053	-0.025	-0.095	-0.086	-0.048	-0.070	-0.067	-0.067
Variable hours								
Post-NLW x bite					-0.029	0.014	0.009	-0.017
					(0.023)	(0.039)	(0.018)	(0.029)
Pre-NLW mean of dep. var.					0.763	0.745	0.239	0.225
IQ effect					-0.003	0.002	0.001	-0.002
% IQ effect					-0.004	0.003	0.003	-0.010
Fixed hours								
Post-NLW x bite					0.044**	0.009	0.014	0.038
					(0.018)	(0.032)	(0.021)	(0.034)
Pre-NLW mean of dep. var.					0.206	0.208	0.732	0.734
IQ effect					0.005	0.001	0.001	0.005
% IQ effect					0.022	0.006	0.002	0.007
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24,899	10,523	258,964	71,738	133,816	38,778	151,385	46,283

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2) and (4) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2), (4), (6), and (8) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Table 8: Effect of NLW Exposure (Bite) on Self-Employment Stocks and Flows

Panel A: Stocks	**Employee**		**Solo self-employed**		**Non-solo self-employed**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
Post-NLW x bite	0.002	0.001	-0.004	-0.004	0.002	0.004
	(0.008)	(0.011)	(0.007)	(0.008)	(0.005)	(0.006)
Pre-NLW mean of dep. var.	0.861	0.869	0.116	0.102	0.023	0.029
IQ effect	0.000	0.000	-0.000	-0.001	0.000	0.001
% IQ effect	0.000	0.000	-0.003	-0.006	0.007	0.017
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	674,310	213,185	674,310	213,185	674,310	213,185
Panel B: Flows	**State in period t**					
(Longitudinal)	**Employee**		**Solo self-employed**		**Non-solo self-employed**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Employee						
Post-NLW x bite	0.021***	0.012	-0.010	-0.021	0.006	0.037
	(0.008)	(0.015)	(0.025)	(0.049)	(0.042)	(0.148)
Pre-NLW mean of dep. var.	0.964	0.951	0.033	0.030	0.040	0.035
IQ effect	0.002	0.002	-0.001	-0.002	0.001	0.002
% IQ effect	0.002	0.002	-0.030	-0.068	0.015	0.057
Solo self-employed						
Post-NLW x bite	0.002	0.005	-0.055	-0.073	0.236**	0.015
	(0.003)	(0.003)	(0.039)	(0.080)	(0.090)	(0.146)
Pre-NLW mean of dep. var.	0.006	0.005	0.920	0.915	0.065	0.049
IQ effect	0.000	0.001	-0.006	-0.007	0.021	0.001
% IQ effect	0.038	0.161	-0.006	-0.008	0.330	0.017
Non-solo self-employed						
Post-NLW x bite	-0.000	0.001	0.014	0.026	-0.292**	-0.038
	(0.001)	(0.001)	(0.012)	(0.023)	(0.114)	(0.180)
Pre-NLW mean of dep. var.	0.001	0.001	0.015	0.017	0.889	0.908
IQ effect	-0.000	0.000	0.001	0.003	-0.026	-0.002
% IQ effect	-0.030	0.132	0.093	0.155	-0.030	-0.002
Non-employed						
Post-NLW x bite	-0.024***	-0.017	0.050**	0.067	0.050	-0.014
	(0.008)	(0.014)	(0.024)	(0.043)	(0.045)	(0.043)
Pre-NLW mean of dep. var.	0.030	0.043	0.032	0.038	0.007	0.009
IQ effect	-0.002	-0.003	0.005	0.007	0.005	-0.001
% IQ effect	-0.068	-0.071	0.160	0.174	0.641	-0.090
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	271,675	80,869	38,330	11,034	7,445	2,928

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2), (4), and (6) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2), (4), and (6) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Table 9: Effect of NLW Exposure (Bite) on Alternative Contracts Stocks and Flows

Panel A: Stocks	**Temporary job**		**Agency work: Temporary**		**Agency work: Permanent**		**Zero-hours contract**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-NLW x bite	-0.016*	0.004	-0.004	0.001	0.001	0.004	0.017**	0.023
	(0.008)	(0.013)	(0.003)	(0.005)	(0.003)	(0.004)	(0.007)	(0.014)
Pre-NLW mean of dep. var.	0.053	0.063	0.012	0.014	0.015	0.017	0.023	0.045
IQ effect	-0.001	0.001	-0.000	0.000	0.000	0.001	0.001	0.003
% IQ effect	-0.023	0.009	-0.027	0.014	0.009	0.041	0.057	0.066
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	674,310	213,185	577,549	183,308	577,549	183,308	270,443	84,535

Panel B: Flows	**State in period t**			
(Longitudinal)	**Temporary job**		**Permanent job**	
	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
State in period t + 1				
Temporary job				
Post-NLW x bite	-0.017	-0.033	-0.005	-0.007
	(0.041)	(0.070)	(0.005)	(0.009)
Pre-NLW mean of dep. var.	0.698	0.643	0.013	0.016
IQ effect	-0.005	-0.014	-0.000	-0.001
% IQ effect	-0.008	-0.021	-0.029	-0.067
Permanent job				
Post-NLW x bite	0.090***	0.137***	0.015	0.013
	(0.030)	(0.050)	(0.009)	(0.015)
Pre-NLW mean of dep. var.	0.175	0.195	0.967	0.953
IQ effect	0.028	0.056	0.001	0.002
% IQ effect	0.159	0.290	0.001	0.002
Non-employed				
Post-NLW x bite	-0.073**	-0.104**	-0.010	-0.006
	(0.029)	(0.052)	(0.008)	(0.013)
Pre-NLW mean of dep. var.	0.127	0.162	0.021	0.032
IQ effect	-0.022	-0.043	-0.001	-0.001
% IQ effect	-0.177	-0.265	-0.039	-0.026
Control Variables	Yes	Yes	Yes	Yes
Observations	14,958	5,266	252,887	74,472

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2), (4), (6), and (8) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2) and (4) of panel B restrict the sample to individuals employed in an LPI industry in period t.

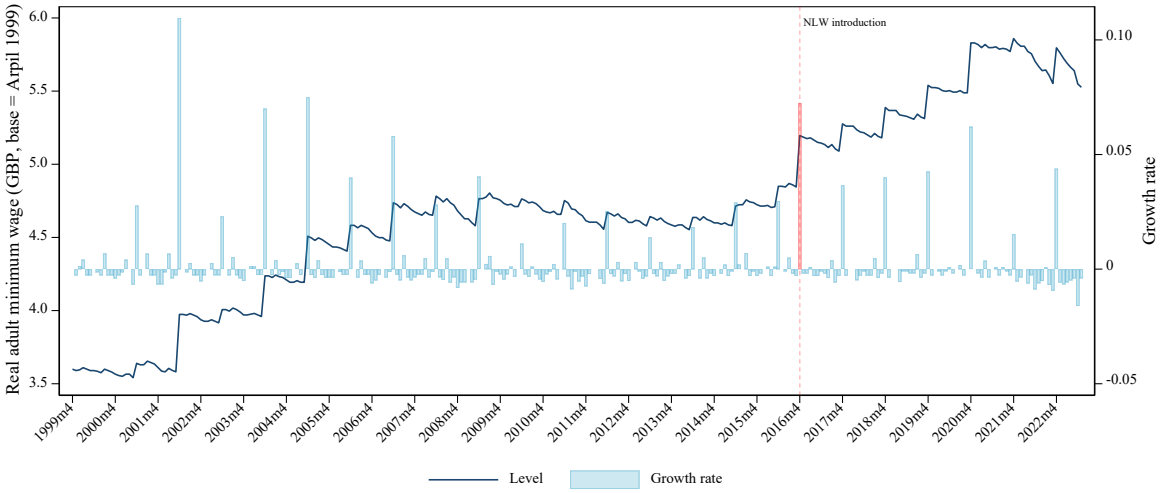
Table 10: Effect of NLW Exposure (Bite) on Non-Standard Work Stocks and Flows

Panel A: Stocks	**Non-standard work**	
(Cross-Sectional)	Pooled	LPI
	(1)	(2)
Post-NLW x bite	-0.033***	-0.040*
	(0.012)	(0.021)
Pre-NLW mean of dep. var.	0.364	0.473
IQ effect	-0.003	-0.006
% IQ effect	-0.007	-0.012
Control Variables	Yes	Yes
Observations	674,310	213,185

Panel B: Flows	**State in period t**			
(Longitudinal)	**Non-standard work**		**Standard work**	
	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
State in period t + 1				
Non-standard work				
Post-NLW x bite	0.019	0.016	-0.005	-0.023
	(0.018)	(0.026)	(0.008)	(0.015)
Pre-NLW mean of dep. var.	0.899	0.888	0.032	0.042
IQ effect	0.002	0.004	-0.001	-0.003
% IQ effect	0.002	0.004	-0.017	-0.060
Standard work				
Post-NLW x bite	-0.001	-0.003	0.025**	0.045**
	(0.012)	(0.018)	(0.012)	(0.021)
Pre-NLW mean of dep. var.	0.051	0.049	0.950	0.936
IQ effect	-0.000	-0.001	0.003	0.005
% IQ effect	-0.001	-0.013	0.003	0.005
Non-employed				
Post-NLW x bite	-0.019	-0.013	-0.019**	-0.022*
	(0.014)	(0.020)	(0.008)	(0.013)
Pre-NLW mean of dep. var.	0.050	0.062	0.018	0.022
IQ effect	-0.002	-0.003	-0.002	-0.002
% IQ effect	-0.032	-0.048	-0.113	-0.107
Control Variables	Yes	Yes	Yes	Yes
Observations	120,688	46,875	196,762	47,956

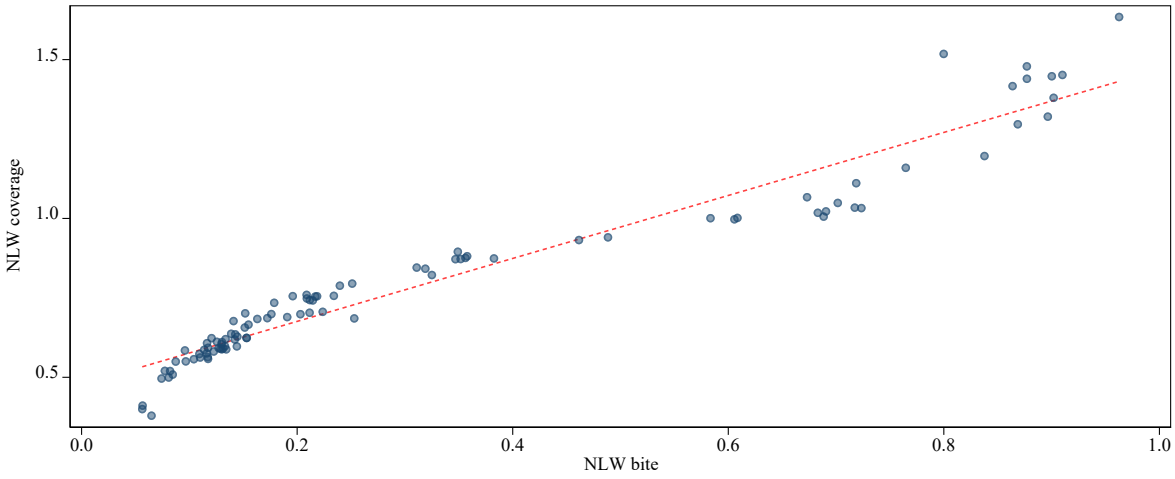
Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Column (2) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2) and (4) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Figure 1: Evolution of the Adult Minimum Wage Rate



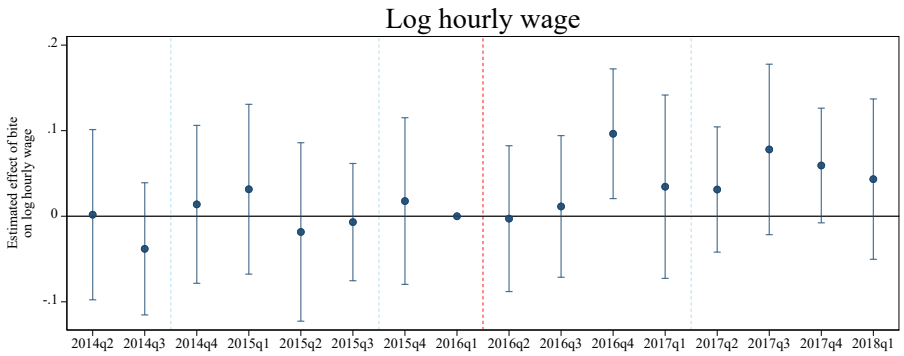
Notes: The blue line plots the real binding minimum wage rate for adults (25 or older) on the left-hand axis. It corresponds to the National Minimum Wage until April, 2016 and to the National Living Wage since its introduction. Monthly nominal rates are deflated by the monthly Consumer Price Index with base April, 1999. The pale blue bars plot the corresponding monthly growth rates of the real adult minimum wage rate on the right-hand axis.

Figure 2: Correlation of Pre-Reform Exposure Measures

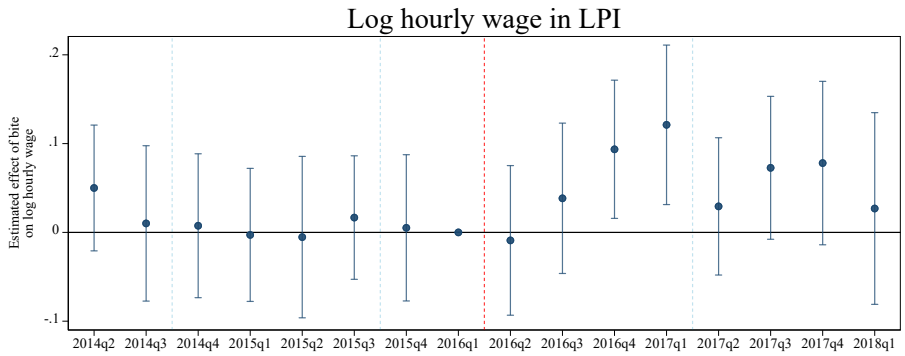


Sample: 96 exposure units (age band x region). Correlation: ρ = 0.97.

Figure 3: Effect of NLW Exposure (Bite) on Hourly Wages and Hours Worked

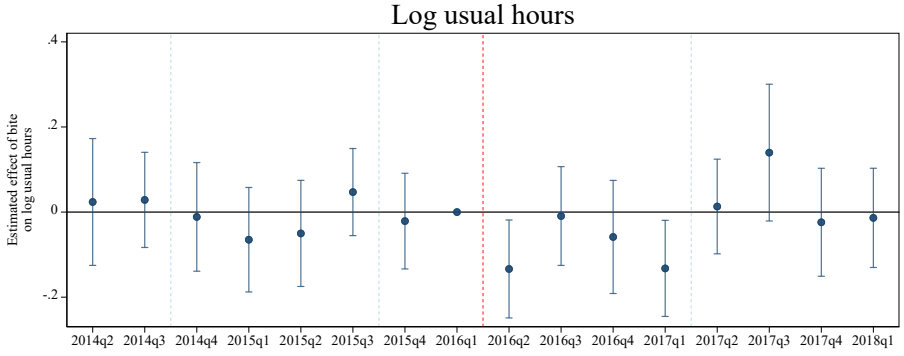


Mean bite = 0.61. 75th percentile of bite = 0.64. Pre-reform p-value = 0.768. Post-reform p-value = 0.002. Sample size = 154,880.

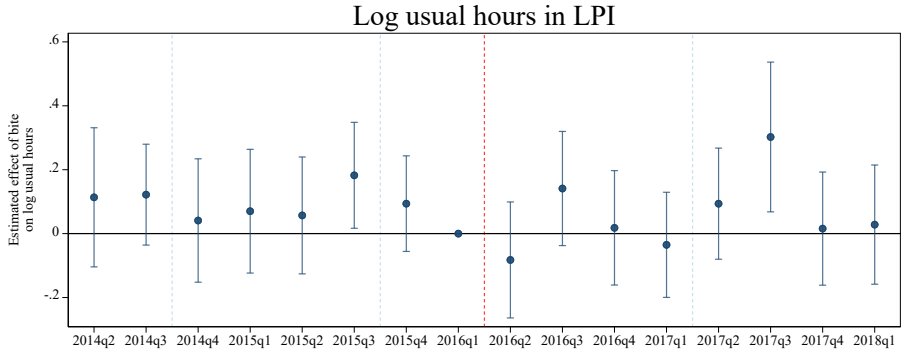


Mean bite = 0.66. 75th percentile of bite = 0.70. Pre-reform p-value = 0.789. Post-reform p-value = 0.020. Sample size = 47,656.

(a) Hourly wages



Mean bite = 0.61. 75th percentile of bite = 0.64. Pre-reform p-value = 0.364. Post-reform p-value = 0.004. Sample size = 154,880.



Mean bite = 0.66. 75th percentile of bite = 0.70. Pre-reform p-value = 0.329. Post-reform p-value = 0.003. Sample size = 47,656.

(b) Hours worked

Figure 4: Effect of NLW Exposure (Bite) on Employment Stocks and Flows

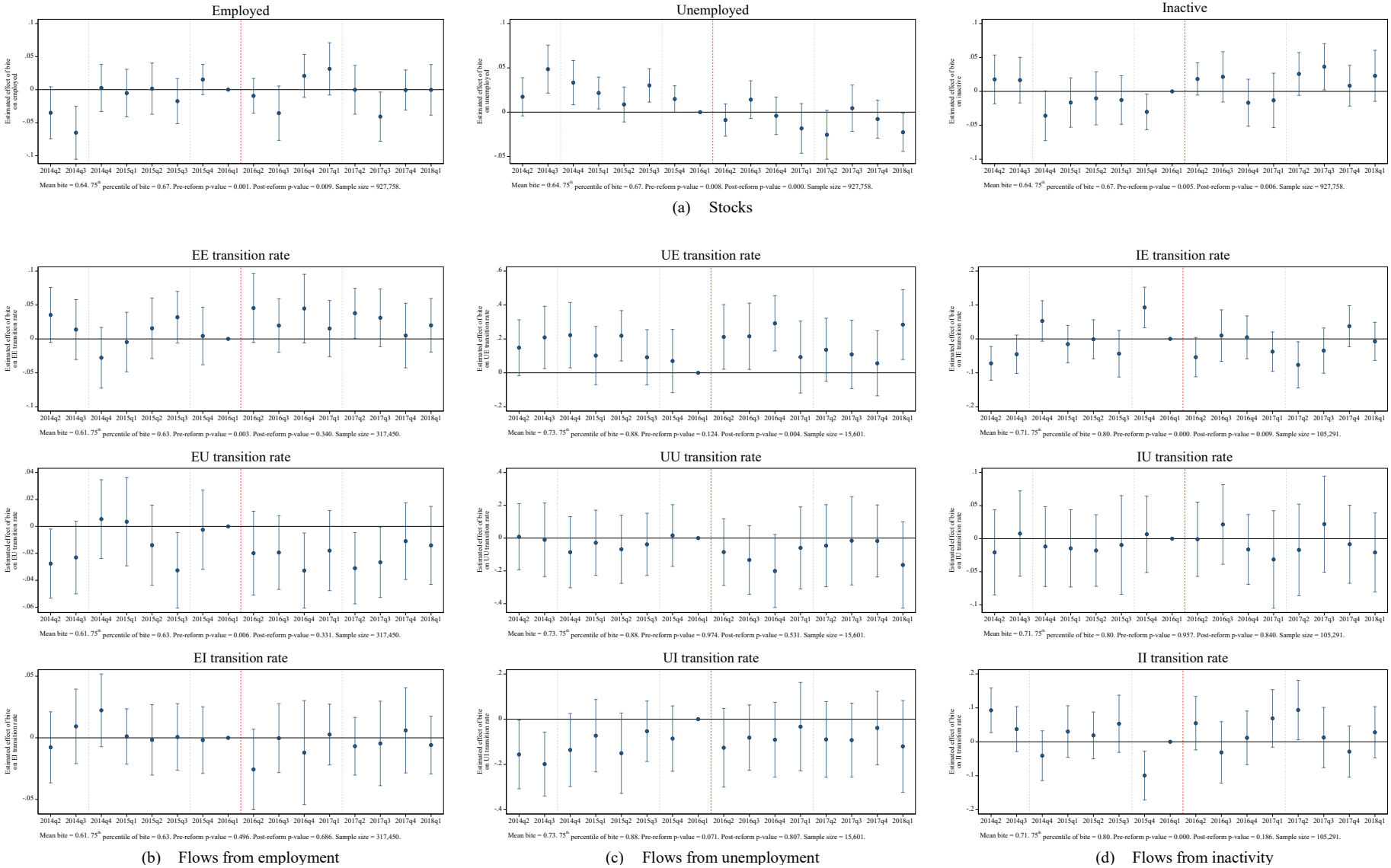
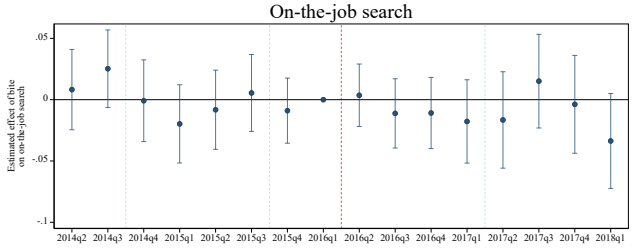
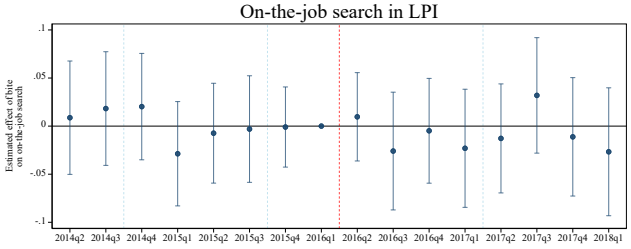


Figure 5: Effect of NLW Exposure (Bite) on Job Search

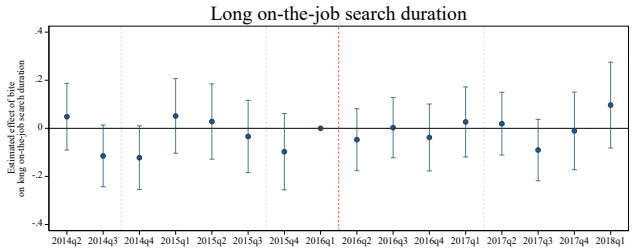


Mean bite = 0.61. 75th percentile of bite = 0.63. Pre-reform p-value = 0.093. Post-reform p-value = 0.022. Sample size = 675,621.

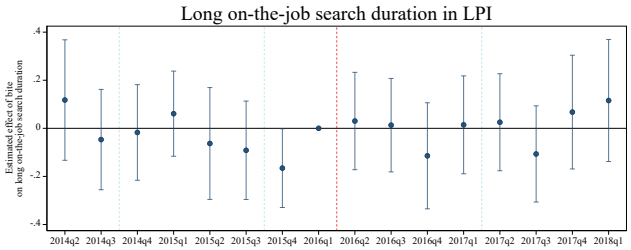


Mean bite = 0.66. 75th percentile of bite = 0.70. Pre-reform p-value = 0.567. Post-reform p-value = 0.218. Sample size = 213,836.

(a) On-the-Job: Search incidence

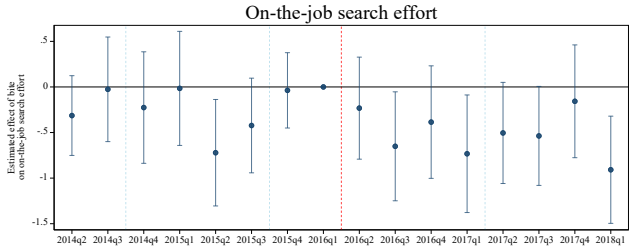


Mean bite = 0.63. 75th percentile of bite = 0.69. Pre-reform p-value = 0.097. Post-reform p-value = 0.361. Sample size = 42,264.

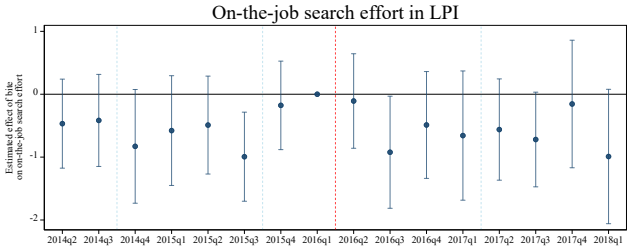


Mean bite = 0.68. 75th percentile of bite = 0.82. Pre-reform p-value = 0.067. Post-reform p-value = 0.303. Sample size = 17,840.

(b) On-the-Job: Long search duration

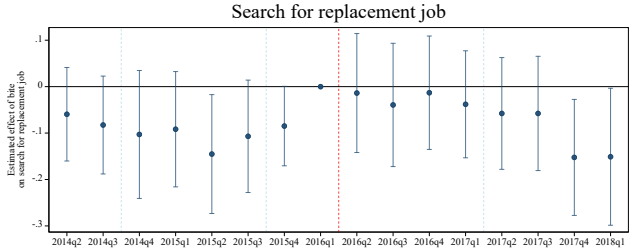


Mean bite = 0.63. 75th percentile of bite = 0.69. Pre-reform p-value = 0.180. Post-reform p-value = 0.031. Sample size = 42,246.

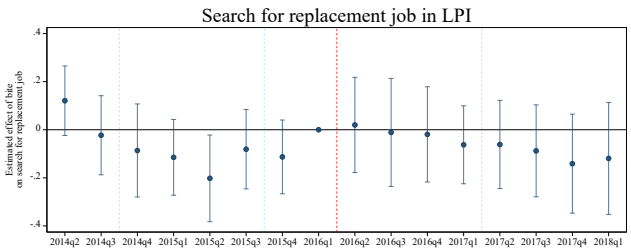


Mean bite = 0.68. 75th percentile of bite = 0.82. Pre-reform p-value = 0.094. Post-reform p-value = 0.172. Sample size = 17,838.

(c) On-the-Job: Search effort

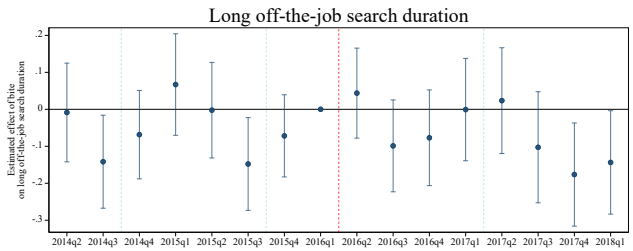


Mean bite = 0.63. 75th percentile of bite = 0.69. Pre-reform p-value = 0.442. Post-reform p-value = 0.244. Sample size = 42,264.



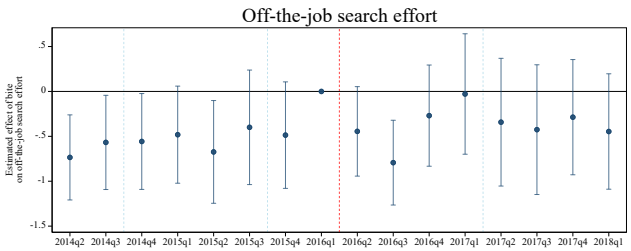
Mean bite = 0.68. 75th percentile of bite = 0.82. Pre-reform p-value = 0.000. Post-reform p-value = 0.745. Sample size = 17,840.

(d) On-the-Job: Replacing current job



Mean bite = 0.73. 75th percentile of bite = 0.88. Pre-reform p-value = 0.007. Post-reform p-value = 0.023. Sample size = 33,873.

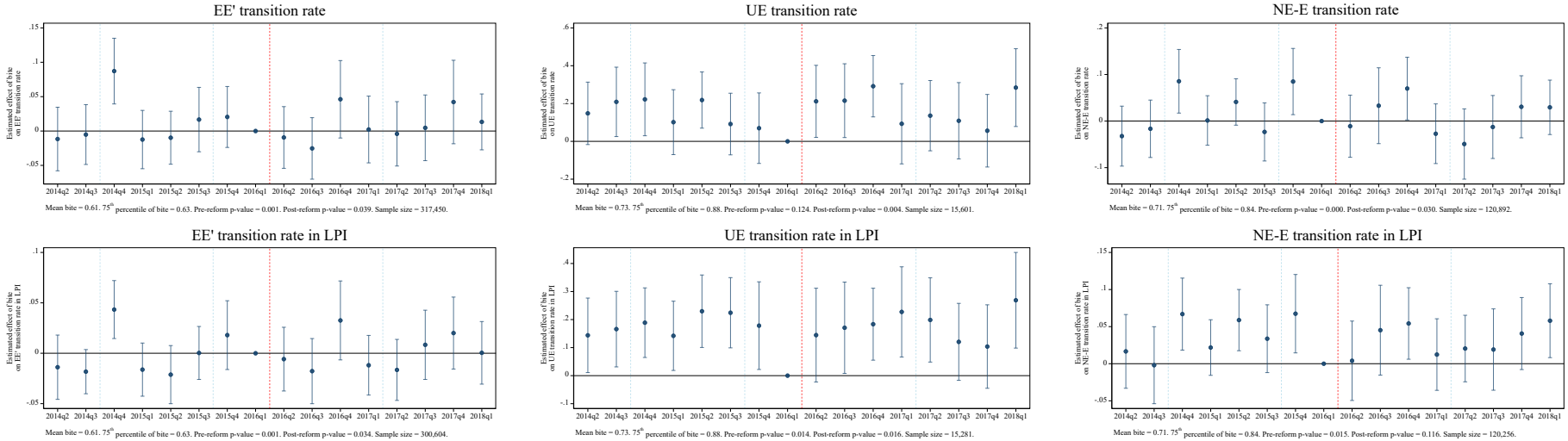
(e) Off-the-Job: Long search duration



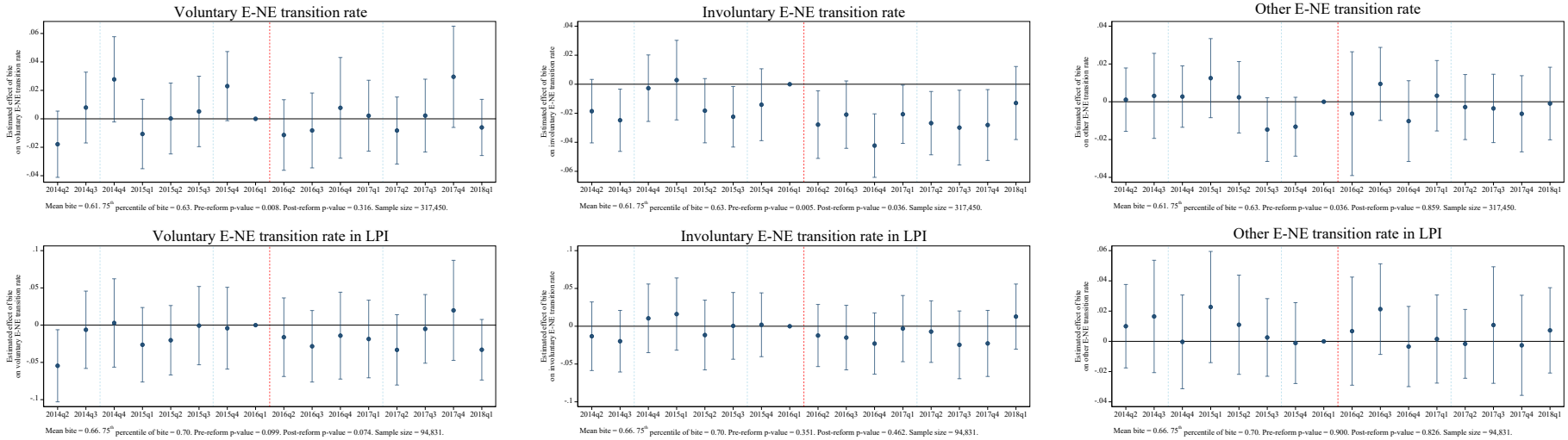
Mean bite = 0.74. 75th percentile of bite = 0.88. Pre-reform p-value = 0.079. Post-reform p-value = 0.032. Sample size = 33,854.

(f) Off-the-Job: Search effort

Figure 6: Effect of NLW Exposure (Bite) on Job Hiring and Separations

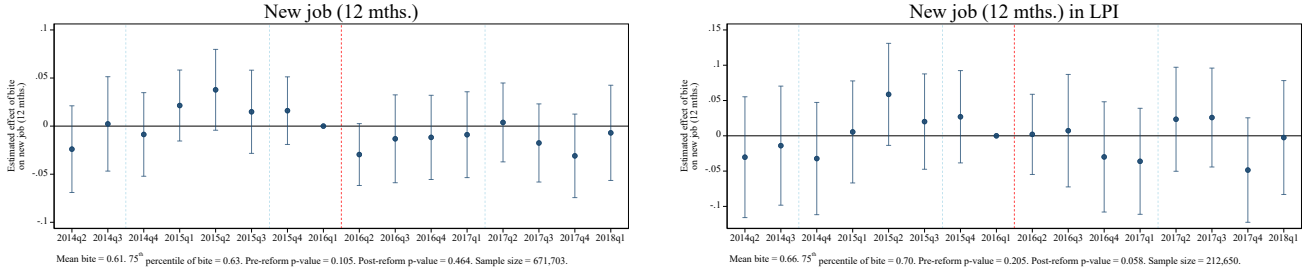


(a) Hiring from employment (b) Hiring from unemployment (c) Hiring from non-employment

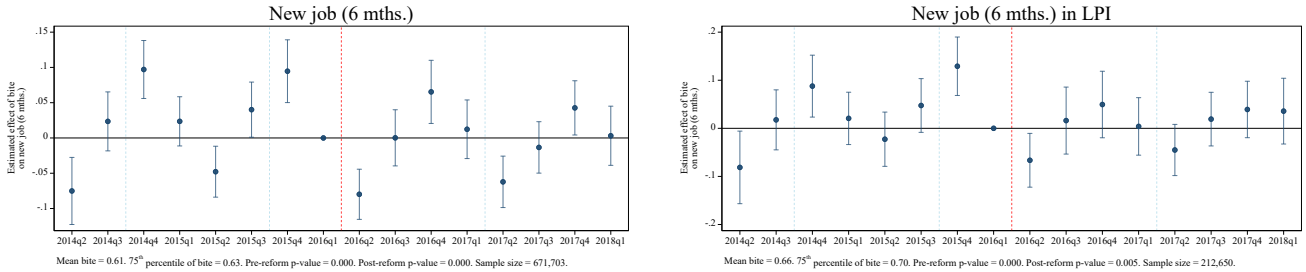


(d) Voluntary separations (e) Involuntary separations (f) Other separations

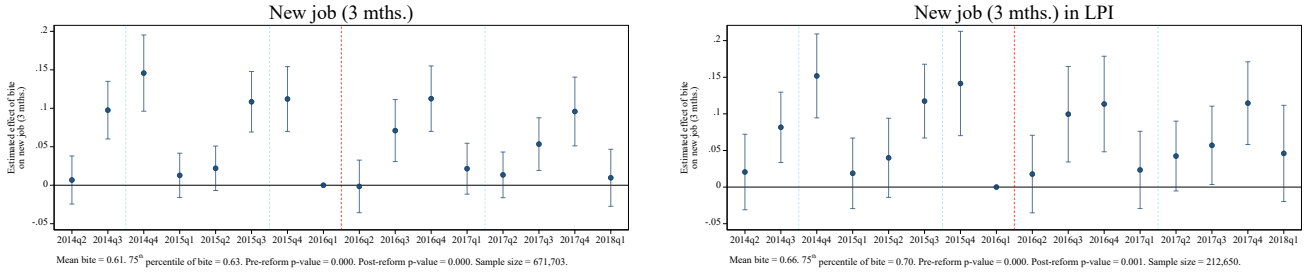
Figure 7: Effect of NLW Exposure (Bite) on New Job Initiation



(a) Started new job in the past 12 months

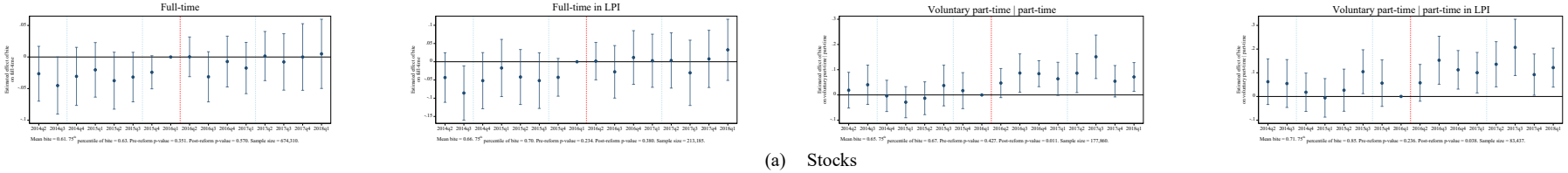


(b) Started new job in the past 6 months

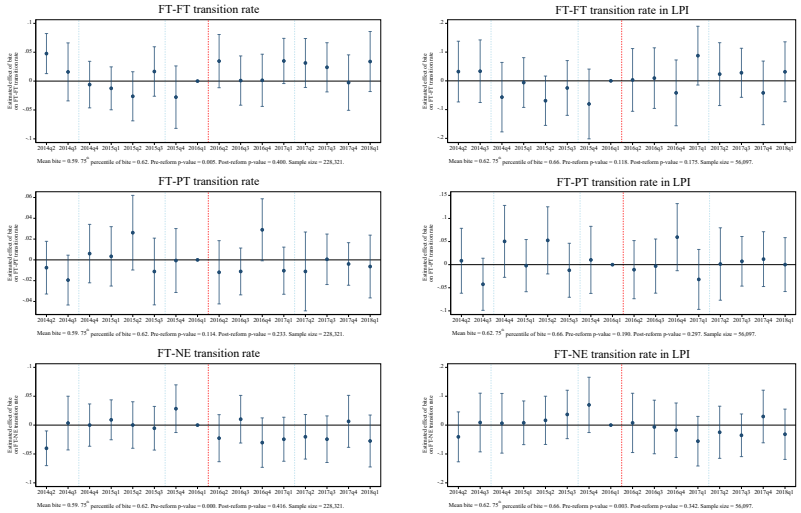


(c) Started new job in the past 3 months

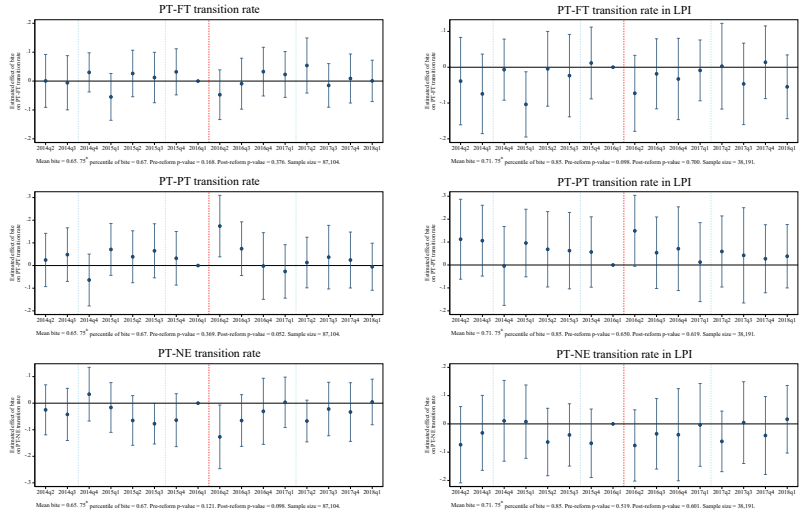
Figure 8: Effect of NLW Exposure (Bite) on Contract Hours Type Stocks and Flows



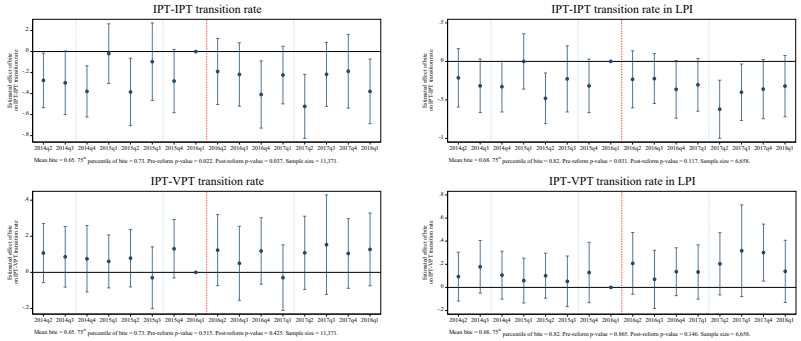
(a) Stocks



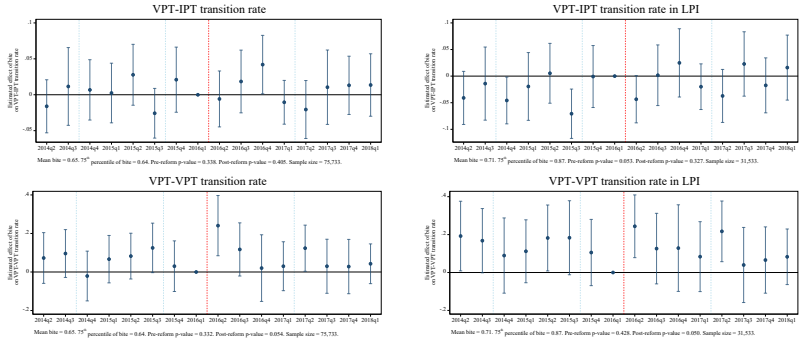
(b) Flows from full-time employment



(c) Flows from part-time employment



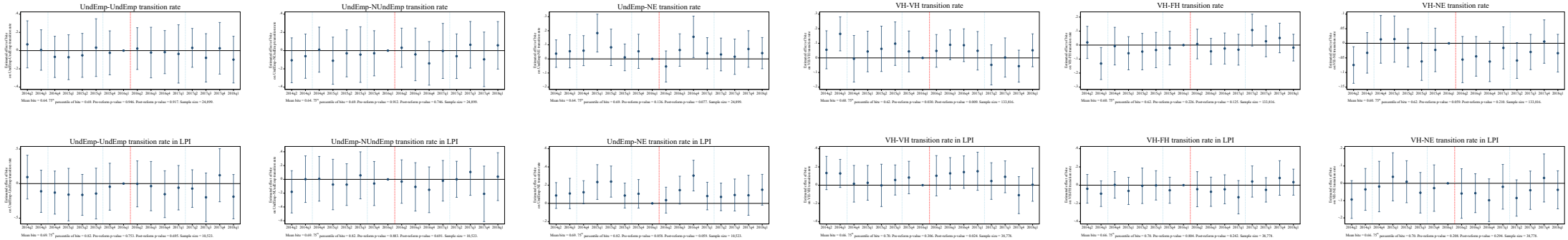
(d) Flows from involuntary part-time employment



(e) Flows from voluntary part-time employment

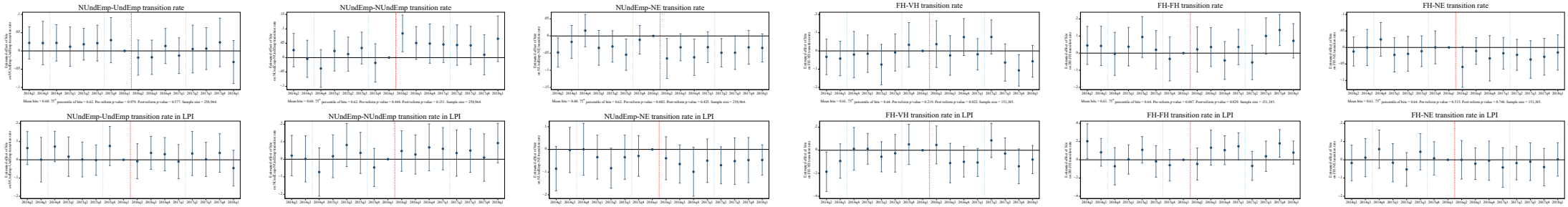
Figure 9: Effect of NLW Exposure (Bite) on Hours Insufficiency and Volatility Stocks and Flows

(a) Stocks



(b) Flows from underemployment

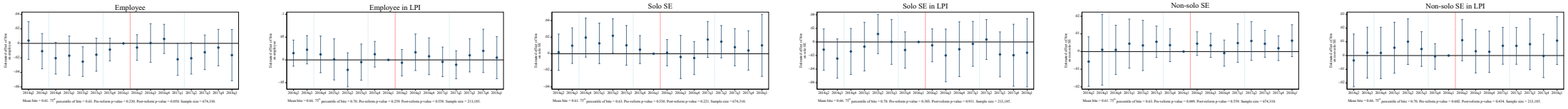
(c) Flows from variable hours



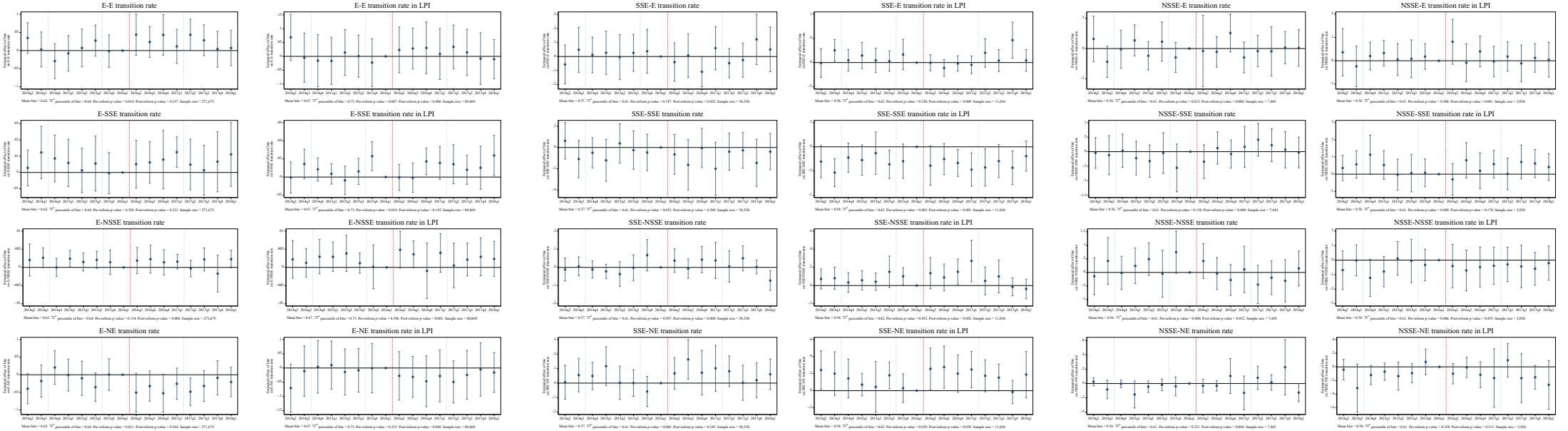
(d) Flows from non-underemployment

(e) Flows from fixed hours

Figure 10: Effect of NLW Exposure (Bite) on Self-Employment Stocks and Flows

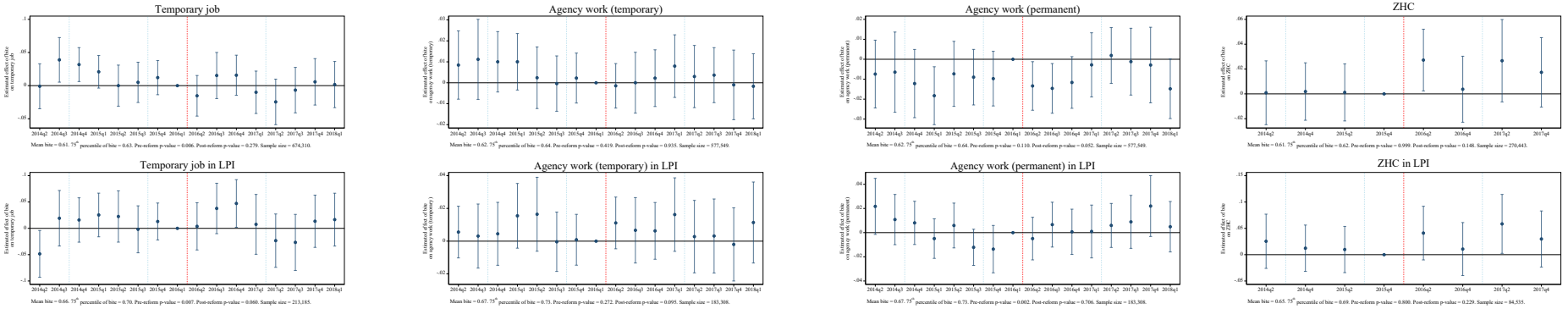


(a) Stocks

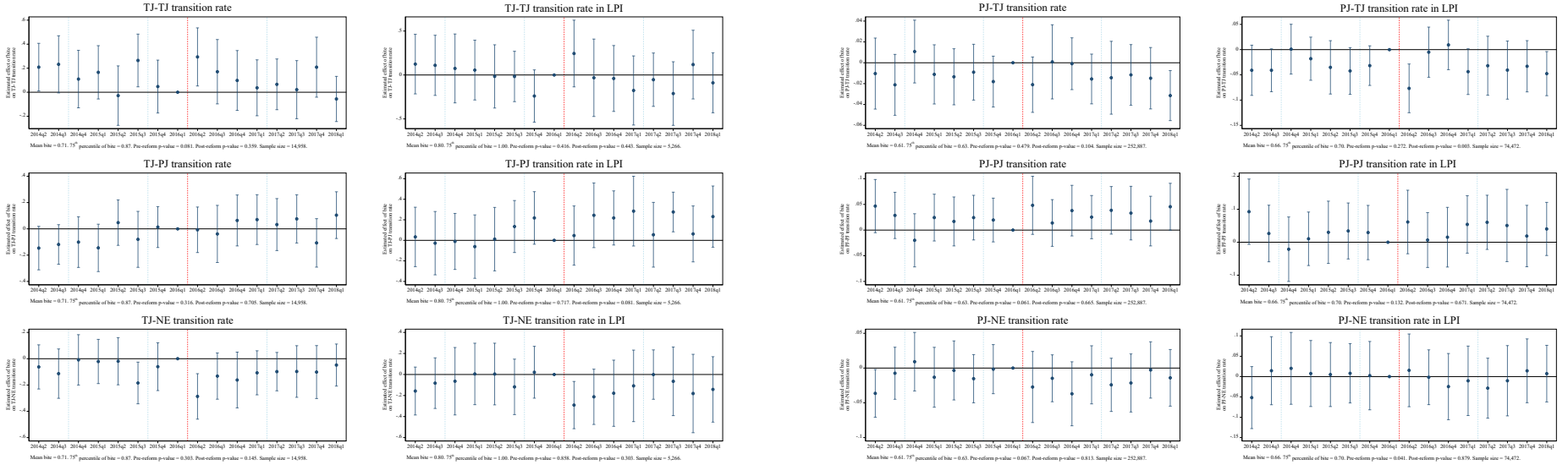


(b) Flows from employee work (c) Flows from solo self-employment (d) Flows from non-solo self-employment

Figure 11: Effect of NLW Exposure (Bite) on Alternative Contracts Stocks and Flows



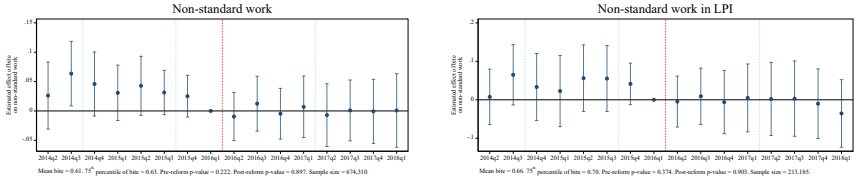
(a) Stocks



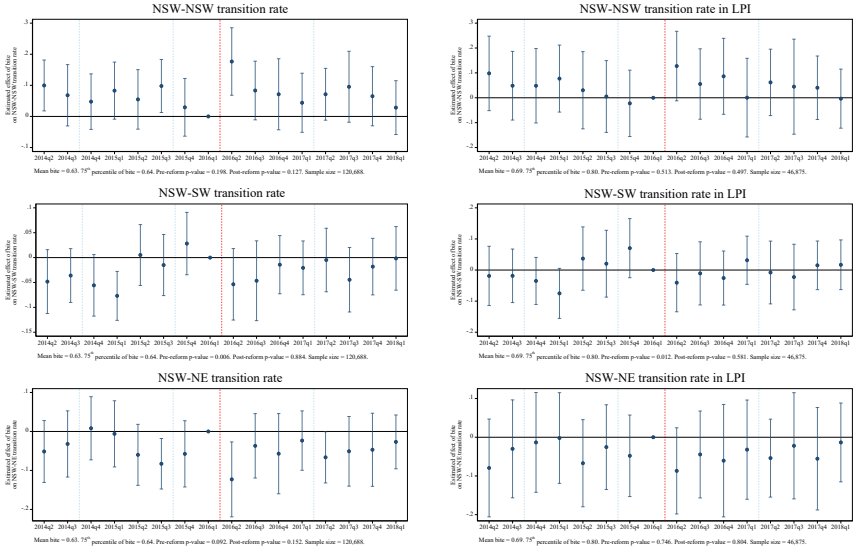
(b) Flows from temporary employment

(c) Flows from permanent employment

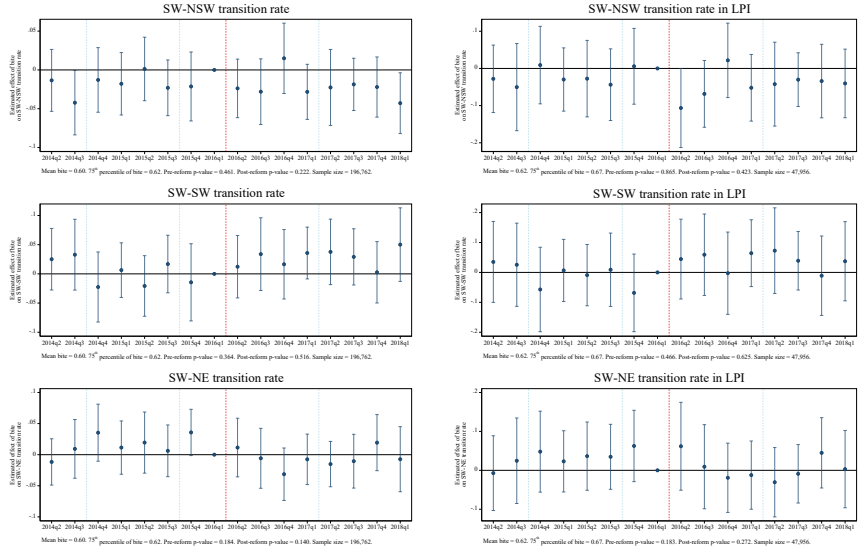
Figure 12: Effect of NLW Exposure (Bite) on Non-Standard Work Stocks and Flows



(a) Stocks



(b) Flows from non-standard work



(c) Flows from standard work

Appendix

A. Data Description

A.1 Cross-Sectional Data

We construct our cross-sectional dataset by appending the quarterly QLFS files from 2014Q2 to 2018Q1 and merging the corresponding NLW bite and coverage values from ASHE. We restrict the sample to individuals aged 16-65 each quarter and exclude those working outside the UK. We further exclude employed and unemployed respondents when the information to characterise their job search behaviour is unavailable. Finally, we exclude observations with missing nationality or ethnicity information. Each variable used in our cross-sectional analysis is defined as follows.

Date

Our date variable is the quarterly date of the reference week and is constructed from LFS variables REFWKM (month) and REFWKY (year). It ranges from 2014Q2 to 2018Q1.

Age Band

We recode LFS variable AGE into 8 age bands: 16-17, 18-20, 21-24, 25-29, 30-39, 40-49, 50-64, and 65+. The younger bands map to the age profile of the minimum wages binding in the UK over the sample period. Because of the sample restriction to individuals aged 16 to 65, the last band contains 65-year-olds only. However, the bite and coverage statistics from ASHE data for this age band include workers aged 65 or older.

Region of Work/Residence

Our geographic unit consists of the 12 regions in level 1 of the International Territorial Level (ITL) subdivision of the UK, displayed in Table A.1 below. LFS variable GORWKR reports the region of place of work for all respondents in employment. Since GORWKR was reported at the 21-region level before 2015Q2, we harmonise accordingly. There is an additional category for respondents with a workplace outside the UK, which we exclude as mentioned above. For respondents with missing information on region of work, we impute the region of residence using LFS variable URESMC, suitably recoded to the 12-region level (0.35% of employed observations, 100% of unemployed and inactive observations). URESMC reports the region of usual residents for all respondents.

Table A.1: UK Regions

#	Region
1	North East, England
2	North West, England
3	Yorkshire and the Humber, England
4	East Midlands, England
5	West Midlands, England
6	East of England
7	London, England
8	South East, England
9	South West, England
10	Wales
11	Scotland
12	Northern Ireland

NLW Bite and Coverage

Our analysis groups workers into exposure units based on age band and region of work as defined above. Our measures of exposure at this level of aggregation are defined over the year before the introduction of the NLW and are thus time-invariant. We use the ASHE data for this period to compute our measures of bite —defined as the ratio of the NLW rate at the time of introduction, £7.2 per hour, to the median hourly wage at the exposure-unit level— and coverage —defined as the proportion of workers earning below £7.2 per hour at the exposure-unit level. We merge the bites and coverages from the resulting cross-section of exposure units into our main cross-section of LFS respondents.

Low-Paying Industries

We follow the low-paying industry (LPI) classification of SIC 2007 industry codes defined in Table A3.1 of Low Pay Commission (2017). LFS variables INDD07M, INDG07M, and INDC07M report the industry division, group, and class SIC 2007 codes corresponding to the main job of employed respondents, respectively. Since the industry sub-class (in the main job) variable INDSC07M is not available in the safeguarded versions of the QLFS datasets, we exclude two industry classes that contain a sub-class that would be classified as LPI and some non-LPI sub-classes, preventing correct classification at the available, more aggregate level. These are (i) "Hospital activities" (86.10), containing LPI subclass "Medical nursing home activities" (86.10/2) and non-LPI sub-class "Hospital activities" (86.10/1); and (ii) "Activities of employment placement agencies", containing LPI sub-class "Activities of employment placement agencies (other than motion picture, television and other theatrical casting) n.e.c." (78.10/9) and non-LPI sub-class "Motion picture, television and other theatrical casting" (78.10/1). This exclusion amounts to 5.08% of observations with non-missing industry information.

Hours Worked

Our measure of work hours is total usual hours, including usual paid overtime, and is based on LFS variables BUSHR and POTHR. BUSHR is a derived variable that measures total usual hours worked in the main job excluding overtime. It applies to all respondents in employment excluding those on certain government schemes. POTHR measures usual hours of paid overtime and applies to all respondents who may work paid or unpaid overtime. Both variables are originally right censored at 97 weekly hours. We truncate the resulting hours variable at 100 (0.01% observations) and censor the remaining observations at 80 weekly hours (0.33% observations). When analysing the impact of the NLW on hours worked, we restrict the sample to observations with non-missing wage and hours data.

Hourly Wage

We focus on nominal hourly wages as captured by LFS variable HRRATE, which measures the basic hourly pay for respondents who are paid a fixed hourly rate and is top coded at £995 per hour. For respondents who do not report a fixed hourly rate, we impute the hourly wage implied by their weekly pay as reported in variable GRSSWK, a derived variable that measures the gross weekly pay in the main job and applies to all respondents who are employees and those on a government scheme (65.88% obs.). Before imputation, we censor GRSSWK at 1.5 times the weekly equivalent of the £99995 top code for variable GROSS99, from which GRSSWK is derived (1.42% obs.). The weekly hours variable used for imputation

is the one described above. After imputation, we top-code the resulting hourly wage variable by right-censoring at 1.5 times the hourly equivalent of the £99995 GROSS99 top code, assuming a minimum of 20 weekly hours of work (0.08% obs.). Finally, we bottom-code by truncating at the corresponding apprentice MW rate (0.72% obs.) and whenever GRSSWK is below the minimum weekly pay implied by the respondent's weekly hours of work at that rate (0.50% obs.). When analysing the impact of the NLW on hourly wages, we restrict the sample to observations with non-missing wage and hours data.

Employment Status

LFS variable ILODEFR applies to all respondents and reports their basic economic activity group following the standard International Labour Organization (ILO) classification: employed, unemployed, and economically inactive. There is a fourth category for respondents under the age of 16, but we exclude them as mentioned above. We generate an indicator variable for each of these three categories.

Job Search

A set of LFS variables allows us to characterise on-the-job and off-the-job search in terms of their incidence (probability of searching), effort (number of search methods used), duration, and job seeker preferences concerning the employment status (employee vs self-employed) and contract-hours type (full-time vs part-time) of the desired job.

DIFJOB reports whether the respondent is looking for a new job or business and applies to all respondents in employment. Similarly, LOOK4 reports whether the respondent has been looking for paid work in the last four weeks and applies to all respondents who did unpaid work in the reference week or have no current job. We capture the incidence of on-the-job and off-the-job search with indicator variables for (i) DIFJOB = 1 ("Yes") for employed respondents and (ii) LOOK4 = 1 ("Yes") for unemployed respondents, respectively.

METHMP(01-11), METHSE(1-6), and METHAL(01-14) are multi-response variables reporting the search methods used by job seekers looking for work as an employee, as self-employed, or indifferent, respectively. We define search effort as the number of methods used, separately for on-the-job and off-the-job searchers. We control for preference over employment status (employee, self-employed, or indifferent) in our analysis of search effort to account for the varying total number of search methods recorded in the METHMP, METHSE, and METHAL variables.

LKTIMA is an ordered categorical variable recording how long the respondent has been looking for a job in intervals that go from "Not yet started" up to "5 years or more" and applies to all respondents who are looking for paid work or a place on a government scheme but not waiting to take up a new job/business already obtained. LKTIMB is the corresponding analogue for respondents who are not working in the reference week but have found a job they are waiting to start. We construct dummy variables indicating LKTIMA/B ≥ 6 ("12 months but less than 18 months") for the above-defined samples of (i) on-the-job and (ii) off-the-job searchers, capturing long search durations for each type of job search, respectively.

LKSELA is a categorical variable recording whether the respondent is looking for work as an employee or self-employed or has no preference, and applies to all respondents looking for paid work in the last four weeks. Dummy variables for each level of LKSELA for the

samples of on-the-job and off-the-job searchers capture their preference concerning the employment status of the desired job. Similarly, LKFTPA reports the respondent's preference (or indifference) for full-time vs part-time work but applies to those seeking work as an employee (or indifferent) according to LKSELA. We generate analogue indicator variables for the three possible answers to LKFTPA for on-the-job and off-the-job seekers who look for work as employees. Note that respondents who are unemployed during the reference week but are waiting to start a new job are excluded from this set of job seeker preference variables.

New Job Initiation

While EMPMON —recording the number of months continuously employed for all respondents in employment— provides a continuous measure of job tenure, EMPLEN provides job tenure information in the form of an ordered categorical variable in 8 intervals ranging from "Less than 3 months" to "20 years or more". We use EMPMON directly and generate indicator variables for job tenures below 6 and 12 months based on EMPLEN. For job tenures below 3 months, we exploit an alternative source of information in variable REDPAID, which indicates whether the respondent left a paid job in the last 3 months and applies to employed respondents who started their current job within the last 3 months. Our dummy for tenure below 3 months is just an indicator for non-missing REDPAID. We identify job movers within the past 3 months as those with REDPAID = 1 ("Yes") among those with job tenure below 3 months.

We further exploit information on the reason for separation contained in REDYL13, which applies to all respondents who left a paid job in the last 3 months or were unemployed in the reference week, having left their previous job within 8 years. REDYL13 reports the reason for leaving the last job in 11 categories, which we further classify as voluntary, involuntary, or other, as summarised in Table A.2 below. We generate a matching set of dummies for voluntary, involuntary, and other job moves, indicating that REDYL13 takes any of the corresponding values in the subsample of past-3-month job movers (REDPAID = 1). To make the samples consistent across all the job initiation variables, we further restrict the sample for all the constructed variables described in this paragraph and the one above by excluding all observations with missing data on EMPLEN, or with REDPAID = 1 and missing data on REDYL13.

Table A.2: Reason for Job Separation

#	REDYL13 – Reason left last job	Classification
1	Dismissed	Involuntary
2	Made redundant	Involuntary
3	Took voluntary redundancy	Involuntary
4	Temporary job which came to an end	Involuntary
5	Resigned	Voluntary
6	Gave up work for health reasons	Other
7	Took early retirement	Voluntary
8	Retired (at or after state pension age)	Voluntary
9	Gave up work for family or personal reasons	Other
10	Education or training	Voluntary
11	Left for some other reason	Other

Contract Hours

Our classification of contract hours into full- or part-time is based on LFS variable FTPTW, which records the part-time/full-time status for all respondents who are employees or

self-employed, together with their reason for part-time work. We also classify part-time workers into voluntary and involuntary part-time, as summarized in Table A.3 below. We generate indicators for full-timers and involuntary part-timers conditional on part-time work.

Our measure of hours insufficiency is an underemployment dummy based on LFS variable UNDEMP, which reports whether the respondent would like to work longer hours at their current basic rate of pay, given the opportunity, and applies to all respondents in employment who are not looking for a job.

Finally, our measure of hours volatility is an indicator variable for variable weekly hours based on LFS variables DIFFHR6 and VARYHR. DIFFHR6 is a categorical variable reporting whether and why hours differ from usual hours in the reference week and applies to all employed respondents. VARYHR is a binary variable reporting whether weekly hours vary and applies to all respondents in work who did not work their usual hours in the reference week but did not previously state variable hours, particularly to self-employed and shift workers. We start by identifying workers with variable hours as those with DIFFHR6 = 2 ("Hours vary"). We also classify respondents with non-missing DIFFHR6 and VARYHR = 1 ("Yes").

Table A.3: Contract Hours Classification

#	FTPTW – Full- or Part-Time	Classification
1	Part-time – student	Voluntary part-time
2	Part-time – ill or disabled	Voluntary part-time
3	Part-time – could not find full-time job	Involuntary part-time
4	Part-time – did not want full-time job	Voluntary part-time
5	Part-time – no reason given	Voluntary part-time
6	Full-time	Full-time

Self-Employment

We construct a set of indicator variables for employees, the solo self-employed, and the non-solo self-employed using LFS variable SOLOR, which reports whether the self-employed respondent has employees or not. We can infer that an employed respondent is an employee — i.e., is not self-employed— if this variable does not apply to them. The three generated dummies apply to those employed according to the classification defined above.

Temporary Jobs

We identify workers with temporary jobs as those with JOBTYP = 2 ("Not permanent in some way"). JOBTYP applies to all respondents who are employees, and reports whether the job is permanent, where the permanency of the job relates to the job itself as opposed to the respondent's intentions about the job. While JOBTYP does not apply to the self-employed, we include them as zeros in our temporary job dummy variable.

Agency Work

LFS variable AGWRK applies to employees in permanent jobs and reports whether they are agency workers. RESTMR6 applies to employees in a temporary job and reports the reason why the job is temporary, including six categories for agency work. We combine the information in these two variables to generate a dummy variable for agency workers, including temporary and permanent agency workers. We also generate separate indicators for temporary and permanent agency workers from RESTMR6 and AGWRK, respectively.

Zero-Hour Contracts

Zero-hour contracts (ZHCs) are captured by LFS variable FLEXW7, which applies to all respondents in employment and on certain government schemes. This variable is available only in the spring and autumn quarters each year, limiting the sample size for our ZHC analysis.

Non-Standard Work

Following the OECD (2018) definition of non-standard work (NSW), we generate an NSW dummy identifying temporary workers, part-time workers, and the solo self-employed according to the corresponding definitions explained above.

Control Variables

Control variables in our cross-sectional analysis include white, female, British nationality, full-time student, and public sector indicators based on LFS variables ETHUKEUL, SEX, NTNLTY12, STUCUR, and PUBLICR, respectively.

A.2 Longitudinal Data

We construct our main longitudinal dataset for the analysis of flows by appending the 2-quarter QLFS datasets from 2014Q1 to 2017Q4 and merging the corresponding NLW bite and coverage values from ASHE. Each respondent in a quarterly file appears in two consecutive waves (1-2, 2-3, 3-4, or 4-5), and we measure event time with respect to the second one. Therefore, the post-policy period corresponds to observations with their second appearance in a quarter after 2016Q2, i.e., in quarterly files after 2016Q1 since file names are indexed according to the first quarter of observation. The resulting dataset is a cross-section of 2-quarter transitions. Consistently with our cross-sectional dataset, we restrict our longitudinal sample to individuals aged 16-25 in both periods of observation and exclude respondents working outside the UK and those with missing information on national identity and ethnicity. Each variable used in our longitudinal analysis is defined as follows.

Date

Our date variable is defined the same as in the cross-sectional dataset, as described in the previous subsection. It corresponds to the second quarter of observation in the 2-quarter dataset, while there are two observations per respondent in the 5-quarter dataset, each with its corresponding quarterly date.

Age Band

Age bands are defined just as in the cross-sectional dataset in subsection A.1. They are based on the respondent's age in the second period of observation (AGE2 and AGE5 in the 2-quarter and 5-quarter datasets, respectively).

Region of Work/Residence

Our geographic unit is the same as in the cross-sectional dataset, as described in the previous subsection. Since there are 6 regions missing from the encoding of GORWKR in the 2016Q3 2-quarter and 2016Q4 5-quarter QLFS datasets, we impute the corresponding GORWKR values from the adjacent (before and after) quarterly datasets for the same respondent.

NLW Bite and Coverage

Our ASHE bite and coverage measures are exactly as described in subsection A.1.

Low-Paying Industries

The LPI dummy is defined exactly as described in the previous subsection. In most of our longitudinal analysis, it refers to industry in the first quarter of observation. Only when analysing transitions from non-employment into employment we use the LPI dummy for industry in wave 2.

Hours Worked

Our measure of work hours in each wave is virtually the same as in the cross-sectional dataset. The only difference is that the LFS variable POTHR is unavailable in the longitudinal QLFS datasets. Instead, we compute usual paid overtime as the difference between total usual hours including overtime as captured by TTUSHR and BUSHR (usual paid overtime) and add this quantity to BUSHR if positive.

Employment Transitions

The longitudinal QLFS datasets contain FLOW, a categorical variable summarizing gross labour force flows while distinguishing between states in and outside working age. Given our sample restrictions, the resulting dataset only contains flows representing the possible two-period transitions over the state space $(\mathrm{E}, \mathrm{U}, \mathrm{I})$ —EE, EU, EI, UE, UU, UI, IE, IU, and II—, where E, U, and I denote employed, unemployed, and inactive, respectively. We generate a set of 9 dummy variables, one for each of these transitions. The samples for these dummies are conditional on the initial state. For example, the EE, EU, and EI dummies are missing for respondents who were unemployed or inactive in the initial quarter.

We further decompose the EE flows into entrants and incumbents, defined as those with a job tenure below or above 12 months in their first quarter of observation. This is done by conditioning the subsample of initially employed respondents on tenure below 12 months for entrants or above 12 months for incumbents based on EMPLEN1.

Hiring

While hiring from unemployment can be directly measured by the UE transition dummy, hiring from employment represents an EE' transition, where E' denotes a new (different) job and is therefore not captured by our EE transition dummy. We measure hiring from employment through an indicator variable for EE transition and non-missing REDPAID2. REDPAID2 is non-missing for employed respondents (in their second quarter) who started their current job within the past 3 months.

Separations

Separations can be measured as EU and EI transitions. We can further disaggregate them into voluntary, involuntary, and other separations using variable REDYL132 according to the classification in Table A.2 above. We generate indicators for REDYL132 taking the corresponding values and EU transition, conditional on being employed in the initial quarter. Since REDYL132 is missing for a few observations with EU transition (0.09% of observations with initial state E), we impute it based on age (AGE2), whether the job in the first quarter was

temporary (JOBTYP1), whether the respondent is a full-time student in each quarter (CURED81 and CURED82), and whether they have been made redundant (REDUND2) according to the following criteria.

a. Respondents initially in temporary jobs who were not full-time students in any quarter and were not made redundant: REDYL132 = 4 ("Temporary job which came to an end").
b. Respondents initially in permanent jobs who were not students in any quarter and were not made redundant: REDYL132 = 1 ("Dismissed").
c. Respondents initially in temporary jobs who were not students in any quarter and were made redundant: REDYL132 = 2 ("Made redundant").
d. Respondents who were students in their second quarter but not in their first: REDYL132 = 10 ("Education or training").
e. Respondents 21 years or younger who were students in both quarters: REDYL132 = 10 ("Education or training").
f. Respondents older than 60 years who were not made redundant: REDYL132 = 8 ("Retired").
g. Remaining observations with EU transition and missing REDYL132: REDYL132 = 11 ("Left for some other reason").

We also generate similar dummies for EU transition and each category of REDYL132 for a more disaggregate analysis of separations by cause.

Contract Hours Transitions

We generate dummy variables for the full sets of possible transitions over the state spaces (FT, PT, NE), (IPT, VPT), (Und, NUnd, NE), and (VH, FH, NE), where FT, PT, NE, IPT, VPT, Und, NUnd, VH, and FH stand for full-time, part-time, non-employed (unemployed or inactive), involuntary part-time, voluntary part-time, underemployed, non-underemployed, variable hours, and fixed hours, respectively and as defined in subsection A.1 above.

Self-Employment Transitions

We generate indicator variables for the full sets of possible transitions over the state space (Emp, SSE, NSE, NE), where Emp, SSE, NSE, and NE represent employee, solo self-employed, non-solo self-employed, and non-employed (unemployed or inactive), respectively, and as defined in subsection A.1 above. We further decompose separations from solo and non-solo self-employment into voluntary, involuntary, and other separations using variable REDYL132 according to the classification in Table A.2 above. We generate indicators for REDYL132 taking the corresponding values and SSE-NE transition for the solo self-employed or NSE-NE transition for the non-solo self-employed, conditional on the corresponding initial state (SSE or NSE accordingly). REDYL132 is missing for some observations with E-NE transitions and is imputed as described above for the EU transitions in the discussion of our separation variables. We follow the same criteria in the imputation of REDYL132 for EI transitions with missing information (0.32% of observations with initial state E).

Temporary Job Transitions

We generate dummy variables for the full sets of possible transitions over the state space $(\mathrm{TJ}, \mathrm{PJ}, \mathrm{NE})$, where TJ, PJ, and NE represent temporary job, permanent job, and non-employed (unemployed or inactive), respectively and as defined in subsection A.1 above.

Non-Standard Work Transitions

We generate indicator variables for the full sets of possible transitions over the state space $(\mathrm{NSW}, \mathrm{SW}, \mathrm{NE})$, where NSW, SW, and NE represent non-standard work, standard work, and non-employed (unemployed or inactive), respectively and as defined in subsection A.1 above.

Control Variables

Control variables in our longitudinal analysis —measured at the first period of observation where appropriate— include white, female, British national identity, full-time student, and public sector indicators based on LFS variables ETUKEUL1, SEX, NAIDB111, CURED81, and PUBLICR1, respectively.

B. Coverage Results

Table B.1: Effect of NLW Exposure (Coverage) on Hourly Wages and Hours Worked

	Log hourly wage		Log usual hours	
	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
Post-NLW x coverage	0.048**	0.047**	-0.001	-0.031
	(0.021)	(0.023)	(0.022)	(0.037)
Pre-NLW mean of dep. var.	2.457	2.144	3.483	3.345
IQ effect	0.003	0.004	-0.000	-0.003
Control Variables	Yes	Yes	Yes	Yes
Observations	154,592	47,515	154,592	47,515

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, British nationality, and public sector indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of coverage in the estimation sample. Columns (2) and (4) restrict the sample to respondents employed in an LPI industry.

Table B.2: Effect of NLW Exposure (Coverage) on Employment Stocks and Flows

Panel A: Stocks	**Employed**		**Unemployed**		**Inactive**	
(Cross-Sectional)	(1)		(2)		(3)	
Post-NLW x coverage	0.002		-0.035***		0.033***	
	(0.011)		(0.008)		(0.010)	
Pre-NLW mean of dep. var.	0.726		0.044		0.230	
IQ effect	0.000		-0.002		0.002	
% IQ effect	0.000		-0.052		0.009	
Control Variables	Yes		Yes		Yes	
Observations	927,758		927,758		927,758	
Panel B: Flows	**State in period t**					
(Longitudinal)	**Employed**		**Unemployed**		**Inactive**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Employed						
Post-NLW x coverage	0.023**	0.018	0.028	-0.003	-0.021*	-0.001
	(0.010)	(0.016)	(0.041)	(0.035)	(0.012)	(0.010)
Pre-NLW mean of dep. var.	0.970	0.958	0.269	0.126	0.058	0.030
IQ effect	0.001	0.001	0.007	-0.001	-0.003	-0.000
% IQ effect	0.001	0.001	0.025	-0.006	-0.056	-0.003
Unemployed						
Post-NLW x coverage	-0.014**	-0.008	-0.058		-0.002	
	(0.006)	(0.011)	(0.058)		(0.012)	
Pre-NLW mean of dep. var.	0.011	0.015	0.545		0.048	
IQ effect	-0.001	-0.001	-0.014		-0.000	
% IQ effect	-0.070	-0.042	-0.026		-0.006	
Inactive						
Post-NLW x coverage	-0.009	-0.009	0.031		0.023	
	(0.009)	(0.013)	(0.037)		(0.019)	
Pre-NLW mean of dep. var.	0.019	0.027	0.186		0.894	
IQ effect	-0.001	-0.001	0.007		0.004	
% IQ effect	-0.028	-0.025	0.040		0.004	
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	317,450	94,831	15,601	15,281	105,291	104,975

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of coverage in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Column (2) of Panel B restricts the sample to individuals who were employed in an LPI industry in period t. In columns (4) and (6) of Panel B, the outcome is an indicator for employment in an LPI industry in period t + 1, and the sample comprises the unemployed or inactive respondents accordingly in period t.

Table B.3: Effect of NLW Exposure (Coverage) on Job Search

	On-the-job search								Off-the-Job search	
	Incidence		Effort		Long duration		Replacing current job		Effort	Long duration
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	Pooled
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Post-NLW x coverage	-0.012	-0.009	-0.187	0.004	0.007	0.009	0.015	0.007	0.100	-0.012
	(0.008)	(0.011)	(0.130)	(0.196)	(0.031)	(0.042)	(0.034)	(0.045)	(0.131)	(0.033)
Pre-NLW mean of dep. var.	0.069	0.094	2.849	2.920	0.409	0.411	0.864	0.860	3.889	0.500
IQ effect	-0.001	-0.001	-0.017	0.001	0.001	0.002	0.001	0.001	0.025	-0.003
% IQ effect	-0.010	-0.008	-0.006	0.000	0.002	0.004	0.002	0.002	0.006	-0.006
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	675,621	213,836	42,246	17,838	42,264	17,840	42,264	17,840	33,467	33,873

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of coverage in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Search effort is measured as the number of search methods used from a predefined list. Columns (3) and (4) additionally control for preference over employment status in the new job (employee, self-employed, or indifferent), which determines the number of search methods available (see Appendix A for details). Long search duration is defined as 6 months or longer. Replacing current job sample in columns (7) and (8) conditions on on-the-job search, and the alternative is looking for an additional job. Columns (2), (4), (6), and (8) restrict the sample to individuals employed in a low-paying industry.

Table B.4: Effect of NLW Exposure (Coverage) on Job Hiring and Separations

Panel A: Hiring (Longitudinal)	**State in period t**					
	Employed		**Unemployed**		**Non-employed**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Employed in new job						
Post-NLW x coverage	0.006	0.005	0.028	-0.003	-0.017	-0.007
	(0.013)	(0.011)	(0.041)	(0.035)	(0.015)	(0.012)
Pre-NLW mean of dep. var.	0.036	0.014	0.269	0.126	0.093	0.046
IQ effect	0.000	0.000	0.007	-0.001	-0.004	-0.002
% IQ effect	0.009	0.020	0.025	-0.006	-0.040	-0.034
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	317,450	300,604	15,601	15,281	120,892	120,256
Panel B: Separations (Longitudinal)	**Reason for separation**					
	Voluntary		**Involuntary**		**Other**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Unemployed						
Post-NLW x coverage	0.002	0.004	-0.019***	-0.016***	0.003	0.003
	(0.005)	(0.007)	(0.003)	(0.005)	(0.003)	(0.005)
Pre-NLW mean of dep. var.	0.002	0.004	0.006	0.007	0.003	0.004
IQ effect	0.000	0.000	-0.001	-0.001	0.000	0.000
% IQ effect	0.042	0.074	-0.178	-0.166	0.064	0.062
Non-employed						
Post-NLW x coverage	-0.003	-0.002	-0.017***	-0.009	-0.003	-0.006
	(0.008)	(0.012)	(0.004)	(0.007)	(0.005)	(0.006)
Pre-NLW mean of dep. var.	0.011	0.018	0.010	0.011	0.009	0.013
IQ effect	-0.000	-0.000	-0.001	-0.001	-0.000	-0.000
% IQ effect	-0.016	-0.009	-0.103	-0.064	-0.016	-0.034
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	317,450	94,831	317,450	94,831	317,450	94,831

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British national identity indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of coverage in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. State in period t = employed in all columns of panel B. In columns (2), (4), and (6) of Panel A, the dependent variable is an indicator for employment in an LPI industry in period t + 1, and the sample comprises the employed, unemployed, or non-employed respondents in period t, respectively. Columns (2), (4), and (6) of Panel B restrict the sample to individuals who were employed in an LPI industry in period t, and the dependent variable is an indicator for the corresponding status in period t + 1.

Table B.5: Effect of NLW Exposure (Coverage) on New Job Initiation

	New job (past 12 months)		New job (past 6 months)		New job (past 3 months)	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
Post-NLW x coverage	-0.017	-0.005	-0.025**	-0.014	-0.015*	-0.005
	(0.015)	(0.022)	(0.010)	(0.016)	(0.008)	(0.013)
Pre-NLW mean of dep. var.	0.166	0.217	0.087	0.116	0.054	0.075
IQ effect	-0.001	-0.000	-0.001	-0.001	-0.001	-0.000
% IQ effect	-0.006	-0.002	-0.016	-0.010	-0.016	-0.005
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	671,703	212,650	671,703	212,650	671,703	212,650

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, British nationality, and public sector indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of coverage in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Column (2), (4), and (6) restrict the sample to respondents employed in an LPI industry.

Table B.6: Effect of NLW Exposure (Coverage) on Contract Hours Type Stocks and Flows

Panel A: Stocks	**Full-time**		**Voluntary part-time | part-time**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
Post-NLW x coverage	0.020	0.040*	0.070***	0.076***
	(0.013)	(0.023)	(0.018)	(0.024)
Pre-NLW mean of dep. var.	0.746	0.614	0.833	0.791
IQ effect	0.001	0.003	0.004	0.016
% IQ effect	0.002	0.005	0.005	0.021
Control Variables	Yes	Yes	Yes	Yes
Observations	674,310	213,185	177,860	83,437

Panel B: Flows	**State in period t**							
(Longitudinal)	**Full-time**		**Part-time**		**Involuntary part-time**		**Voluntary part-time**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State in period t + 1								
Full-time								
Post-NLW x coverage	0.033**	0.054**	-0.009	-0.000				
	(0.014)	(0.024)	(0.016)	(0.019)				
Pre-NLW mean of dep. var.	0.962	0.946	0.057	0.057				
IQ effect	0.002	0.003	-0.001	-0.000				
% IQ effect	0.002	0.003	-0.009	-0.000				
Part-time								
Post-NLW x coverage	-0.004	-0.009	0.013	-0.009				
	(0.008)	(0.015)	(0.022)	(0.026)				
Pre-NLW mean of dep. var.	0.020	0.030	0.887	0.877				
IQ effect	-0.000	-0.001	0.001	-0.002				
% IQ effect	-0.013	-0.017	0.001	-0.002				
Non-employed								
Post-NLW x coverage	-0.029***	-0.045***	-0.004	0.009				
	(0.010)	(0.017)	(0.022)	(0.025)				
Pre-NLW mean of dep. var.	0.018	0.024	0.056	0.066				
IQ effect	-0.002	-0.003	-0.000	0.002				
% IQ effect	-0.097	-0.110	-0.004	0.028				
Involuntary part-time								
Post-NLW x coverage					-0.035	-0.086	0.005	0.016
					(0.055)	(0.067)	(0.010)	(0.010)
Pre-NLW mean of dep. var.					0.742	0.763	0.017	0.022
IQ effect					-0.004	-0.017	0.000	0.004
% IQ effect					-0.005	-0.023	0.017	0.171
Voluntary part-time								
Post-NLW x coverage					0.039	0.099**	0.015	-0.016
					(0.036)	(0.045)	(0.024)	(0.029)
Pre-NLW mean of dep. var.					0.088	0.077	0.882	0.865
IQ effect					0.004	0.020	0.001	-0.004
% IQ effect					0.046	0.257	0.001	-0.004
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	228,321	56,097	87,104	38,191	11,371	6,658	75,733	31,533

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of coverage in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2) and (4) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2), (4), (6), and (8) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Table B.7: Effect of NLW Exposure (Coverage) on Hours Insufficiency and Volatility Stocks and Flows

Panel A: Stocks	**Underemployed**		**Variable hours**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
Post-NLW x coverage	-0.029***	-0.029**	0.021	0.030
	(0.009)	(0.014)	(0.016)	(0.023)
Pre-NLW mean of dep. var.	0.100	0.145	0.445	0.432
IQ effect	-0.002	-0.002	0.001	0.002
% IQ effect	-0.017	-0.015	0.003	0.006
Control Variables	Yes	Yes	Yes	Yes
Observations	629,013	194,367	656,776	207,062

Panel B: Flows	**State in period t**							
(Longitudinal)	**Underemployed**		**Non-underemployed**		**Variable hours**		**Fixed hours**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State in period t + 1								
Underemployed								
Post-NLW x coverage	-0.028	-0.017	-0.019	-0.009				
	(0.052)	(0.067)	(0.015)	(0.023)				
Pre-NLW mean of dep. var.	0.580	0.607	0.056	0.076				
IQ effect	-0.002	-0.003	-0.001	-0.001				
% IQ effect	-0.004	-0.006	-0.021	-0.007				
Non-underemployed								
Post-NLW x coverage	0.057	0.033	0.048**	0.040				
	(0.050)	(0.062)	(0.022)	(0.031)				
Pre-NLW mean of dep. var.	0.382	0.347	0.920	0.887				
IQ effect	0.004	0.007	0.003	0.002				
% IQ effect	0.011	0.019	0.003	0.003				
Non-employed								
Post-NLW x coverage	-0.029	-0.016	-0.029**	-0.032	-0.018	-0.022	-0.029***	-0.028
	(0.023)	(0.028)	(0.012)	(0.021)	(0.018)	(0.027)	(0.010)	(0.017)
Pre-NLW mean of dep. var.	0.038	0.047	0.025	0.037	0.031	0.047	0.029	0.041
IQ effect	-0.002	-0.003	-0.002	-0.002	-0.001	-0.002	-0.002	-0.002
% IQ effect	-0.059	-0.068	-0.070	-0.049	-0.035	-0.041	-0.063	-0.052
Variable hours								
Post-NLW x coverage					-0.033	0.007	0.006	-0.019
					(0.028)	(0.039)	(0.021)	(0.033)
Pre-NLW mean of dep. var.					0.763	0.745	0.239	0.225
IQ effect					-0.002	0.001	0.000	-0.001
% IQ effect					-0.003	0.001	0.001	-0.006
Fixed hours								
Post-NLW x coverage					0.051**	0.015	0.023	0.047
					(0.020)	(0.031)	(0.023)	(0.035)
Pre-NLW mean of dep. var.					0.206	0.208	0.732	0.734
IQ effect					0.003	0.001	0.001	0.004
% IQ effect					0.015	0.006	0.002	0.005
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24,899	10,523	258,964	71,738	133,816	38,778	151,385	46,283

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of coverage in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2) and (4) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2), (4), (6), and (8) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Table B.8: Effect of NLW Exposure (Coverage) on Self-Employment Stocks and Flows

Panel A: Stocks	**Employee**		**Solo self-employed**		**Non-solo self-employed**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
Post-NLW x coverage	-0.003	-0.008	-0.002	0.005	0.005	0.003
	(0.008)	(0.009)	(0.007)	(0.008)	(0.004)	(0.005)
Pre-NLW mean of dep. var.	0.861	0.869	0.116	0.102	0.023	0.029
IQ effect	-0.000	-0.001	-0.000	0.000	0.000	0.000
% IQ effect	-0.000	-0.001	-0.001	0.004	0.012	0.008
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	674,310	213,185	674,310	213,185	674,310	213,185
Panel B: Flows	**State in period t**					
(Longitudinal)	**Employee**		**Solo self-employed**		**Non-solo self-employed**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Employee						
Post-NLW x coverage	0.024**	0.014	-0.021	-0.014	0.055	0.155
	(0.011)	(0.016)	(0.041)	(0.080)	(0.099)	(0.257)
Pre-NLW mean of dep. var.	0.964	0.951	0.033	0.030	0.040	0.035
IQ effect	0.002	0.001	-0.001	-0.001	0.003	0.006
% IQ effect	0.002	0.001	-0.034	-0.027	0.070	0.170
Solo self-employed						
Post-NLW x coverage	0.004	0.004	-0.090*	-0.086	0.397	-0.068
	(0.003)	(0.003)	(0.050)	(0.092)	(0.245)	(0.313)
Pre-NLW mean of dep. var.	0.006	0.005	0.920	0.915	0.065	0.049
IQ effect	0.000	0.000	-0.005	-0.005	0.020	-0.003
% IQ effect	0.045	0.080	-0.005	-0.005	0.311	-0.053
Non-solo self-employed						
Post-NLW x coverage	-0.000	0.000	0.017	0.024	-0.595**	-0.091
	(0.001)	(0.001)	(0.013)	(0.023)	(0.280)	(0.374)
Pre-NLW mean of dep. var.	0.001	0.001	0.015	0.017	0.889	0.908
IQ effect	-0.000	0.000	0.001	0.001	-0.030	-0.003
% IQ effect	-0.018	0.052	0.058	0.081	-0.034	-0.004
Non-employed						
Post-NLW x coverage	-0.027**	-0.019	0.094**	0.076	0.142	0.004
	(0.011)	(0.017)	(0.039)	(0.056)	(0.115)	(0.074)
Pre-NLW mean of dep. var.	0.030	0.043	0.032	0.038	0.007	0.009
IQ effect	-0.002	-0.002	0.005	0.004	0.007	0.000
% IQ effect	-0.058	-0.041	0.153	0.115	1.009	0.017
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	271,675	80,869	38,330	11,034	7,445	2,928

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of coverage in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2), (4), and (6) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2), (4), and (6) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Table B.9: Effect of NLW Exposure (Coverage) on Alternative Contracts Stocks and Flows

Panel A: Stocks	**Temporary job**		**Agency work: Temporary**		**Agency work: Permanent**		**Zero-hours contract**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-NLW x coverage	-0.015	0.001	-0.005	0.000	0.002	0.005	0.027***	0.035**
	(0.011)	(0.015)	(0.003)	(0.005)	(0.004)	(0.004)	(0.010)	(0.016)
Pre-NLW mean of dep. var.	0.053	0.063	0.012	0.014	0.015	0.017	0.023	0.045
IQ effect	-0.001	0.000	-0.000	0.000	0.000	0.000	0.002	0.003
% IQ effect	-0.016	0.001	-0.025	0.001	0.010	0.026	0.068	0.062
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	674,310	213,185	577,549	183,308	577,549	183,308	270,443	84,535

Panel B: Flows	**State in period t**			
(Longitudinal)	**Temporary job**		**Permanent job**	
	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
State in period t + 1				
Temporary job				
Post-NLW x coverage	-0.032	-0.047	0.000	-0.005
	(0.042)	(0.074)	(0.008)	(0.011)
Pre-NLW mean of dep. var.	0.698	0.643	0.013	0.016
IQ effect	-0.008	-0.023	0.000	-0.000
% IQ effect	-0.011	-0.036	0.002	-0.023
Permanent job				
Post-NLW x coverage	0.100***	0.138***	0.012	0.013
	(0.029)	(0.050)	(0.014)	(0.018)
Pre-NLW mean of dep. var.	0.175	0.195	0.967	0.953
IQ effect	0.024	0.067	0.001	0.001
% IQ effect	0.137	0.345	0.001	0.001
Non-employed				
Post-NLW x coverage	-0.068**	-0.091*	-0.013	-0.008
	(0.030)	(0.054)	(0.011)	(0.016)
Pre-NLW mean of dep. var.	0.127	0.162	0.021	0.032
IQ effect	-0.016	-0.044	-0.001	-0.001
% IQ effect	-0.128	-0.272	-0.035	-0.018
Control Variables	Yes	Yes	Yes	Yes
Observations	14,958	5,266	252,887	74,472

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of coverage in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2), (4), (6), and (8) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2) and (4) of panel B restrict the sample to individuals employed in an LPI industry in period t.

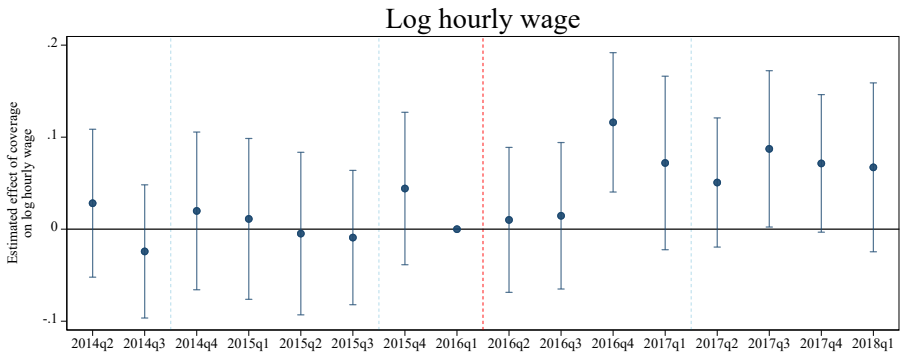
Table B.10: Effect of NLW Exposure (Coverage) on Non-Standard Work Stocks and Flows

Panel A: Stocks	**Non-standard work**	
(Cross-Sectional)	Pooled	LPI
	(1)	(2)
Post-NLW x coverage	-0.030**	-0.033
	(0.015)	(0.023)
Pre-NLW mean of dep. var.	0.364	0.473
IQ effect	-0.002	-0.003
% IQ effect	-0.005	-0.006
Control Variables	Yes	Yes
Observations	674,310	213,185

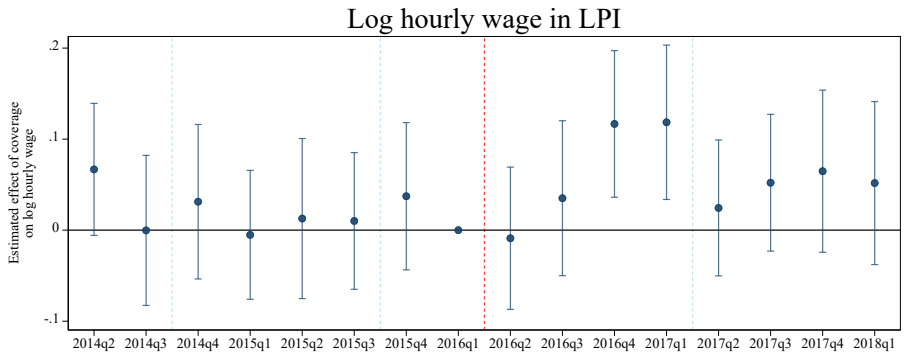
Panel B: Flows	**State in period t**			
(Longitudinal)	**Non-standard work**		**Standard work**	
	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
State in period t + 1				
Non-standard work				
Post-NLW x coverage	0.019	0.015	0.003	-0.018
	(0.022)	(0.028)	(0.013)	(0.019)
Pre-NLW mean of dep. var.	0.899	0.888	0.032	0.042
IQ effect	0.001	0.002	0.000	-0.001
% IQ effect	0.001	0.002	0.005	-0.025
Standard work				
Post-NLW x coverage	-0.000	-0.002	0.026	0.049*
	(0.016)	(0.020)	(0.019)	(0.027)
Pre-NLW mean of dep. var.	0.051	0.049	0.950	0.936
IQ effect	-0.000	-0.000	0.002	0.003
% IQ effect	-0.000	-0.007	0.002	0.003
Non-employed				
Post-NLW x coverage	-0.019	-0.012	-0.029**	-0.030*
	(0.017)	(0.023)	(0.011)	(0.016)
Pre-NLW mean of dep. var.	0.050	0.062	0.018	0.022
IQ effect	-0.001	-0.002	-0.002	-0.002
% IQ effect	-0.025	-0.028	-0.096	-0.079
Control Variables	Yes	Yes	Yes	Yes
Observations	120,688	46,875	196,762	47,956

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of coverage in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Column (2) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2) and (4) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Figure B.1: Effect of NLW Exposure (Coverage) on Hourly Wages and Hours Worked

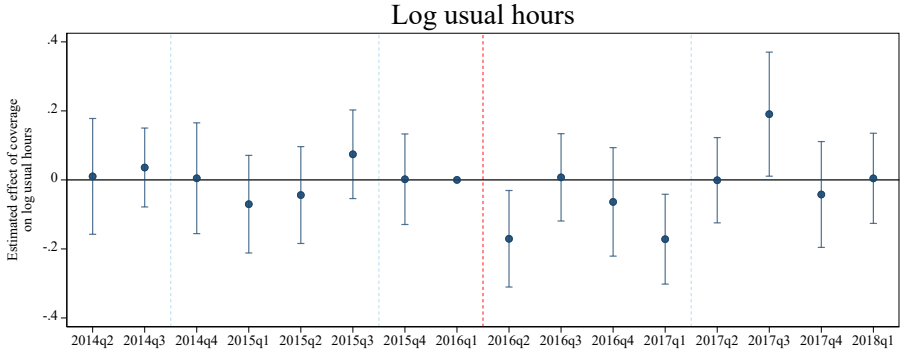


Mean coverage = 0.16. 75th percentile of coverage = 0.15. Pre-reform p-value = 0.518. Post-reform p-value = 0.001. Sample size = 154,880.

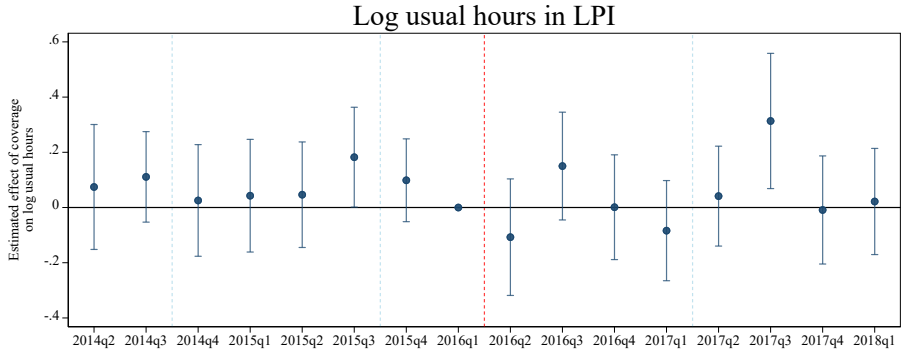


Mean coverage = 0.21. 75th percentile of coverage = 0.19. Pre-reform p-value = 0.714. Post-reform p-value = 0.010. Sample size = 47,656.

(a) Hourly wages



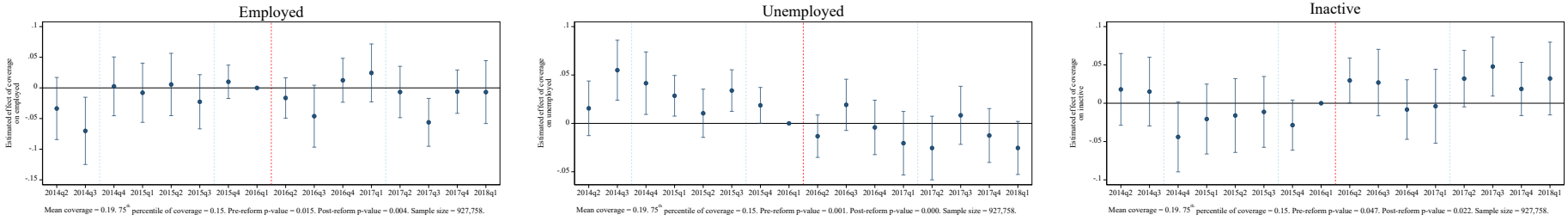
Mean coverage = 0.16. 75th percentile of coverage = 0.15. Pre-reform p-value = 0.477. Post-reform p-value = 0.006. Sample size = 154,880.



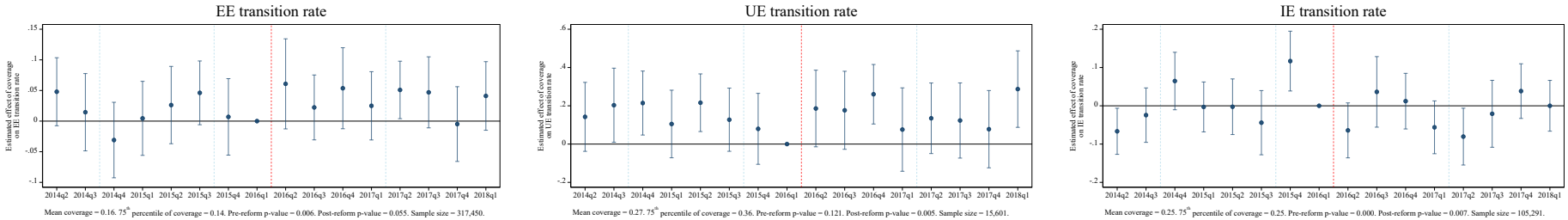
Mean coverage = 0.21. 75th percentile of coverage = 0.19. Pre-reform p-value = 0.415. Post-reform p-value = 0.001. Sample size = 47,656.

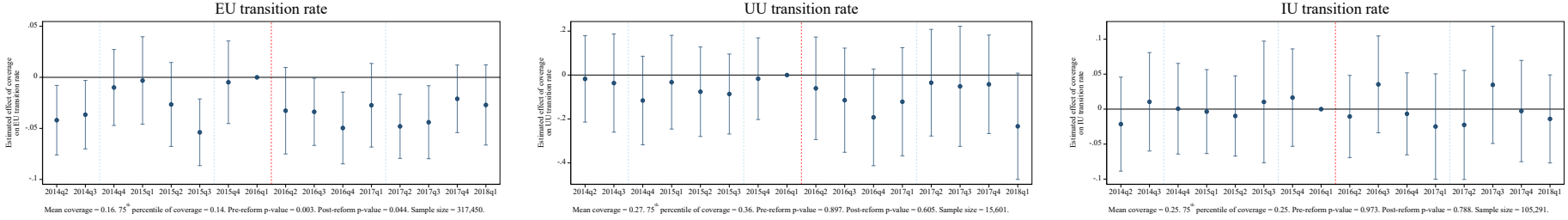
(b) Hours worked

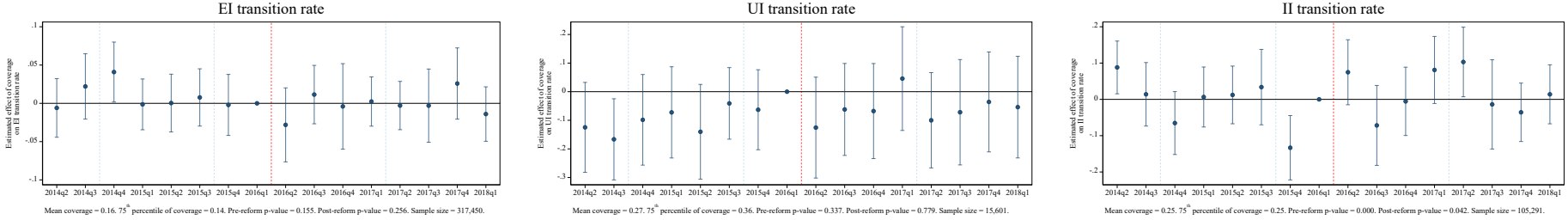
Figure B.2: Effect of NLW Exposure (Coverage) on Employment Stocks and Flows



(a) Stocks

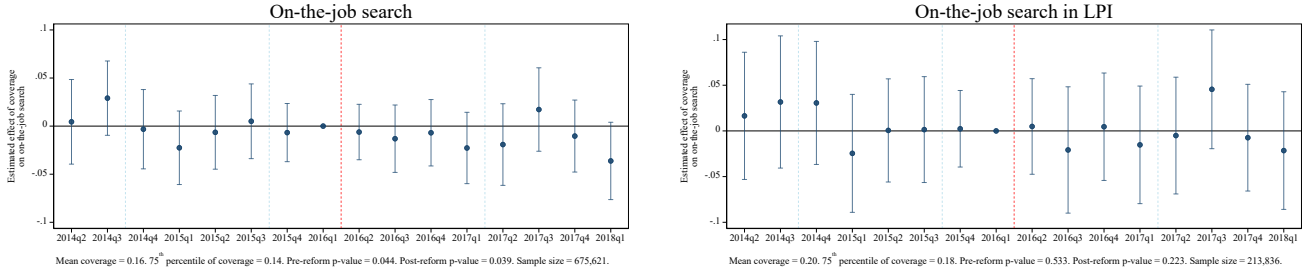




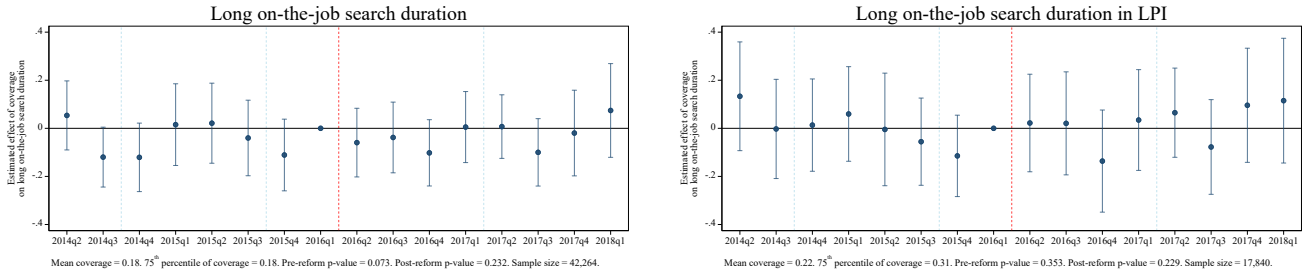


(b) Flows from employment (c) Flows from unemployment (d) Flows from inactivity

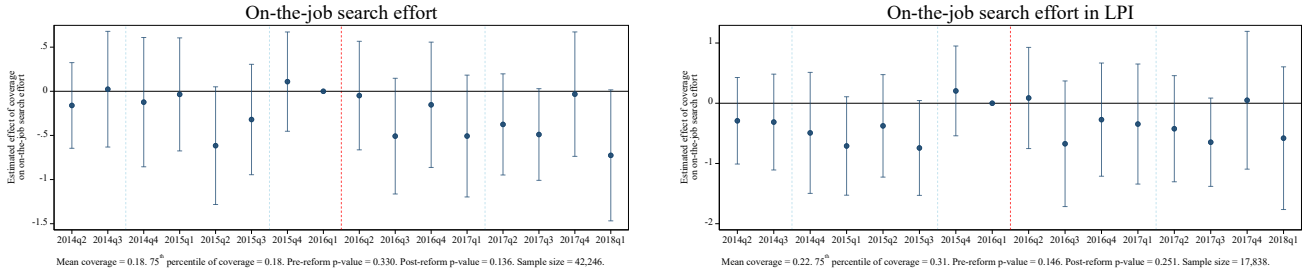
Figure B.3: Effect of NLW Exposure (Coverage) on Job Search



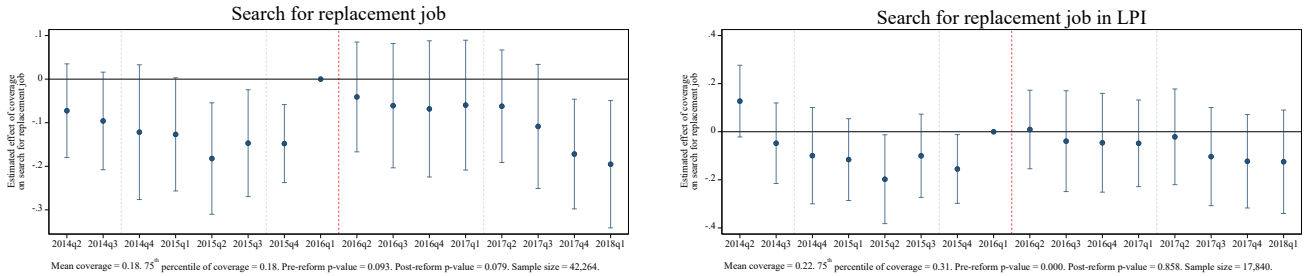
(a) On-the-Job: Search incidence



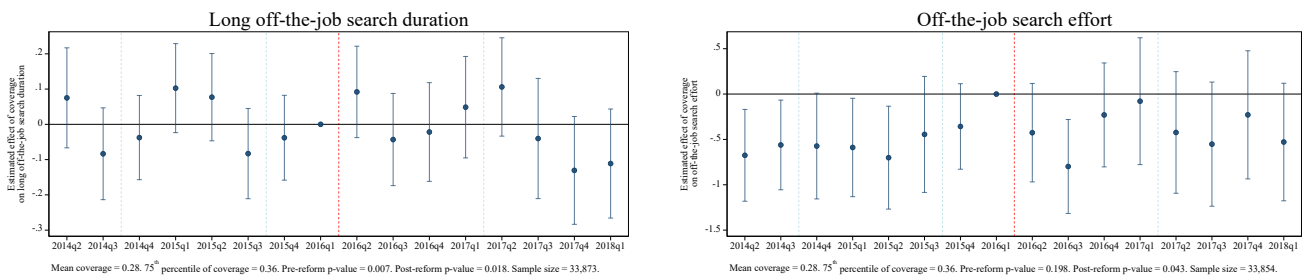
(b) On-the-Job: Long search duration



(c) On-the-Job: Search effort



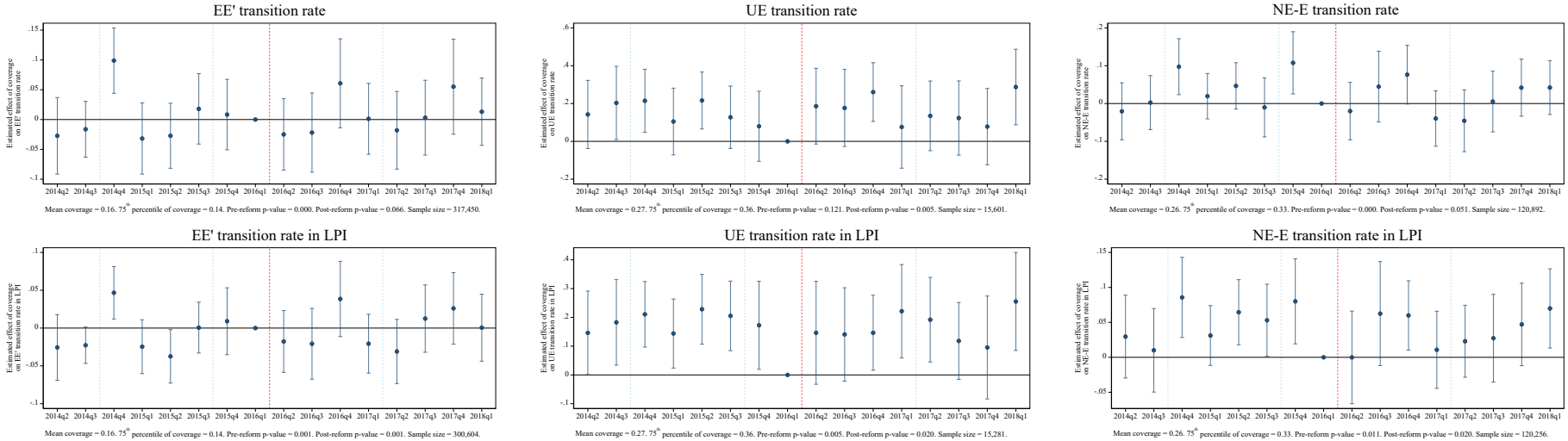
(d) On-the-Job: Replacing current job



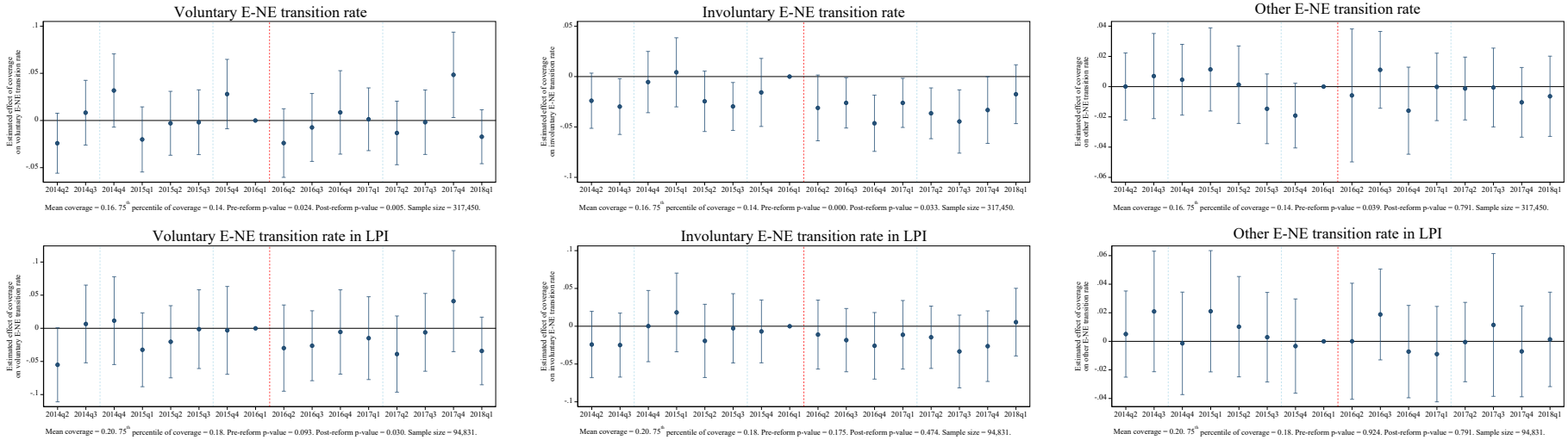
(e) Off-the-Job: Long search duration

(f) Off-the-Job: Search effort

Figure B.4: Effect of NLW Exposure (Coverage) on Job Hiring and Separations

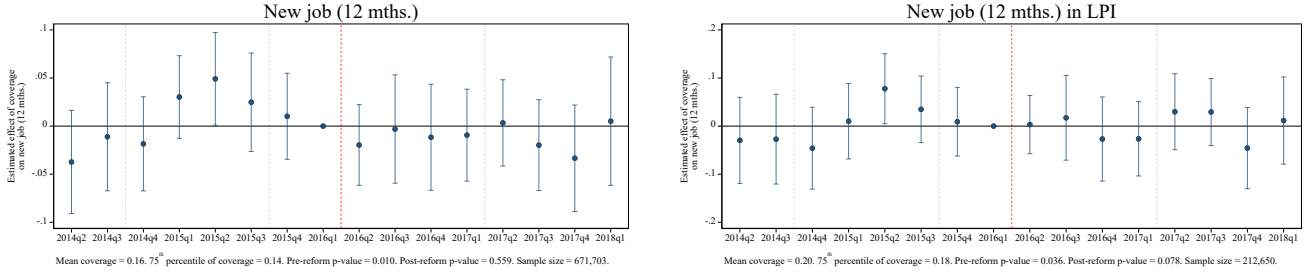


(a) Hiring from employment (b) Hiring from unemployment (c) Hiring from non-employment

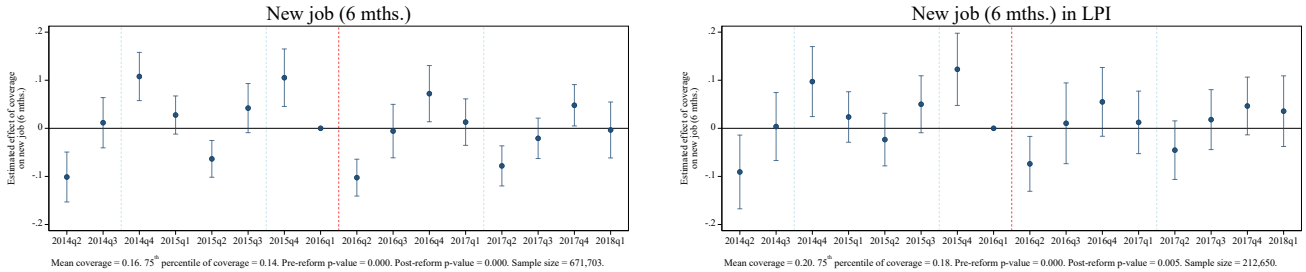


(d) Voluntary separations (e) Involuntary separations (f) Other separations

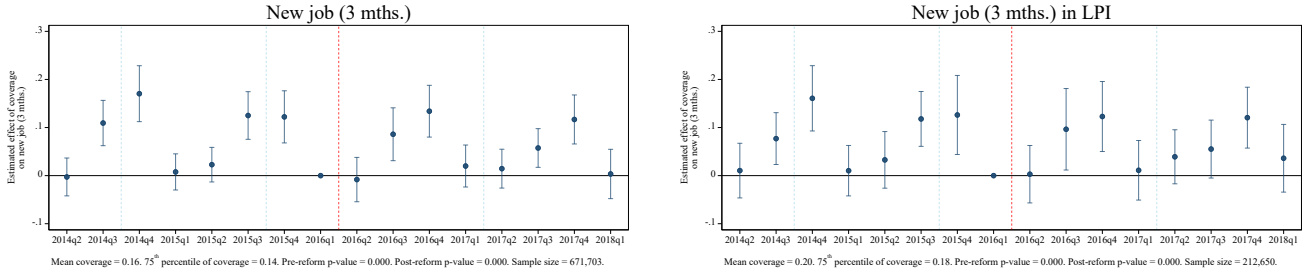
Figure B.5: Effect of NLW Exposure (Coverage) on New Job Initiation



(a) Started new job in the past 12 months

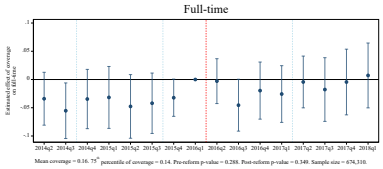


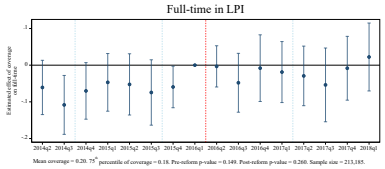
(b) Started new job in the past 6 months

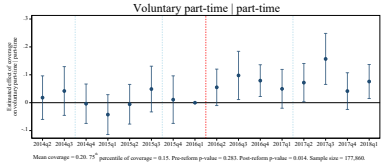


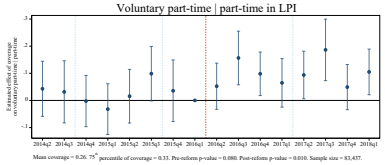
(c) Started new job in the past 3 months

Figure B.6: Effect of NLW Exposure (Coverage) on Contract Hours Type Stocks and Flows

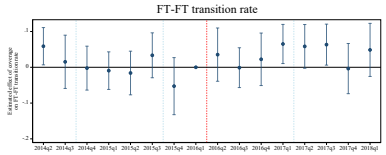


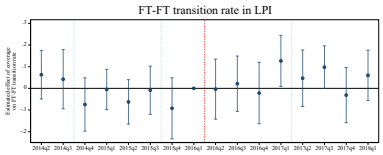


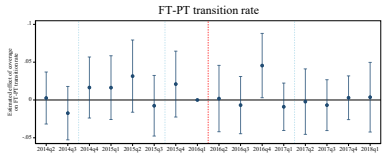


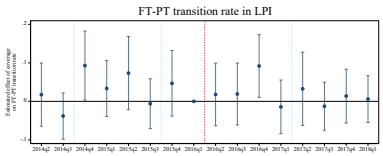


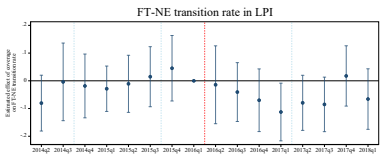
(a) Stocks



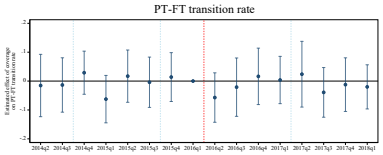


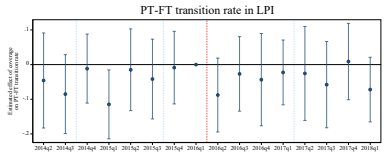


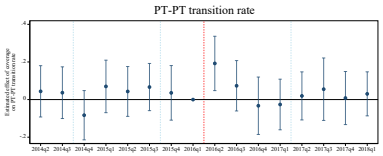


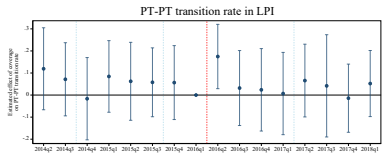


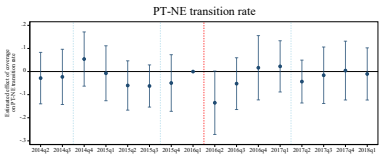
(b) Flows from full-time employment

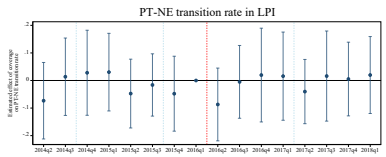




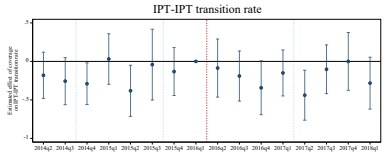


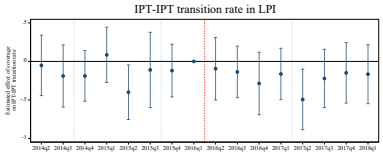


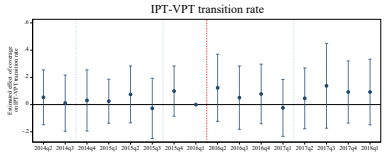


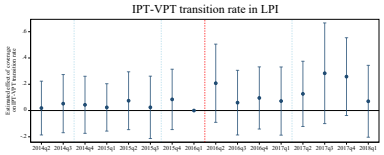


(c) Flows from part-time employment

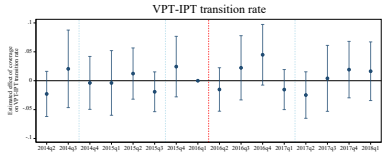


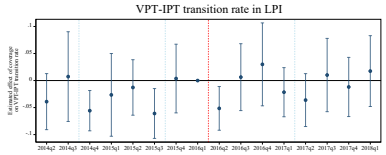


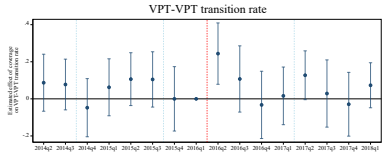


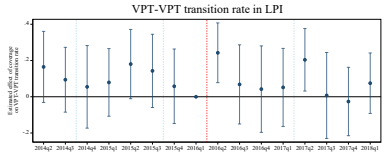


(d) Flows from involuntary part-time employment





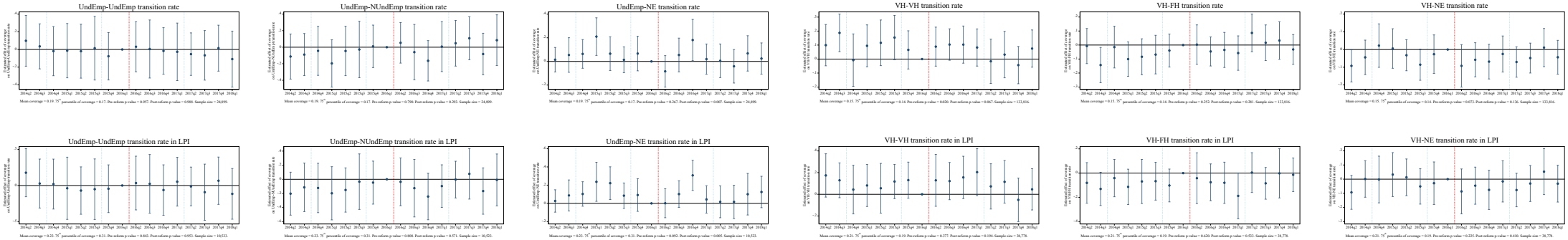




(e) Flows from voluntary part-time employment

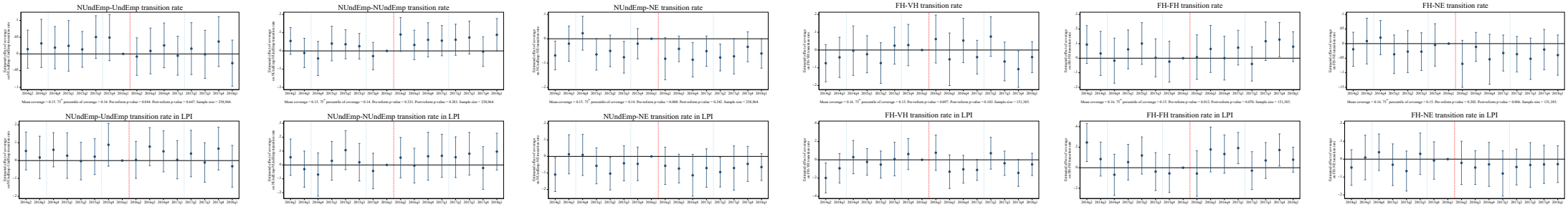
Figure B.7: Effect of NLW Exposure (Coverage) on Hours Insufficiency and Volatility Stocks and Flows

(a) Stocks



(b) Flows from underemployment

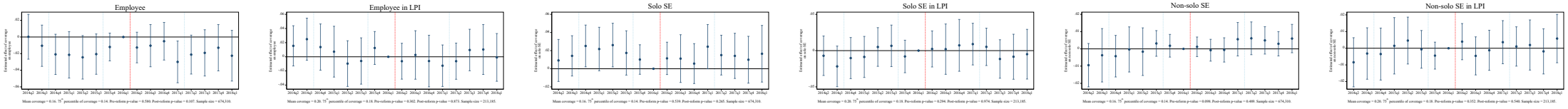
(c) Flows from variable hours



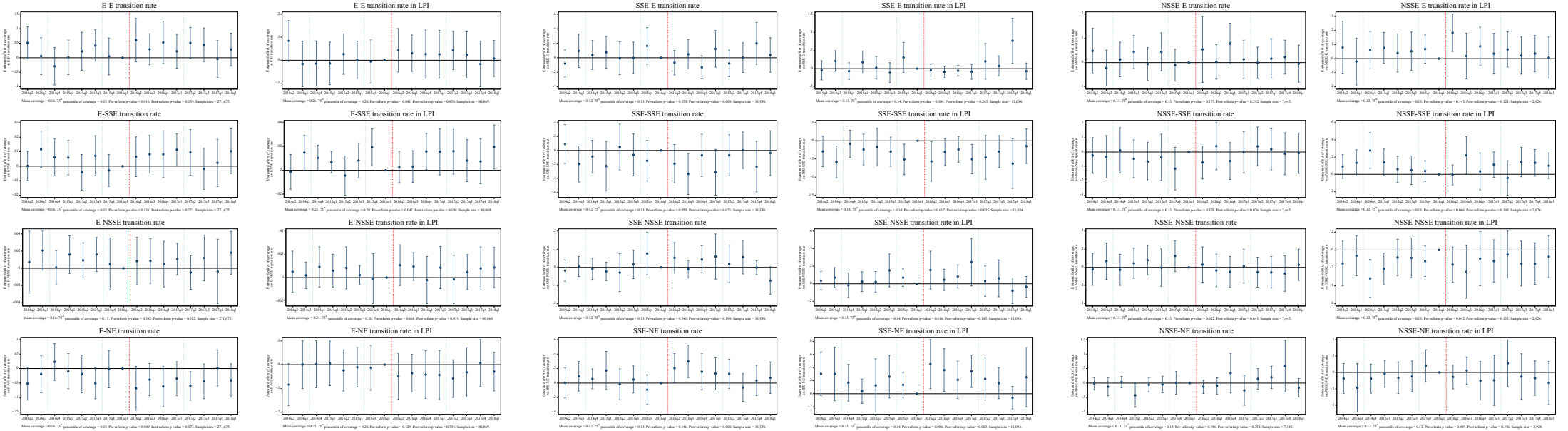
(d) Flows from non-underemployment

(e) Flows from fixed hours

Figure B.8: Effect of NLW Exposure (Coverage) on Self-Employment Stocks and Flows

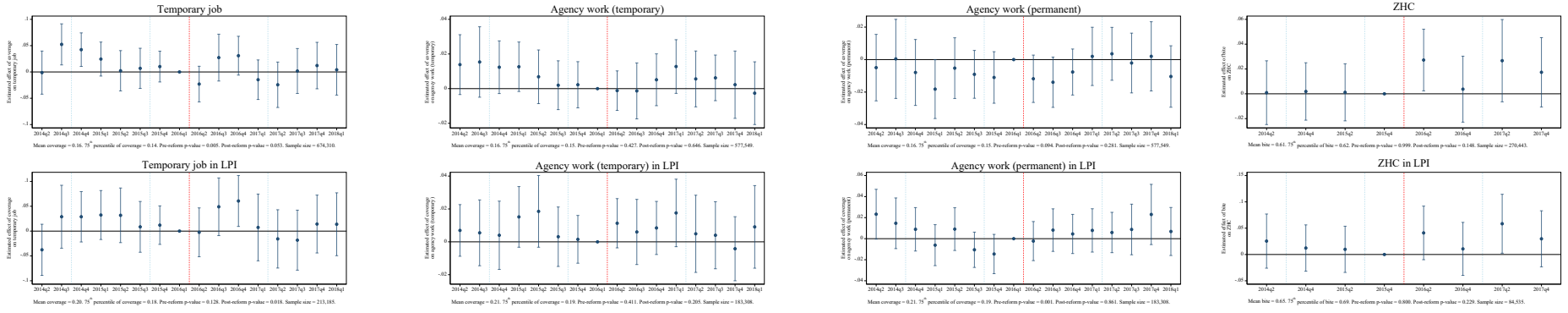


(a) Stocks

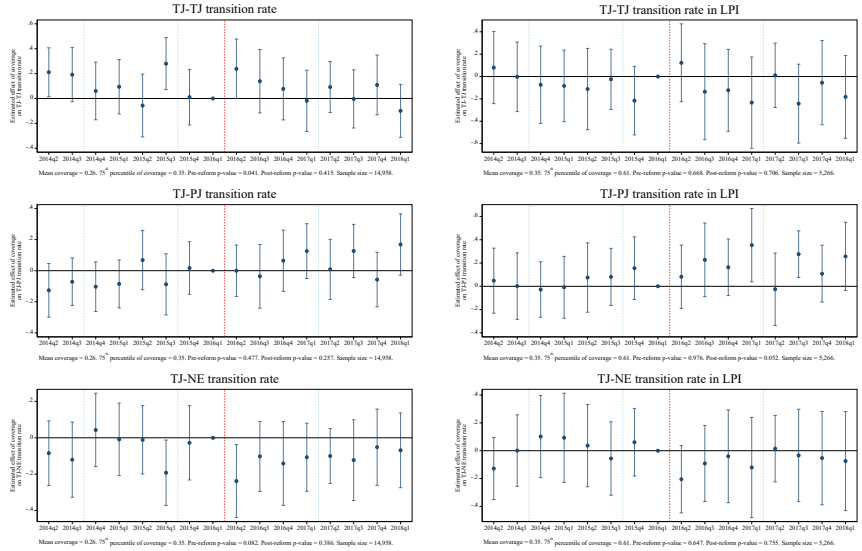


(b) Flows from employee work (c) Flows from solo self-employment (d) Flows from non-solo self-employment

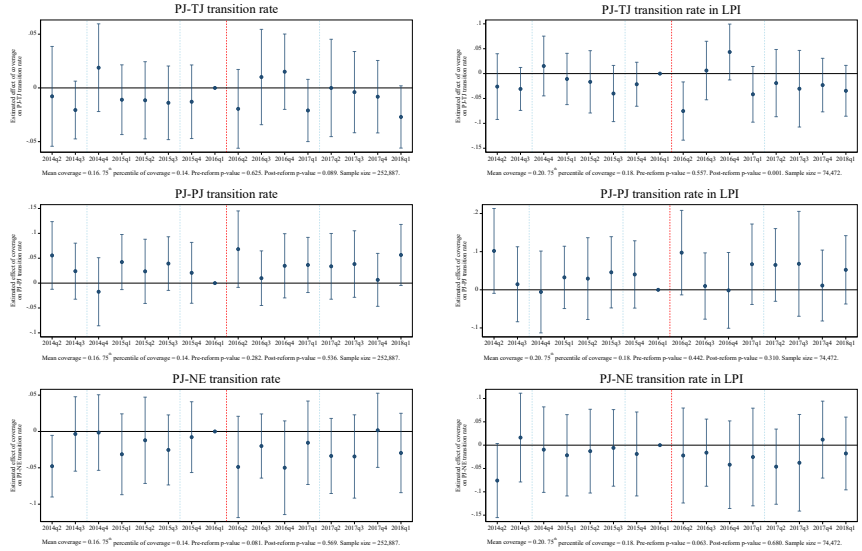
Figure B.9: Effect of NLW Exposure (Coverage) on Alternative Contracts Stocks and Flows



(a) Stocks

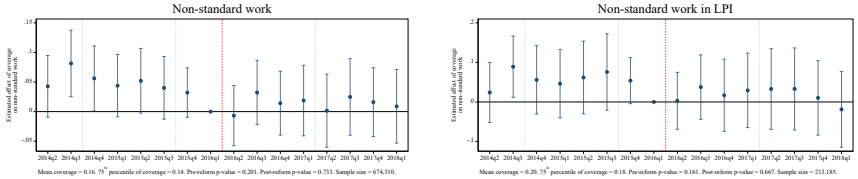


(b) Flows from temporary employment

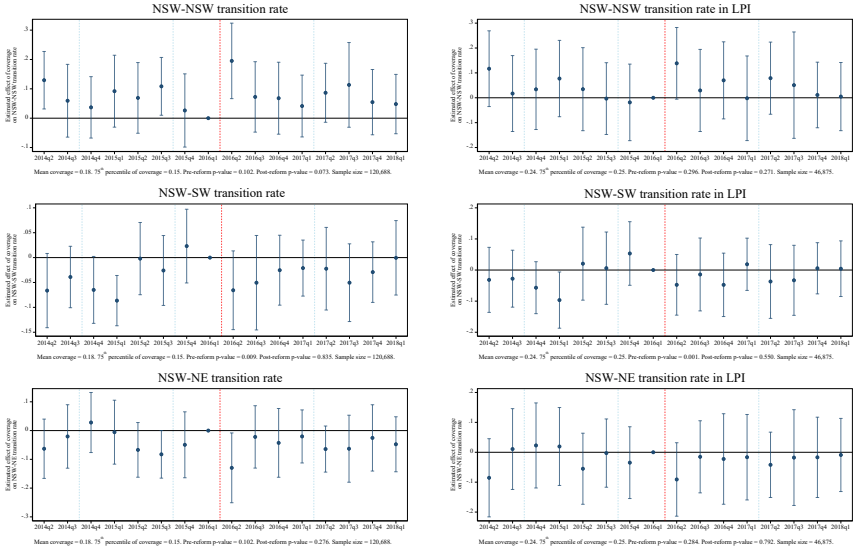


(c) Flows from permanent employment

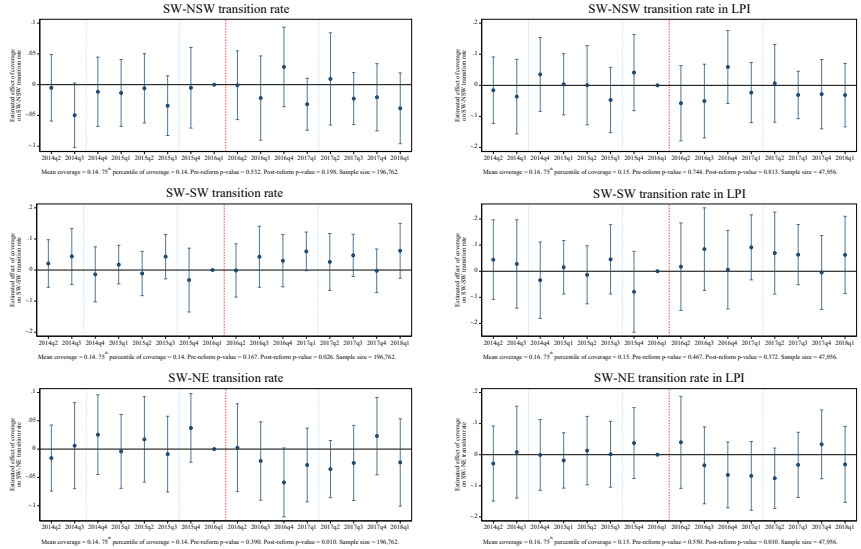
Figure B.10: Effect of NLW Exposure (Coverage) on Non-Standard Work Stocks and Flows



(a) Stocks



(b) Flows from non-standard work



(c) Flows from standard work

C. Further Results

Figure C.1: Minimum Wage Spillovers Across Age Bands

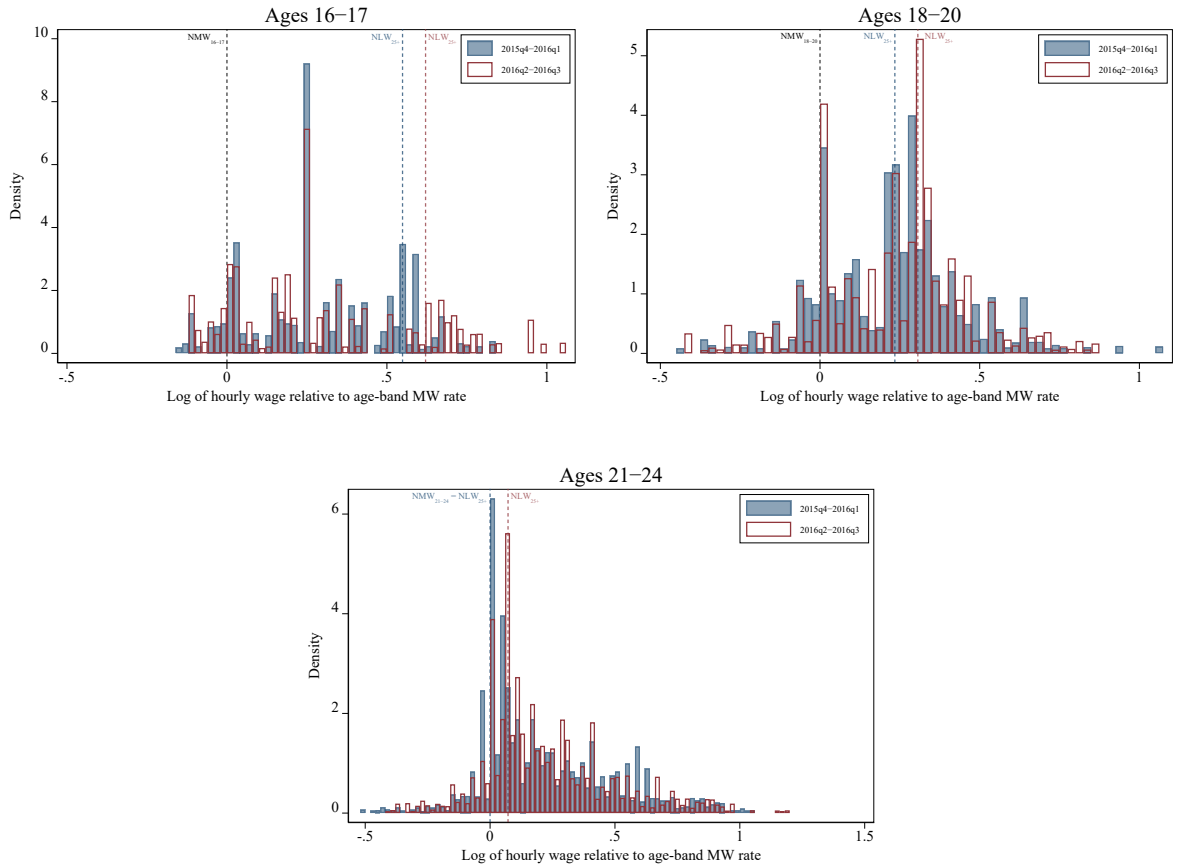


Table C.1: Effect of NLW Exposure (Bite) on Employment Stocks for Workers 25 or Older

	Employed	Unemployed
	(1)	(2)
Post-NLW x bite	0.029	-0.041***
	(0.019)	(0.011)
Pre-NLW mean of dep. var.	0.767	0.041
IQ effect	0.003	-0.004
% IQ effect	0.003	-0.091
Control Variables	Yes	Yes
Observations	789,649	627,231

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Sample is restricted to respondents 25 or older in both columns. Column (2) further restricts the unemployment sample to those in the labour force.

Table C.2: Effect of NLW Exposure (Bite) on Job Search Preferences

Panel A: Employment Status	**Employee**		**Self-employed**		**Indifferent**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
On-the-job						
Post-NLW x bite	0.002	-0.037	0.009	0.020	-0.011	0.017
	(0.024)	(0.032)	(0.016)	(0.020)	(0.030)	(0.026)
Pre-NLW mean of dep. var.	0.843	0.879	0.053	0.034	0.104	0.087
IQ effect	0.000	-0.010	0.001	0.005	-0.002	0.005
% IQ effect	0.000	-0.011	0.023	0.151	-0.015	0.053
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	42,246	17,838	42,246	17,838	42,246	17,838
Off-the-job						
Post-NLW x bite	-0.010		0.003		0.007	
	(0.029)		(0.012)		(0.023)	
Pre-NLW mean of dep. var.	0.858		0.023		0.119	
IQ effect	-0.003		0.001		0.002	
% IQ effect	-0.004		0.043		0.017	
Control Variables	Yes		Yes		Yes	
Observations	33,468		33,468		33,468	
Panel B: Contract Hours Type	**Full-time**		**Part-time**		**Indifferent**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
On-the-job						
Post-NLW x bite	0.001	-0.028	0.001	0.026	-0.002	0.002
	(0.030)	(0.043)	(0.029)	(0.045)	(0.016)	(0.026)
Pre-NLW mean of dep. var.	0.751	0.722	0.179	0.203	0.069	0.075
IQ effect	0.000	-0.007	0.000	0.007	-0.000	0.000
% IQ effect	0.000	-0.010	0.000	0.033	-0.003	0.005
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	39,920	17,181	39,920	17,181	39,920	17,181
Off-the-job						
Post-NLW x bite	0.060		-0.015		-0.045	
	(0.036)		(0.035)		(0.032)	
Pre-NLW mean of dep. var.	0.401		0.321		0.278	
IQ effect	0.018		-0.005		-0.014	
% IQ effect	0.046		-0.014		-0.049	
Control Variables	Yes		Yes		Yes	
Observations	32,686		32,686		32,686	

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British nationality indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Contract hours type preference conditions on preference for employee work or indifferent, i.e., those looking for self-employed work are excluded. Columns (2), (4), (6), and (8) restrict the sample to individuals employed in a low-paying industry.

Table C.3: Effect of NLW Exposure (Bite) on Separation Rates by Reason

Panel A: Unemployed in Period t + 1	**Reason for separation**							
(Longitudinal)	**Reason 1**		**Reason 2**		**Reason 3**		**Reason 4**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Reason type								
Involuntary								
Post-NLW x bite	-0.000	-0.002	-0.004***	-0.004*	0.000	-0.000	-0.010***	-0.009***
	(0.001)	(0.002)	(0.001)	(0.002)	(0.000)	(0.000)	(0.003)	(0.003)
Pre-NLW mean of dep. var.	0.001	0.001	0.002	0.002	0.000	0.000	0.003	0.004
IQ effect	-0.000	-0.000	-0.000	-0.001	0.000	-0.000	-0.001	-0.001
% IQ effect	-0.003	-0.174	-0.140	-0.257	0.034	-0.411	-0.270	-0.365
Voluntary								
Post-NLW x bite	0.002	0.003	0.000	0.000	0.000**	0.000*	-0.002	-0.000
	(0.002)	(0.004)	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.003)
Pre-NLW mean of dep. var.	0.002	0.003	0.000	0.000	0.000	0.000	0.001	0.001
IQ effect	0.000	0.000	0.000	0.000	0.000	0.000	-0.000	-0.000
% IQ effect	0.108	0.144	0.042	0.087	0.485	1.187	-0.203	-0.050
Other								
Post-NLW x bite	0.001	0.000	0.001	0.002	0.000	0.002		
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)		
Pre-NLW mean of dep. var.	0.000	0.001	0.001	0.001	0.002	0.002		
IQ effect	0.000	0.000	0.000	0.000	0.000	0.000		
% IQ effect	0.168	0.048	0.146	0.351	0.019	0.127		
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	317,450	94,831	317,450	94,831	317,450	94,831	317,450	94,831
Panel B: Non-Employed in Period t + 1	**Reason for separation**							
(Longitudinal)	**Reason 1**		**Reason 2**		**Reason 3**		**Reason 4**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Reason type								
Involuntary								
Post-NLW x bite	-0.001	-0.000	-0.003*	-0.002	0.000	0.001	-0.011***	-0.009**
	(0.002)	(0.004)	(0.002)	(0.003)	(0.000)	(0.001)	(0.003)	(0.004)
Pre-NLW mean of dep. var.	0.002	0.002	0.003	0.003	0.001	0.000	0.005	0.005
IQ effect	-0.000	-0.000	-0.000	-0.000	0.000	0.000	-0.001	-0.001
% IQ effect	-0.039	-0.002	-0.083	-0.103	0.035	0.327	-0.176	-0.224
Voluntary								
Post-NLW x bite	0.003	0.005	-0.000	-0.000	0.000	0.000	-0.006	-0.008
	(0.003)	(0.006)	(0.000)	(0.000)	(0.001)	(0.001)	(0.004)	(0.007)
Pre-NLW mean of dep. var.	0.003	0.006	0.001	0.001	0.002	0.002	0.004	0.009
IQ effect	0.000	0.001	-0.000	-0.000	0.000	0.000	-0.000	-0.001
% IQ effect	0.064	0.114	-0.021	-0.006	0.003	0.043	-0.109	-0.125
Other								
Post-NLW x bite	0.000	-0.000	-0.002	-0.003	0.000	0.001		
	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.005)		
Pre-NLW mean of dep. var.	0.002	0.003	0.002	0.004	0.005	0.006		
IQ effect	0.000	-0.000	-0.000	-0.000	0.000	0.000		
% IQ effect	0.011	-0.008	-0.063	-0.122	0.003	0.015		
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	317,450	94,831	317,450	94,831	317,450	94,831	317,450	94,831

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British national identity indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. State in period t = employed in all columns and panels. Involuntary: reason 1 = dismissed, reason 2 = made redundant, reason 3 = took voluntary redundancy, reason 4 = temporary job which came to an end. Voluntary: reason 1 = resigned, reason 2 = took early retirement, reason 3 = retired (at or after state pension age), reason 4 = education or training. Other: reason 1 = gave up work for health reasons, reason 2 = gave up work for family or personal reasons, reason 3 = left for some other reason. Columns (2), (4), (6), and (8) restrict the sample to individuals who were employed in an LPI industry in period t, and the dependent variable is an indicator for the corresponding status in period t + 1.

Table C.4: Effect of NLW Exposure (Bite) on Separation Rates from Dependent Work by Reason

	Reason for separation							
	Reason 1		Reason 2		Reason 3		Reason 4	
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Reason type								
Involuntary								
Post-NLW x bite	-0.001	0.000	-0.004**	-0.003	0.000	0.001	-0.012***	-0.011**
	(0.002)	(0.004)	(0.002)	(0.003)	(0.000)	(0.001)	(0.003)	(0.005)
Pre-NLW mean of dep. var.	0.002	0.003	0.003	0.003	0.001	0.000	0.005	0.006
IQ effect	-0.000	0.000	-0.000	-0.000	0.000	0.000	-0.001	-0.002
% IQ effect	-0.060	0.004	-0.097	-0.131	0.046	0.312	-0.220	-0.342
Voluntary								
Post-NLW x bite	0.003	0.005	-0.000	0.000	0.000	0.001	-0.006	-0.006
	(0.003)	(0.006)	(0.000)	(0.001)	(0.001)	(0.001)	(0.004)	(0.007)
Pre-NLW mean of dep. var.	0.004	0.007	0.001	0.001	0.002	0.001	0.005	0.010
IQ effect	0.000	0.001	-0.000	0.000	0.000	0.000	-0.001	-0.001
% IQ effect	0.060	0.125	-0.021	0.009	0.008	0.111	-0.108	-0.102
Other								
Post-NLW x bite	0.001	0.001	-0.003	-0.004	-0.001	-0.001		
	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.004)		
Pre-NLW mean of dep. var.	0.002	0.003	0.002	0.004	0.004	0.005		
IQ effect	0.000	0.000	-0.000	-0.001	-0.000	-0.000		
% IQ effect	0.024	0.028	-0.104	-0.191	-0.029	-0.038		
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	271,675	80,869	271,675	80,869	271,675	80,869	271,675	80,869

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British national identity indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. State in period t = employee and state in period t + 1 = non-employed in all columns. Involuntary: reason 1 = dismissed, reason 2 = made redundant, reason 3 = took voluntary redundancy, reason 4 = temporary job which came to an end. Voluntary: reason 1 = resigned, reason 2 = took early retirement, reason 3 = retired (at or after state pension age), reason 4 = education or training. Other: reason 1 = gave up work for health reasons, reason 2 = gave up work for family or personal reasons, reason 3 = left for some other reason. Columns (2), (4), (6), and (8) restrict the sample to individuals who were employed in an LPI industry in period t, and the dependent variable is an indicator for the corresponding status in period t + 1.

Table C.5: Effect of NLW Exposure (Bite) on Separation Rates from Solo Self-Employment by Reason

	Reason for separation							
	Reason 1		Reason 2		Reason 3		Reason 4	
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Reason type								
Involuntary								
Post-NLW x bite	0.005	-0.000	-0.001	0.002	-0.001	0.001	0.011*	0.027
	(0.005)	(0.002)	(0.003)	(0.004)	(0.001)	(0.001)	(0.006)	(0.017)
Pre-NLW mean of dep. var.	0.000	0.001	0.001	0.001	0.000	0.000	0.005	0.004
IQ effect	0.001	-0.000	-0.000	0.000	-0.000	0.000	0.001	0.003
% IQ effect	1.176	-0.036	-0.051	0.204	-0.390	0.269	0.243	0.756
Voluntary								
Post-NLW x bite	-0.000	0.004	-0.000	-0.001	-0.002	-0.013*	-0.002	-0.042**
	(0.005)	(0.013)	(0.002)	(0.003)	(0.004)	(0.007)	(0.009)	(0.017)
Pre-NLW mean of dep. var.	0.001	0.003	0.002	0.002	0.003	0.003	0.002	0.003
IQ effect	-0.000	0.000	-0.000	-0.000	-0.000	-0.001	-0.000	-0.004
% IQ effect	-0.025	0.158	-0.006	-0.028	-0.069	-0.411	-0.133	-1.604
Other								
Post-NLW x bite	-0.000	-0.004	0.011	0.028	0.030*	0.064**		
	(0.005)	(0.008)	(0.009)	(0.031)	(0.016)	(0.031)		
Pre-NLW mean of dep. var.	0.003	0.003	0.004	0.006	0.011	0.014		
IQ effect	-0.000	-0.000	0.001	0.003	0.003	0.006		
% IQ effect	-0.013	-0.150	0.292	0.463	0.271	0.450		
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	38,330	11,034	38,330	11,034	38,330	11,034	38,330	11,034

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British national identity indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. State in period t = solo self-employed and state in period t + 1 = non-employed in all columns. Involuntary: reason 1 = dismissed, reason 2 = made redundant, reason 3 = took voluntary redundancy, reason 4 = temporary job which came to an end. Voluntary: reason 1 = resigned, reason 2 = took early retirement, reason 3 = retired (at or after state pension age), reason 4 = education or training. Other: reason 1 = gave up work for health reasons, reason 2 = gave up work for family or personal reasons, reason 3 = left for some other reason. Columns (2), (4), (6), and (8) restrict the sample to individuals who were employed in an LPI industry in period t, and the dependent variable is an indicator for the corresponding status in period t + 1.

Table C.6: Effect of NLW Exposure (Bite) on Separation Rates from Non-Solo Self-Employment by Reason

	Reason for separation							
	Reason 1		Reason 2		Reason 3		Reason 4	
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Reason type								
Involuntary								
Post-NLW x bite			0.013	0.039	0.006	0.018	0.016	0.008
			(0.009)	(0.034)	(0.006)	(0.018)	(0.013)	(0.008)
Pre-NLW mean of dep. var.			0.001	0.001	0	0	0.000	0.001
IQ effect			0.001	0.002	0.001	0.001	0.001	0.000
% IQ effect			1.367	2.379			4.051	0.444
Voluntary								
Post-NLW x bite	0.045		-0.000	0.010	0.012	0.009		
	(0.036)		(0.004)	(0.007)	(0.009)	(0.014)		
Pre-NLW mean of dep. var.	0.001		0.002	0.001	0.001	0.001		
IQ effect	0.004		-0.000	0.001	0.001	0.000		
% IQ effect	7.741		-0.005	0.505	0.834	0.321		
Other								
Post-NLW x bite	-0.006	0.000	-0.002	-0.006	-0.034**	-0.092		
	(0.005)	(0.005)	(0.002)	(0.006)	(0.016)	(0.064)		
Pre-NLW mean of dep. var.	0.000	0.001	0.001	0.002	0.001	0.002		
IQ effect	-0.001	0.000	-0.000	-0.000	-0.003	-0.005		
% IQ effect	-1.351	0.014	-0.205	-0.156	-2.708	-2.756		
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,445	2,928	7,445	2,928	7,445	2,928	7,445	2,928

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Controls include white, female, student, and British national identity indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. State in period t = non-solo self-employed and state in period t + 1 = non-employed in all columns. Involuntary: reason 1 = dismissed (empty cell), reason 2 = made redundant, reason 3 = took voluntary redundancy (only 1 respondent in LPI left for this reason, no variation in pre-reform period), reason 4 = temporary job which came to an end. Voluntary: reason 1 = resigned (only 4 respondents resigned, no variation in LPI), reason 2 = took early retirement, reason 3 = retired at or after state pension age, reason 4 = education or training (only 1 respondent left for this reason, no variation in LPI). Other: reason 1 = gave up work for health reasons, reason 2 = gave up work for family or personal reasons, reason 3 = left for some other reason. Columns (2), (4), (6), and (8) restrict the sample to individuals who were employed in an LPI industry in period t, and the dependent variable is an indicator for the corresponding status in period t + 1.

D. Alternative Estimation Window

Table D.1: Effect of NLW Exposure (Bite) on Hourly Wages and Hours Worked

	Log hourly wage		Log usual hours	
	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
Post-NLW x bite	0.031*	0.068**	-0.020	-0.038
	(0.018)	(0.029)	(0.027)	(0.048)
Pre-NLW mean of dep. var.	2.466	2.155	3.485	3.350
IQ effect	0.003	0.010	-0.002	-0.006
Control Variables	Yes	Yes	Yes	Yes
Observations	75,554	23,238	75,554	23,238

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Sample period: 2015Q2-2017Q1. Controls include white, female, student, British nationality, and public sector indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. Columns (2) and (4) restrict the sample to respondents employed in an LPI industry.

Table D.2: Effect of NLW Exposure (Bite) on Employment Stocks and Flows

Panel A: Stocks	**Employed**	**Unemployed**	**Inactive**
(Cross-Sectional)	(1)	(2)	(3)
Post-NLW x bite	0.002	-0.017**	0.016
	(0.011)	(0.008)	(0.011)
Pre-NLW mean of dep. var.	0.730	0.042	0.229
IQ effect	0.000	-0.002	0.002
% IQ effect	0.000	-0.049	0.008
Control Variables	Yes	Yes	Yes
Observations	456,077	456,077	456,077

Panel B: Flows	**State in period t**					
(Longitudinal)	**Employed**		**Unemployed**		**Inactive**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Employed						
Post-NLW x bite	0.018*	0.020	0.110**	0.015	-0.031*	-0.010
	(0.010)	(0.016)	(0.049)	(0.038)	(0.018)	(0.014)
Pre-NLW mean of dep. var.	0.970	0.959	0.279	0.138	0.059	0.031
IQ effect	0.001	0.003	0.033	0.005	-0.007	-0.002
% IQ effect	0.001	0.003	0.118	0.033	-0.124	-0.078
Unemployed						
Post-NLW x bite	-0.010	-0.014	-0.098		-0.000	
	(0.006)	(0.013)	(0.067)		(0.016)	
Pre-NLW mean of dep. var.	0.011	0.015	0.528		0.049	
IQ effect	-0.001	-0.002	-0.029		-0.000	
% IQ effect	-0.070	-0.135	-0.056		-0.001	
Inactive						
Post-NLW x bite	-0.008	-0.005	-0.012		0.032	
	(0.009)	(0.015)	(0.045)		(0.025)	
Pre-NLW mean of dep. var.	0.019	0.026	0.192		0.892	
IQ effect	-0.001	-0.001	-0.004		0.007	
% IQ effect	-0.034	-0.028	-0.019		0.008	
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	155,933	46,416	7,677	7,512	51,531	51,372

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Sample period: 2015Q2-2017Q1. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Column (2) of Panel B restricts the sample to individuals who were employed in an LPI industry in period t. In columns (4) and (6) of Panel B, the outcome is an indicator for employment in an LPI industry in period t + 1, and the sample comprises the unemployed or inactive respondents accordingly in period t.

Table D.3: Effect of NLW Exposure (Bite) on Job Search

	On-the-job search								Off-the-Job search	
	Incidence		Long duration		Effort		Replacing current job		Long duration	Effort
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	Pooled
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Post-NLW x bite	-0.007	-0.009	0.014	0.061	-0.183	-0.148	0.047	0.066	0.033	0.029
	(0.010)	(0.019)	(0.045)	(0.066)	(0.191)	(0.263)	(0.033)	(0.062)	(0.165)	(0.040)
Pre-NLW mean of dep. var.	0.066	0.091	0.398	0.398	2.824	2.914	0.863	0.861	3.842	0.475
IQ effect	-0.001	-0.001	0.002	0.016	-0.026	-0.039	0.007	0.017	0.010	0.009
% IQ effect	-0.008	-0.014	0.005	0.041	-0.009	-0.013	0.008	0.020	0.003	0.019
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	332,402	105,115	20,649	8,842	20,640	8,841	20,649	8,842	16,411	16,634

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Sample period: 2015Q2-2017Q1. Controls include white, female, student, and British nationality indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Search effort is measured as the number of search methods used from a predefined list. Columns (5) and (6) additionally control for preference over employment status in the new job (employee, self-employed, or indifferent), which determines the number of search methods available (see Appendix A for details). Long search duration is defined as 6 months or longer. Replacing current job sample in columns (7) and (8) conditions on on-the-job search, and the alternative is looking for an additional job. Columns (2), (4), (6), and (8) restrict the sample to individuals employed in a low-paying industry.

Table D.4: Effect of NLW Exposure (Bite) on Job Hiring and Separations

Panel A: Hiring (Longitudinal)	**State in period t**					
	Employed		**Unemployed**		**Non-employed**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Employed in new job						
Post-NLW x bite	-0.002	0.000	0.110**	0.015	-0.010	-0.012
	(0.014)	(0.011)	(0.049)	(0.038)	(0.019)	(0.014)
Pre-NLW mean of dep. var.	0.036	0.015	0.279	0.138	0.094	0.047
IQ effect	-0.000	0.000	0.033	0.005	-0.003	-0.003
% IQ effect	-0.005	0.001	0.118	0.033	-0.030	-0.070
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	155,933	147,630	7,677	7,512	59,208	58,884
Panel B: Separations (Longitudinal)	**Reason for separation**					
	Voluntary		**Involuntary**		**Other**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Unemployed						
Post-NLW x bite	-0.003	-0.006	-0.013***	-0.015**	0.007**	0.006
	(0.004)	(0.008)	(0.004)	(0.007)	(0.003)	(0.004)
Pre-NLW mean of dep. var.	0.002	0.005	0.006	0.007	0.003	0.004
IQ effect	-0.000	-0.001	-0.001	-0.002	0.001	0.001
% IQ effect	-0.111	-0.160	-0.184	-0.325	0.188	0.252
Non-employed						
Post-NLW x bite	-0.009	-0.013	-0.014***	-0.010	0.006	0.004
	(0.008)	(0.012)	(0.005)	(0.008)	(0.006)	(0.007)
Pre-NLW mean of dep. var.	0.011	0.018	0.009	0.011	0.009	0.012
IQ effect	-0.001	-0.002	-0.001	-0.001	0.000	0.001
% IQ effect	-0.067	-0.100	-0.119	-0.139	0.046	0.043
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	155,933	46,416	155,933	46,416	155,933	46,416

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Sample period: 2015Q2-2017Q1. Controls include white, female, student, and British national identity indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. State in period t = employed in all columns of panel B. In columns (2), (4), and (6) of Panel A, the dependent variable is an indicator for employment in an LPI industry in period t + 1, and the sample comprises the employed, unemployed, or non-employed respondents in period t, respectively. Columns (2), (4), and (6) of Panel B restrict the sample to individuals who were employed in an LPI industry in period t, and the dependent variable is an indicator for the corresponding status in period t + 1.

Table D.5: Effect of NLW Exposure (Bite) on New Job Initiation

	New job (past 12 months)		New job (past 6 months)		New job (past 3 months)	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
Post-NLW x bite	-0.033**	-0.042*	-0.020	-0.036**	-0.008	-0.011
	(0.014)	(0.025)	(0.012)	(0.018)	(0.010)	(0.015)
Pre-NLW mean of dep. var.	0.170	0.225	0.088	0.120	0.055	0.077
IQ effect	-0.003	-0.006	-0.002	-0.005	-0.001	-0.001
% IQ effect	-0.015	-0.026	-0.018	-0.043	-0.012	-0.019
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	330,431	104,538	330,431	104,538	330,431	104,538

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Sample period: 2015Q2-2017Q1. Controls include white, female, student, British nationality, and public sector indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Column (2), (4), and (6) restrict the sample to respondents employed in an LPI industry.

Table D.6: Effect of NLW Exposure (Bite) on Contract Hours Type Stocks and Flows

Panel A: Stocks	**Full-time**		**Voluntary part-time | part-time**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
Post-NLW x bite	0.010	0.031	0.060***	0.059*
	(0.014)	(0.022)	(0.023)	(0.030)
Pre-NLW mean of dep. var.	0.746	0.613	0.840	0.800
IQ effect	0.001	0.004	0.007	0.018
% IQ effect	0.001	0.007	0.008	0.023
Control Variables	Yes	Yes	Yes	Yes
Observations	331,753	104,785	87,489	41,173

Panel B: Flows	**State in period t**							
(Longitudinal)	**Full-time**		**Part-time**		**Involuntary part-time**		**Voluntary part-time**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State in period t + 1								
Full-time								
Post-NLW x bite	0.027**	0.056**	-0.018	-0.030				
	(0.013)	(0.026)	(0.023)	(0.027)				
Pre-NLW mean of dep. var.	0.961	0.944	0.060	0.061				
IQ effect	0.003	0.006	-0.002	-0.009				
% IQ effect	0.003	0.006	-0.038	-0.151				
Part-time								
Post-NLW x bite	-0.004	-0.008	0.018	0.021				
	(0.008)	(0.018)	(0.029)	(0.035)				
Pre-NLW mean of dep. var.	0.021	0.032	0.885	0.875				
IQ effect	-0.000	-0.001	0.002	0.006				
% IQ effect	-0.020	-0.026	0.003	0.007				
Non-employed								
Post-NLW x bite	-0.023**	-0.048**	0.000	0.009				
	(0.010)	(0.021)	(0.025)	(0.032)				
Pre-NLW mean of dep. var.	0.018	0.024	0.055	0.064				
IQ effect	-0.002	-0.005	0.000	0.003				
% IQ effect	-0.129	-0.200	0.001	0.043				
Involuntary part-time								
Post-NLW x bite					-0.046	-0.013	0.005	0.008
					(0.084)	(0.093)	(0.010)	(0.014)
Pre-NLW mean of dep. var.					0.730	0.752	0.017	0.022
IQ effect					-0.008	-0.003	0.001	0.003
% IQ effect					-0.011	-0.004	0.031	0.116
Voluntary part-time								
Post-NLW x bite					0.005	0.064	0.039	0.024
					(0.043)	(0.058)	(0.036)	(0.046)
Pre-NLW mean of dep. var.					0.096	0.084	0.880	0.864
IQ effect					0.001	0.016	0.004	0.007
% IQ effect					0.010	0.190	0.004	0.009
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	112,166	27,333	42,749	18,800	5,600	3,298	37,149	15,502

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Sample period: 2015Q2-2017Q1. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2) and (4) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2), (4), (6), and (8) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Table D.7: Effect of NLW Exposure (Bite) on Hours Insufficiency and Volatility Stocks and Flows

Panel A: Stocks	**Underemployed**		**Variable hours**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
Post-NLW x bite	-0.012	-0.002	0.012	0.018
	(0.010)	(0.020)	(0.019)	(0.027)
Pre-NLW mean of dep. var.	0.098	0.141	0.445	0.433
IQ effect	-0.001	-0.000	0.001	0.003
% IQ effect	-0.009	-0.001	0.002	0.006
Control Variables	Yes	Yes	Yes	Yes
Observations	309,610	95,467	323,105	101,727

Panel B: Flows	**State in period t**							
(Longitudinal)	**Underemployed**		**Non-underemployed**		**Variable hours**		**Fixed hours**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
State in period t + 1								
Underemployed								
Post-NLW x bite	-0.009	0.020	-0.026**	-0.006				
	(0.059)	(0.078)	(0.011)	(0.027)				
Pre-NLW mean of dep. var.	0.577	0.610	0.056	0.076				
IQ effect	-0.001	0.005	-0.002	-0.001				
% IQ effect	-0.002	0.009	-0.035	-0.010				
Non-underemployed								
Post-NLW x bite	-0.006	-0.053	0.050***	0.031				
	(0.062)	(0.077)	(0.017)	(0.034)				
Pre-NLW mean of dep. var.	0.387	0.345	0.919	0.888				
IQ effect	-0.001	-0.014	0.004	0.004				
% IQ effect	-0.002	-0.040	0.004	0.005				
Non-employed								
Post-NLW x bite	0.014	0.032	-0.024**	-0.026	-0.018	-0.037	-0.021	-0.011
	(0.027)	(0.038)	(0.012)	(0.021)	(0.018)	(0.028)	(0.014)	(0.022)
Pre-NLW mean of dep. var.	0.037	0.045	0.025	0.036	0.031	0.048	0.030	0.039
IQ effect	0.002	0.008	-0.002	-0.003	-0.002	-0.006	-0.002	-0.001
% IQ effect	0.054	0.186	-0.074	-0.091	-0.062	-0.131	-0.060	-0.038
Variable hours								
Post-NLW x bite					0.015	0.094*	0.031	-0.060
					(0.026)	(0.048)	(0.024)	(0.046)
Pre-NLW mean of dep. var.					0.762	0.744	0.240	0.226
IQ effect					0.002	0.016	0.003	-0.008
% IQ effect					0.002	0.022	0.011	-0.035
Fixed hours								
Post-NLW x bite					0.003	-0.058	-0.011	0.071
					(0.022)	(0.043)	(0.027)	(0.050)
Pre-NLW mean of dep. var.					0.207	0.208	0.730	0.735
IQ effect					0.000	-0.010	-0.001	0.009
% IQ effect					0.002	-0.048	-0.001	0.013
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	12,247	5,136	127,334	35,168	65,984	18,970	74,330	22,602

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Sample period: 2015Q2-2017Q1. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2) and (4) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2), (4), (6), and (8) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Table D.8: Effect of NLW Exposure (Bite) on Self-Employment Stocks and Flows

Panel A: Stocks	**Employee**		**Solo self-employed**		**Non-solo self-employed**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
Post-NLW x bite	0.007	0.007	-0.007	-0.010	-0.000	0.002
	(0.008)	(0.014)	(0.008)	(0.011)	(0.003)	(0.007)
Pre-NLW mean of dep. var.	0.861	0.872	0.116	0.100	0.023	0.028
IQ effect	0.001	0.001	-0.001	-0.001	-0.000	0.000
% IQ effect	0.001	0.001	-0.005	-0.014	-0.000	0.013
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	331,753	104,785	331,753	104,785	331,753	104,785
Panel B: Flows	**State in period t**					
(Longitudinal)	**Employee**		**Solo self-employed**		**Non-solo self-employed**	
	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)
State in period t + 1						
Employee						
Post-NLW x bite	0.022*	0.024	-0.032	-0.081	0.034	0.313
	(0.012)	(0.018)	(0.037)	(0.063)	(0.107)	(0.258)
Pre-NLW mean of dep. var.	0.963	0.951	0.032	0.028	0.040	0.033
IQ effect	0.002	0.004	-0.003	-0.007	0.003	0.017
% IQ effect	0.002	0.004	-0.103	-0.261	0.075	0.499
Solo self-employed						
Post-NLW x bite	0.006**	0.001	-0.098	-0.169	0.227*	0.370
	(0.003)	(0.004)	(0.065)	(0.131)	(0.125)	(0.232)
Pre-NLW mean of dep. var.	0.006	0.006	0.921	0.917	0.073	0.053
IQ effect	0.001	0.000	-0.010	-0.015	0.021	0.020
% IQ effect	0.090	0.039	-0.011	-0.017	0.280	0.371
Non-solo self-employed						
Post-NLW x bite	0.001	0.002	0.022	0.079	-0.249*	-0.619**
	(0.001)	(0.002)	(0.016)	(0.052)	(0.145)	(0.270)
Pre-NLW mean of dep. var.	0.001	0.001	0.016	0.018	0.881	0.906
IQ effect	0.000	0.000	0.002	0.007	-0.023	-0.033
% IQ effect	0.053	0.328	0.140	0.403	-0.026	-0.036
Non-employed						
Post-NLW x bite	-0.029**	-0.027	0.108***	0.171**	-0.012	-0.064
	(0.012)	(0.017)	(0.040)	(0.082)	(0.019)	(0.075)
Pre-NLW mean of dep. var.	0.030	0.042	0.032	0.037	0.006	0.008
IQ effect	-0.002	-0.005	0.011	0.016	-0.001	-0.003
% IQ effect	-0.082	-0.110	0.350	0.425	-0.192	-0.401
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	133,303	39,604	18,973	5,372	3,657	1,440

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Sample period: 2015Q2-2017Q1. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2), (4), and (6) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2), (4), and (6) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Table D.9: Effect of NLW Exposure (Bite) on Alternative Contracts Stocks and Flows

Panel A: Stocks	**Temporary job**		**Agency work: Temporary**		**Agency work: Permanent**		**Zero-hours contract**	
(Cross-Sectional)	Pooled	LPI	Pooled	LPI	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-NLW x bite	-0.003	0.016	0.001	0.006	-0.004	0.005	0.014	0.019
	(0.012)	(0.016)	(0.004)	(0.005)	(0.004)	(0.005)	(0.009)	(0.018)
Pre-NLW mean of dep. var.	0.052	0.064	0.012	0.014	0.015	0.018	0.024	0.049
IQ effect	-0.000	0.002	0.000	0.001	-0.000	0.001	0.001	0.003
% IQ effect	-0.005	0.034	0.007	0.070	-0.024	0.054	0.042	0.054
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	331,753	104,785	284,138	90,281	284,138	90,281	130,666	40,633

Panel B: Flows	**State in period t**			
(Longitudinal)	**Temporary job**		**Permanent job**	
	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
State in period t + 1				
Temporary job				
Post-NLW x bite	0.077	0.095	0.001	-0.001
	(0.063)	(0.125)	(0.008)	(0.013)
Pre-NLW mean of dep. var.	0.687	0.638	0.013	0.016
IQ effect	0.024	0.039	0.000	-0.000
% IQ effect	0.035	0.061	0.004	-0.005
Permanent job				
Post-NLW x bite	0.030	0.089	0.016	0.008
	(0.054)	(0.093)	(0.012)	(0.018)
Pre-NLW mean of dep. var.	0.186	0.197	0.966	0.953
IQ effect	0.009	0.037	0.001	0.001
% IQ effect	0.050	0.187	0.001	0.001
Non-employed				
Post-NLW x bite	-0.108**	-0.184**	-0.016	-0.007
	(0.052)	(0.084)	(0.011)	(0.015)
Pre-NLW mean of dep. var.	0.127	0.165	0.021	0.031
IQ effect	-0.033	-0.076	-0.001	-0.001
% IQ effect	-0.262	-0.460	-0.060	-0.034
Control Variables	Yes	Yes	Yes	Yes
Observations	7,370	2,606	124,037	36,437

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Sample period: 2015Q2-2017Q1. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Columns (2), (4), (6), and (8) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2) and (4) of panel B restrict the sample to individuals employed in an LPI industry in period t.

Table D.10: Effect of NLW Exposure (Bite) on Non-Standard Work Stocks and Flows

Panel A: Stocks	**Non-standard work**	
(Cross-Sectional)	Pooled	LPI
	(1)	(2)
Post-NLW x bite	-0.024	-0.037
	(0.015)	(0.023)
Pre-NLW mean of dep. var.	0.364	0.473
IQ effect	-0.002	-0.005
% IQ effect	-0.005	-0.011
Control Variables	Yes	Yes
Observations	331,753	104,785

Panel B: Flows	**State in period t**			
(Longitudinal)	**Non-standard work**		**Standard work**	
	Pooled	LPI	Pooled	LPI
	(1)	(2)	(3)	(4)
State in period t + 1				
Non-standard work				
Post-NLW x bite	0.048**	0.062*	-0.005	-0.037
	(0.024)	(0.034)	(0.011)	(0.023)
Pre-NLW mean of dep. var.	0.899	0.889	0.034	0.046
IQ effect	0.004	0.016	-0.001	-0.004
% IQ effect	0.005	0.018	-0.016	-0.088
Standard work				
Post-NLW x bite	-0.040*	-0.045	0.028*	0.060*
	(0.021)	(0.030)	(0.014)	(0.031)
Pre-NLW mean of dep. var.	0.052	0.051	0.948	0.931
IQ effect	-0.003	-0.012	0.003	0.006
% IQ effect	-0.065	-0.230	0.003	0.007
Non-employed				
Post-NLW x bite	-0.008	-0.017	-0.023**	-0.023
	(0.021)	(0.027)	(0.011)	(0.021)
Pre-NLW mean of dep. var.	0.049	0.060	0.018	0.023
IQ effect	-0.001	-0.004	-0.002	-0.002
% IQ effect	-0.015	-0.072	-0.131	-0.108
Control Variables	Yes	Yes	Yes	Yes
Observations	59,470	23,038	96,463	23,378

Notes: *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered at the age band × region level in parentheses. Sample period: 2015Q2-2017Q1. Controls include white, female, student, and British nationality (Panel A) or national identity (Panel B) indicators. IQ effect = point-estimate * (Q75 - Q25), where Q75 and Q25 are the 75th and 25th percentiles of the distribution of bite in the estimation sample. % IQ effect = IQ effect / pre-reform mean of dependent variable. Column (2) of panel A restrict the sample to respondents employed in an LPI industry. Columns (2) and (4) of panel B restrict the sample to individuals employed in an LPI industry in period t.