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Labor Markets in Practice – Theory, Empirical Evidence and Policies

Migration Policy of the Republic of Ireland and its Impact on Labor Market Outcomes:

The Case of Ukrainian War Refugees

Final Paper

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Introduction

The displacement of the Ukrainian people caused by Russian aggression in 2022 has had considerable economic impact on European nations as their asylum was assured by the EU Temporary Protection Directive (European Commission 2022). However, this was also complemented by states' individual policies. In Ireland, for instance, the economic effect of the refugees has translated in a specific manner. To study the nature of this impact, one will address the question: *How did Ireland's open migration policy under the EU Temporary Protection Directive affect the short-run sectoral labor market impact of the Ukrainian refugee inflow?* This paper will first concentrate on the sector-based transformations and then will consider labor market outcomes following the influx.

Ireland's Open Migration Policy Shaped Which Sectors Absorbed Refugees

It is true that Irish open migration policy, together with the EU Temporary Protection Directive, has made the integration of Ukrainian refugees into the labor market easier. Nevertheless, this affected only specific labor market sectors. Theoretically, this tendency is explained by some as the lack of ability of the refugees to substitute native workers. Data between 1960 and 1990 in the USA has shown that immigration is not evenly balanced across different working experience cells in different groups since asylum seekers are not perfect substitutes (Borjas 2003). However, this was found to be more nuanced for economies similar to Ireland in terms of open migration policy. In Sweden, for example, refugees became substitutes vis-à-vis the previous immigrants, but it was not the case for high-income country newcomers who were more similar to natives (Ruist 2013). This should imply that Ukrainians, middle-income country refugees (World Bank Group 2025), could either substitute previous migrants or might fill in the vacancies not occupied by native Irish.

Moreover, the latter may also contribute to the sectors the asylum seekers would engage in. Despite the variability in immigrants' education (CSO 2025c), the literature observes general push of immigrants towards lower skill work. It is found that during intense refugee influx, like in the case of Miami Cuban migrants in the 1980s, the rapid absorption of the newcomers resulted in them being employed in relatively unskilled sectors and hence increasing their labor supply there (Card 1990). Although in this case most refugees were

low-skilled, other evidence points out a more general tendency for natives to reallocate their task supply and move on to higher skill jobs, giving up work requiring manual routine tasks to foreign-born individuals (Peri and Sparber 2009). It is still important, however, to mention that this general trend does not capture the underlying reasons. In fact, the placement of refugees into low-skill jobs is not necessarily due to education. There are additional barriers of higher paying employment such as language deficiencies or physical and mental health problems due to experiences in their war-torn countries (Brell, Dustmann, and Preston 2020).

The case of Ukrainian refugees in Ireland is consistent with the aforementioned literature. As shown in Figure 2, the largest numbers of Ukrainian workers are found in *Accommodation & Food Service Activities*, *Wholesale and Retail Trade*, and *Manufacturing*, sectors typically associated with lower pay and skill levels. Figure 3 shows the average post-invasion share of Ukrainian workers by sector. In *Accommodation & Food Service Activities*, for instance, refugees made up nearly 5% of the total workforce on average, the highest share observed across sectors. In the first quarter of 2025, the share of Ukrainian refugees in this sector reached 8.2% (CSO 2025a; CSO 2025b).

These patterns clarify that even under a liberal and permissive framework like Ireland's, integration was not evenly distributed. The magnitude of concentration highlights that refugees were not merely absorbed into pre-existing niches, but became a defining feature of labor supply in those sectors. This demonstrates how, in practice, even liberal migration policies are mediated by institutional hierarchies that funnel refugee labor into structurally precarious and often low-mobility roles. Ireland's case demonstrates that openness in legal terms does not guarantee dispersion or equal access in labor terms. Instead, sectoral concentration reflects and reinforces the stratified structure of opportunity within the host economy.

Irish Policy Impacted Short-Run Shifts in Labor Market Outcomes in Affected Sectors

It is true that a liberal migration policy of Ireland has not only affected movements of Ukrainian refugees into specific labor sectors, but it has also impacted labor outcomes in the sectors of high exposure. From the theoretical standpoint, it is important to rationalize these fluctuations through a labor supply shock framework with wage rigidities and labor substitution considerations discussed in the previous argument. When analyzing

the questions of exposure of refugees with respect to the labor market, most literature utilizes the canonical model for studying the impact of immigration which is a partial equilibrium model combining one or various types of labor with capital in a constant-returns-to-scale production function (Dustmann, Schonberg, and Stuhler 2016). These instruments often translate through a neoclassical model that usually predicts a fall in wages after a positive supply shock (Figure 1). This has an even stronger theoretical basis when one assumes limited government like in the case of open migration policy in Ireland.

However, empirical findings regarding such models are contradictory, especially when one looks at high-income countries. For instance, using sector-level analysis to track differential impacts on variables like wage and working hours in 15 European countries, refugee influx between 1996 and 2010 not only pushed natives for more "complex" jobs but this job upgrade was also associated to a 0.7% increase in native wages for a doubling of the immigrants' share while institutional constraints contributed to a fall in hours worked per employee to restore equilibrium (D'Amuri and Peri 2014). On the contrary, research in Israel after the fall of the Soviet Union found that occupations employing more Russian immigrants had substantially lower wage growth and slightly lower native employment growth than others (Friedberg 1997). A third interpretation of labor market outcomes points out that previous empirical findings were spurious. In Israel, for instance, important discrepancies between the original analysis and reanalysis could be explained by specification choices in the construction of instrumental variables. Thus, some conclude that evidence from refugee waves collectively supports the consensus that the impact of immigration on market outcomes is small (Clemens and Hunt 2017).

Evidence from the case of Ukrainian refugees in Ireland challenges the view that immigration has negligible short-run labor market effects. Using quarterly sector-level data from 2021 to 2025, we estimate a difference-in-differences model with continuous treatment effects, where exposure is measured by the average post-invasion share of Ukrainian workers in each sector. The results show that sectors with greater exposure experienced larger declines in weekly earnings. A one percentage point increase in exposure is associated with a €14.65 drop in average weekly earnings. For the most exposed sector, *Accommodation & Food Service Activities*, where Ukrainian workers comprised 4.9% of the workforce, this corresponds to a wage reduction of nearly €72 relative to the sector with the lowest observed exposure (*Financial and Insurance Activities* at 0.18%). This estimate can be interpreted as the marginal effect of increasing treatment intensity rela-

tive to the least exposed unit, consistent with the framework outlined in Callaway et al. (2024). See Appendix for details on the empirical strategy.

Figures 6 and 7 offer a descriptive view of how the relationship between sectoral refugee exposure and labor market outcomes evolved over time. In both periods, higher exposure is associated with lower earnings, but the steeper post-invasion slope in Figure 6 is consistent with our estimated treatment effects: sectors with greater exposure experienced larger earnings declines after the inflow. Figure 7, by contrast, shows no meaningful change in the relationship between exposure and hours worked, reinforcing our finding that the adjustment occurred through wages rather than employment. These figures help visualize underlying patterns, though the identification of causal effects in our continuous treatment DiD framework relies on within-sector variation in exposure intensity over time, not on graphical slope differences.

These findings support theoretical models in which labor markets adjust to shocks not by reducing employment, but by compressing wages, particularly in sectors with weaker bargaining power and more flexible wage-setting. Ukrainian refugees appear to have been absorbed primarily into low-wage, low-mobility sectors, deepening existing inequalities rather than offsetting them. Thus, Ireland's open migration regime enabled rapid labor market integration but did little to insulate vulnerable segments from downward wage pressure. This challenges the narrative that refugee inflows have neutral effects in the short run: even moderate exposure can shift earnings trajectories in sectors already facing structural precarity.

Conclusion

Ireland's migration policy accompanied by the EU Directive has had multidimensional effects on the short-term labor market outcomes following the Ukrainian influx. On the one hand, refugees located themselves in lower-wage sectors like *Accommodation & Food Service Activities*. On the other hand, smooth short-term integration of Ukrainians in these sectors has had an impact on respective labor market variables. These findings simultaneously raise new questions. Checking if the tendencies persist in the long-term and comparing Ireland to other EU countries under different migration policies could substantially complement the observations and contribute to the related economic literature.

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Appendix

Figures

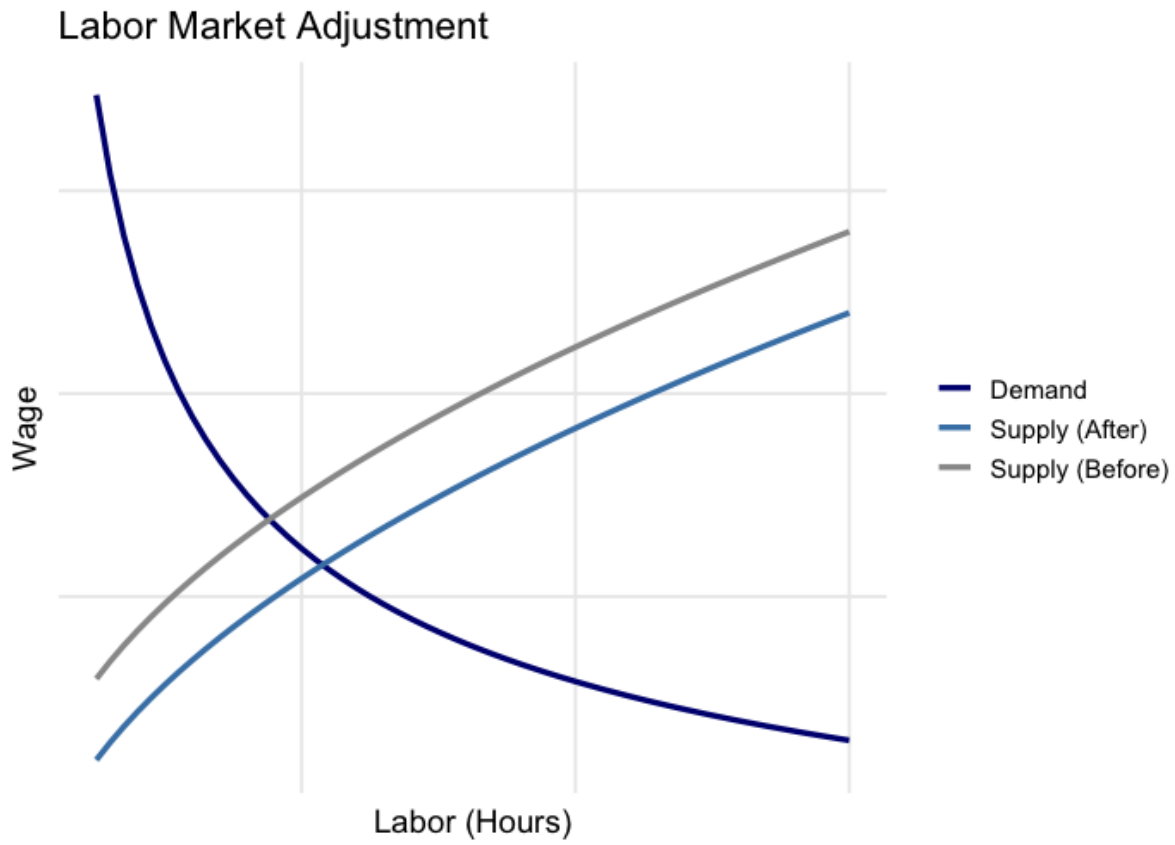

Figure 1: Labor Market Adjustment: Positive Labor Supply Shock

A change in labor supply is reflected as a shift in the location of the labor supply curve. An increase in the supply of labor shifts the curve to the right, implying that at every wage a greater quantity of labor is supplied.
Based on Rosenbloom (2018)

Empirical Strategy and Methodology

We evaluate the labor market impact of Ireland's migration response using a continuous treatment difference-in-differences (DiD) framework, as outlined in Callaway et al. (2024). This approach is particularly suited to settings where treatment varies in intensity and no group is entirely untreated.

The treatment variable, sector-level Ukrainian refugee share, varies by intensity rather than in a binary fashion. In the absence of a truly untreated group, treatment effects are interpreted relative to the sector with the lowest observed exposure. The estimated coefficient is interpreted as the marginal average treatment effect (MATE): the average change in outcomes associated with a small increase in refugee exposure, relative to the sector with the lowest exposure.

In our context, we ask whether sectors with greater exposure to the refugee inflow after Q2 2022 experienced disproportionately larger shifts in labor market outcomes, specifically, changes in weekly earnings and hours worked. The data used for this analysis come from the Central Statistics Office's publicly available sources on sectoral employment and labor market outcomes (CSO 2025a; CSO 2025b).

Motivation and Design

We construct a quarterly panel using data from the Central Statistics Office (CSO) on average weekly earnings, hours worked, and the number of Ukrainian workers in each NACE Rev 2 sector from 2021 to 2025 (CSO 2025a; CSO 2025b). Exposure is measured by the average share of Ukrainian workers in each sector over the post-invasion period. To reduce bias from COVID-related shocks, we restrict the analysis to begin in Q4 2021, after most lockdown-induced volatility had subsided.

Sectors with the highest Ukrainian shares tend to be lower-wage service sectors, including *Accommodation & Food Service Activities* and *Administrative and Support Services*. These structural differences inform both the empirical specification and interpretation.

Table 1: Summary Statistics for Sectoral Ukrainian Exposure

Min	Q1	Median	Mean	Q3	Max
0.1837	0.2669	0.3536	1.6383	2.3016	4.9262

Figure 2 shows the Ukrainian worker count by sector, while Figure 3 plots the treatment

variable, the average share of Ukrainian refugees as a percentage of the total workforce by sector.

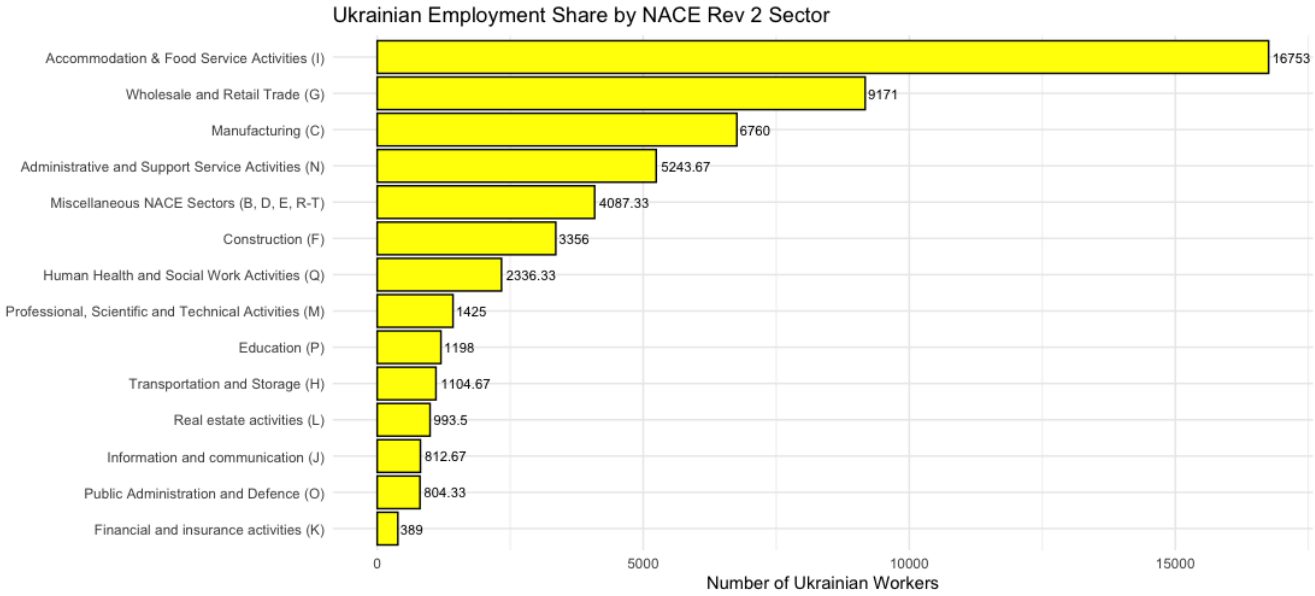

Figure 2: Ukrainian Worker Count by Sector (Q1 2025)

Data Source: CSO (2025b)

Regression Specification

We estimate the following model:

$$Y_{st} = \alpha + \beta \cdot \text{Post}_t \times \text{Sector_Ukraine_pct}_s + \gamma_s + \delta_t + \varepsilon_{st} \tag{1}$$

where:

- Y_{st} is either average weekly earnings or hours in sector s and quarter t,
- Post_t is a dummy equal to 1 after Q2 2022,
- $\text{Sector_Ukraine_pct}_s$ is the average post-treatment share of Ukrainian workers in sector s,
- γ_s are sector fixed effects, and δ_t are quarter fixed effects.

The interaction term allows treatment intensity to vary continuously. The coefficient β captures the marginal effect of a one percentage point increase in refugee exposure on Y_{st} after the war began. As previously mentioned, treatment effects are identified relative to the lowest exposed sector, consistent with the marginal interpretation emphasized in

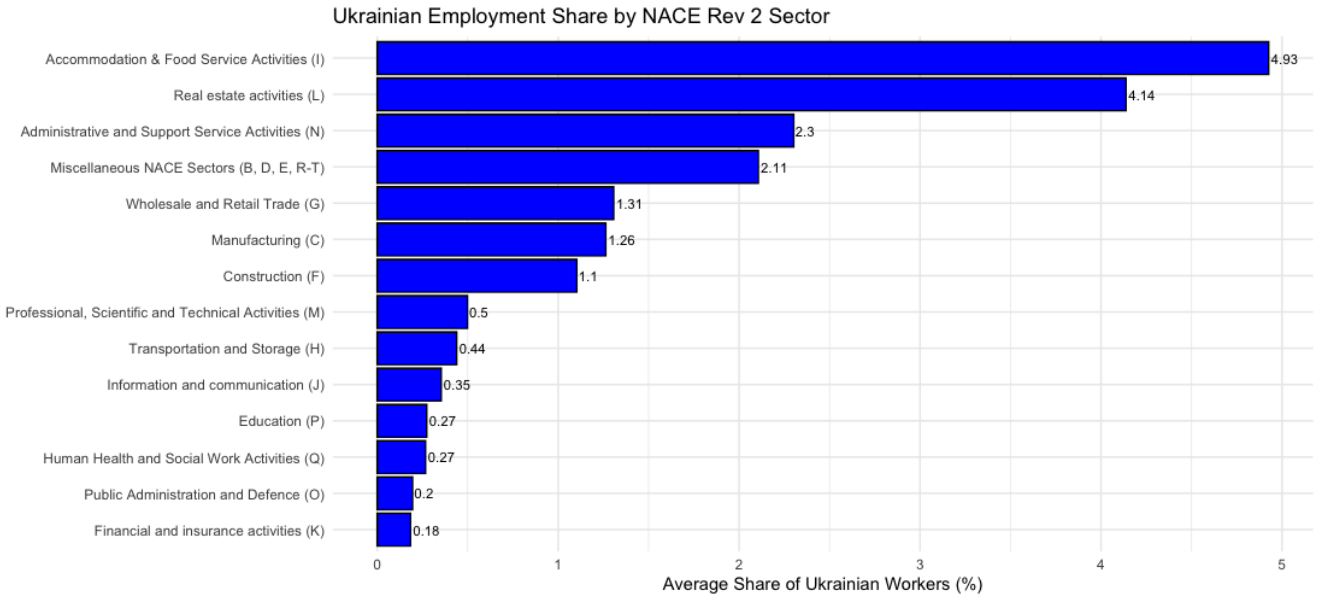

Figure 3: Average Ukrainian Worker Share by Sector

Data Source: CSO (2025a)

Callaway et al. (2024). Thus, β reflects the average change in outcomes across already-treated sectors as exposure increases.

Parallel Trends Validation

Figures 4 and 5 show smoothed pre-trends for sectors with first, second, and third-tercile levels of exposure. Both groups move similarly before the treatment period, broadly supporting the parallel trends assumption that underpins DiD.

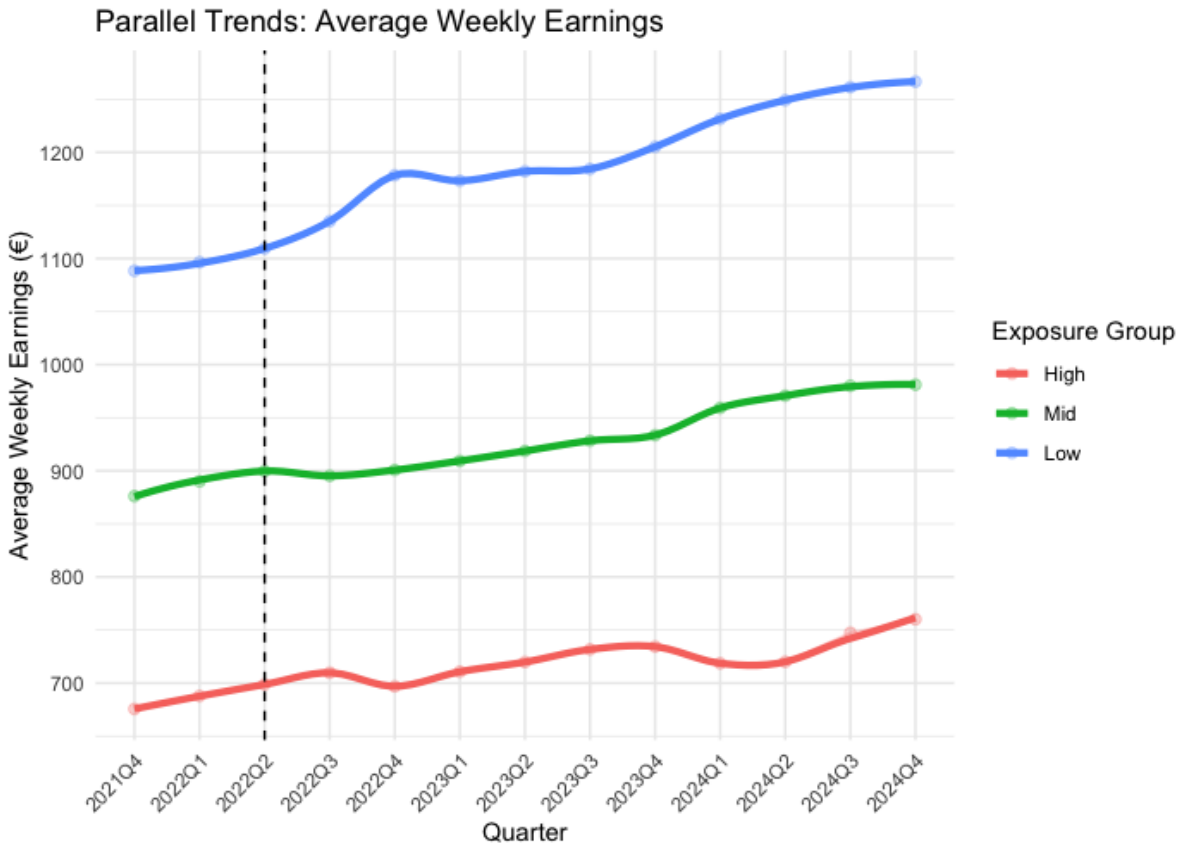

Figure 4: Parallel Trends: Weekly Earnings (High vs Low Exposure)

Regression Results

Dependent Variables:	Weekly_Earnings	Weekly_Hours
Model:	(1)	(2)
Post × Sector_Ukraine_pct	-14.65**	-0.1115
	(5.370)	(0.1553)
Fixed-effects		
'NACE Sector'	Yes	Yes
Quarter	Yes	Yes
Fit statistics		
Observations	182	182
R^2	0.99211	0.98839
Within R^2	0.08639	0.01776

Clustered ('NACESector') standard-errors in parentheses

*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

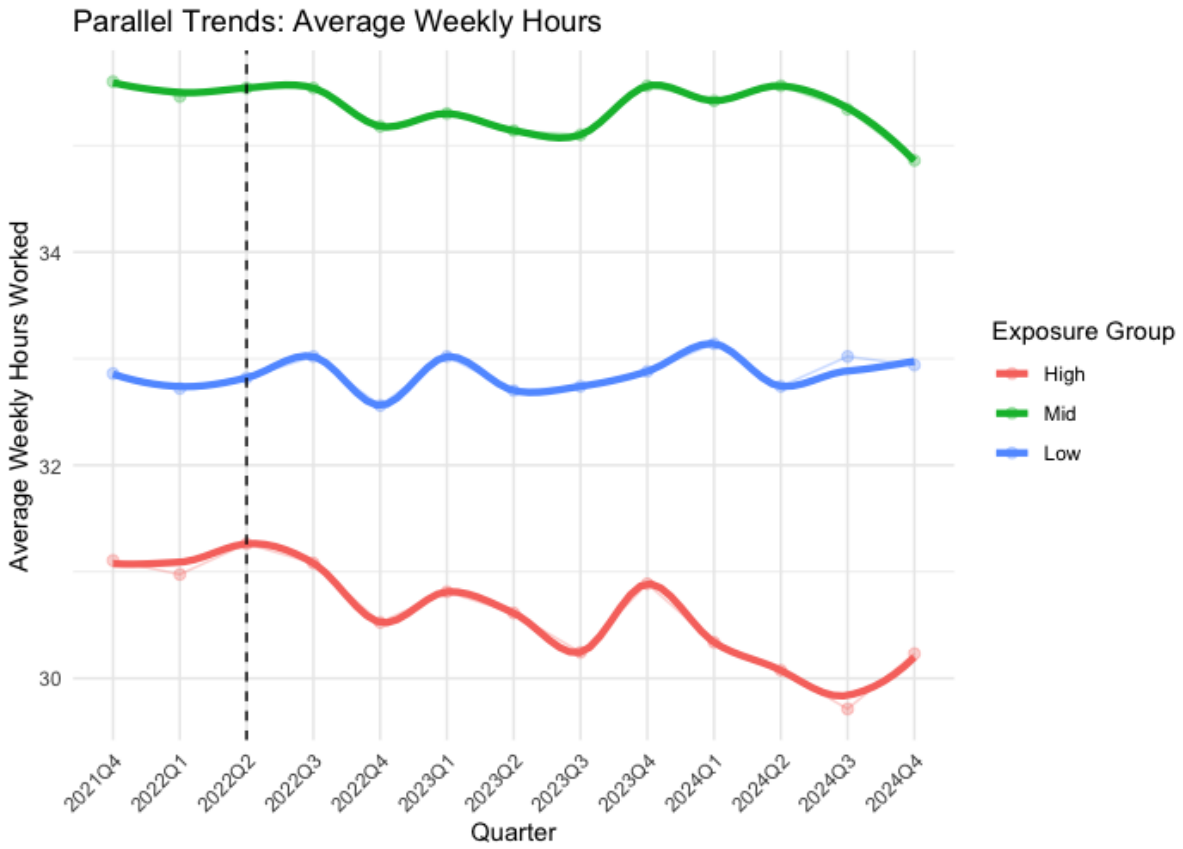

Figure 5: Parallel Trends: Weekly Hours Worked (High vs Low Exposure)

Graphical Illustration of Treatment Effects

Figures 6 and 7 illustrate the association between sectoral refugee exposure and labor market outcomes in the pre- and post-invasion periods. These descriptive graphs help visualize how the exposure–outcome relationship evolved over time. While our identification strategy does not depend on changes in slope, the steeper post-invasion decline in Figure 6 aligns with our main finding: more exposed sectors saw greater wage compression. Figure 7, by contrast, shows stable trends, consistent with the result that adjustments occurred through wages rather than hours worked.

Figure 6: Sector Exposure vs Weekly Earnings (Pre vs Post Invasion)

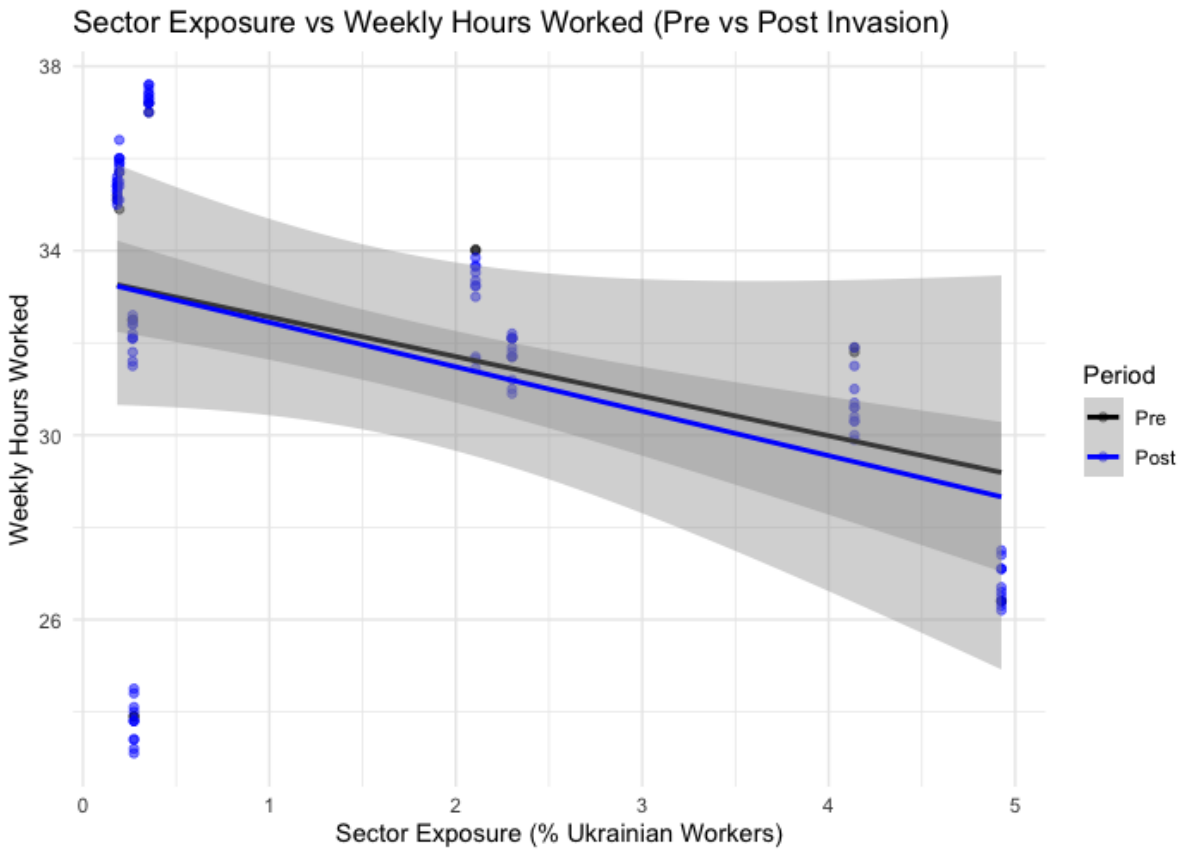

Figure 7: Sector Exposure vs Weekly Hours Worked (Pre vs Post Invasion)