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Work-from-Home as a Structural Bridge: How the Spread of Remote Work Shapes Maternal Employment in Europe

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Abstract: The rapid diffusion of work-from-home (WFH) has fundamentally restructured working arrangements in Europe, yet its role as a structural driver of parental employment remains under-researched. Analyzing macro-level panel data across 15 European countries (2006–2024) alongside micro-level maternal transitions, we examine WFH's impact on employment for parents of young children. We find that national WFH prevalence is positively and significantly associated with maternal employment, while no effects are observed for fathers or non-parents. A 10-percentage point increase in national WFH share increases maternal employment rates by 0.86 percentage points the following year and raises a mother's probability of transitioning from non-employment to work by 4.7 percentage points. However, WFH primarily facilitates part-time employment, acting as a reconciliatory bridge rather than a catalyst for full-time integration. Ultimately, while remote work enhances labor market attachment, without broader structural changes to domestic labor divisions, it risks prioritizing work-family reconciliation over full career equality.

Keywords: work-from-home, maternal employment, labor market transitions, work-family reconciliation

JEL codes: J22, J13, J16, O33

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1. Introduction

The rapid advancement of digitalization over the last two decades has fundamentally transformed the organization of work across Europe. Long before the global health crisis of 2020, the increasing availability of information and communication technologies (ICT) had already begun to decouple professional tasks from the physical office, leading to a steady, long-term rise in work-from-home (WFH) arrangements (Eurofound 2020). While the COVID-19 pandemic acted as a powerful catalyst, quadrupling teleworking rates within months and institutionalizing remote models as a "new normal", it represented an acceleration of a pre-existing structural shift toward labor market flexibilization (OECD 2021; Touzet 2023).

This ongoing transformation has generated a complex landscape of opportunities and risks, reshaping traditional employment arrangements and work–life boundaries (Chung 2022). For parents, and mothers in particular, the diffusion of WFH offers a potential "reconciliatory tool" to navigate the persistent conflict between professional activity and domestic care demands (Bernhardt et al. 2023; Boeckmann et al. 2015). However, as remote work transitions from a niche arrangement to a stabilized feature of contemporary labor markets, its impact on long-term parental employment patterns, specifically the distinction between labor market participation and full-time career integration, remains a critical area of inquiry.

A growing body of research has examined how WFH affects career progression, documenting reduced access to promotions and slower wage growth for remote workers, even in the post-pandemic period (Kasperska et al. 2024; Bloom et al. 2015). Yet, the potential of WFH to facilitate parental employment, particularly for mothers, remains understudied. On the one hand, WFH can ease entry into paid employment by reducing commuting time and offering greater temporal flexibility, which is particularly valuable for individuals with caregiving responsibilities who often face time constraints (Chung and van der Horst 2018; Chung and van der Lippe 2020). Recent studies also show that WFH can improve satisfaction with work–life balance, which may encourage mothers to return to employment or increase working hours after childbirth if remote options are available (Laß and Wooden 2023; Kurowska et al. 2025).

On the other hand, however, evidence indicates that teleworking may intensify work–family conflict by blurring the boundaries between professional and domestic roles, creating a double burden that can paradoxically discourage labor market entry (Eddleston and Mulki 2017). For many parents, the vision of WFH is not necessarily one of seamless flexibility,

but of extreme work fragmentation and exhaustion (Powell and Craig 2015). The impact of this blurring on work-family balance is deeply gendered (Yucel and Laß 2024), which helps explain why WFH might fail to attract some caregivers into the workforce. Research suggests that men and women utilize the domestic space differently. While fathers are more likely to physically and mentally separate their professional tasks from family life, mothers often engage in simultaneous multitasking, managing childcare and household chores while working (Del Boca et al. 2020; Lyttelton et al. 2022). Consequently, the prospect of managing this mental load and the inevitable work-family interference may appear unmanageable. If a mother anticipates that remote work will simply lead to work intensification and fatigue rather than genuine reconciliation, she may perceive the costs of employment—even in a remote format—as exceeding the benefits, leading her to remain outside the labor market entirely (Kurowska et al. 2025). Thus, while WFH offers a structural pathway to inclusion of women into the workforce, the reality of gendered domestic expectations can, in fact, discourage mothers from employment, as the anticipated stress of "doing it all from home" acts as a deterrent rather than an incentive.

This paper examines whether the spread of WFH is related to an increase or a decrease in employment rates of parents of young children, particularly mothers, in Europe using data for 2006-2024 from the Labor Force Survey. In the first and core stage of the analysis, we examine how the prevalence and spread of WFH in a country relate to parental employment rates (separate for mothers and fathers) compared to individuals without young children (women and men, separately) at a country level. To further refine these results, we supplement this primary macro-level focus with a micro-level transition analysis. This secondary step adds to the macro-level findings by investigating how the national spread of WFH influences individual probabilities of transitioning from non-employment to employment. In this step, we distinguish between part-time and full-time employment.

By supplementing macro-perspective with a micro-level analysis, this study sheds light on the complex relationship between telework and parental employment. It provides new evidence on how remote work intersects with family responsibilities to shape labor market trajectories, with particular attention to gendered inequalities. Crucially, this research complements existing studies that focus on the impact of WFH availability on the career outcomes of those already in the workforce, such as wage growth or promotion prospects, by shifting the focus to non-employed individuals. Thus, by examining whether the diffusion of WFH facilitates labor market entry at all, our analysis addresses the fundamental question

of social and economic inclusion. In doing so, the analysis contributes to broader debates on the long-term implications of teleworking for career opportunities, work–family reconciliation, and social inclusion. The dual focus on national dynamics and individual employment transitions offers a comprehensive understanding of how the rapid diffusion of WFH may either mitigate or exacerbate disparities in employment opportunities between mothers, fathers, and individuals without young children.

The remainder of this paper is organized as follows. Section 2 contextualizes the study by briefly reviewing recent WFH trends in Europe, synthesizing key theoretical arguments, and situating our research within the existing literature. Section 3 details our data sources, defines the primary variables, and outlines the empirical strategy. Section 4 presents our findings in two stages. First, a macro-level panel analysis examines the association between the aggregate spread of WFH and subgroup-specific employment rates. Second, we employ a micro-level approach to investigate individual transitions from non-employment to employment for those subgroups that exhibit significant associations at a macro-level. This dual-method strategy allows us to test the robustness of our macro-level observations and identify the underlying drivers of labor market entry. Finally, Section 5 discusses the implications of our results, acknowledges the study's limitations, and offers concluding remarks as well as policy implications.

2. Background

Parenthood remains a central axis of labor market inequality in Europe, as childcare demands frequently conflict with professional activity (Boeckmann et al. 2015; Kleven et al. 2025). Because mothers remain the primary responders to domestic needs, their labor force participation is uniquely sensitive to workplace flexibility (Bernhardt et al. 2022). Within this context, WFH might function as a critical facilitator by removing the requirement for physical presence, thereby drastically reducing commuting costs and expanding the "time budget" available for both paid and unpaid labor (Arntz et al. 2022; Van Landeghem et al. 2024).

The rapid diffusion of WFH across Europe is an extension of long-term trends in digitalization and labor market flexibilization that began well before 2020 (Eurofound 2020). Prior to the COVID-19 pandemic, the uptake of remote work followed a distinct geographical gradient: while Northern European countries like the Netherlands and Sweden showed pre-pandemic adoption rates above 30%, Southern and Eastern countries like Italy, Greece, and Romania often remained below 5% (Arntz et al. 2020; Chung 2020). The 2020 health crisis

acted as a massive exogenous shock to these disparate systems, forcing a rapid, large-scale experiment introducing WFH across all European labor markets. This transition from a temporary emergency arrangement to an increasingly institutionalized mode of work has since stabilized, constituting a fundamental structural transformation where teleworking is now a permanent feature of the post-pandemic era (Touzet 2023).

The uneven pace of this transformation across Europe is primarily driven by the underlying economic structure and the "teleworkability" of national labor markets. Research suggests that the baseline potential for remote work is defined by a country's specific sectoral mix, specifically the share of occupations that do not require physical presence (Arntz et al. 2020; Song 2025). For instance, while it is estimated that only 37% of jobs in the US are feasible for remote work (Dingel and Neiman 2020), this share reaches up to 56% in highly digitalized economies like Germany (Alipour et al. 2023). Across these varying contexts, WFH-feasible jobs tend to be concentrated in digitalized, service-oriented industries characterized by cognitive tasks and relatively high wages (Alipour et al. 2023; Dingel and Neiman 2020). Consequently, the national "spread" of WFH, which serves as the primary predictor in our analysis, can reflect the aggregate availability of these flexible work arrangements within a given economic and regulatory environment.

The impact of WFH operates through both individual and partner-level mechanisms. For mothers, the ability to work from home provides the necessary autonomy to respond to immediate domestic needs, such as minor illnesses or school gaps, without exiting the labor market or reducing contractual hours (Inchauste and Siravegna 2024). This "joint production" of household and professional outputs allows mothers to maintain employment even during periods of high domestic demand (Bernhardt et al. 2022). Crucially, the benefits extend to the partner's arrangement; when fathers work remotely, they can absorb household management tasks that typically fall to the mother, "freeing up" her time and mental energy to pursue or sustain a career (Matysiak et al. 2025). Consequently, WFH may serve as a powerful tool for improving work–family reconciliation and social inclusion.

Despite its potential benefits, WFH can also function as a "double-edged sword" that reinforces traditional gender roles by increasing unpaid work expectations for women (Kurowska 2020; Osiewalska and Matysiak 2025). Because remote work blurs the spatial and temporal boundaries between home and office, mothers often face heightened pressure to manage domestic chores and caregiving simultaneously (Hilbrecht et al. 2008; Powell and Craig 2015). This arrangement leads to extreme work fragmentation, multitasking,

and a higher mental load, which can intensify work–family conflicts rather than alleviate them (Eddleston and Mulki 2017; Kurowska et al. 2025).

These dynamics impact parental employment by limiting the intensity of a mother's labor market participation. When the domestic "joint production" of outputs becomes overwhelming, mothers may be forced to reduce their contractual hours or opt for part-time roles to cope with the mental and physical load of managing a household while working (Golden et al. 2006). Furthermore, remote workers often suffer from a "flexibility stigma" and diminished professional visibility (Williams et al. 2013), which can also discourage them from employment if they have to struggle balancing paid work and care, and at the same time face worse career prospects due to a stigmatized image of remote work. These career penalties are rooted in gendered "ideal worker" norms that equate physical presence with professional commitment; consequently, mothers who use WFH for reconciliation may face lower promotion prospects and stagnating wages compared to their on-site colleagues (Acker 1990; Kasperska et al. 2024).

Finally, the literature suggests that WFH benefits fathers and mothers differently, further entrenching labor market inequalities. While mothers use remote work primarily to maintain labor force attachment amidst caregiving, fathers are more likely to use the saved commuting time to extend their working hours and enhance professional performance (Lyttelton et al. 2022). This often results in a "fatherhood premium" in the form of income increases and employment continuity, while mothers remain tethered to the "reconciliation" side of the flexibility spectrum (Arntz et al. 2022).

Despite these documented risks of work intensification and career penalties, recent empirical evidence highlights the significant inclusive potential of remote work in practice. For instance, Matysiak et al. (2025) found that both the actual use of and access to WFH significantly facilitated labor market re-entry for mothers after childbirth in the UK, while Zarate (2025) demonstrated that WFH access can mitigate the "child penalty", the drop in employment following motherhood by approximately 4 percentage points. These individual-level gains are often tied to contractual stability. Mothers with WFH access are significantly less likely to reduce their working hours (Chung and van der Horst 2018) and, in some contexts, even see an increase in contractual hours compared to their on-site counterparts (Arntz et al. 2022). At the aggregate level, the impact of these transitions becomes even more pronounced. Utilizing American Community Survey data from the US, Song (2025) found that WFH potential in the local labor market has an impact on labor force participation for mothers that is nearly three times larger than for the general female population. Similarly, Crescenzi et al.

(2025), focusing on the Italian context, identified WFH as a vital "substitution resource" that enhances inclusivity in economically disadvantaged regions where formal childcare infrastructure is scarce.

Despite these findings, a critical gap remains in the literature regarding the interdependence between macro-structural contexts and micro-level transitions. Most current research is either geographically restricted to a single country, such as the US (Song 2025) or Italy (Crescenzi et al. 2025), or focused specifically on local labor markets and the shock of the COVID-19 pandemic. While these studies are invaluable, they do not account for how varying national institutional frameworks and long-term structural trends across different European countries impact the WFH-employment relationship.

This study fills these gaps by integrating macro-level panel data with micro-level transition analysis across 15 European countries where the spread of WFH was not negligible before COVID-19. By supplementing the macro-perspective with an individual-level analysis and covering a large number of countries, we provide more comprehensive evidence on whether the diffusion of WFH acts as a structural bridge to employment for mothers, fathers, and individuals without young children, and whether this bridge leads to part-time or full-time integration. Specifically, we investigate whether the spread of WFH is associated with the employment rates of parents of young children compared to individuals without young children. This dual focus offers a comprehensive understanding of how the normalization of telework may either mitigate or exacerbate disparities in employment opportunities between mothers and other groups. Consequently, we hypothesize that the spread of WFH serves as a unique structural facilitator for the employment rates of parents, particularly mothers facing the highest domestic constraints.

3. Data and Methods

This study employs a two-tiered analytical design, centered on a primary macro-level longitudinal analysis to identify broad structural associations between WFH diffusion and employment rates across 15 European countries. To further investigate the mechanisms driving these aggregate trends, we supplement this focus with a micro-level transition analysis that provides granular evidence on individual labor market entry. Accordingly, the following sections detail the data sources, sample compositions, and variable definitions separately for the macro-level study and its supplementary micro-level counterpart.

3.1. Data and Sample

Our empirical analysis utilizes harmonized microdata from the Labor Force Survey (LFS, Eurostat 2025) spanning the period 2006–2024. To ensure our results are not driven by countries with negligible remote-work infrastructure, we restrict our primary sample to countries where the pre-pandemic prevalence of WFH workers reached a structural minimum, defined here as an average threshold of 10% or higher prior to 2020. This selection criterion is grounded in the assumption that in economies where WFH is a marginal phenomenon, its adoption lacks the requisite scale to shift aggregate employment dynamics or influence individual transitions between economic activity and inactivity. By focusing on environments where WFH was already an established option rather than a sudden pandemic necessity, we can better isolate its long-term impact on employment rates. To ensure the results are not sensitive to this specific cutoff, we conduct sensitivity analyses using alternative thresholds of 8%, 12%, and 15%. Detailed summary statistics, including the final list of included countries and their respective total sample sizes, are provided in Table 1.

While the majority of countries in our final sample provide full longitudinal coverage from 2006 to 2024, three notable exceptions exist for data consistency reasons. First, the series for the United Kingdom concludes in 2019, limiting its contribution to our post-pandemic analysis. Second, for the Netherlands, we restrict our observations to the 2015–2024 period to ensure alignment with the standardized Eurostat WFH definitions. This avoids inconsistencies caused by the pre-2015 Dutch LFS, which used different categorical levels before harmonizing its remote work variable with other LFS countries. Finally, for Sweden, the analysis commences in 2009, as consistent household-level information regarding the presence and age of children was not available in the LFS microdata for earlier waves. Truncating these specific series ensures that our demographic subgroups, particularly parents, are identified using a harmonized methodology across the entire panel.

Table 1. Selection of the analytical sample: Countries meeting the 10% pre-pandemic WFH threshold and associated sample sizes

Country	Average Pre-Pandemic Share of WFH workers	Total Sample Size	Average Yearly Sample Size
Austria	0.22	3,431,728	180,617
Belgium	0.20	1,458,489	76,763
Germany	0.12	5,175,620	272,401
Denmark	0.29	2,490,342	131,071

Country	Average Pre-Pandemic Share of WFH workers	Total Sample Size	Average Yearly Sample Size
Estonia	0.13	468,377	24,651
Finland	0.24	974,050	51,266
France	0.20	6,980,485	367,394
Ireland	0.15	3,107,722	163,564
Luxembourg	0.24	472,926	24,891
Netherlands	0.35	1,795,851	179,585
Poland	0.13	5,682,970	299,104
Portugal	0.11	2,723,734	143,354
Sweden	0.27	3,592,329	189,070
Slovenia	0.15	1,198,289	63,068
United Kingdom	0.24	1,482,960	105,926
Total	0.20	35,804,144	2,036,400

Note: WFH prevalence is calculated as the weighted average share of employed individuals reporting "usually" or "sometimes" working from home between 2006 and 2019. Sample sizes represent the total number of individual observations across the 2006–2024 period as well as yearly averages. For the United Kingdom, data availability is restricted to the 2006–2019 period due to data availability reasons. For the Netherlands, data availability is restricted to the 2015–2024 period due to cross-country comparability reasons. For Sweden, data availability is restricted to the 2009–2024 period due to data availability reasons.
Source: Authors' calculations based on Eurostat LFS microdata.

3.2. Employment Rates

The dependent variables in our country-level analysis are the quarterly employment rates of four distinct demographic subgroups: mothers, fathers, women without young children, and men without young children. In our study, having a young child is defined by the presence of at least one child aged 14 or younger in the household. We argue that children above the age of 14 do not require the same level of intensive, physically present supervision that necessitates the high degree of workplace flexibility provided by WFH. While older children still benefit from parental support, the coordination costs and direct care constraints that typically impede a parent's ability to maintain full-time office-based employment are significantly reduced once a child reaches mid-adolescence.

Consequently, our “non-parents of young children” category is intentionally broad as it encompasses adults who have never had children, “empty nesters” whose children have reached adulthood, and parents of teenagers aged 15–18. This classification allows us to isolate the specific impact of WFH on those parents facing the most acute time-use conflicts, i.e., those with younger, more dependent children. Nevertheless, to ensure our results are not sensitive

to this specific cutoff, we conduct a robustness check in Section 4 using an alternative definition that includes all parents with children in the household regardless of the child's age.

Each subgroup-specific employment rate is calculated as the ratio of the number of employed individuals within that subgroup to the total population of that same subgroup. To account for periodic fluctuations and ensure longitudinal consistency, all rates are calculated on a quarterly basis and are seasonally adjusted at the country level. Table 2 provides a comprehensive overview of the mean employment rates for each demographic subgroup at the country level across the full study period. To illustrate the long-term evolution of labor market participation, the table also presents a percentage point change (Δ) between the last and first available observations for each country. This allows for an assessment of the overall trend and the magnitude of change in employment rates for parents and individuals without young children over nearly two decades. For the United Kingdom, the Netherlands, and Sweden, these comparisons reflect their specific data availability windows (2006–2019, 2015–2024, and 2009-2024, respectively).

3.3. Spread of Working from Home

Our key explanatory variable is the quarterly share of the employed population that reports working from home. This measure is derived from the HOMEWK variable in the LFS microdata, which identifies whether a respondent performed their professional duties at their place of residence during the four-week reference period. Following Eurostat's harmonized definition, our variable captures the aggregate share of workers who "usually" or "sometimes" work from home.

To ensure our model captures structural labor market shifts rather than transitory shocks, the WFH share is seasonally adjusted. Furthermore, we acknowledge that the labor supply response to remote work availability is likely non-instantaneous; individuals require time to observe market trends, and transitions into or out of employment involve significant search and administrative lags. Consequently, we employ a one-year (four-quarter) lag of the WFH variable in our primary model specifications.

Throughout the paper, we use the WFH spread among the total population to proxy for general infrastructure and cultural shifts toward remote work. As a sensitivity analysis, we further decompose this variable to distinguish between the spread of WFH specifically among women and men, allowing us to test for gender-specific externalities in remote work adoption.

3.4. Contextual Variables and Potential Confounders

To isolate the relationship between WFH and employment, we account for several contextual factors that may confound this association. At the macro level, our primary control is the unemployment rate, which is calculated quarterly using LFS, lagged by one year, and seasonally adjusted. The inclusion of the unemployment rate is essential as it captures the overall business cycle and labor demand. A tightening labor market generally increases employment, though the magnitude of these gains may vary across subgroups, while also potentially encouraging employers, especially in sectors where flexibility is feasible, to expand flexible work arrangements as a non-monetary benefit to attract scarce labor.

The remaining variables are calculated annually at a country-level due to data constraints or very low within-year variability. We further include two demographic and human capital controls derived from the LFS. First, we calculate the mean age of the adult population, which accounts for life-cycle effects on labor participation (Vlasblom and Schippers 2004). Then, we also include the share of the population with higher education. The latter is particularly critical, as high-skill, service-oriented roles are both more likely to require a university degree and more conducive to remote work, creating a potential positive correlation between education levels and the spread of WFH (Arntz et al. 2022; Dingel and Neiman 2020).

Table 2. Average employment rates for parents and individuals without young (14 and below) children and their changes over the study period by country

Country	Employment Rates							
	Mothers		Fathers		Women without young children		Men without young children	
	Mean	Δ(pp)	Mean	Δ(pp)	Mean	Δ(pp)	Mean	Δ(pp)
Austria	0.70	12.3	0.83	1.7	0.46	6.0	0.56	1.4
Belgium	0.63	5.5	0.75	0.2	0.41	4.9	0.50	-2.1
Germany	0.65	13.5	0.83	3.6	0.47	7.9	0.57	6.1
Denmark	0.78	-2.0	0.84	-3.7	0.60	1.5	0.65	2.4
Estonia	0.60	16.4	0.73	5.9	0.55	-1.1	0.58	-4.1
Finland	0.69	10.6	0.78	1.3	0.50	4.9	0.52	0.4
France	0.61	7.0	0.75	-0.9	0.38	2.8	0.45	-0.3
Ireland	0.57	16.6	0.74	1.7	0.44	-5.0	0.53	-11.0
Luxembourg	0.64	20.5	0.79	0.8	0.42	4.0	0.50	-2.7
Netherlands	0.77	11.3	0.89	0.7	0.62	10.6	0.69	3.8

Country	Employment Rates							
	Mothers		Fathers		Women without young children		Men without young children	
	Mean	Δ(pp)	Mean	Δ(pp)	Mean	Δ(pp)	Mean	Δ(pp)
Poland	0.55	19.6	0.73	15.5	0.34	1.8	0.47	2.8
Portugal	0.64	9.9	0.74	-0.2	0.39	1.0	0.49	-6.3
Sweden	0.80	7.1	0.84	3.8	0.67	-5.3	0.69	-2.9
Slovenia	0.70	6.9	0.78	5.3	0.41	-2.6	0.49	-8.8
United Kingdom	0.62	7.7	0.80	3.9	0.47	0.0	0.54	-2.7
Total	0.66	10.2	0.79	2.5	0.48	2.1	0.54	-0.9

Note: Employment rates in the 'Mean' columns are expressed as proportions (0–1), while Δ values represent the absolute change in percentage points (pp). All figures are derived from seasonally adjusted quarterly microdata. 'Mothers' and 'Fathers' are defined as employed individuals residing in a household with at least one child aged 14 or younger. The study period covers 2006–2024, with three exceptions: the United Kingdom (2006–2019), the Netherlands (2015–2024), and Sweden (2009–2024). Δ(pp) is calculated as the difference between the last and first available annual observations for each country.
Source: Authors' calculations based on Eurostat Labour Force Survey (LFS) microdata.

Next, to capture the institutional and cultural environment, we incorporate two measures based on other data sources. First, we measure childcare coverage based on the EU-SILC database (2006–2024). This variable represents the percentage of children aged 0–3 enrolled in formal childcare. We lag this variable by one year to account for the time it takes for childcare availability to influence parental labor market entry (Boeckmann et al. 2015). We anticipate this factor to be significantly more impactful for the parental subgroups in our analysis.

Second, we construct a proxy for national gender role attitudes using the European Values Survey (EVS). Because EVS is conducted in infrequent waves and participation years vary significantly across countries, with most countries appearing in only two or three non-consecutive waves between 2006 and 2024, the data are inherently asynchronous. To create a continuous annual series, we calculate the share of respondents who 'Agree' or 'Strongly Agree' with the statement that a pre-school child suffers if their mother works for every available data point. We then apply country-specific linear interpolation to bridge the gaps between survey years and linear extrapolation to extend the series to 2024. This approach is theoretically grounded in the observation that gender role attitudes and cultural norms typically evolve at a slow, incremental pace rather than through abrupt year-on-year fluctuations (Brooks and Bolzendahl 2004; Inglehart et al. 2017). By assuming a steady linear

trend, we preserve unique national trajectories while ensuring a complete panel for our econometric analysis. Finally, we include a binary indicator for the 2020–2022 period. This control accounts for the acute phase of the COVID-19 pandemic, capturing the systemic labor market shocks and the emergency-driven surge in remote work that occurred prior to the stabilization of hybrid work models in 2023–2024.

3.5. Transition Variables and Individual Controls

To supplement our main country-level analysis, we shift from aggregate trends to an individual-level investigation of labor market entry. We utilize the retrospective longitudinal component of the LFS, specifically the variable identifying an individual's labor market status one year prior to the survey, to track transitions into employment. We define a transition from non-employment to employment as occurring when an individual reports being either unemployed or professionally inactive twelve months prior but is currently engaged in paid employment or self-employment at the time of the interview. Crucially, while our macro-level analysis extends to 2024, the retrospective employment variables in the LFS microdata are only consistently available across our sample until 2020. Thus, this analysis is based mostly on pre-pandemic data with only the first four quarters of the pandemic.

To capture the nuances of these transitions, we further distinguish between entries into part-time versus full-time employment, as WFH may facilitate different intensities of labor market attachment depending on the subgroup. Our key variable of interest remains the lagged spread of WFH at a country-level. However, besides the set of contextual independent variables at a country-level, our micro-level models also incorporate a set of individual characteristics. These include age, educational attainment, and partnership status. Finally, we control the age of the youngest child in the household, which serves as a proxy for the intensity of domestic care demands.

3.5. Empirical Strategy

3.5.1. Macro-Level Panel Analysis

At the macro level, we estimate fixed-effects (FE) panel regression models with clustered standard errors at the country level to evaluate the association between the spread of WFH and the employment rates of our four demographic subgroups. By utilizing country and quarter fixed effects, we control for time-invariant unobserved heterogeneity (such as stable national institutional frameworks) and common shocks across Europe (such as the 2008 financial crisis

or the 2020 pandemic). The models rely on within-country variation over time to identify the relationship of interest. A separate model is estimated for each subgroup, mothers, fathers, women without young children, and men without young children, to allow for group-specific coefficients on all covariates.

3.5.2. Micro-Level Transition Analysis

To uncover the individual-level mechanisms driving these aggregate trends, we supplement the macro-level findings with a micro-level analysis of labor market entry. Using LFS data from 2006 to 2019, we estimate logistic regression models to examine the probability of an individual transitioning from non-employment (unemployment or inactivity) to employment.

The micro-analysis proceeds in two steps. First, we estimate a binary logit model to identify the general likelihood of entering the labor market. Second, we employ a multinomial logistic regression to distinguish between transitions into part-time versus full-time employment. This distinction is critical for understanding whether WFH serves as a tool for full labor market integration or primarily as a facilitator for reduced-hours attachment, particularly for parents facing high care demands. In both models, we use yearly-country-specific clustered standard errors. As mentioned before, due to the 2021 LFS survey redesign and subsequent breaks in retrospective variables, this stage of the analysis is restricted to the pre-2021 period. Therefore, we also rerun the models after excluding 2020.

4. Results

4.1. Macro Analysis

The results of the macro-level panel analysis can be found Table 3. The models demonstrate high explanatory power, particularly for the maternal subgroup, where the fixed-effects specification explains 75.7% of the within-country variance. Our primary finding is that the expansion of WFH is positively and significantly associated with employment rates exclusively for mothers of children aged 14 or younger. The point estimate for this group is approximately 0.086, indicating that a 10-percentage point increase in the national share of WFH employees is associated with a 0.86 percentage point increase in the maternal employment rate in the following year, ceteris paribus. In contrast, the coefficients for fathers, and women and men without young children are statistically insignificant, and the models explain less variance than in the case of mothers (28.5% for men without young children,

39.3% for women without young children, and 50.8% for fathers). This suggests that while WFH may offer general utility, its role as a critical "enabler" of labor market participation is specifically concentrated among those facing the highest domestic coordination costs.

To ensure that our findings are not driven by the unique labor market disruptions of the COVID-19 era, we conduct a series of sensitivity tests for the maternal subgroup (see Table 4). The association remains stable across different time specifications. Crucially, the coefficient for the pre-pandemic period (2006–2019) is not only significant but larger in magnitude (effect size of 0.14) than the full-sample estimate. In other words, for the pre-pandemic period, a 10-percentage point increase in the share of WFH employees is associated with a 1.4 percentage point increase in the maternal employment rate in the following year, ceteris paribus. This suggests that in "normal" institutional settings where childcare services are fully operational and not disrupted by lockdowns, the flexibility provided by WFH may be even more effective at facilitating maternal labor supply. The continued significance of the effect when excluding the 2020–2022 period further confirms that the observed relationship is a structural shift in the labor market rather than a temporary artifact of the pandemic.

Table 3. Macro-level associations between WFH spread and employment rates across 15 European countries

	Employment Rate			
Variables	Mothers	Fathers	Women without young children	Men without young children
Lagged WFH spread, seasonally adjusted	0.086**	-0.011	0.015	0.022
	(0.037)	(0.028)	(0.040)	(0.030)
Lagged unemployment rate, seasonally adjusted	-0.577***	-0.705***	-0.425***	-0.640***
	(0.078)	(0.077)	(0.072)	(0.062)
Lagged childcare coverage 0-3	0.000	0.000	0.000**	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Mean age of adult population	0.003	0.003	-0.013***	-0.007***
	(0.003)	(0.002)	(0.003)	(0.002)
Higher education share	0.203*	0.164*	0.266**	0.113
	(0.112)	(0.079)	(0.105)	(0.094)
Pandemic (1 if 2020, 2021, 2022)	-0.010***	-0.008***	-0.004	-0.006**
	(0.003)	(0.003)	(0.003)	(0.002)
Gender Role Attitudes	-0.350***	0.000	-0.205	0.0371
	(0.100)	(0.161)	(0.123)	(0.151)

	Employment Rate			
Variables	Mothers	Fathers	Women without young children	Men without young children
Constant	0.529***	0.645***	1.056***	0.904***
	(0.124)	(0.117)	(0.158)	(0.154)
Number of observations	987	987	987	990
R-squared	0.757	0.508	0.393	0.285
Number of countries	15	15	15	15

*Notes: Standard errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All models include country and year fixed effects to account for time-invariant country characteristics and common shocks. Standard errors are clustered at the country level to account for within-country correlation. WFH spread refers to the seasonally adjusted share of the working population who sometimes or usually work from home.*
Source: Authors' calculations based on Eurostat Labour Force Survey (LFS) microdata.

4.2. Micro Analysis

To ensure that the observed significant macro-level associations for mothers are not artifacts of aggregate-level data, thereby addressing potential ecological fallacy, we validate our findings by examining individual transitions from non-employment to the labor market. While this micro-level analysis is restricted to a shorter time period due to data availability, it allows us to shift from analyzing national aggregates to observing individual labor market behavior. The coefficients for the probability of entering employment are visualized in Figure 1, with the comprehensive logistic regression results, including all individual and macro-level controls, available in Appendix Table A1.

The micro-level analysis strongly corroborates the patterns observed in the macro-level models. As shown in Figure 3, the national prevalence of WFH has a positive and highly significant impact on a mother's individual probability of labor market entry (Average Marginal Effect = 0.473, $p < 0.001$). To put this in perspective, a 10-percentage point increase in the national share of WFH employees is associated with a 4.7 percentage point increase in the individual probability of a mother transitioning from non-employment to employment. The magnitude of this effect is substantial. For instance, the impact of a 10-point rise in WFH availability is equal to the impact of having a university degree (AME = 0.047) and larger than the effect of having a partner (AME = 0.030).

By distinguishing between transitions to full- and part-time employment, our findings confirm that the positive impact of WFH is almost entirely driven by transitions into part-time employment (AME = 0.466, $p < 0.001$). In contrast, the effect of WFH prevalence on full-time

employment transitions is not statistically significant. These findings suggest that in the pre-pandemic era, WFH functioned primarily as a "reconciliatory tool" that lowered the barriers to entry for mothers seeking reduced-hours positions. While WFH provides spatial and temporal flexibility, it does not appear to have sufficiently offset the high coordination costs and time-intensity associated with full-time labor market re-entry. The latter was significantly negatively associated with the age of the youngest child, emphasizing the role of care responsibilities. Finally, it is important to note that these micro-level results are structurally robust, as the findings remain consistent even when excluding the 2020 data from the sample.

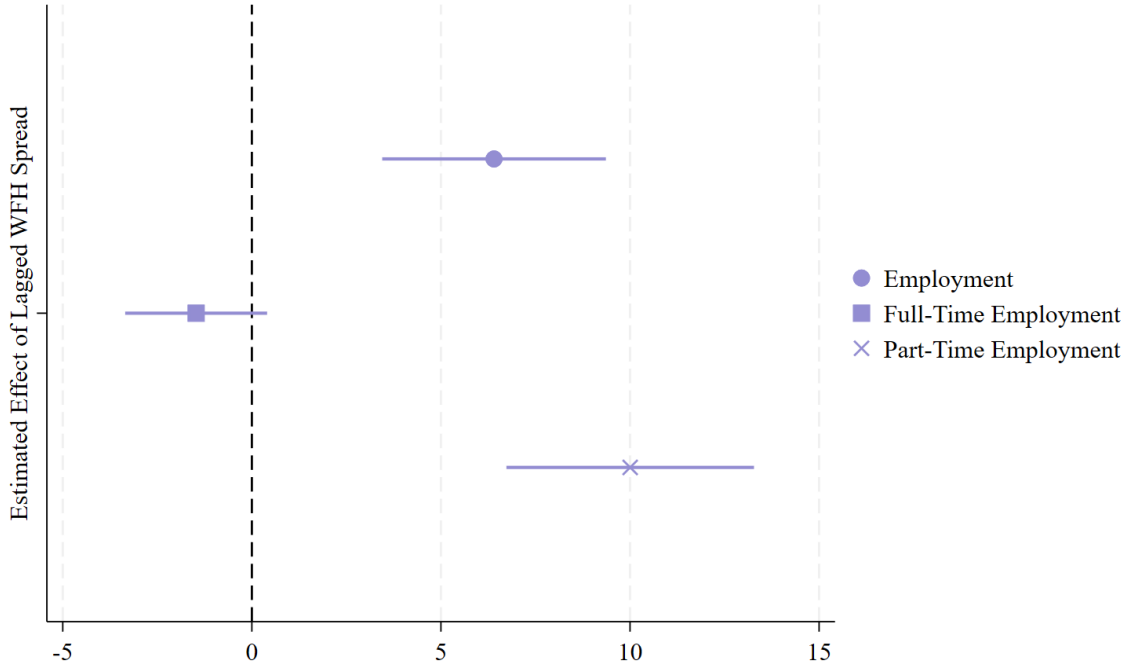
Table 4. Macro-level associations between WFH spread and employment rates. Comparing pre-pandemic (2006–2019) and non-pandemic (2006–2024, excluding 2020–2022) samples.

	Employment Rate							
Variables	Mothers		Fathers		Women without young children		Men without young children	
Lagged WFH spread, seasonally adjusted	0.141**	0.080**	0.075	-0.023	-0.059	-0.007	-0.029	0.017
	(0.048)	(0.034)	(0.090)	(0.037)	(0.079)	(0.048)	(0.061)	(0.033)
Lagged unemployment rate, seasonally adjusted	-0.579***	-0.579***	-0.718***	-0.692***	-0.442***	-0.434***	-0.743***	-0.692***
	(0.063)	(0.065)	(0.010)	(0.081)	(0.054)	(0.067)	(0.057)	(0.066)
Lagged childcare coverage 0-3	0.000	0.000**	-0.001	0.000	0.001**	0.001***	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Mean age of adult population	0.001	0.002	0.004	0.003	-0.016***	-0.012***	-0.013***	-0.008**
	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
Higher education share	0.229**	0.220*	0.161	0.165*	0.158	0.254**	0.051	0.113
	(0.080)	(0.108)	(0.130)	(0.087)	(0.113)	(0.105)	(0.010)	(0.098)
Gender Role Attitudes	-0.296**	-0.327***	-0.098	-0.047	-0.544***	-0.181	-0.197	0.060
	(0.108)	(0.107)	(0.298)	(0.188)	(0.134)	(0.141)	(0.175)	(0.184)
Constant	0.569***	0.535***	0.615***	0.664***	1.290***	1.021***	1.204***	0.922***
	(0.134)	(0.130)	(0.169)	(0.152)	(0.108)	(0.171)	(0.143)	(0.185)
Number of observations	711	819	711	819	711	819	714	822
R-squared	0.702	0.762	0.465	0.497	0.521	0.405	0.439	0.328
Number of countries	15	15	15	15	15	15	15	15
Years	Before 2020	Without Pandemic	Before 2020	Without Pandemic	Before 2020	Without Pandemic	Before 2020	Without Pandemic

*Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. "Before 2020" refers to the baseline pre-pandemic period (2006–2019). "Without Pandemic" refers to the full longitudinal sample (2006–2024), excluding the acute crisis years of 2020, 2021, and 2022, to isolate structural trends from temporary pandemic-induced shocks. All models include country and year fixed effects with standard errors clustered at the country level. WFH spread refers to the seasonally adjusted share of the working population who sometimes or usually work from home.*

Source: Authors' calculations based on Eurostat Labour Force Survey (LFS) microdata.

Figure 1. Estimated Effect of WFH spread on the probability of transitions to employment of mothers by the type of transition



Notes: The dependent variable is a binary variable where 1 denotes the transition to employment, full-time employment, or part-time employment. All models include the full set of macro-level controls and individual characteristics. Whiskers represent 95% confidence intervals based on standard errors clustered at the country and year level.
Source: Authors' calculations based on Eurostat Labour Force Survey (LFS) microdata.

4.3. Sensitivity and Robustness Checks

To evaluate the stability and boundary conditions of our findings, we performed three supplementary analyses (see Appendix, Tables A2–A4).

First, we tested the sensitivity of our results to different national WFH spread thresholds. When the pre-pandemic WFH spread, threshold was lowered to 8% (adding Czechia and Slovakia), the lagged effect remained consistent in magnitude, though the significance level shifted slightly (p=0.057). Conversely, increasing the threshold to 15%, which excludes Poland and Estonia, resulted in a larger coefficient (0.0949). This suggests that the supportive effect of WFH spread on maternal employment becomes stronger as WFH becomes more normalized within a national labor market.

Second, we tested the age definition of the "parent" subgroup. When the sample was expanded to include parents of children older than 14, the significant positive effect of WFH for mothers disappeared. This reinforces our theoretical argument that WFH primarily functions as a reconciliatory tool specifically for those facing the highest domestic and childcare

constraints. Once children reach a level of independence where intensive care is no longer required, the marginal benefit of WFH for labor market participation diminishes.

Finally, we examined gender-specific WFH diffusion. By calculating the spread separately for men and women, we continued to observe a positive effect on maternal employment. However, the magnitude was smaller than when using the total population spread. This nuance suggests that maternal labor market attachment is not only driven by a woman's own access to remote work but also by the general prevalence of WFH in the country. This might be linked to the potential effect of partner-level flexibility, which can facilitate a more egalitarian redistribution of domestic labor.

5. Discussion

The steady increase in remote work across Europe, a trend significantly accelerated by the COVID-19 pandemic, has fundamentally restructured the coordination of professional and domestic life. Six years after the initial global shift toward telework, the "new normal" has stabilized, providing a critical vantage point to assess its longitudinal impact on parental employment (Eurofound 2020; Touzet 2023). This study addresses a significant gap in literature by linking macro-level structural trends with micro-level individual transitions, investigating whether the spread of WFH acts as a facilitator for maternal labor market entry and the nature of that integration (Boeckmann et al. 2015; Matysiak et al. 2025).

Our findings provide robust evidence that the expansion of WFH is positively and significantly associated with the employment rates of mothers, while the effects for fathers and individuals without young children remain statistically insignificant. At the macro level, this relationship persists even when controlling for national unemployment, education levels, and gender-role attitudes. These results align with recent evidence from Song (2025), who demonstrated that, for the United States, the accelerated adoption of WFH significantly boosted female labor force participation, particularly among mothers with young children. While Song (2025) highlights that WFH opportunities can increase the probability of maternal participation by nearly one percentage point for a one-standard-deviation shift in WFH potential, our cross-national analysis confirms that this is not merely a local market area phenomenon but a consistent country-level association appearing over the last two decades in Europe.

Furthermore, our results echo the findings of Crescenzi et al. (2025) for Italy, who argued that WFH serves as a vital resource in contexts where external support is scarce. By reducing the reliance on physical proximity to the workplace, WFH helps bridge the gap created

by fragmented or insufficient childcare infrastructure. This suggests that the “spatial flexibility” of remote work be a functional buffer, helping mothers, the primary responders to domestic needs, to maintain labor market attachment despite high coordination costs (Bernhardt et al. 2022; Crescenzi et al. 2025; Heggeness and Suri 2021).

While the spread of WFH increases the probability of a mother transitioning into employment, our micro-level decomposition reveals that this effect is driven almost exclusively by transitions into part-time employment. For full-time transitions, the impact of WFH spread is not statistically significant, and the "care constraint", measured by the age of the youngest child, continues to play a dominant, negative role (Arntz et al. 2022; Chung and van der Horst 2018). This suggests that WFH spread functions primarily as a “reconciliatory tool” or a "re-entry bridge" (Matysiak et al. 2025). It allows mothers to balance heavy domestic care loads with labor market attachment, but it does not necessarily facilitate a total shift in their career trajectory toward full-time roles. This finding brings the "double-edged sword" of WFH into sharp focus (Chung 2020; Lott and Chung 2016). On one hand, remote work lowers the barrier to entry, preventing the total exit of mothers from the workforce (Zarate 2025). On the other hand, it may inadvertently reinforce funneling mothers into reduced-hours positions that offer flexibility but often come with long-term career penalties (Coltrane et al. 2013; Dotti Sani and Scherer 2018; Kasperska et al. 2024).

Next, the literature warns that remote workers, despite being potentially more productive, often face diminished professional visibility and a "flexibility stigma" (Chung 2020; Kasperska et al. 2024). Our study confirms that while the common access to remote working has the potential to enhance maternal employment at a country level, it primarily fosters attachment rather than integration into the highest levels of the labor markets specifically full-time, career-track roles (Acker 1990; Bloom et al. 2015).

Finally, the fact that the WFH effect is absent for fathers and individuals without young children likely reflects a ceiling effect in their labor market participation. Unlike mothers, these groups generally do not withdraw from employment due to caregiving demands. Thus, for them, remote work functions as a tool for productivity or work-life balance rather than a prerequisite for labor market maintenance (Lyttelton et al. 2022). For mothers, however, WFH availability emerges as a critical structural condition for participation. Interestingly, our findings suggest that it is the general national spread of WFH, rather than gender-specific access, that most strongly predicts maternal employment. This implies a household-level synergy where WFH

prevalence, potentially including a partner's flexibility, facilitates a more manageable domestic environment, allowing mothers to re-enter the workforce.

Ultimately, while WFH serves as a potent facilitator of work-family reconciliation, its concentration in part-time transitions stresses its limitations as a driver of gender equality. Even if remote work were to facilitate full-time re-entry, it remains an imperfect solution so long as the "professional penalties" of physical absence persist. Without addressing the underlying domestic imbalance and the professional penalties associated with remote work, WFH may mitigate the "child penalty" in terms of participation while simultaneously entrenching it in terms of career progression and intensity (Arntz et al. 2022; Kurowska 2020).

Finally, several limitations of this study must be addressed. First, our key independent variable serves as a proxy for the perceived availability and normalization of WFH within a country. We acknowledge that this measure is not a direct count of available remote positions, nor does it capture the specific "teleworkability" of every job vacancy. Instead, it reflects the broader structural and normative environment of the labor market. Second, while we utilize a lagged independent variable to mitigate the risk of reverse causality, this approach does not provide definitive proof of a causal relationship. In the absence of a natural experiment or a strictly exogenous shock, we cannot entirely rule out the presence of unobserved time-varying factors that might simultaneously influence both the spread of WFH and maternal employment rates. Therefore, our results should be interpreted as robust longitudinal associations rather than purely causal estimates. Third, our micro-level investigation is primarily restricted to the pre-pandemic period due to the nature of the available retrospective data in LFS. While this limits our ability to draw direct inferences about the post-pandemic conditions, it provides the baseline individual-level mechanisms that link contextual characteristics to individual labor market entry.

Despite some data limitations, this study offers a methodologically rigorous and contextually grounded analysis of how the diffusion of WFH has the potential to influence labor market participation in the context of 15 European countries. Our findings demonstrate that the widespread availability of work-from-home is especially important for the maternal employment rate at a country level, as well as individual-level transitions to part-time employment. As the discourse surrounding the "new normal" of work intensifies, this research emphasizes the necessity for multidimensional policy responses that do not merely offer flexibility as a temporary relief but instead address the structural barriers to full-time career integration for mothers.

Conflict of Interest The authors have no relevant financial or non-financial interests to disclose.

Data Availability Statement The datasets analyzed during the current study are sourced from the Eurostat Labor Force Survey and are not publicly available. Researchers may apply for access to these microdata through Eurostat's official request procedure for scientific purposes, subject to their institution being recognized as a research entity. All code used for data processing and analysis will be made available in an online repository.

References

Acker, J., 1990. Hierarchies, jobs, bodies: A theory of gendered organizations. Gender and Society, 4(2), 139–158. https://doi.org/10.1177/089124390004002002

Alipour, J.V., Falck, O., Schüller, S., 2023. Germany's capacity to work from home. European Economic Review, 151, 104354. https://doi.org/10.1016/j.euroecorev.2022.104354

Arntz, M., Ben Yahmed, S., Berlingieri, F., 2022. Working from home, hours worked and wages: Heterogeneity by gender and parenthood. Labour Economics, 76, 102169. https://doi.org/10.1016/j.labeco.2022.102169

Bernhardt, J., Recksiedler, C., Linberg, A., 2023. Work from home and parenting: Examining the role of work-family conflict and gender during the COVID-19 pandemic. Journal of Social Issues, 79(3), 935–970. https://doi.org/10.1111/josi.12509

Bloom, N., Liang, J., Roberts, J., Ying, Z.J., 2015. Does working from home work? Evidence from a Chinese experiment. The Quarterly Journal of Economics, 130(1), 165–218. https://doi.org/10.1093/qje/qju032

Boeckmann, I., Misra, J., Budig, M.J., 2015. Cultural and institutional factors shaping mothers' employment and working hours in postindustrial countries. Social Forces, 93(4), 1301–1333. https://doi.org/10.1093/sf/sou119

Brooks, C., Bolzendahl, C., 2004. The transformation of US gender role attitudes: Cohort replacement, social-structural change, and the role of period effects. *American Sociological Review*, 69(1), 106-133.

Chung, H., 2022. The flexibility paradox: why more freedom at work leads to more work, in: The flexibility paradox (pp. 69-84). Policy Press.

Chung, H., 2020. Gender, flexibility stigma and the perceived negative consequences of flexible working in the UK. Social Indicators Research, 151(2), 521–545. https://doi.org/10.1007/s11205-018-2036-7

Chung, H., Van der Lippe, T., 2020. Flexible working, work–life balance, and gender equality: Introduction. Social indicators research, 151(2), 365-381. https://doi.org/10.1007/s11205-018-2025-x

Chung, H., van der Horst, M., 2018. Women's employment patterns after childbirth and the perceived access to and use of flextime and teleworking. Human Relations, 71(1), 47–72. https://doi.org/10.1177/0018726717713828

Coltrane, S., Miller, E.C., DeHaan, T., Stewart, L., 2013. Fathers and the flexibility stigma. Journal of Social Issues, 69(2), 279–302. https://doi.org/10.1111/josi.12015

Crescenzi, R., Dottori, D., Rigo, D., 2025. Work from home, labour market participation and employment (Occasional Paper No. 958). Bank of Italy.

Del Boca, D., Oggero, N., Profeta, P., Rossi, M., 2020. Women's and men's work, housework and childcare, before and during COVID-19. Review of economics of the household, 18(4), 1001–1017. https://doi.org/10.1007/s11150-020-09502-1

Dingel, J.I., Neiman, B., 2020. How many jobs can be done at home? Journal of public economics, 189, 104235. https://doi.org/10.1016/j.jpubeco.2020.104235

Dotti Sani, G.M., Scherer, S., 2018. Maternal employment: Enabling factors in context. Work, employment and society, 32(1), 75-92. https://doi.org/10.1177/0950017016677944

Eddleston, K.A., Mulki, J., 2017. Toward understanding remote workers' management of work–family boundaries: The complexity of workplace embeddedness. Group and Organization Management, 42(3), 346–387. https://doi.org/10.1177/1059601115619548

Eurofound, 2020. Living, working and COVID-19 (COVID-19 series). Publications Office of the European Union. Luxembourg.

Eurostat, 2025. European Union Labour Force Survey (EU-LFS) [2025 Release]. European Commission, Eurostat.

Golden, T.D., Veiga, J.F., Simsek, Z., 2006. Telecommuting's differential impact on work-family conflict: is there no place like home? Journal of applied psychology, 91(6), 1340. https://doi.org/10.1037/0021-9010.91.6.1340

Heggeness, M.L., Suri, P., 2021. Telework, childcare, and mothers' labor supply (Institute Working Paper No. 52). Federal Reserve Bank of Minneapolis. https://doi.org/10.21034/iwp.52

Hilbrecht, M., Shaw, S.M., Johnson, L.C., Andrey, J., 2008. 'I'm home for the kids': contradictory implications for work–life balance of teleworking mothers. Gender, Work and Organization, 15(5), 454-476. https://doi.org/10.1111/j.1468-0432.2008.00413.x

Inchauste, G., Siravegna, M.C., 2024. Understanding the main determinants of telework and its role in women's labor force participation (Policy Research Working Paper No. 10889). World Bank Group.

Inglehart, R.F., Ponarin, E., Inglehart, R.C., 2017. Cultural change, slow and fast: The distinctive trajectory of norms governing gender equality and sexual orientation. Social Forces, 95(4), 1313-1340. https://doi.org/10.1093/sf/sox008

Kasperska, A., Matysiak, A., Cukrowska-Torzewska, E., 2024. Managerial (dis)preferences towards employees working from home: Post-pandemic experimental evidence. PLoS ONE, 19(5), e0303307. https://doi.org/10.1371/journal.pone.0303307

Kleven, H., Landais, C., Leite-Mariante, G., 2025. The child penalty atlas. Review of Economic Studies, 92(5), 3174-3207. https://doi.org/10.1093/restud/rdae104

Kurowska, A., 2020. Gendered effects of home-based work on parents' capability to balance work with non-work: Two countries with different models of division of labour compared. Social Indicators Research, 151(2), 405–425. https://doi.org/10.1007/s11205-018-2034-9

Kurowska, A., Kasperska, A., Kaufman, G., 2025. When working from home fails to support work–life balance: The role of childcare- and work-related demands. Journal of Family Issues, 46(11), 1664–1692. https://doi.org/10.1177/0192513X251356260

Laß, I., Wooden, M., 2023. Working from home and work–family conflict. Work, Employment and Society, 37(1), 176-195. https://doi.org/10.1177/09500170221082474

Lott, Y., Chung, H., 2016. Gender discrepancies in the outcomes of schedule control on overtime hours and income in Germany. European Sociological Review, 32(6), 752-765. https://doi.org/10.1093/esr/jcw032

Lyttelton, T., Zang, E., Musick, K., 2022. Telecommuting and gender inequalities in parents' paid and unpaid work before and during the COVID-19 pandemic. Journal of Marriage and Family, 84(1), 230–249. https://doi.org/10.1111/jomf.12810

Matysiak, A., Osiewalska, B., Kurowska, A., 2025. The role of working-from-home for maternal employment re-entry after childbirth (Working Paper No. 18/2025 (481)). University of Warsaw, Faculty of Economic Sciences.

OECD, 2021, "Teleworking in the COVID-19 pandemic: Trends and prospects", OECD Policy Responses to Coronavirus (COVID-19), OECD Publishing, Paris, https://doi.org/10.1787/72a416b6-en

Osiewalska, B., Matysiak, A., 2025. Two sides of a coin: The relationship between work autonomy and childbearing. Journal of Marriage and Family, 87(3), 1178–1199. https://doi.org/10.1111/jomf.13066

Powell, A., Craig, L., 2015. Gender differences in working at home and time use patterns: Evidence from Australia. Work, employment and society, 29(4), 571-589. https://doi.org/10.1177/0950017014568140

Song, M., 2025. The future of work: Remote opportunities and female labor force participation. SSRN Manuscript.

Touzet, C., 2023, "Teleworking through the gender looking glass: Facts and gaps", OECD Social, Employment and Migration Working Papers, No. 285, OECD Publishing, Paris, https://doi.org/10.1787/8aff1a74-en

Williams, J.C., Blair-Loy, M., Berdahl, J.L., 2013, Cultural Schemas, Social Class, and the Flexibility Stigma. Journal of Social Issues, 69: 209-234. https://doi.org/10.1111/josi.12012

Van Landeghem, B., Dohmen, T., Hole, A.R., Künn-Nelen, A., 2024. The value of commuting time, flexibility, and job security: Evidence from current and recent jobseekers in Flanders. Labour Economics, 91, 102631.

Vlasblom, J.D., Schippers, J.J., 2004. Increases in Female Labour Force Participation in Europe: Similarities and Differences. Eur J Population 20, 375–392. https://doi.org/10.1007/s10680-004-5302-0

Yucel, D., Laß, I., 2024. Working From Home and Work–Family Conflict: The Importance of Role Salience. *Soc Indic Res* 172, 947–983. https://doi.org/10.1007/s11205-024-03337-4

Zarate, P., 2025. Remote work and child penalties. Available at SSRN 5360652.

Appendixes

Table A1. Logistic regression of maternal employment transitions with macro- and micro-level variables, by type of transition

	Transition		
Variables	Employment	Full-time Employment	Part-time Employment
Macro-level variables			
Lagged WFH spread, seasonally adjusted	6.405***	-1.473	10.000***
	(1.509)	(0.957)	(1.670)
Lagged unemployment rate, seasonally adjusted	-16.590***	-16.280***	-18.700***
	(2.260)	(1.636)	(2.996)
Lagged childcare coverage 0-3	-0.003	-0.005	-0.003
	(0.004)	(0.004)	(0.006)
Mean age of adult population	-0.017	-0.097***	0.013
	(0.035)	(0.029)	(0.036)
Higher education share	-0.850	-2.767	-1.018
	(1.545)	(1.775)	(1.693)
Gender Role Attitudes	-2.103	-1.388	-3.724**
	(1.569)	(1.785)	(1.880)
Micro-level variables			
Having higher education	0.641***	0.301**	0.899***
	(0.053)	(0.118)	(0.055)
Age	0.038***	0.049***	0.025***
	(0.005)	(0.003)	(0.005)
Having a partner	0.415***	0.473***	0.327***
	(0.066)	(0.071)	(0.066)
Age of the youngest child	0.006	-0.016***	0.020***
	(0.004)	(0.004)	(0.005)
Constant	-1.625	3.154*	-3.849*
	(2.081)	(1.752)	(2.147)
Number of observations	304,268	288,156	293,363

*Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Models are estimated using logistic regression. Coefficients represent log-odds. Standard errors are clustered at the country-year level to account for the nested structure of the data and the presence of macro-level predictors. "Transition" refers to the movement from non-employment in year t-1 to employment in year t. Full-time and part-time transitions are estimated separately against a baseline of remaining non-employed. WFH spread refers to the seasonally adjusted share of the working population who sometimes or usually work from home.*

Source: Authors' calculations based on Eurostat Labour Force Survey (LFS) microdata.

Table A2. Macro-level associations between WFH spread and employment rates by WFH spread inclusion thresholds (8%, 12%, and 15%)

	Employment Rate											
Variables	Mothers			Fathers			Women without young children			Men without young children		
Lagged WFH spread, seasonally adjusted	0.076*	0.084**	0.095**	-0.007	-0.012	0.003	0.004	0.014	0.021	0.026	0.021	0.018
	(0.037)	(0.038)	(0.037)	(0.028)	(0.029)	(0.024)	(0.039)	(0.041)	(0.043)	(0.028)	(0.030)	(0.033)
Lagged unemployment rate, seasonally adjusted	-0.617***	-0.613***	-0.655***	-0.652***	-0.674***	-0.687***	-0.476***	-0.392***	-0.357***	-0.623***	-0.640***	-0.656***
	(0.081)	(0.093)	(0.085)	(0.080)	(0.085)	(0.093)	(0.076)	(0.081)	(0.101)	(0.060)	(0.078)	(0.090)
Lagged childcare coverage 0-3	0.000	0.000	0.000	0.000	-0.000	0.000	0.000	0.000**	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Mean age of adult population	0.003	0.003	0.001	0.003	0.004*	0.003	-0.012***	-0.013***	-0.0108***	-0.008***	-0.007**	-0.007**
	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.0025)	(0.002)	(0.002)	(0.003)
Higher education share	0.217*	0.188	0.224	0.175**	0.147*	0.198*	0.295**	0.270**	0.240*	0.124	0.100	0.195
	(0.108)	(0.113)	(0.153)	(0.078)	(0.079)	(0.010)	(0.115)	(0.108)	(0.129)	(0.095)	(0.094)	(0.122)
Pandemic (1 if 2020, 2021, 2022)	-0.010***	-0.010***	-0.011***	-0.009***	-0.008**	-0.006*	-0.006**	-0.004	-0.004	-0.007**	-0.005*	-0.004
	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.002)	(0.002)	(0.003)
Gender Role Attitudes	-0.375***	-0.356***	-0.328	-0.018	-0.023	0.192	-0.208*	-0.204	-0.158	0.018	0.008	0.266
	(0.110)	(0.106)	(0.265)	(0.157)	(0.166)	(0.171)	(0.111)	(0.126)	(0.226)	(0.150)	(0.144)	(0.227)
Constant	0.497***	0.523***	0.620***	0.669***	0.625***	0.628***	1.031***	1.047***	0.951***	0.943***	0.902***	0.841***
	(0.120)	(0.124)	(0.121)	(0.107)	(0.119)	(0.136)	(0.134)	(0.159)	(0.166)	(0.146)	(0.156)	(0.175)
Number of observations	1,131	915	703	1,131	915	703	1,131	915	703	1,134	918	706
R-squared	0.753	0.751	0.660	0.501	0.502	0.440	0.393	0.375	0.293	0.296	0.260	0.231
Number of countries	17	14	11	17	14	11	17	14	11	17	14	11
Threshold	8%	12%	15%	8%	12%	15%	8%	12%	15%	8%	12%	15%

*Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. The 8% threshold expands the sample to 17 countries; the 12% threshold includes 14 countries; and the 15% threshold restricts the sample to the 11 countries with the highest WFH mean share. All models include country and year fixed effects with standard errors clustered at the country level. WFH spread refers to the seasonally adjusted share of the working population who sometimes or usually work from home.*

Source: Authors' calculations based on Eurostat Labour Force Survey (LFS) microdata.

Table A3. Macro-level associations between WFH spread and employment rates of parents, including parents of children 15+

	Employment Rate	
Variables	Mothers	Fathers
Lagged WFH spread, seasonally adjusted	0.048	-0.037
	(0.039)	(0.051)
Lagged unemployment rate, seasonally adjusted	-0.592***	-0.734***
	(0.088)	(0.119)
Lagged childcare coverage 0-3	0.000	-0.001**
	(0.000)	(0.000)
Mean age of adult population	0.002	0.002
	(0.003)	(0.002)
Higher education share	0.270	0.266*
	(0.158)	(0.137)
Pandemic (1 if 2020, 2021, 2022)	-0.014***	-0.011***
	(0.004)	(0.003)
Gender Role Attitudes	-0.259*	0.029
	(0.126)	(0.234)
Constant	0.502***	0.636***
	(0.135)	(0.130)
Number of observations	987	987
R-squared	0.709	0.405
Number of countries	15	15

*Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. This model tests the boundary conditions of the "parental" effect by including individuals with children aged 15+ in the parent subgroup. All models include country and year fixed effects with standard errors clustered at the country level. WFH spread refers to the seasonally adjusted share of the working population who sometimes or usually work from home.*

Source: Authors' calculations based on Eurostat Labour Force Survey (LFS) microdata

Table A4. Macro-level associations between WFH spread and employment rates with gender-specific WFH spread

	Employment Rate											
Variables	Mothers			Fathers			Women without young children			Men without young children		
Lagged WFH spread among women, seasonally adjusted	0.050**	0.104***	0.048*				0.011	-0.060	-0.002			
	(0.021)	(0.030)	(0.023)				(0.020)	(0.042)	(0.028)			
Lagged WFH spread among men, seasonally adjusted				-0.004	0.070	-0.008				0.019	-0.034	0.013
				(0.021)	(0.059)	(0.027)				(0.021)	(0.036)	(0.024)
Lagged unemployment rate, seasonally adjusted	-0.571***	-0.572***	-0.569***	-0.706***	-0.721***	-0.694***	-0.424***	-0.441***	-0.435***	-0.639***	-0.741***	-0.690***
	(0.079)	(0.063)	(0.064)	(0.077)	(0.100)	(0.081)	(0.072)	(0.046)	(0.066)	(0.061)	(0.054)	(0.066)
Lagged childcare coverage 0-3	0.000*	0.000*	0.000**	0.000	-0.001	-0.001	0.000**	0.001**	0.001***	0.000	0.001	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Mean age of adult population	0.002	0.002	0.002	0.003	0.005	0.003	-0.013***	-0.016***	-0.012***	-0.007**	-0.013***	-0.008**
	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)
Higher education share	0.215*	0.238**	0.229*	0.160*	0.156	0.155*	0.265**	0.161	0.250**	0.111	0.057	0.113
	(0.111)	(0.080)	(0.108)	(0.079)	(0.125)	(0.085)	(0.100)	(0.113)	(0.101)	(0.095)	(0.103)	(0.098)
Pandemic (1 if 2020, 2021, 2022)	-0.011***			-0.008***			-0.005*			-0.006**		
	(0.003)			(0.003)			(0.002)			(0.002)		
Gender Role Attitudes	-0.357***	-0.290**	-0.330***	0.000	-0.090	-0.048	-0.206	-0.552***	-0.181	0.037	-0.202	0.060
	(0.102)	(0.103)	(0.106)	(0.161)	(0.292)	(0.187)	(0.125)	(0.134)	(0.142)	(0.151)	(0.174)	(0.184)
Constant	0.537***	0.549***	0.536***	0.645***	0.595***	0.669***	1.059***	1.305***	1.022***	0.906***	1.215***	0.921***
	(0.124)	(0.133)	(0.131)	(0.118)	(0.157)	(0.150)	(0.159)	(0.103)	(0.172)	(0.156)	(0.141)	(0.185)
Number of observations	987	711	819	987	711	819	987	711	819	990	714	822
R-squared	0.757	0.704	0.761	0.508	0.470	0.496	0.393	0.528	0.405	0.287	0.442	0.328
Number of countries	15	15	15	15	15	15	15	15	15	15	15	15
Years	All	Before 2020	Without Pandemic	All	Before 2020	Without Pandemic	All	Before 2020	Without Pandemic	All	Before 2020	Without Pandemic

*Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. All models include country and year fixed effects with standard errors clustered at the country level. WFH spread refers to the seasonally adjusted share of the working population who sometimes or usually work from home.*

Source: Authors' calculations based on Eurostat Labour Force Survey (LFS) microdata.

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