

NOTES AND COMMENTARY

The End of an Era: The Vanishing Negative Effect of Women's Employment on Fertility

ANNA MATYSIAK  AND DANIELE VIGNOLI 

This paper examines whether women's employment in the 21st century remains a barrier to family formation, as it was in the 1980s and 1990s, or—similar to men's—it has become a prerequisite for childbearing. We address this question through a systematic quantitative review (meta-analysis) of empirical studies conducted in Europe, North America, and Australia. We selected 94 studies published between 1990 and 2023 (N = 572 effect sizes). Our analysis uncovers a fundamental shift in the relationship between women's employment and fertility. What was once a strongly negative association has become statistically insignificant in the 2000s and 2010s—and even turned positive in the Nordic countries, parts of Western Europe (France, Belgium, and the Netherlands), and Central and Eastern Europe. This shift is evident both among childless women and mothers and has occurred across all analyzed country clusters, except for the German/Southern European group, where the relationship has remained negative. These findings challenge longstanding assumptions about work–family trade-offs and suggest a reconfiguration of the economic and social conditions underpinning fertility decisions in contemporary high-income societies. The paper calls for a reconceptualization of the employment–fertility relationship and development of a new theoretical framework that better captures these evolving dynamics in contemporary high-income societies.

Introduction

For decades, the relationship between women's labor market participation and fertility has been at the center of demographic research and policy debates. In the 1970s and 1980s, the remarkable expansion of female employment coincided with a steep decline in fertility rates across high-

Anna Matysiak, Interdisciplinary Center of Labour Market and Family Dynamics (Lab-Fam), Faculty of Economic Sciences, University of Warsaw, 00-241 Warsaw, Poland. E-mail: annamatysiak@uw.edu.pl. Daniele Vignoli, Dipartimento di Statistica, Informatica, Applicazioni, University of Florence, 50134 Florence, Italy. E-mail: danielle.vignoli@unifi.it.

income countries (Bhrolcháin 1993; Bernhardt 1993; Rindfuss and Brewster 1996; Ahn and Mira 2002; Engelhardt, Kögel, and Prskawetz 2004). At that time, women faced a stark choice between paid work and family: childcare responsibilities overwhelmingly fell on mothers, with limited institutional or spousal support, forcing many to choose between career advancement and motherhood (Becker 1993; McDonald 2000). Faced with high opportunity costs, women increasingly postponed or reduced childbearing to maintain their labor market attachment (McDonald 2000; Goldscheider, Bernhardt, and Lappegård 2015). A meta-analysis by Matysiak and Vignoli (2008), synthesizing 29 studies from Europe and the United States conducted between 1990 and 2006, confirmed that employed women were generally less likely to have children, particularly in countries with weak institutional support for working parents.

Since then, the conditions for combining employment and parenthood have evolved significantly (Ferragina and Seeleib-Kaiser 2015; Esping-Andersen and Billari 2015; Goldscheider, Bernhardt, and Lappegård 2015; Doepke et al. 2023). Policy reforms—albeit unevenly implemented—have sought to reconcile employment and family life, expanding childcare provisions and individualizing parental leave entitlements to encourage paternal involvement (Anxo et al. 2011; Plantenga and Remery 2013; Goldscheider, Bernhardt, and Lappegård 2015). Nordic countries led the way, fostering a more supportive environment for working mothers, but even in other high-income nations, dual-earner households have become an integral part of the contemporary reality. These developments raised the possibility that the longstanding trade-off between women's employment and childbearing might have weakened or even reversed. Rising economic instability and stagnating male wages may have further contributed to this change, eroding the Beckerian model of household specialization (Becker 1993) and reinforcing women's economic indispensability (Matysiak, Kurowska, and Pavelea 2024).

On this backdrop, a fundamental question arises: Are employed women in the 21st century still less likely to give birth compared to nonemployed women, as was the case in the 1980s and 1990s? We address this question through a systematic quantitative review (meta-analysis) of empirical studies published in “Western” high-income countries (Europe, North America, and Australia) over the last 33 years (1990–2023).

Data and methods

Meta-sample

In order to conduct the meta-analysis, we started from a thorough Scopus search using all possible combinations of keywords in three domains: gender (female or women), labor market (work, employment, or labor), and

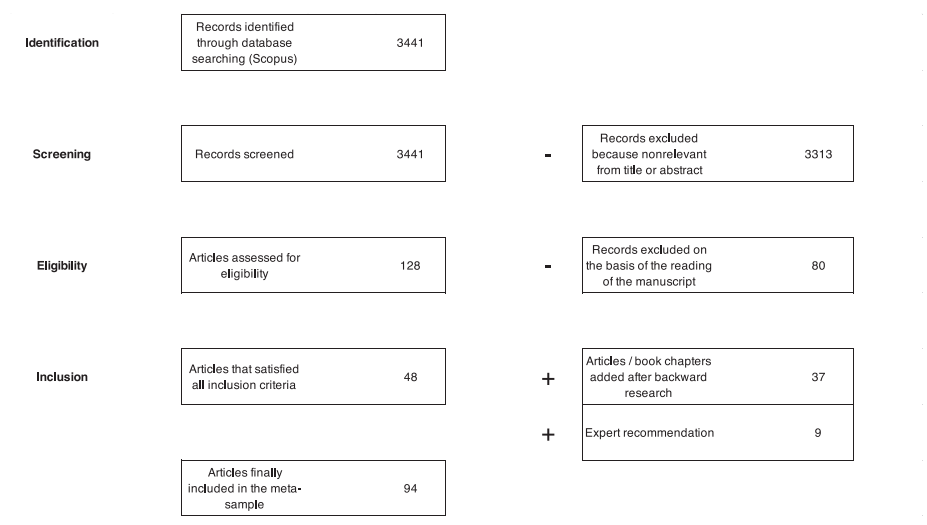
fertility (childbearing or fertility). We performed the search among publications in social sciences, economics, econometrics and finance, psychology, business, management and accounting, and multidisciplinary, published between 1970 and 2023. Second, we checked references within retrieved publications. Finally, we sent our list of publications to 20 well-known international experts on the topic, asking them to check whether any important contributions were missing. To ensure both data quality and full replicability, we restricted our meta-sample to peer-reviewed publications that had undergone a formal review process. Including unpublished manuscripts, working papers, or dissertations—even though sometimes recommended to mitigate publication bias—could have led to a bias in our sample, as it is not feasible to systematically identify all such materials across multiple decades and research systems.

The Scopus search returned 3,441 publications. They were all assessed for eligibility, meaning they were evaluated based on our predefined inclusion and exclusion criteria to determine their relevance to the study. We (1) restricted the search to studies conducted in “Western” high-income countries (defined according to the World Bank classification, i.e., Australia, Europe, and North America); (2) included only articles and book chapters; (3) included only studies that provide sufficient information to assess the relationship between women’s employment and fertility behaviors in a quantitative manner, hence restricting the search to micro-level longitudinal studies¹; (4) excluded studies that estimated models using pooled country samples as they were not directly comparable to the others; and (5) considered articles in English only.

This eligibility assessment was conducted by reviewing the title and abstract of each publication. As a result, 128 publications were deemed relevant and included for further analysis. Out of them, we retained only those which met all our inclusion/exclusion criteria. This left us with 48 studies. In addition, we included 30 studies based on the backward search through reference lists and nine on the basis of expert recommendations (see Figure 1). Altogether, we selected 94 studies, which are listed in Online Appendix A.

Some articles reported more than one effect estimate: either because they presented results from stepwise modeling, specific analyses for more than one country, or for subgroups of women (e.g., by age). We coded all these estimates together with their standard errors. As a result, we obtained a final sample of 572 effect estimates. The majority come from Nordic countries and Southern Europe (128 estimates per each region), followed by Germany (103 estimates), the Anglosphere (82 estimates), remaining Western European countries (69 estimates), and Central and Eastern European (CEE) countries (62 estimates). Most of the estimates covered mainly the 1980s and 1990s (361 estimates), fewer the 1950s, 1960s, and 1970s (135 estimates), and the fewest the 2000s and 2010s (76 estimates).

FIGURE 1 Flow chart of the articles’ selection process



Effect sizes

Effect sizes (ES) quantify the magnitude of the the association between variables, and correspond to the ratio between effect estimates and their standard errors. Our effect estimates consist of natural logarithms of relative risks (RRs) or odds ratios (ORs) of women’s employment/versus nonemployment on fertility transitions. Employment was measured in different ways in original studies (as overall employment/full-time/part-time and permanent/temporary employment), and so was nonemployment (i.e., nonemployment, unemployment, inactivity, being a housewife). We considered all these effect estimates and controlled for the different definitions of “being employed” in the meta-regressions.

Together with the effect estimates, we coded their standard errors. Some studies, predominantly those from earlier periods, did not report statistics that would have allowed us to compute the standard error (e.g., *t*-statistics or *p*-value). Because excluding these studies could introduce sample selection bias—and because our attempts to obtain original values from corresponding authors were largely unsuccessful—we adopted the following assumptions, which are consistent with previous practice in published meta-analyses in population studies (e.g., Matysiak and Vignoli 2008; Matysiak, Styrac, and Vignoli 2014; Alderotti et al. 2021). When the result was marked significant and no other details were available or when the study was based on register data, we adopted a conservative approach by assigning a *p*-value of 0.05, representing the upper bound of conventional significance. When the significance level was marked with asterisks only,

we assumed that the p -value was equal to the midpoint of the interval between the significance level corresponding to the number of asterisks and the next lower one. When the result was not significant, we set the p -value at 0.5.

Meta-analyses

We specified random-effects meta-analysis models, which accounted for within-study sampling errors (measured by the estimated standard errors reported in the papers) and the heterogeneity of the effect estimates across studies. In this way, we relaxed the assumption that each estimate represented a measure of the same “true effect,” allowing for the variation in the effect estimates according to study characteristics (Borenstein et al. 2010). We accounted for the dependence among the ESs, originating from the same study, by performing a multilevel random-effects meta-analysis, using the Stata command `meta meregress`.

Our main explanatory covariates were (1) the country cluster, (2) the calendar period covered primarily by the study, and (3) the parity. We distinguished six country clusters: Nordic (Denmark, Finland, Norway, and Sweden), German speaking (Germany), remaining Western European countries (France, Belgium, and the Netherlands), Southern Europe (Italy and Spain), Central and Eastern Europe (Bulgaria, Czechia, Hungary, Lithuania, Poland, and Russia), and the Anglosphere (Australia, Canada, the United Kingdom and the United States). The calendar period variable refers to the mean calendar period covered by the study and consists of three groups: 1950–1979, 1980–1999, and 2000–2020.

In addition, we controlled for other study characteristics such as the definition of employment (general, temporary vs. permanent, full-time vs. part-time) and nonemployment (general, unemployment, inactive), a dummy indicating whether the sample was selected toward older women, a dummy indicating whether the sample was selected toward women in unions (cohabitation and marriage), and a set of dummies indicating whether the study controls for respondent's social background, partner characteristics, division of unpaid work in the household, and migration status.

Full model estimates from this basic model are presented in Online Appendix B's Table B1. In addition, we estimated several other specifications in which we (a) interacted the country cluster with the parity, (b) interacted the time period with the parity, and (c) interacted the country cluster with the time period. These additional models allowed us to investigate (a) the cross-country heterogeneity in the estimated ESs by parity, (b) the temporal change by parity, and (c) the temporal change within country groups. The results from these additional analyses are presented in Figures 2–4, and the full model estimates are available on request.

Past research established that the relationship between women's employment and childbearing is complex and bidirectional (Budig 2001; Matysiak 2009; Han, Gowen, and Brinton 2024). Only a small number of studies explicitly accounted for selection and endogeneity between employment and fertility (e.g., Baizán, Aassve, and Billari 2003; Aassve et al. 2006; Matysiak and Vignoli 2013). By design, a meta-analysis can only synthesize what the existing literature provides. Nevertheless, we tested the inclusion of an additional dummy variable indicating whether the original study accounted for selection and/or endogeneity. Including this variable does not alter the results presented in the paper (results available upon request).

Publication bias

Because studies reporting significant results could have a higher probability of being published than those not finding significant evidence, a typical first step in the meta-analysis is to test for such a publication bias (Card 2015). In order to do so, we used funnel plots and an Egger's test (Egger et al. 1997). Given the evidence of publication bias ($p = 0.0003$), which persisted even after accounting for between-study heterogeneity ($p = 0.01$), we included the variance of the effect estimates as a moderator in our meta-regression (Moreno et al. 2009; Stanley and Doucouliagos 2014). The publication bias suggests an underrepresentation of studies that report a positive relationship between women's employment and fertility, across different time periods and countries.

Robustness check

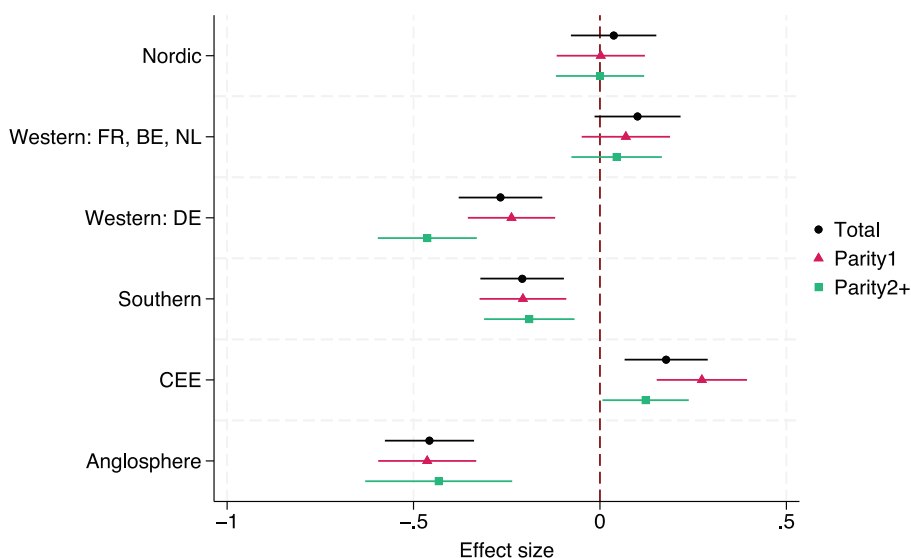
To assess the robustness of the meta-regression estimates, we followed a leave-one-out meta-analysis approach. In addition, given that our meta-study includes a large number of studies, we repeated our meta-analysis 1,000 times, each time excluding 10 percent of the studies. The results of these sensitivity checks are presented in Online Appendix B (Figures B1–B6).

Results

Cross-country heterogeneity

Our study reveals a clear heterogeneity in the relationship between women's employment and fertility, which ranges from negative to positive (Figure 2). Over the whole analyzed period, the most pronounced negative association is, on average, observed in the Anglosphere—comprising Australia, Canada, the United Kingdom, and the United States—with an average ES of -0.46 , implying that working women are 37 percent less likely to have children there than those who do not work. This negative

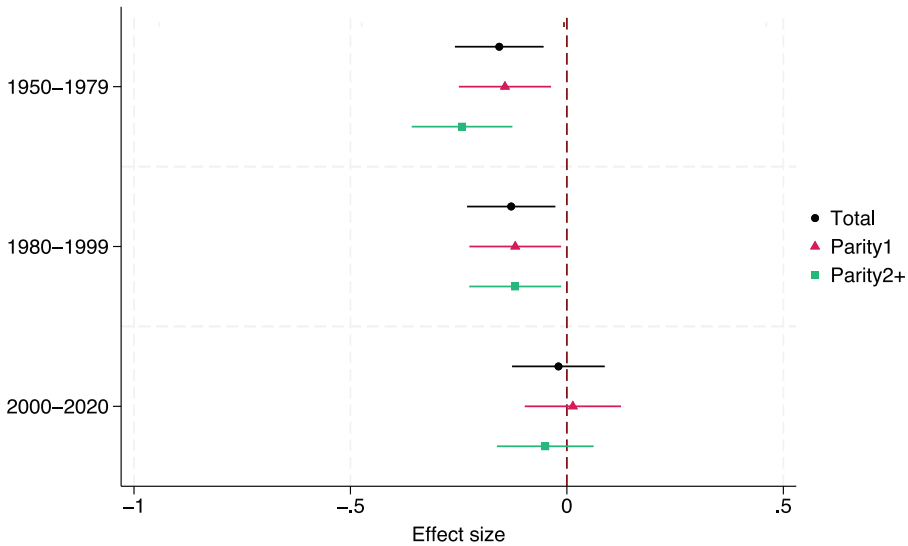
FIGURE 2 Cross-country variation in the relationship between women's employment and fertility. Predicted ESs by country group, 95 percent CI



NOTE: The findings are based on a random effect meta-regression of 94 studies (572 observations) with ESs clustered within a study and country group as an explanatory covariate. The meta-regression by parity is estimated on 88 studies (551 observations), after we dropped studies that were based on all parities. The explanatory covariate in this model is the country group interacted with parity. The control covariates include the definition of employment (general, temporary vs. permanent, full-time vs. part-time) and nonemployment (general, unemployment, inactive), a dummy indicating whether the sample was selected toward older women, a dummy indicating whether the sample was selected toward women in unions (cohabitation and marriage), and a set of dummies indicating whether the study control for respondents' social background, partner characteristics, division of unpaid work in the household and migration status.

relationship is fairly as strong for childless women as it is for mothers. A negative relationship between women's employment and fertility, although weaker, is also found in Southern Europe (e.g., Italy, Spain) and Germany. In Southern Europe, the employment–fertility association remains equally negative for both childless women and mothers, with an average ES of -0.21 , equivalent to a 19 percent lower birth rate among employed women compared to those not in the labor force. In Germany, the average negative impact is even slightly more pronounced (-0.23), but it is primarily driven by lower progression to second and higher order births rather than reduced entry into motherhood. By contrast, the association between women's employment and fertility is, on average, close to zero in the Nordic countries (Sweden, Denmark, Norway, and Finland; $ES = 0.04$) and the Western European nations beyond the German-speaking ones (France, Belgium, and the Netherlands; $ES = 0.10$). Such findings involved both childless women as well as mothers. Finally, a clearly positive relationship was found in CEE countries (i.e., Bulgaria, Czechia, Hungary, Lithuania, Poland, and Russia; $ES = 0.18$). This positive relationship is, on average, slightly stronger among childless women than mothers, though still prevalent in the latter group.

FIGURE 3 Temporal shift in the relationship between women's employment and fertility. Predicted ESs by calendar period, 95 percent CI



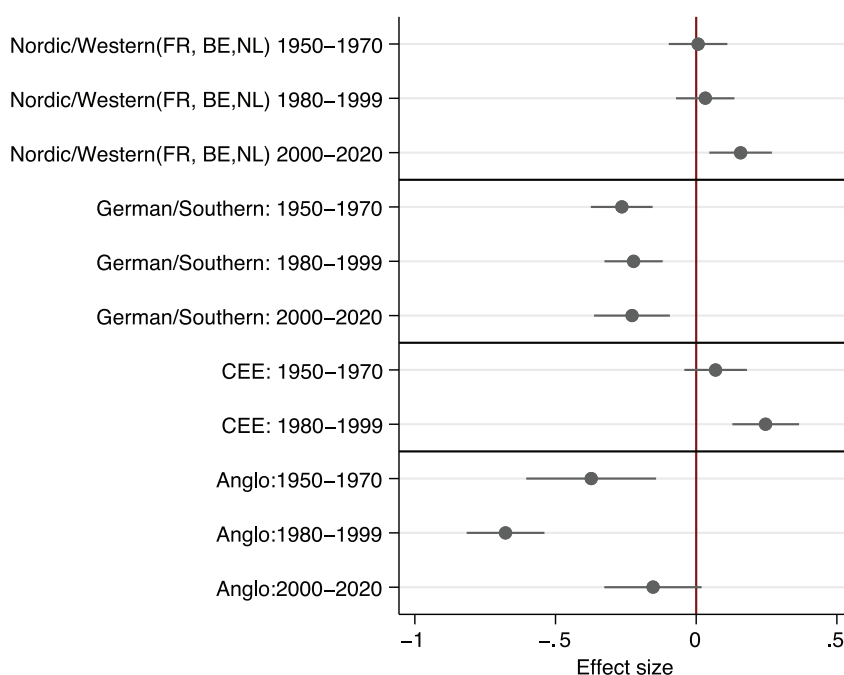
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Temporal shifts

Besides the strong cross-country variation, we also find a clear shift in the relationship between women's employment and fertility over time (Figure 3). In the second half of the 20th century, female employment was strongly negatively associated with fertility behavior, with an average ES equal to -0.16 in 1950–1979 and -0.13 in 1980–1999. This suggests that working women were approximately 15 percent and 12 percent less likely, respectively, to have a child compared to nonworking women—regardless of birth order. However, this pattern appears to have changed in the 2000s and 2010s. During this period, the relationship weakened considerably and approached zero ($ES = -0.019$). This shift is evident both in first birth transitions ($ES = 0.014$) and in second or higher order births ($ES = -0.05$).

Finally, we examined whether the temporal shift in the relationship between women's employment and fertility occurred consistently across all analyzed country groups. Given the smaller number of studies covering the 2000s and 2010s compared to earlier periods, we had to consolidate country clusters. Specifically, we merged Western (Germany) and

FIGURE 4 Temporal change in the relationship between women's employment and fertility across country groups, predicted ESs with 95 percent CI



NOTE: The findings are based on a random effect meta-regression of 94 studies (572 observations) with ESs clustered within a study. The main explanatory variable is the country group interacted with the average calendar time covered by the study. The control covariates include the definition of employment (general, temporary vs. permanent, full-time vs. part-time) and nonemployment (general, unemployment, inactive), a dummy indicating whether the sample was selected toward older women, a dummy indicating whether the sample was selected toward women in unions (cohabitation and marriage), and a set of dummies indicating whether the study control for respondents' social background, partners' characteristics, division of unpaid work in the household and migration status.

Southern Europe, which exhibited a similarly strong negative relationship, and Nordic with Western European countries (France, Belgium, and the Netherlands), where the relationship was, on average, nonsignificant (see Figure 2). Notably, no studies from CEE countries extended considerably into the 2000s and 2010s, limiting our analysis of temporal changes in that region to the late 1990s. Our findings, displayed in Figure 4, reveal that the shift in the relationship between women's employment and fertility occurred in all analyzed country clusters, with this change being statistically significant, except for the German/Southern European group. More specifically, in the Nordic/Western cluster, the relationship turned positive after being previously insignificant, while in the Anglosphere it weakened substantially, particularly between 1990–1999 and 2000–2023, and turned insignificant in the most recent period. In CEE countries, the relationship between women's employment and fertility, which was insignificant already in 1950–1979, turned positive in the 1980–1999. In contrast, in the

German/Southern European cluster, the negative association persisted, showing no significant change over time.

Robustness checks

Our findings demonstrate robustness, as evidenced by a sensitivity analysis in which we (1) iteratively reestimated the model 1,000 times after randomly removing 10 percent of the observations and (2) reestimated the model 94 times, each time after removing one study. For each iteration, we computed the median predicted ESs along with their confidence intervals, defined as the range between the 2.5th and 97.5th percentiles. The median ESs align closely with those from the full dataset, with consistent confidence intervals, with two exceptions (see Figures B1–B6 of the Online Appendix B). First, the sensitivity analysis suggests that women's employment in the 21st century still negatively impacts second and higher order births (but not the first), though less strongly than in the past. Second, it suggests the studied relationship in the Anglosphere in the 2000s/2010s to be still negative, though close to zero, and much weaker than in the preceding decade.

We also carried out a robustness check that accounts for the distribution of employment types in our dataset (results available upon request). Most ESs compare overall employment with broad nonemployment categories—employment versus nonemployment (194 cases), unemployment (117), or inactivity (100)—together representing 72 percent of all observations. Because only a small fraction of studies examines specific employment types (e.g., part-time work), we reestimated our models after excluding these less common categories. The results based on this reduced sample are highly consistent with our main findings, confirming that our conclusions do not depend on the inclusion of these heterogeneous employment forms.

Discussion

Since the Great Recession, the literature on labor market dynamics and fertility has increasingly prioritized employment instability and economic uncertainty (Vignoli et al. 2020; Matysiak and Vignoli 2024), while the role of women's labor market participation has received far less systematic attention. With this study, we address this drawback.

Our meta-analysis provides compelling evidence of a profound transformation in the relationship between women's employment and fertility in "Western" high-income countries. While previous decades were characterized by a strong negative association, our findings reveal a fundamental shift: in the 2010s, the link between women's employment and childbearing had largely dissipated. This shift is evident not only among childless women deciding whether to enter motherhood but also among mothers

progressing to a second or a third child. It reflects deep structural changes in labor markets, family policies, and gender norms that have reshaped the conditions under which women balance paid work and motherhood.

This temporal shift in the relationship between women's employment and fertility was evident across all country groups in our meta-study—except for the German/Southern European cluster. In Nordic and Western European countries (excluding Germany), where state policies swiftly adapted to rising female labor force participation by enhancing work–family reconciliation measures, women's employment was no longer negatively associated with childbearing already in the second half of the 20th century. Strong institutional support for working mothers—such as extensive childcare provision (as seen in the Nordic countries, France, and Belgium), policies facilitating part-time employment (as in the Netherlands), and increased paternal involvement in childcare (particularly in the Nordic region)—has likely played a crucial role in this transformation (Rindfuss et al. 2010; Klüsener, Neels, and Kreyenfeld 2013; Mills 2015; Duvander et al. 2019). By the 21st century, the relationship between women's employment and fertility in these countries had turned significantly positive, suggesting that, as with men, stable employment has become a key precondition for childbearing.

A similar pattern emerges in CEE countries. While state support for work–family reconciliation remains weaker and men's participation in unpaid labor is more limited than in the Nordic countries, the economic context positions women as essential second earners. The socialist era strongly promoted female employment, and, after the collapse of state socialism, economic necessity further reinforced the importance of women's income for household stability. As a result, employment has become a prerequisite for childbearing in this region (Braun, Scott, and Alwin 1994; Matysiak 2009).

The relationship between women's employment and fertility has also undergone a profound transformation in the Anglosphere. While strongly negative in the 1980s and 1990s, it has since weakened considerably, becoming statistically insignificant in our main analyses and only slightly negative in sensitivity tests. In this context, state intervention has traditionally been minimal, focused primarily on maintaining market efficiency rather than directly supporting work–family reconciliation. Over time, however, the combination of high labor market flexibility and, primarily, the expansion of flexible work schedules (part-time work, telework, flexible working hours), has improved the conditions for working mothers to combine paid work and care, likely facilitating childbearing among working women (Chung and Van der Horst 2018; Osiewalska and Matysiak 2025).

The only country group where no significant change was observed is the German/Southern European cluster, where the relationship between women's employment and fertility remains persistently negative. Both Southern Europe and German-speaking countries have historically offered limited institutional support for working mothers, including restricted

access to full-time public childcare and paid parental leave, while also failing, for a long time, to promote paternal involvement in childcare (Anxo et al. 2011; Blome 2016; Schober 2020). This persistent structural constraint likely explains why the negative relationship between employment and fertility remains stronger in these regions than elsewhere in Europe. Germany undertook substantial steps to improve the conditions for work and family reconciliation. Nonetheless, the family policy reform aimed at childcare expansion and providing incentives for men to participate in childcare took place only in 2007. Although it might have contributed to the weakening of the relationship between women's employment and childbearing, its effects may not yet be evident in our findings. Likewise, there are also some signs of the weakening of the negative relationship between women's employment and fertility in Italy in the most recent studies (Alderotti 2022; Guetto, Alderotti, and Vignoli 2025), and future research shall reveal whether this change has a robust, long-lasting character.

By incorporating more recent studies, our meta-analysis extends the work of Matysiak and Vignoli (2008) based on studies published in 2006 and before. It highlights the continuing erosion of the Beckerian model of household specialization. Our findings confirm that the economic logic of childbearing has shifted across most "Western" high-income countries, where expanding work-family reconciliation policies have made female employment increasingly integral to family formation. However, this transformation has not been uniform. While in Nordic and parts of Western Europe the relationship between women's employment and fertility has turned positive, in Germany and Southern Europe it remained negative. Therefore, work-family reconciliation policies remain inadequate, and women continue to face stark trade-offs between career and motherhood. While our meta-analysis documents clear regional variation in the association between women's employment and fertility, identifying the specific country- or region-level factors driving these differences lies beyond the scope of this study. Future research—building on our replication package and the dataset we make publicly available—could incorporate institutional, policy, or macroeconomic indicators to more fully investigate the sources of such variation (e.g., Matysiak and Węziak-Białowolska 2016; Galos and Coppock 2023). Likewise, expanding the study to regions such as East Asia or Latin America, both characterized by rapidly declining fertility and high gender inequalities, would deepen our understanding of the fertility/women's labor supply nexus and its temporal dynamics beyond "Western" high-income societies.

Our meta-study also provides insights into the research on women's employment and fertility conducted over the last three decades. First, empirical studies on the topic clearly are increasingly making use of longitudinal micro-level data instead of relying on aggregate indicators. We also detected a change toward assessing labor force participation of women as a

time-varying variable instead of a time-constant covariate fixed around the time of the union formation. Increasingly more nuanced measures of labor force status have been employed, with more recent research paying more attention to the variety of contract types. Likewise, more sophisticated control variables were implemented, in particular, control for the partner's education, labor market status, and income, becoming more common. Second, we detected clear evidence of publication bias, indicating that null and positive effects are underrepresented in the published peer-reviewed literature. This implies that the reversal of the employment–fertility association documented in our meta-analysis may be even more pronounced than observed, but is not yet fully acknowledged in the research community. Finally, although the relationship between women's employment and childbearing has long been recognized as bidirectional (Bernhardt 1993), only a small number of studies explicitly addressed selection or endogeneity (e.g., Matysiak and Vignoli 2013). Future research should more carefully address the potentially distorting effects of selection and endogeneity, particularly when comparing findings across different contextual settings, as these mechanisms may operate differently depending on the institutional and social environment.

Overall, our study challenges longstanding assumptions about work–family trade-offs and lends new empirical support on the reconfiguration of the employment–fertility relationship (Oppenheimer 1997; Esping-Andersen and Billari 2015; Goldscheider, Bernhardt, and Lappegård 2015; Doepke et al. 2023). Our findings document a substantial shift in the micro-level association between women's employment and fertility over time. In doing so, the paper underscores the need for theoretical advances that more accurately capture the evolving economic and social conditions shaping fertility decisions in contemporary “Western” high-income societies.

Author Contributions

AM and DV designed the research; AM and DV coded and analyzed data; and AM and DV wrote the paper and approved its final version. AM and DV both agree to be accountable for all aspects of the conducted work.

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Data availability statement

A replication package (data and codes) is available in the data repository Zenodo, DOI: <https://doi.org/10.5281/zenodo.18402166>

Note

1 Macro-level studies, in contrast, are also excluded since they do not allow for susceptible to ecological fallacies and cannot assessing the relationship between women’s reliably capture individual-level dynamics. employment prior to conception to her fertility behaviors. Studies based on cross-sectional data were

References

- Aassve, Arnstein, Simon Burgess, Carol Propper, and Matthew Dickson. 2006. “Employment, Family Union and Childbearing Decisions in Great Britain.” *Journal of the Royal Statistical Society: Series A* 169 (4): 781–804.
- Ahn, Namkee, and Pedro Mira. 2002. “A Note on the Changing Relationship between Fertility and Female Employment Rates in Developed Countries.” *Journal of Population Economics* 15: 667–682.
- Alderotti, Giammarco. 2022. “Female Employment and First Childbirth in Italy: What News?” *Genus* 78: 14.
- Alderotti, Giammarco, Daniele Vignoli, Michele Baccini, and Anna Matysiak. 2021. “Employment Instability and Fertility in Europe: A Meta-Analysis.” *Demography* 58: 871–900.
- Anxo, Dominique, Letizia Mencarini, Ariane Pailhé, Anne Solaz, Maria Letizia Tanturri, and Lennart Flood. 2011. “Gender Differences in Time Use over the Life Course: A Comparative Analysis of France, Italy, Sweden, and the United States.” *Feminist Economics* 17: 159–195.
- Baizán, Pau, Arnstein Aassve, and Francesco C. Billari. 2003. “Cohabitation, Marriage, and First Birth: The Interrelationship of Family Formation Events in Spain.” *European Journal of Population* 19: 147–169.
- Becker, Gary S. 1993. *A Treatise on the Family*. Enlarged ed. Cambridge, MA: Harvard University Press.
- Bernhardt, Eva M. 1993. “Fertility and Employment.” *European Sociological Review* 9: 25–42.
- Bhrolcháin, Máire Ní. 1993. “How to Answer the Fertility/Employment Question (and How Not to).” *Studies in Medical Population Subjects* 55: 151–157.
- Blome, Agnes. 2016. *The Politics of Work-Family Policy Reforms in Germany and Italy*. London: Routledge.
- Borenstein, Michael, Larry V. Hedges, Julian P. T. Higgins, and Hannah R. Rothstein. 2010. *Introduction to Meta-Analysis*. Chichester, UK: Wiley.
- Braun, Michael, Jacqueline Scott, and Duane F. Alwin. 1994. “Economic Necessity or Self-Actualization? Attitudes toward Women’s Labour-Force Participation in East and West Germany.” *European Sociological Review* 10: 29–47.

- Budig, Michelle J. 2001. "Are Women's Fertility and Employment Histories Interdependent? An Examination of Causal Order Using Event History Analysis." *Social Science Research* 32: 376–401.
- Chung, Heejung, and Maarten van der Horst. 2018. "Women's Employment Patterns after Childbirth and the Perceived Access to and Use of Flexitime and Teleworking." *Human Relations* 71 (1): 47–72.
- Doepke, Matthias, Anna Hannusch, Fabian Kindermann, and Michèle Tertilt. 2023. "The Economics of Fertility: A New Era." In *Handbook of the Economics of the Family*, edited by Shelly Lundberg and Alessandra Voena, Vol. 1, no. 1, 151–254. Amsterdam: North-Holland.
- Duvander, Ann-Zofie, Trude Lappegård, Snorri N. Andersen, Ólöf Garðarsdóttir, Gerda Neyer, and Iliana Viklund. 2019. "Parental Leave Policies and Continued Childbearing in Iceland, Norway, and Sweden." *Demographic Research* 40: 1501–1528.
- Egger, Matthias, George Davey Smith, Martin Schneider, and Christoph Minder. 1997. "Bias in Meta-Analysis Detected by a Simple, Graphical Test." *British Medical Journal* 315: 629–634.
- Engelhardt, Henriette, Tomas Kögel, and Alexia Prskawetz. 2004. "Fertility and Women's Employment Reconsidered: A Macro-Level Time-Series Analysis for Developed Countries, 1960–2000." *Population Studies* 58: 109–120.
- Esping-Andersen, Gøsta, and Francesco C. Billari. 2015. "Re-Theorizing Family Demographics." *Population and Development Review* 41 (1): 1–31.
- Ferragina, Emanuele, and Martin Seeleib-Kaiser. 2015. "Determinants of a Silent (R)evolution: Understanding the Expansion of Family Policy in Rich OECD Countries." *Social Politics: International Studies in Gender, State & Society* 22 (1): 1–37.
- Galos, Douglas R., and Alexander Coppock. 2023. "Gender Composition Predicts Gender Bias: A Meta-Reanalysis of Hiring Discrimination Audit Experiments." *Science Advances* 9 (18): eade7979.
- Goldscheider, Frances, Eva Bernhardt, and Trude Lappegård. 2015. "The Gender Revolution: A Framework for Understanding Changing Family and Demographic Behavior." *Population and Development Review* 41: 207–239.
- Guetto, Raffaele, Giammarco Alderotti, and Daniele Vignoli. 2025. "Can Family Policies Enhance Fertility? An Ex Ante Evaluation through Factorial Survey Experiments." *Demography* 62 (1): 311–334.
- Han, Sun W., Orla Gowen, and Mary C. Brinton. 2024. "When Mothers Do It All: Gender-Role Norms, Women's Employment, and Fertility Intentions in Post-Industrial Societies." *European Sociological Review* 40 (2): 309–325.
- Klüsener, Sebastian, Karel Neels, and Michaela Kreyenfeld. 2013. "Family Policies and the Western European Fertility Divide: Insights from a Natural Experiment in Belgium." *Population and Development Review* 39: 587–610.
- Matysiak, Anna. 2009. "Employment First, Then Childbearing: Women's Strategy in Post-Socialist Poland." *Population Studies* 63: 253–276.
- Matysiak, Anna, and Daniele Vignoli. 2008. "Fertility and Women's Employment: A Meta-Analysis." *European Journal of Population* 24: 363–384.
- Matysiak, Anna, and Daniele Vignoli. 2013. "Diverse Effects of Women's Employment on Fertility: Insights from Italy and Poland." *European Journal of Population* 29: 273–302.
- Matysiak, Anna, and Daniele Vignoli. 2024. "Family Life Courses, Uncertain Futures, and the Changing World of Work: State-of-the-Art and Prospects." *European Journal of Population* 40: 19.
- Matysiak, A., A. Kurowska, and A. M. Pavelea. 2024. "His unemployment, her response, and the moderating role of welfare policies in European countries. Results from a preregistered study." *Plos one* 19: no. 8. e0306964.
- Matysiak, Anna, Marta Styrac, and Daniele Vignoli. 2014. "The Educational Gradient in Marital Disruption: A Meta-Analysis of European Research Findings." *Population Studies* 68 (2): 197–215.

- Matysiak, Anna, and Dorota Węziak-Białowolska. 2016. "Country-Specific Conditions for Work and Family Reconciliation: An Attempt at Quantification." *European Journal of Population* 32: 475–510.
- McDonald, Peter. 2000. "Gender Equity in Theories of Fertility Transition." *Population and Development Review* 26: 427–439.
- Mills, Melinda C. 2015. "The Dutch Fertility Paradox: How the Netherlands Has Managed to Sustain Near-Replacement Fertility." In *Low and Lower Fertility: Variations across Developed Countries*, 161–188. New York: Springer.
- Moreno, Sergio G., Alex J. Sutton, A. E. Ades, T. D. Stanley, Keith R. Abrams, Jonathan L. Peters, and Nicky J. Cooper. 2009. "Assessment of Regression-Based Methods to Adjust for Publication Bias through a Comprehensive Simulation Study." *BMC Medical Research Methodology* 9: 2.
- Oppenheimer, Valerie Kincade. 1997. "Women's Employment and the Gain to Marriage: The Specialization and Trading Model." *Annual Review of Sociology* 23: 431–453.
- Osiewalska, Alicja, and Anna Matysiak. 2025. "Two Sides of a Coin: The Relationship between Work Autonomy and Childbearing." *Journal of Marriage and Family* 87 (3): 1178–1199.
- Plantenga, Janneke, and Chantal Remery. 2013. "Work–Family Reconciliation Policies in Europe." In *Handbook of Research on Gender and Economic Life*, edited by Deborah Figart and Tonia Warnecke, 290–306. Cheltenham: Edward Elgar.
- Rindfuss, Ronald R., and Karin L. Brewster. 1996. "Childrearing and Fertility." *Population and Development Review* 22: 258–289.
- Rindfuss, Ronald R., Douglas K. Guilkey, S. Philip Morgan, and Øystein Kravdal. 2010. "Child-Care Availability and Fertility in Norway." *Population and Development Review* 36 (4): 725–748.
- Schober, Pia. 2020. "Going Regional: Local Childcare Provision and Parental Work–Care Choices in Germany." In *The Palgrave Handbook of Family Policy*, edited by Rense Nieuwenhuis and Wim Van Lancker, 485–509. London: Palgrave Macmillan.
- Stanley, T. D., and Hristos Doucouliagos. 2014. "Meta-Regression Approximations to Reduce Publication Selection Bias." *Research Synthesis Methods* 5 (1): 60–78.
- Vignoli, Daniele, Raffaele Guetto, Giulia Bazzani, et al. 2020. "A Reflection on Economic Uncertainty and Fertility in Europe: The Narrative Framework." *Genus* 76: 28.