

# **The Gendered Consequences of Childbearing on Partners' Income Trajectories: Evidence from Administrative Tax Data**

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## **Abstract**

The transition to parenthood is a key life-course event that triggers a divergence in the career trajectories of men and women, a phenomenon referred to as the child penalty. While extensive research has documented the motherhood penalty at the individual level, less is known about how childbirth affects partners' relative earnings within couples. This study examines how the birth of the first child affects partners' incomes by quantifying the within-couple child penalty, its persistence, and its heterogeneity by pre-birth characteristics, in order to test whether post-childbirth income inequalities reflect specialisation, bargaining power, or gender roles. Using unique Italian administrative tax records from 2003–2021, we reconstruct a retrospective panel spanning 2003–2021 for about 85,000 different-sex married couples with women of reproductive age, observed from five years before to five years after their first childbirth. An event-study design with couple fixed effects estimates the impact of parenthood on intra-couple income inequality and its heterogeneity by partners' pre-birth earnings shares. Results reveal a sharp widening of the within-couple income gap following childbirth, with women's earnings falling markedly behind their male partner. What begins as a temporary loss during maternity leave evolves into a persistent penalty, especially among couples where women were the higher earners, ruling out explanation based on utility maximisation or bargaining power. By focusing on couples rather than individuals, this study extends the literature on child penalties showing how parenthood acts as a critical mechanism producing gender inequality, underscoring the need for policies that support women's labour market attachment after childbirth.

## **Extended abstract**

Becoming a parent is a pivotal life-course transition, and a growing body of research shows that it comes with long-term implications for economic and career conditions with highly asymmetric consequences for men and women. While mothers experience a substantial reduction in earnings, fathers' earnings tend to remain unaffected or even increase slightly (e.g., Angelov et al. 2016; Kleven et al., 2019).

This divergence, commonly referred to as the child penalty, is now recognised as a key mechanism reproducing gender inequality in contemporary societies (Kleven et al. 2025). Most existing studies analyse individuals separately, focusing on mothers relative to childless women or fathers relative to childless men, or more recently on mothers versus fathers on average. However, this perspective overlooks the relational nature of parenthood, as decisions concerning paid work, caregiving, and the allocation of household resources are made within couples, not by individuals in isolation. Theoretically, understanding the child penalty demands focusing on the couple as the primary economic unit, where decisions about the division of paid and unpaid labour are negotiated. Pre-birth asymmetries in earnings can lead to diverging post-birth income trajectories, with implications for both intra- and inter-household inequality.

We address this gap by adopting a dyadic approach that treats the couple, rather than the individual, as the unit of analysis, in line with the small but growing literature (Killewald & García-Mangano, 2016; Musick et al., 2020; Steiber et al., 2024). Building on theories of household specialisation (Becker, 1985), intra-household bargaining (Lundberg & Pollak, 1996), and gender performance (West & Zimmerman, 1987), we explore how partners reorganise their labour supply and earnings following parenthood. While average gender comparisons reveal broad gaps, they overlook the relational adjustments through which partners may either reinforce or offset each other's income changes. This perspective makes it possible to understand whether childbirth amplifies cumulative disadvantage and gender inequality, or whether households pursue compensatory adaptations that reduce overall economic inequality but deepen asymmetries within couples.

Our empirical contribution focuses on Italy, a country characterized by persistent gender inequality, low female labour force participation, and limited public support for working parents. Despite these features, research on the economic impact of parenthood in Italy remains scarce and fragmented, often comparing mothers to non-mothers (e.g., Casarico & Lattanzio, 2023) or analysing men and women separately (e.g., Biasi & De Paola, 2025). No previous studies analysed within-couple inequalities in earnings triggered by the birth of the child.

The present paper offers two major contributions. First, it examines how the transition to parenthood affects income trajectories for both partners within married couples, thereby informing on how childbirth shapes economic inequality within and across households. Second, it addresses a gap in the literature by estimating the child penalty in Italy and by exploring whether pre-birth resource asymmetries moderate both the extent and duration of income losses following childbirth.

We use, for the first time in Italy, longitudinal administrative income records from the Ministry of Economy and Finance, made available through IRPET (Regional Institute for Economic Planning in Tuscany). The data cover the universe of Tuscan residents who filed a tax return in 2022 and allow us to reconstruct a retrospective panel spanning the period 2003–2021. By matching the social security numbers of legally married spouses (from their first to last joint filing) we identify 84,834 different-sex married couples and build a balanced dyadic panel. The analytical sample is restricted to couples in which the woman was aged 25–60 in 2022, thereby capturing both partners' income trajectories over the woman's reproductive life course.

The birth of the first child is identified when at least one child is declared as fiscally dependent in the 2022 tax return. The date of birth is taken from the record reported jointly by both spouses when available, or from one spouse's declaration if that individual is fiscally registered as married to the partner included in the dataset. Information on income refers to annual gross taxable income, which includes labour and self-employment earnings, parental leave benefits, unemployment benefits, and financial income from real assets.

These data enable us to compare partners' pre- and post-birth incomes. Our empirical strategy follows an event-study design (Kleven et al., 2019), tracking married couples from five years before to ten years after the birth of their first child. For each year, we estimate the average change in income for female and male partners relative to two years before childbirth. The child penalty is defined as the difference in earnings changes between women and men. We include couple fixed effects to control for all time-invariant characteristics of the dyad and explore heterogeneity in the child penalty by stratifying couples according to the female partner's pre-birth contribution to total household income.

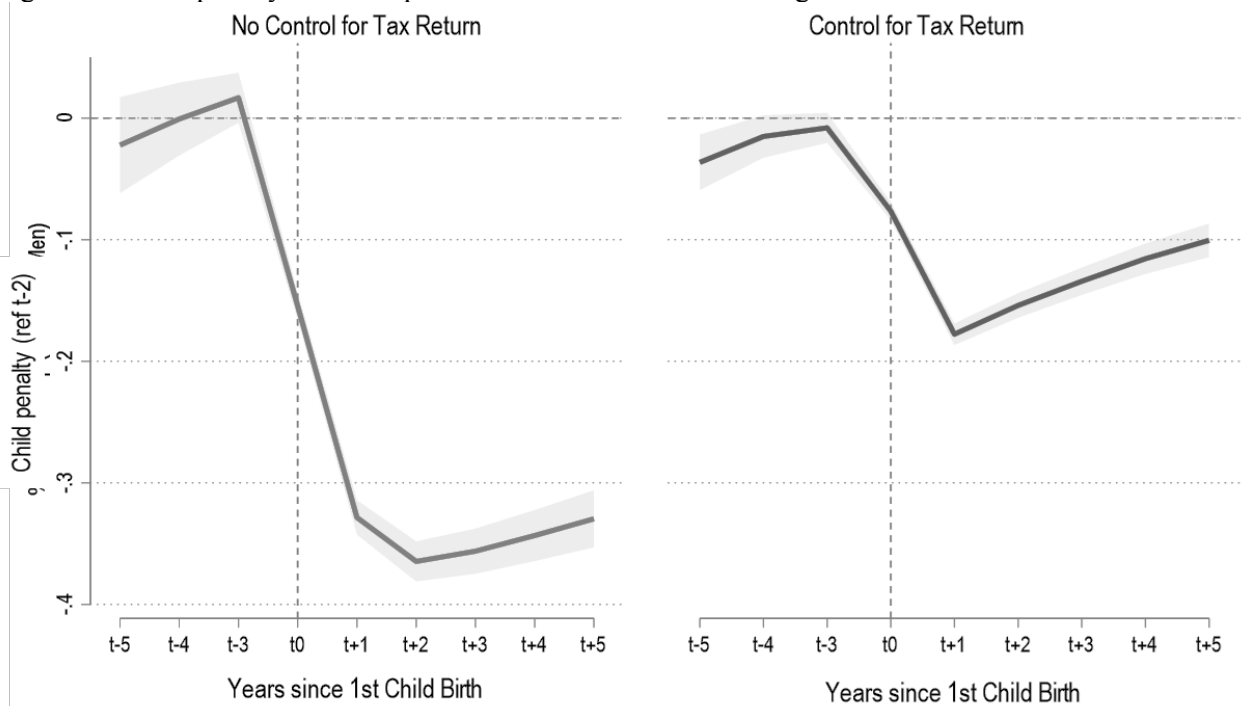
Main results indicate a pronounced and persistent widening of the income gap within couples upon parenthood. As shown in Figure 1, women's earnings fall sharply in the year of childbirth—by about 15 percentage points relative to their male partners—and the gap remains wide in subsequent years, showing no sign of recovery even five years after the event. The short-term child penalty is related to institutional features of the Italian maternity-leave system, which compensates around 80% of previous earnings for five months around childbirth. However, women's earnings trajectories remain substantially below those of their male partners also in the year following childbirth, highlighting a persistent child penalty of more than 30 percentage points. Controlling for whether partners filed a tax return indicates that the child penalty reflects not only women's withdrawal from employment but also significant reductions in working hours and earnings among mothers who remain employed, relative to their partners.

Moreover, results highlight strong heterogeneity by pre-birth partners' income distribution, as reported in Figure 2. Among couples in which the woman was the main earner before childbirth (>60%), the decline is sharp and sustained, as her contribution to total household income falls by nearly 15 percentage points and shows no recovery even up to ten years after birth. This pattern

indicates a strong and persistent within-couple child penalty among higher-earning women. Together, these results suggest that the child penalty is not uniform across households but rather increases with women's pre-birth economic position.

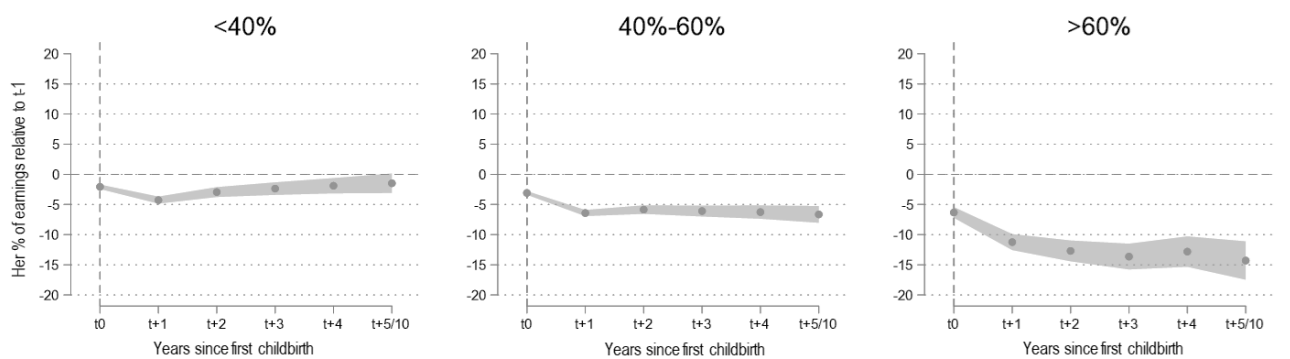
Our findings underscore the centrality of the couple as the locus where the child penalty is generated and reinforced. The observed patterns show that parenthood widens intra-couple inequalities most sharply in couples that were relatively gender-egalitarian before the birth of their first child, challenging explanations based on either efficient specialisation or unequal bargaining power and revealing instead a relational dynamic in which parenthood triggers a re-traditionalisation of gender roles.

Figure 1 – Child penalty at the couple level in relative annual earnings



Source: Authors' calculations from IRPET administrative data.

Figure 2 Child penalty at the couple level in relative annual earnings, based on women's contribution to total household income before birth



Source: Authors' calculations from IRPET administrative data.

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