Maternity Leave and Informality: Evidence from an Eligibility Expansion in Peru

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[Work in progress: Preliminary version, September 2025]

Abstract

This paper examines whether increasing short-term benefits from social protection can incentivize greater affiliation with formal institutions in contexts of high labor informality. I study a 2022 reform in Peru that substantially relaxed eligibility requirements for maternity leave, effectively transforming maternity benefits into a short-term return on contributions to the social security system. Using panel data from the Peruvian National Household Survey (ENAHO), I implement a dynamic difference-in-differences design that compares women at the same stage relative to childbirth before and after the reform. First, I assess whether the reform increased contributory health insurance affiliation during childbirth, a prerequisite for accessing maternity leave. Then, I examine labor market outcomes, focusing on changes in informal employment and overall employment status. This approach provides new evidence on the role of short-term contributory benefits as formalization incentives for women in informal labor markets, even in the absence of strong enforcement mechanisms.

JEL Classification: I38, J16, J18, O17

Keywords: maternity leave, informality, formal employment, Peru, social protection

1 Introduction

The reach of social protection systems is closely tied to the structure of the labor market. In many countries, access to key protections such as retirement pensions, unemployment insurance, and maternity leave is conditional on formal employment, where participation in social security schemes is mandatory (ILO, 2023a). By contrast, informal employment is typically defined as work not covered by mandatory social security contributions (Samaniego de la Parra et al., 2024; Brotherhood et al., 2024; Rodríguez-Castelán and Vasquez, 2022; David et al., 2020). A large share of the workforce falls into this category and is consequently excluded from employment-based entitlements. This institutional structure creates substantial gaps in social protection coverage, particularly among low-income and non-salaried workers. One region where this issue is especially pronounced is Latin America, where approximately 50% of workers are employed in informal jobs (ECLAC and ILO, 2023).

Among informal workers operating in this setting, many are not structurally excluded from formality but instead face a choice about whether to contribute to social security and access associated benefits. For these workers, the decision to formalize is often shaped by how they perceive the trade-off between mandatory contributions and the benefits they expect to receive (Bergolo and Cruces, 2021; Levy and Schady, 2013; Levy, 2008). When benefits are primarily perceived as long-term, the returns to formalization may be limited, especially for individuals with pressing financial needs or access to alternative subsidized services. In contrast, short-term benefits can provide a more immediate incentive to participate in the contributory system. This paper seeks to answer whether expanding short-term social protection benefits encourages women to affiliate with the contributory health insurance system and adjust their labor market status around childbirth. A follow-up question is whether such responses represent a lasting shift in women's employment trajectories or a temporary adjustment aimed at securing access to the benefit.

To answer these questions, this paper focuses on maternity benefits as a short-term social protection policy in the context of Peru, a country characterized by widespread labor informality and a contributory system that restricts access to paid maternity leave to formal workers. In this context, maternity leave operates as a short-term contributory benefit that may incentivize formal participation in the labor market. By offering a direct and tangible return, maternity benefits can help reduce the financial uncertainty associated with pregnancy, particularly for women anticipating income disruptions due to childbirth. If such transitions to formality do occur, it becomes especially relevant to examine whether they are sustained over time or represent short-term strategies to access benefits before returning to informal work. Evidence of the latter would suggest that persistent structural barriers continue to constrain long-term formal employment, even when short-term incentives are available.

In my preliminary empirical strategy, I implement a dynamic difference-in-difference strategy that compares women at the same stage relative to childbirth across cohorts before and after a 2022 policy reform that expanded maternity leave access. As a first step, I examine whether the reform increased contributory health insurance affiliation during childbirth, which is a prerequisite for accessing maternity leave. Then, I track changes in labor market outcomes and formal employment status using panel data from the Peruvian National Household Survey (ENAHO) to identify whether the reform induced transitions into formality and whether these transitions persisted over time.

Many developing countries experience high rates of informality and face institutional conditions that differ markedly from those in developed countries (OECD, 2023). Research on social protection in developing countries often centers on formal workers, overlooking a large share of the labor force (Banerjee et al., 2024; Jensen, 2022). One reason for this bias is the difficulty of observing informal workers in administrative records and the limited employment histories available in standard household surveys. This paper contributes to filling this gap by examining how a temporary contributory benefit can influence labor market behavior among both formal and informal workers. Using panel data from ENAHO, I study transitions between formal and informal employment in a nationally representative sample of Peruvian households. The ENAHO follows households for five consecutive years before rotating them out of the sample, which allows me to observe medium-run labor market dynamics. This rotating panel structure helps overcome common limitations in the literature. First, it provides up to five years of employment history for all workers, regardless of their formality status. Second, it allows me to track transitions into formality among previously informal workers. Importantly, a key limitation of the data is that both employment status and social security contributions are self-reported, which may introduce measurement error and sample selection. However, as discussed in Section 3, these concerns are partially mitigated by the nationally representativeness of the ENAHO survey.

Understanding women labor transitions is especially relevant in contexts where access to maternity benefits depends on formal labor contracts, thereby excluding a large share of the female workforce. Pereira-Kotze et al. (2023) and Huong (2023) show that women in informal or non-standard employment often lack access to essential components of maternity protection—such as paid leave, medical benefits, or breastfeeding breaks—and instead rely on informal or discretionary arrangements like unpaid leave or flexible work (e.g., bringing the baby to work). Ulrichs (2016) and Addati (2015) further document structural barriers that limit access to maternity protection, including rigid eligibility criteria, contribution requirements, and limited awareness of available benefits. Even when legal maternity benefits exist, weak enforcement and the financial burden placed on employers, especially small or informal firms, limit actual access (Raquiza et al., 2024; Stumbitz et al., 2018).

In response to persistent gaps in the coverage of maternity protection, recent studies have

proposed alternative program designs to extend these benefits to informal workers (Banerjee et al., 2024; Gilbert-Ulep et al., 2020; Vilar-Compte et al., 2019). Vilar-Compte et al. (2019) and Gilbert-Ulep et al. (2020) mainly estimate the cost of implementing publicly funded non-contributory maternity cash transfer programs for women in the informal sector, in Mexico and the Philippines, respectively. Both studies find such programs to be financially feasible and emphasize their potential to promote social equity and improve maternal and child health outcomes. However, there is no causal evidence on whether such interventions influence women's labor market behavior or transitions into formality. Instead, most existing research has examined how childbirth leads to exits from the formal sector (Tribin-Uribe et al., 2019; Lima et al., 2021). For example, Lima et al. (2021) find that childbirth in Brazil causes a sharp decline in formal employment, with no corresponding increase in informal employment. A small number of recent studies have begun to explore whether maternity leave entitlements can also prompt movements into formality. In Vietnam, Vu and Glewwe (2022) show that a more generous leave policy led potentially eligible women to switch from informal to formal jobs, often in the public sector where benefits were guaranteed.

Unlike prior studies that examine how maternity leave affects outcomes among already formal workers, my study investigates whether the availability of such benefits can trigger transitions into formal employment among previously informal workers. This question is particularly relevant in countries with high levels of informality and contributory benefit structures, where access to maternity leave is conditional on formal labor participation. To the best of my knowledge, no existing research has tested whether short-term contributory maternity benefits serve as a direct incentive for formalization. This remains a critical gap in the literature, particularly in contexts like Peru, where such benefits may represent one of the few immediate returns to formal employment.

More broadly, the literature on maternity leave has examined its effects in settings where labor markets are highly formalized and social protection systems are well developed. This body of work has extensively explored how parental leave influences employment outcomes, particularly the motherhood penalty and the extent to which leave policies can mitigate it (Patnaik, 2019; Stearns, 2018; Bartel et al., 2018; Baum and Ruhm, 2016; Anderson et al., 2002). Anderson et al. (2002), studying the United States, show that mothers—especially those with higher education levels- experience significant wage penalties after childbirth. In contrast, Bartel et al. (2018) exploit variation in state-level paid leave mandates in the U.S. and find that these policies significantly raise leave-taking and modestly increase maternal employment and wages in the medium run. Similarly, for the case of the State of California, Patnaik (2019) finds that access to paid family leave increases mothers' labor force participation in the years following childbirth, suggesting that short-term leave can have persistent effects.

Building on these findings, this paper shifts focus to examine how maternity leave policies function

in environments characterized by high informality and employment insecurity. Most existing evidence describes the role of maternity leave in shaping women's careers in institutional settings where benefit coverage and enforcement are strong. Much less is known about whether such policies can influence labor market behavior where access to benefits is conditional on formal employment. This study addresses this gap by analyzing the case of Peru, where more than two-thirds of women work in the informal sector and access to maternity leave depends on formal contributions. In doing so, the paper contributes to a broader understanding of the role of maternity benefits in shaping labor market dynamics in developing economies.

This paper also relates to a broader literature examining the role of parental leave policies, including both maternal and paternal leave, in promoting family welfare and gender equality. By enabling both parents to participate in early child-rearing, these policies aim to redistribute caregiving responsibilities more equitably. This redistribution has the potential to improve child outcomes while also reducing gender disparities in the labor market. Recent global trends toward more inclusive and flexible leave provisions reflect the growing recognition of these benefits (Flores et al., 2023; Earle et al., 2023; Hyland and Shen, 2022). On the one hand, some studies have investigated the impact of paternity leave on children's educational outcomes as a measure of family welfare (Flores et al., 2023; Cools et al., 2015). Cools et al. (2015) show that the introduction of a paternal quota in Norway improved children's school performance, particularly in households where fathers had higher educational attainment than mothers.

On the other hand, other studies have emphasized the role of paternal leave in improving gender equality. Ekberg et al. (2013) explore whether incentivizing fathers to take more leave mitigates the career costs mothers face due to childbearing. While they find strong short-term increases in paternal leave-taking, they observe limited effects on broader household behavior. In contrast, Bartel et al. (2018) analyze the implementation of California's Paid Family Leave program and find that it significantly increased leave-taking among fathers, especially for first-time parents. These findings underscore the potential of well-designed parental leave schemes to promote greater gender balance in caregiving and, potentially, in labor market outcomes.

However, much of this literature focuses on settings where at least one parent has access to formal employment and, therefore, to leave entitlements. This limits our understanding of how such policies function in contexts where large segments of the workforce, especially women, remain outside formal protections. My study contributes to this literature by shifting the focus from how parents share leave benefits within the household to whether mothers can access such benefits in the first place. Specifically, I examine whether expanding access to maternity leave among informal workers can also promote family welfare and gender equality. If short-term maternity benefits encourage women to enter formal employment, this could increase their access to income support during a critical life

event, reduce economic vulnerability for mothers and children, and improve overall well-being. In this way, expanding access to contributory maternity benefits may serve not only as a tool for improving women's labor market outcomes but also as a policy lever to enhance household well-being and reduce gender inequalities in contexts where informality is widespread.

From a policy perspective, this study is highly relevant to current efforts aimed at expanding social protection in economies with high labor informality. Maternity benefits are often viewed as instruments for promoting maternal and child well-being, yet many existing systems are designed in ways that exclude a large share of working women. In Peru and similar contexts, maternity benefits may be studied as a return to formal employment. Understanding whether such benefits can induce formalization has direct implications for the design of inclusive protection systems and gender-equitable labor markets. Evidence from this study can inform policy debates on how to extend protections to informal workers, either by incentivizing formalization through contributory schemes or by designing complementary non-contributory alternatives.

The remainder of the paper is structured as follows. Section 2 provides a description of the context of study. Section 3 outlines the data. Section 4 discusses a preliminary empirical strategy. Section 5 presents preliminary results, and Section 6 lists the next steps.

2 Context

The Peruvian Labor Market

Peru has one of the highest informality rates in Latin America, with an average of 71% of workers employed informally.[1] The National Household Survey of Peru (ENAHO) defines informal employment as including the following categories: (1) self-employed individuals operating in unregistered businesses; (2) employees without employer-funded social security benefits; (3) unpaid family workers, even in legally registered businesses. To align with a more standard and commonly used definition of informal employment (Samaniego de la Parra et al., 2024; Brotherhood et al., 2024; Rodríguez-Castelán and Vasquez, 2022; David et al., 2020), this paper defines informal employment as work not covered by social security (SS). Under this definition, social security includes both health and pension contributions. Figure B.1 shows informality rates for men and women of productive age (18-64 years), using both definitions. The SS contribution definition consistently yields higher informality rates than the ENAHO definition, and the gender gap remains under both. For the remainder of the paper, I refer to informal employment as defined by the lack of SS contributions.

Occupational differences also play a role in shaping gender disparities in informality. Women are

[1]This estimate comes from the 2023 National Household Survey of Peru (ENAHO) and includes all employed individuals aged 14 and above.

more likely to work in retail, restaurants, and hotels, which account for 36% of their employment, compared to 16% among men (see Table A.3). In contrast, men are more frequently employed in construction, transportation, and public services (25%) and in manufacturing (10%), while these sectors represent only 2% and 7% of women's employment, respectively. These sectoral differences are relevant because informality rates vary substantially across occupations. As shown in Table A.4, informality is particularly high in agriculture and mining (94%), retail, restaurants, and hotels (88%), and construction and transportation (86%). In contrast, informality is much lower in education (17%) and health (29%). The combination of occupational segregation and sector-specific informality rates helps explain why women, who are more concentrated in high-informality sectors, face higher overall rates of informal employment.

The Peruvian Health System

The Peruvian health system consists of two primary insurance programs: integrated health insurance (SIS), a subsidized health insurance program, and social health insurance (EsSalud), a contributory health insurance program. Figure B.2a shows the proportion of the total population affiliated with SIS and EsSalud, as well as the share covered by other types of health insurance or lacking any health insurance coverage during my sample period.

On average, between 2019 and 2023, 50.6% of the population was covered by subsidized health insurance, 28.8% contributed to EsSalud, 2.6% had other forms of health insurance, and 17.8% were uninsured. In particular, the share of the population covered by subsidized insurance increased over time, while the share without any health insurance decreased. To compare health insurance coverage by gender, Figure B.2b presents health coverage statistics separately for men and women. In both cases, the trends of rising subsidized coverage and declining uninsured rates hold. However, women consistently had lower rates of being uninsured and higher rates of subsidized coverage throughout all years of the sample. In contrast, men and women exhibited similar levels of coverage under the contributory health system.

The distinction between subsidized and contributory health insurance is crucial for this study, as only the contributory system provides paid maternity leave benefits. The subsidized system targets low-income and vulnerable populations and is fully funded by the government (ILO, 2023b). It provides free healthcare services to eligible individuals, including maternity care, but does not offer paid maternity leave. Importantly, since 2020, all Peruvians not affiliated with any other insurance system are automatically eligible for SIS coverage, without the need for prior enrollment or socioeconomic assessment.[2] In contrast, the contributory health insurance system covers regular affiliates, including active formal sector workers, retirees, and voluntary affiliates. Voluntary affiliates

[2]See: https://www.diresaapurimac.gob.pe/web/noticias/aprueban-afiliacion-al-sis-para-todos-los-peruanos

include individuals not linked to an employer, such as self-employed workers or independent contractors, who choose to enroll in EsSalud and pay monthly contributions directly. Eligibility for EsSalud depends on employment status: employees are affiliated automatically through a formal employer, while non-employees can enroll voluntarily. For employees, the cost of coverage is 9 percent of monthly income, paid by the employer, with the contribution base required to meet or exceed the legal minimum wage. In 2025, the legal minimum wage was set at S/1,130. Therefore, the minimum amount paid for employees is S/101.7 in 2025. For non-employees, the monthly contribution varies by age, ranging from S/132 to S/215.[3]

For the period prior to May 2022, maternity benefits under EsSalud include 98 days of paid maternity leave. This benefit was only available to women directly enrolled in EsSalud and was not extended to dependents (see Table 1). Paid leave could be allocated before or after childbirth, depending on the mother's preference and as long as she refrained from engaging in paid work during that time. In the case of multiple births or the birth of a child with a disability, an additional 30 days of leave were granted. The monetary value of the benefit was calculated based on the average daily wage over the 12 calendar months preceding the start of the leave, multiplied by the total number of leave days (ILO, 2023b). If the insured individual had been affiliated for fewer than 12 months, the benefit was adjusted to reflect the actual number of months contributed at the time the leave began. This rule applies to both dependent workers and voluntary affiliates who joined EsSalud during pregnancy. In addition, EsSalud provided maternal care and a breastfeeding subsidy of 820 soles per newborn,[4] granted if either parent was actively contributing to the system with some restrictions: (1) Maternal care and breastfeeding benefits were provided to insured women and to spouses or partners of male affiliates; (2) Unmarried pregnant women affiliated through a partner were only entitled to maternal care.

EsSalud is the institution responsible for financing and paying maternity benefits. For dependent workers, employers initially disburse the paid leave to the employee and subsequently request reimbursement from EsSalud.[5] This mechanism ensures that employers are not financially burdened by the benefit, thus reducing disincentives to hire or retain women of childbearing age. For independent or voluntary affiliates, EsSalud pays the maternity subsidy directly to the insured individual, contingent on meeting eligibility requirements.

Policy Change: The May 2022 Maternity Benefits Reform

Before May 2022, access to paid maternity leave under the EsSalud contributory system was restricted to women who met strict eligibility conditions (see Table 2). In addition to being affiliated with EsSalud

[3] Equivalent to approximately 37 to 60 USD at the average exchange rate in June 2025.
[4] Equivalent to approximately 228 USD at the average exchange rate in June 2025.
[5] See https://www.gob.pe/291-subsidio-por-maternidad-en-essalud

and holding an active labor contract, dependent workers had to complete either three consecutive or four non-consecutive monthly contributions within the six months prior to the start of maternity leave. Moreover, their EsSalud affiliation had to begin before conception. These requirements often excluded women with intermittent employment histories, a common pattern among informal workers.

Table 1: Contributory Health Insurance Scheme

Feature	Description
Eligibility	✓ **Employees:** Affiliated through a formal employer. ✓ **Non-employees:** Self-employed, or any worker not affiliated through an employer can enroll voluntarily.
Cost to the beneficiary	✓ **Employees:** 9% of monthly income, paid by the employer. Contribution base $\geq$ legal minimum wage ✓ **Non-employees:** Monthly contribution based on age (S/ 132 - S/215).
Maternity benefits	98 days of paid maternity leave, maternal care, and a breastfeeding subsidy (S/ 820 per newborn).

Notes: This table describes the main features of Peru's contributory health insurance system (EsSalud), which covers both salaried employees and non-salaried individuals through voluntary enrollment. It outlines eligibility conditions, cost of enrollment for each group, and the maternity-related benefits offered to directly affiliated women. Paid maternity leave was only available to women directly enrolled in EsSalud, not to dependents. The breastfeeding subsidy was granted if either parent was actively contributing to the system with some restrictions: (1) Maternal care and breastfeeding benefits were provided to insured women and to spouses or partners of male affiliates; (2) Unmarried pregnant women affiliated through a partner were only entitled to maternal care.

The interpretation of labor attachment under the pre-reform system also varied by worker type. For dependent workers, eligibility required an active labor contract at the time of pregnancy and during the subsidy period. In contrast, independent workers—such as self-employed individuals or those under special contribution regimes like artisanal fishers—did not need to prove a formal labor relationship. Instead, they qualified by maintaining active EsSalud affiliation and paying their contribution in the month when pregnancy began. This distinction implied that individuals without a formal employer-employee relationship could still access maternity benefits through voluntary affiliation to EsSalud (Gobierno del Perú, 2024).

In May 2022, a legal reform[6] introduced more flexible eligibility criteria for maternity benefits (ILO, 2023b). The reform eliminates the waiting period (*periodo de carencia*) and grants access to paid maternity leave for women who enroll in EsSalud at any point during pregnancy, as long as their affiliation precedes childbirth. Under the new law, there is no minimum contribution history required, and affiliation during pregnancy is sufficient for eligibility. While the requirement of an active labor contract remains in place for dependent workers, independent or voluntary affiliates can continue to access the benefit without such a contract, provided that their affiliation is active during pregnancy. The same relaxed criteria apply to breastfeeding subsidies. The reform was introduced to ensure immediate access to EsSalud for pregnant women, recognizing the need for timely coverage without delays imposed by contribution requirements. For a graphical representation of the old and new requirements, Figure B.5 presents the eligibility timeline before and after the reform.

This policy change expands access to maternity benefits for key groups previously excluded: women

[6]Specifically, a new law (*Law No. 31469*) modified Article 10 of *Law No. 26790*.

who formalize during pregnancy, those with fragmented contribution records, and voluntary affiliates who enter the contributory system close to childbirth.

Table 2: Maternity Benefit Eligibility: Before and After the 2022 Reform

Requirement	Before Reform	After Reform (May 2022)
Employment & affiliation	✓ EsSalud affiliation ✓ Active labor contract for dependent workers ✓ Monthly contribution for independent workers	✓ EsSalud affiliation ✓ Active labor contract still required for dependent workers ✓ Monthly contribution still required for independent workers
Timing of affiliation	Must begin before conception	Can begin any time during pregnancy, as long as affiliation precedes childbirth
Prior contributions	3 consecutive or 4 non-consecutive in the prior 6 months	None required if affiliated during pregnancy

Notes: This table summarizes the changes in eligibility criteria for Peru's contributory maternity benefit under the EsSalud system following the May 2022 reform. Information based on ILO, 2023b and Gobierno del Perú, 2024.

3 Data

The primary data used in this paper comes from the National Household Survey of Peru (*ENAHO*). This survey is a continuous annual household survey designed to track the living conditions of Peruvian households, conducted by the Peruvian National Institute of Statistics and Informatics (*INEI*). The survey incorporates a longitudinal panel component that allows one to observe changes in household conditions and economic dynamics over time. It uses a probabilistic, stratified, and multistage sampling design to ensure national representativeness in urban and rural areas. The **panel component** consists of a rotating sample design, where households remain in the survey for five waves before being replaced. This structure balances the need for continuity in tracking household changes while refreshing the sample to maintain representativeness (INEI, 2025).

My project focuses on the 2019–2023 *ENAHO* panel, which tracks a subset of households over five consecutive years. In each year, the panel component represents approximately 30% of the total surveyed households, corresponding to around 12,074 dwellings per year. To ensure comparability over time, the panel includes 1,994 households that responded in all five waves (2019-2023), 3,699 households for the 2020-2023 sub-panel, 6,310 households for the 2021-2023 sub-panel, and 9,216 households for the 2022-2023 sub-panel (INEI, 2023).[7] Each wave of the panel includes harmonized modules on housing conditions, education, health, employment, and income, with detailed reference periods ranging from the day of the interview to the previous 12 months, depending on the topic. Due to the structure of my empirical strategy described in the following Section, some versions of the main specification require observing outcomes two or three years before childbirth. For this reason, I incorporate the cohort of individuals first surveyed in 2018 and followed through 2022, which allows me to construct event-time variables around childbirth for earlier cohorts.

[7] 5,661; 10,952; 19,201; and 29,114 household members, respectively.

Employment and Coverage Patterns Across Men and Women

Given the survey's detailed employment and social protection modules, ENAHO provides rich information to assess patterns of labor informality and access to social protection programs. In all years covered by my sample, women experience higher informality rates than men (see Figure B.1). On average, 73% of productive-age working men have informal jobs, while this share is higher among women, with 78% of the productive-age female workforce employed informally. This high prevalence of informal work implies that a large share of Peruvian workers, especially women, remain excluded from employment-based social protection programs.

Gender disparities in informality are closely related to differences in employment categories. Table A.1 shows that while self-employment is common for both men and women, men are more likely to be employers or employees, whereas women are overrepresented in unpaid family work and domestic service. These categories are typically associated with lower earnings and reduced access to contributory benefits.[8] Table 3 further disaggregates employment categories by formality status. Among formal workers, the vast majority are classified as employees, with men slightly more concentrated in this group. In contrast, among informal workers, both men and women are predominantly self-employed. However, women in informal employment are also substantially concentrated in unpaid family work (18%) and domestic work (7%). Only 24% of informal women are employees, compared to 39% of informal men. These patterns suggest that women in informal jobs are largely concentrated in three categories: self-employment, unpaid family work, and employee positions, which may differ in terms of stability and access to social protection. This composition has important implications for understanding how women engage in contributory programs such as maternity leave.

Table 3: Employment Categories by Formality Status and Gender

	(1)	(2)	(3)	(4)
	Formal employment		Informal employment	
	Men	Women	Men	Women
Employer	0.035	0.021	0.053	0.021
Self-employed	0.054	0.068	0.509	0.490
Employee	0.902	0.884	0.390	0.237
Unpaid family worker	0.008	0.005	0.044	0.179
Domestic worker	0.001	0.021	0.002	0.070
Other	0.000	0.000	0.002	0.002

Notes: This table reports the distribution of employment categories by formality status and gender using data from the ENAHO survey. Columns (1) and (2) present the shares of male and female workers in formal employment, while columns (3) and (4) report the corresponding shares for informal employment.

Similarly, health insurance coverage in Peru varies between formal and informal workers. By definition, all formal workers are part of the contributory health system. Informal workers display distinct patterns of health insurance coverage (see Figure B.3). Only about 6.4% are affiliated with

[8] *The Invisible Workforce: Women in the Informal Economy (2023)* at https://www.lisep.org/content/the-invisible-workforce-women-in-the-informal-economy

EsSalud, while the majority are covered by SIS. Between 2019 and 2023, the share of informally employed individuals covered by SIS increased from 62% to 75%, and the uninsured rate decreased from 28% to 16%. Gender differences are also present in this group. Informal women are more likely to be enrolled in SIS and EsSalud, and less likely to be uninsured compared to informal men (see Table A.2).

Regarding retirement security, between 2019 and 2023, 23.4% of informal male workers and 9.2% of informal female workers had pension coverage on average (see Figure B.4). As required by the definition of formality, all formal workers are affiliated with a pension system, most commonly through private pension funds. Together, these patterns highlight the limited reach of the pension system among informal workers and the persistent gender disparities in social protection coverage.

Identifying Mothers and Patterns of Health Coverage Around Childbirth

A key feature of the *ENAHO* survey for this study is that it allows for the identification of household structure, which enables the inference of maternity status. Although the survey does not include a direct indicator for whether a woman is a mother, this can be inferred by combining information on household relationships and ages. In my final sample, 64% of women aged 14 and older are identified as mothers, and this share is 62% among women of reproductive age (15–49 years). Mothers in the sample tend to have higher overall rates of health insurance coverage than non-mothers. In contrast, pension coverage is similar across groups: 29% of mothers are enrolled in a pension system compared to 31.8% of non-mothers. These numbers show that most women of reproductive age remain excluded from pension systems (see Figures B.6 and B.7). Lastly, informality rates for both mothers and non-mothers have consistently ranged between 78% and 82% over time (see Figure B.8).

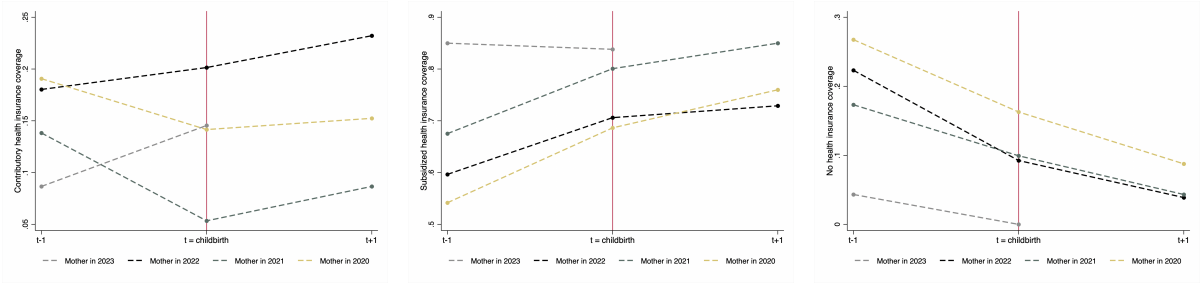
Focusing on the sample of mothers of reproductive age, I further explore differences in health insurance enrollment between cohorts of newborn mothers between 2020 and 2023. In 2023, 3.2% of mothers in reproductive age were newborn mothers. These shares were slightly higher in previous years: 4.9% in 2022, 4.7% in 2021, and 4.1% in 2020.

Health coverage patterns differ across newborn mothers' cohorts, especially after the 2022 reform. In terms of contributory health coverage, mothers who gave birth in 2022 and 2023 show a clear increase in affiliation at the time of childbirth. For the 2022 cohort, EsSalud coverage rose from about 17% in the year before childbirth (t–1) to nearly 23% one year after childbirth ($t + 1$). The 2023 cohort also shows an upward shift in EsSalud affiliation from t–1 to childbirth, reaching around 15%, although data for the post-childbirth period are not yet available for this cohort. In contrast, the 2021 and 2020 cohorts saw a decline in EsSalud coverage around childbirth. For both groups, coverage fell between t–1 and childbirth, with only modest recovery afterward (see Figure 1a).

Subsidized health insurance (SIS) remains the most common form of coverage for all cohorts.

Although almost all groups show an increase in SIS affiliation around childbirth, the increase is more pronounced for the 2021 and 2020 cohorts. For example, SIS coverage among the 2020 cohort increased from about 55% to nearly 70%, whereas for the 2022 and 2023 cohorts, coverage was already high prior to childbirth and changed more gradually. The 2023 cohort maintained levels above 85% throughout the childbirth window (see Figure 1b).

Figure 1: Health insurance coverage around childbirth by cohort of newborn mothers (2020–2023)



(a) Contributory coverage (EsSalud) **(b)** Subsidized coverage (SIS) **(c)** No health insurance

Notes: This figure shows trends in health insurance coverage from one year before to one year after childbirth, by year of birth (2020–2023). Each line corresponds to a cohort of mothers defined by the year of childbirth. The red vertical line marks the childbirth reference period.

The share of mothers without health insurance decreased substantially around the time of delivery for all groups, but especially for the cohorts 2022 and 2023. Among 2022 mothers, the proportion of uninsured women fell from 22% at t–1 to about 10% at $t + 1$. Newborn mothers in 2023 had already a low uninsured rate in t–1, and it drop to nearly zero at childbirth. In comparison, the decline was slower for the 2020 cohort, who remained more likely to be uninsured after childbirth (see Figure 1c).

Taken together, these patterns suggest that the 2022 reform improved access to contributory insurance and reduced the number of uninsured mothers, while maintaining high levels of SIS enrollment. The bigger changes appear in the cohorts directly affected by the reform and are concentrated around the time of childbirth, when access to maternity protection is most critical.

To contextualize the representativeness of my main sample of newborn mothers, I compare their socioeconomic characteristics with two relevant groups: all other women of reproductive age and mothers outside the newborn cohort. Table A.5 shows that, compared to other women, newborn mothers are more likely to have completed secondary or higher education, be affiliated with contributory health insurance, and be covered by a pension system, while being less likely to work informally or receive government assistance. Table A.6 narrows the comparison to other mothers and reveals similar patterns. Newborn mothers are slightly more educated, more likely to be covered by pensions and contributory insurance, and less likely to receive government assistance. These comparisons suggest that newborn mothers in the sample are relatively more integrated into formal institutions, which can shape how they respond to policy changes such as the 2022 reform.

4 Empirical Strategy

The 2022 reform provides an opportunity to evaluate how expanding short-term benefits for a clearly defined group affects women's employment decisions. In this context, I focus on maternity benefits, which the reform effectively transformed into a short-term social security benefit. By lowering barriers to access, the reform may have encouraged women to participate in the labor market, potentially shifting between formal and informal employment. This potential shift may reflect different margins of adjustment: entry into formality to secure access to benefits, greater retention in formal jobs that might otherwise be abandoned for informal work, and increased participation in the labor force among women previously out of employment.

For each mother, I define event time variables as the number of years relative to childbirth. Then, I compare health system affiliations and labor market outcomes at the same relative point (e.g., one year before or one year after childbirth) between mothers who gave birth before the 2022 reform and those who gave birth afterward. This approach allows me to compare women at equivalent stages in the pregnancy/postnatal cycle while exploiting variation in eligibility for maternity benefits induced by the reform. The sample of women considered in the analysis are women in reproductive age (15-49 years).

My preliminary empirical strategy uses a dynamic difference-in-differences strategy estimating Equation 1,

$$Y_{it,\tau} = \beta_0 + \sum_{k \neq -1} \beta_k \left(\mathbb{1}[\tau = k] \times \text{Treated}_i \right) + X_{it,\tau} + \alpha_i + \lambda_\tau + \gamma_t + \varepsilon_{it,\tau} \tag{1}$$

where $Y_{it,\tau}$ denotes the outcome of interest for woman i in calendar year t and event time τ. Treated_i is an indicator equal to 1 if the woman i gave birth in 2022 or later, when the reform of maternity leave was in effect and 0 otherwise. The control group consists of women who gave birth before the reform. Given the data sample used for this analysis, treated mothers are those who gave birth in 2022 or 2023, and control mothers are those who gave birth in 2019, 2020, and 2021. τ is defined as the number of years relative to the year of childbirth. The term $\mathbb{1}[\tau = k]$ represents event-time dummies for each year k relative to childbirth, excluding $\tau = -1$ as a reference category. Therefore, each β_k captures the differential effect of the reform at each stage relative to childbirth.

The model includes event-time fixed effects, λ_τ, to account for lifecycle patterns around childbirth, calendar year fixed effects, γ_t, to absorb any systematic variation in the outcome variable that is common to all individuals at a given point in time, and individual fixed effects, α_i, to control for time-invariant unobserved heterogeneity across individuals. The error term is denoted by $\varepsilon_{it,\tau}$. Standard errors are clustered at the individual level to account for the correlation of the error term over time. The vector of control variables, $X_{it,\tau}$, includes educational attainment, total household members, and indicators of being the head of household, having a partner, and receiving any government aid.

The identifying assumptions for this dynamic difference-in-differences strategy are as follows. *(1) parallel trends assumption:* in the absence of the reform, trends in my outcomes of interest around childbirth would have been similar across cohorts. *(2) No anticipation:* treated mothers did not change labor market outcomes or insurance behavior in anticipation of the reform. If assumptions *(1)* and *(2)* hold, each β_k estimates the causal effect of the reform of maternity leave for treated mothers relative to mothers who gave birth just before the reform.

The *parallel trends* assumption is supported by the dynamic event-study plots presented in Section 5, which show flat and statistically insignificant pre-trends in the outcomes of interest. This suggests that, prior to the reform, treated and control cohorts followed similar trajectories in health coverage and labor market behavior.

The *no anticipation* assumption is more difficult to fully verify and could be subject to potential violations. Although the reform was only announced after May, 2022, some women may have learned about the upcoming changes and strategically adjusted their behavior. If this were the case, some of the treatment effect might be captured before the reform formally took effect, which would bias post-reform coefficients downward, as early behavioral responses would dilute the observed impact in later periods. *Ongoing work examines the timing and implementation of the reform in greater detail.*

5 Preliminary Results

This section presents preliminary estimates from the dynamic difference-in-differences specification described in Section 4. The results focus on the effects of the 2022 maternity leave reform on women's affiliation with the health system and their labor outcomes. The baseline estimates restrict the event-time window to $\tau = -2$ through $\tau = 1$, for the following reasons: (1) For $\tau = 2$, I only observe outcomes for the control group, since the data extends only through 2023 and the treated cohorts begin in 2022. (2) For $\tau = -3$, observations are available only for a single control cohort (those who gave birth in 2021), making estimates for that period less precise. Appendix Figures B.10 and B.11 display dynamic DiD estimates using an extended event-time window from $\tau = -3$ to $\tau = 1$, providing a broader view of pre-reform trends.

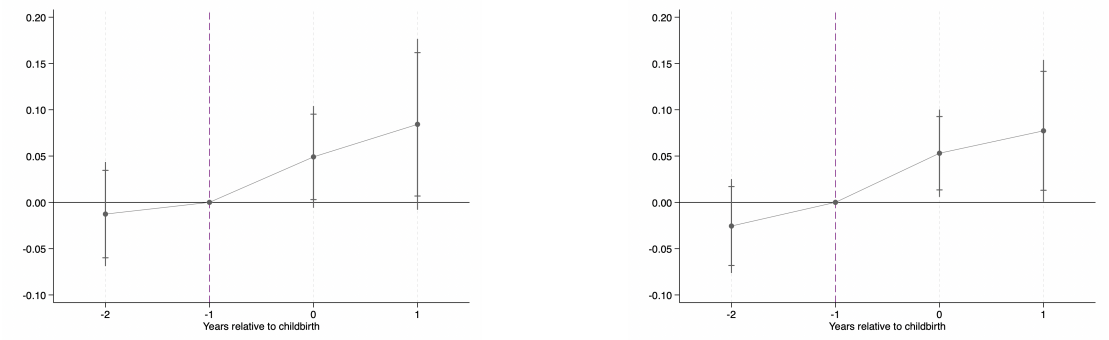
I begin by estimating the DiD model using a two-way fixed effects (TWFE) specification. Figure 2a shows the effect of the 2022 maternity reform on the probability of having contributory health insurance (EsSalud), broadly defined to include any affiliation, whether through the individual's own contribution, a relative's affiliation or coverage through an employer. The estimates indicate a significant increase in coverage starting at childbirth ($\tau = 0$) and intensifying in the year after ($\tau = 1$). These findings suggest that the reform encouraged eligible women to enter or remain in the contributory health system in order to gain access to its benefits. Pre-trends are flat and statistically

insignificant, providing support for the parallel trends assumption.

To better isolate active contributors from those affiliated through employer-based coverage, Figure 2b restricts the outcome to mothers who either directly pay for EsSalud or are dependents of a contributing family member. The results also show a post-reform increase. The estimates for this subsample are slightly larger in magnitude and more precisely estimated, suggesting that the observed post-reform increase in coverage is primarily driven by women (or their partners) who are actively contributing to the system. These patterns reinforce the interpretation that the reform successfully encouraged transitions into the contributory health system around childbirth.

Appendix Figure B.9 presents the corresponding estimates for subsidized health insurance (SIS). Unlike EsSalud, there is no evidence of a post-reform increase in subsidized coverage. The point estimates for $\tau = 0$ and $\tau = 1$ are negative and imprecisely estimated. Taken together, these results suggest that the reform did not shift women into subsidized insurance but instead encouraged transitions into the contributory system, consistent with a narrative in which eligible women responded to the design of a benefit conditional on enrollment in EsSalud.

Figure 2: Dynamic DiD results (TWFE) - Contributory health system affiliation



(a) All EsSalud affiliations

(b) Self-affiliated or relative contributor

Notes: Each panel plots dynamic difference-in-differences (DiD) estimates of the effect of the 2022 maternity reform on women's likelihood of having contributory health insurance (EsSalud). Panel (a) includes all mothers with EsSalud coverage, regardless of whether they or a family member is the contributor. Panel (b) restricts the outcome to those who are self-affiliated or dependent on a contributing household member. The vertical axis reports the estimated effect at each event time (in years relative to childbirth), with 90% and 95% confidence intervals. The vertical dashed line marks the pre-treatment comparison period.

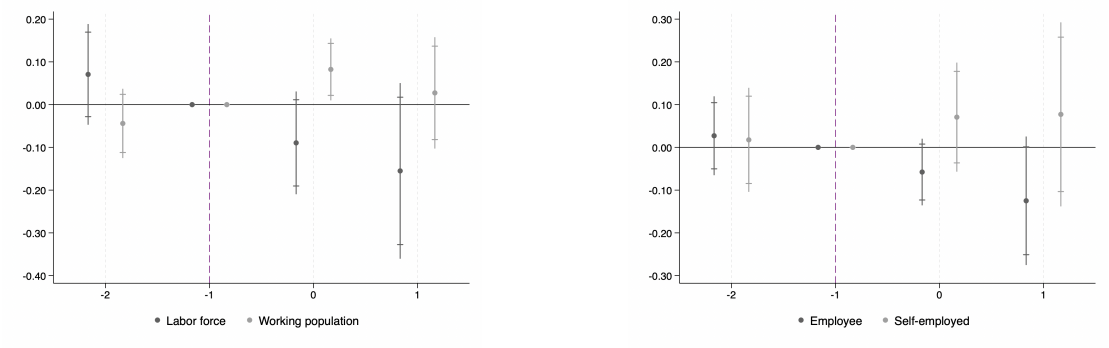
Turning to labor market outcomes, Figure 3 reports dynamic DiD estimates for labor force participation and, conditional on being in the labor force, the probability of being employed (working population). In Panel 3a, labor force participation shows a small decline at $\tau = 0$ and a more pronounced drop at $\tau = 1$. By contrast, the working population exhibits an increase at $\tau = 0$, indicating that among those already in the labor force, a larger share is employed right at childbirth; this effect is imprecisely estimated but suggestive of a short-run adjustment in employment status.

Panel 3b disaggregates employment into employees and self-employed. The estimates point to a decrease in the probability of being an employee after childbirth—most clearly at $\tau = 1$—and a small, statistically insignificant increase in self-employment. Although imprecise, the opposite signs are

consistent with some reallocation at the margin away from dependent employment and toward self-employment.

The results suggest that the reform's most robust effects operate on the margin of health system affiliation, with tentative evidence of short-run adjustments in employment status (a temporary increase in employment among active participants at $\tau = 0$ and a modest shift away from employee status thereafter) rather than substantial changes in aggregate labor supply.

Figure 3: Dynamic DiD results (TWFE) - Labor Outcomes



(a) Labor force and working population

(b) Employee and self-employed

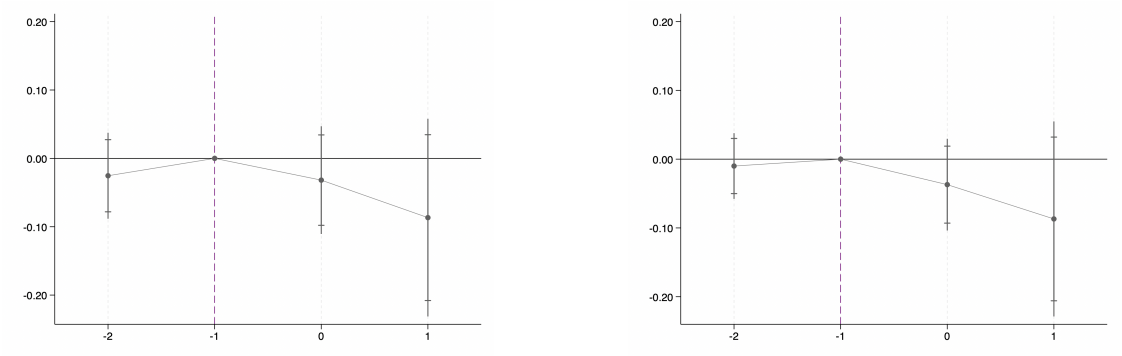
Notes: Each panel plots dynamic difference-in-differences (DiD) estimates of the effect of the 2022 maternity reform on women's likelihood of participating in the labor market and their type of employment. The vertical axis reports the estimated effect at each event time (in years relative to childbirth), with 90% and 95% confidence intervals. The vertical dashed line marks the pre-treatment comparison period.

Finally, Figure 4a shifts focus to informal employment outcomes. Estimates suggest a decline in informality in the year of childbirth and in ($\tau = 1$) for the treated cohort, although the confidence intervals are wide and the effect is not statistically significant. These negative estimates for informal employment are consistent with the increase in affiliation in the contributory health system. However, they do not perfectly align, given that the definition of informal labor also includes the absence of pension contributions. This contrast indicates that while the reform encouraged affiliation with contributory health insurance, it did not significantly affect the margin of pension contributions.

A similar pattern is observed in Panel B of Figure 4b, which estimates dynamic treatment effects using the methodology proposed by Sun and Abraham (2021). While the reform itself applies uniformly from 2022 onward, childbirth timing varies across individuals, creating a form of staggered treatment exposure relative to the event of childbirth. This variation can pose challenges for standard two-way fixed effects (TWFE) models, particularly if treatment effects evolve over time or differ across cohorts. In such cases, TWFE estimators may produce biased results due to the use of already-treated units as controls for later-treated ones, potentially assigning negative or inconsistent weights to some comparisons. The Sun and Abraham estimator addresses these concerns by explicitly modeling treatment effect heterogeneity across cohorts and event time, using interaction terms that compare each treated group only to appropriate untreated cohorts. By applying this estimator, I ensure that the

observed estimates around childbirth are not biased comparisons inherent in the TWFE approach.

Figure 4: Dynamic DiD Estimates of Informal Employment: TWFE vs. Sun & Abraham (2021)



(a) TWFE specification **(b)** Sun & Abraham (2021) specification

Notes: These figures plot the dynamic difference-in-differences (DiD) estimates of the effect of the 2022 maternity reform on women's likelihood of having an informal job, defined as lacking both health and pension coverage. Panel (a) uses a standard TWFE estimator, while panel (b) implements the interaction-weighted estimator proposed by Sun & Abraham (2021). The vertical axis reports the estimated effect at each event time (in years relative to childbirth), with 90% and 95% confidence intervals. The vertical dashed line marks the pre-treatment comparison period.

Together, these findings provide preliminary support for the hypothesis that expanding access to short-term contributory maternity benefits can encourage greater affiliation with the formal health insurance system. The strongest evidence points to increased enrollment in contributory health insurance, while the suggestive reductions in informal employment are less conclusive, partly due to measurement definitions that also capture pension contributions. *Ongoing work will assess the persistence of these effects over longer horizons and explore heterogeneity by initial employment status*.

6 Ongoing Work

(1). Ongoing work is focused on enriching the ENAHO-based analysis by incorporating administrative records from the Peruvian health system. These records provide more granular information on actual enrollment dates, contributions, service utilization, and claims, allowing for a deeper understanding of whether women are actively using or qualifying for health-related benefits such as maternity leave. This will also help validate self-reported coverage in the survey and assess how transitions into formal health insurance systems translate into effective access to entitlements.

(2). Building on a small-scale fieldwork conducted in August 2025, which involved surveys and focus groups with women primarily working in informal jobs in Lima, the next stage of work is the systematic analysis of the collected responses. The analysis will generate first-hand evidence on how women perceive maternity benefits, their understanding of EsSalud requirements, and the role these benefits play in shaping their labor market decisions.

(3). Another strand of ongoing work involves deepening the understanding of all aspects of the reform itself. This includes documenting the precise maternity benefit amounts under the new law, clarifying

any additional eligibility requirements beyond EsSalud affiliation, and tracking how the policy is being implemented on the ground.

(4). Future work will examine key differences in the health services delivered under the contributory system and the subsidized system. Understanding these differences is crucial for interpreting women's affiliation choices, since incentives to formalize depend not only on access to short-term benefits such as maternity leave but also on the broader package of health services available in each system.

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A Tables

Table A.1: Employment Categories by Gender

	(1)	(2)
	Men	Women
Employer	0.047	0.020
Self-employed	0.382	0.377
Employee	0.516	0.361
Unpaid family worker	0.051	0.182
Domestic worker	0.002	0.056
Other	0.002	0.003

Notes: This table reports the distribution of workers by employment category and gender, based on ENAHO survey data. Employment categories include employers, self-employed, employees, unpaid family workers, domestic workers, and other minor categories.

Table A.2: Health Coverage by Gender and Type of Employment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
	Men					Women				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Panel A: Formal Employment										
Subsidized health insurance	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contributory health insurance	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Without health insurance	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other health insurance	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Panel B: Informal Employment										
Subsidized health insurance	0.614	0.611	0.629	0.701	0.727	0.631	0.676	0.705	0.740	0.776
Contributory health insurance	0.034	0.041	0.034	0.049	0.047	0.099	0.077	0.074	0.098	0.090
Without health insurance	0.315	0.313	0.304	0.216	0.188	0.250	0.230	0.206	0.147	0.124
Other health insurance	0.037	0.035	0.034	0.034	0.037	0.021	0.018	0.016	0.015	0.010

Notes: This table presents the distribution of health insurance coverage by gender, year (2019–2023), and type of employment (formal vs. informal), using data from the ENAHO survey. Health coverage types include subsidized insurance (e.g., SIS), contributory insurance (e.g., EsSalud), no insurance, and other types (e.g., private or military insurance). Panel A displays the breakdown for formally employed individuals, while Panel B shows the same for informally employed individuals.

Table A.3: Occupation Sector by Gender

	(1)	(2)
	Men	Women
Agriculture & Mining	0.272	0.238
Manufacturing	0.103	0.072
Construction, Transportation & Public services	0.253	0.021
Retail, Restaurants & Hotels	0.156	0.358
Finance & Real state	0.007	0.008
Information & Communications	0.007	0.001
Education	0.038	0.079
Health	0.016	0.052
Public administration	0.055	0.040
Other	0.093	0.131

Notes: This table shows the distribution of workers by type of occupation and gender, based on the ENAHO survey. Occupations are grouped into broad categories such as agriculture, manufacturing, construction, services, and public administration.

Table A.4: Informality Rate by Type of Occupation

	Share
Agriculture & Mining	0.936
Manufacturing	0.744
Construction, Transportation & Public services	0.854
Retail, Restaurants & Hotels	0.875
Finance & Real state	0.338
Information & Communications	0.560
Education	0.169
Health	0.290
Public administration	0.445
Other	0.738

Notes: This table shows the share of workers in informal employment across different types of occupations, based on the ENAHO survey. Informality is defined as employment without registration in the contributory social security system.

Table A.5: Mean Comparisons between Sample and Other Women

	Difference	*t*-stat
Total Household Members	-0.404***	(-11.588)
Without education	-0.026***	(-4.641)
Complete elementary education	-0.052***	(-6.569)
Complete secondary education	0.050***	(5.769)
Complete non-university higher education	-0.002	(-0.364)
complete university higher education	0.022***	(4.443)
Master's/PhD	0.008***	(3.885)
Government assistance	-0.118***	(-19.933)
Household head indicator	0.003	(0.440)
Has partner (1 = Yes, 0 = No)	-0.254***	(-28.829)
Employment Status (1 = Employed, 0 = Not Employed)	-0.192***	(-20.014)
Labor force	0.064***	(7.789)
Self-employed status	-0.025*	(-2.566)
Contributory health insurance	0.052***	(7.452)
Subsidized health insurance coverage	-0.139***	(-16.097)
Pension coverage	0.042***	(5.779)
Informal Employment Indicator	-0.049***	(-5.538)
Observations	152,817	

t statistics in parentheses. Stars: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Notes: This table compares the sample of identified mothers used in the main analysis with all other women aged 15–49 in the ENAHO panel. The comparison includes demographic, employment, and coverage indicators. Positive values imply higher incidence among sample mothers, while negative values indicate lower incidence relative to non-mothers.

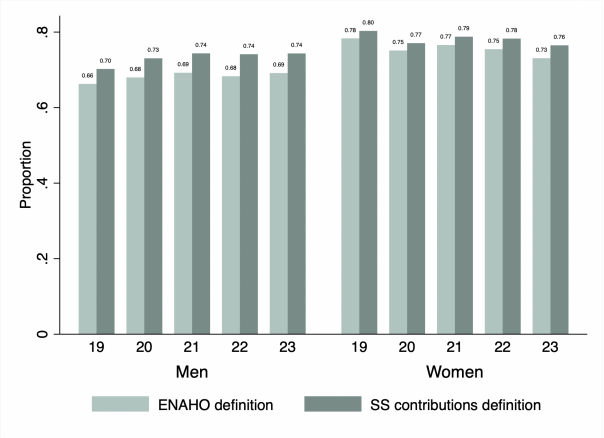
Table A.6: Mean Comparisons between Sample and Other Mothers

	Difference	*t*-stat
Total Household Members	-0.400***	(-11.701)
Without education	0.013	(1.819)
Complete elementary education	-0.051***	(-6.097)
Complete secondary education	0.007	(0.772)
Complete non-university higher education	0.011	(1.906)
Complete university higher education	0.011*	(2.332)
Master's/PhD	0.010***	(4.482)
Government assistance	-0.069***	(-9.304)
Household head indicator	0.066***	(8.325)
Has partner (1 = Yes, 0 = No)	-0.047***	(-5.683)
Employment Status (1 = Employed, 0 = Not Employed)	-0.165***	(-17.352)
Labor force	0.133***	(16.356)
Self-employed status	0.030**	(2.764)
Contributory health insurance	0.063***	(8.443)
Subsidized health insurance coverage	-0.119***	(-13.330)
Pension coverage	0.061***	(7.806)
Informal Employment Indicator	-0.047***	(-5.269)
Observations	92,932	

t statistics in parentheses. Stars: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Notes: This table compares the sample of mothers used in the main analysis with other mothers aged 15-49 in the ENAHO panel. Positive values imply higher incidence among sample mothers, while negative values indicate lower incidence relative to other mothers.

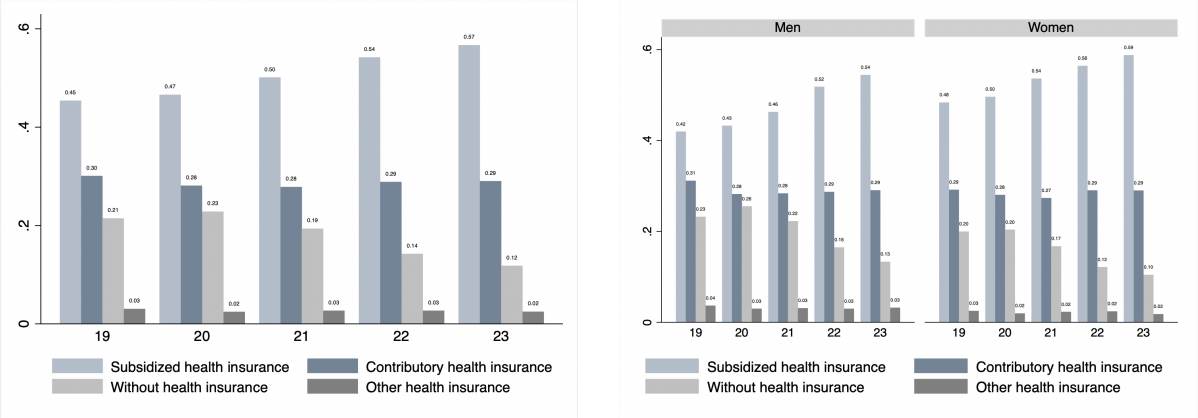
B Figures

Figure B.1: Informality Rate by Gender (productive age population)



Notes: This figure shows the share of informal workers by gender and year among the productive-age population (18–64 years old), using two definitions of informality: (i) the ENAHO classification and (ii) self-reported non-contribution to social security.

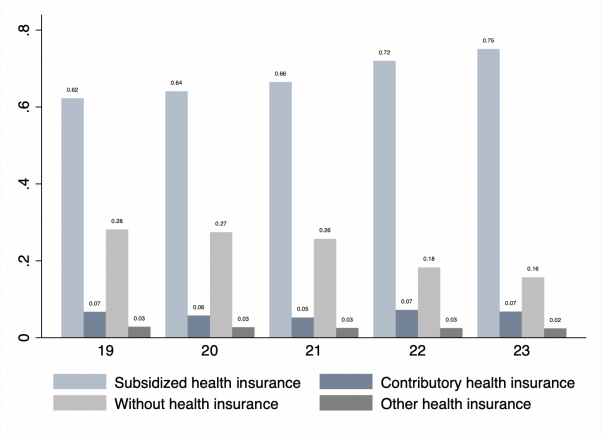
Figure B.2: Health Insurance Coverage



(a) All **(b)** By gender

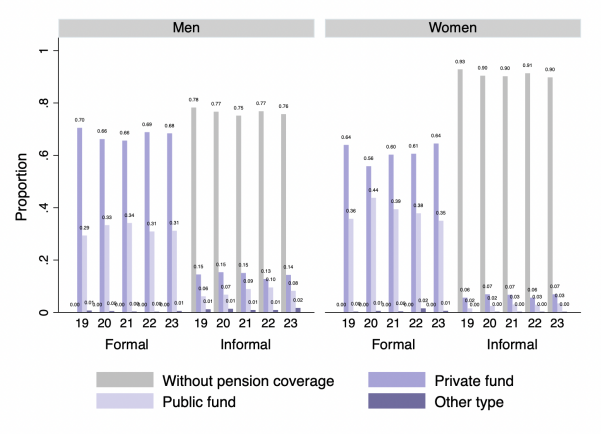
Notes: Panel (a) shows the distribution of health insurance coverage for the full population from 2019 to 2023. Panel (b) disaggregates the same information by gender. Coverage is disaggregated into four categories: subsidized public insurance (SIS), contributory insurance (EsSalud), other insurance schemes, and no insurance. Data from using the ENAHO survey.

Figure B.3: Health Insurance Coverage for Informal Workers



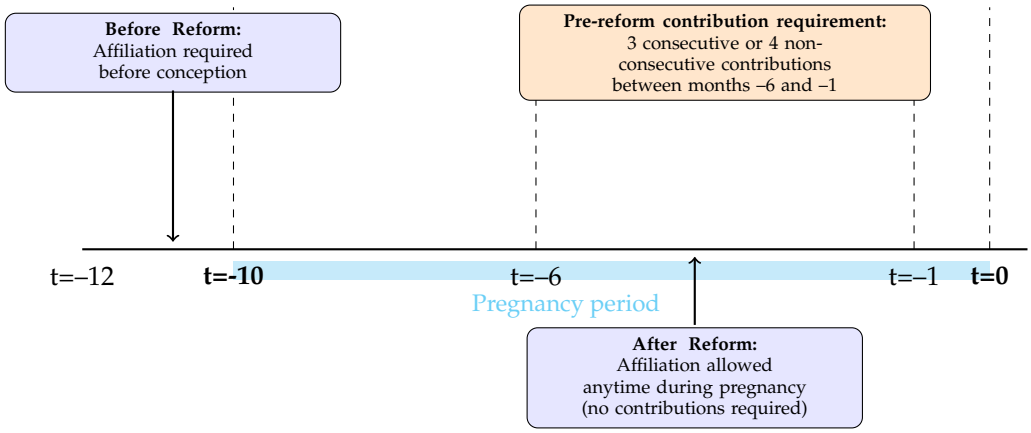
Notes: This figure shows the distribution of health insurance coverage for informal workers among the working-age population (15-64 years old). Coverage is disaggregated into four categories: subsidized public insurance (SIS), contributory insurance (EsSalud), other insurance schemes, and no insurance. Data from the ENAHO survey.

Figure B.4: Pension Coverage by Type of Employment and Gender



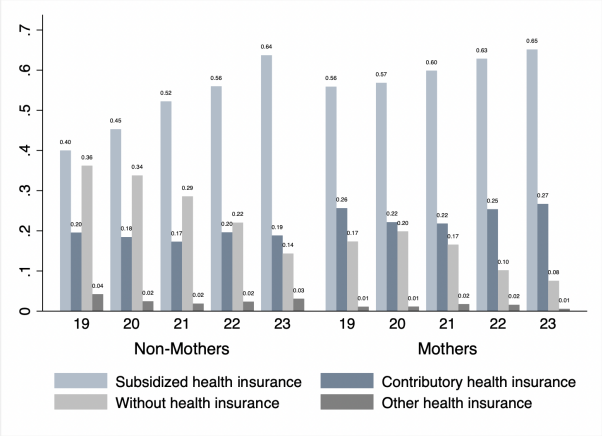
Notes: This figure presents the distribution of pension system affiliation by type of employment (formal vs. informal) and gender among the working-age population (15-64 years old). Pension coverage is categorized into public fund (SNP), private fund (SPP), other schemes, and no affiliation. Data from the ENAHO survey.

Figure B.5: Eligibility Timeline for Maternity Benefits Before and After the 2022 Reform



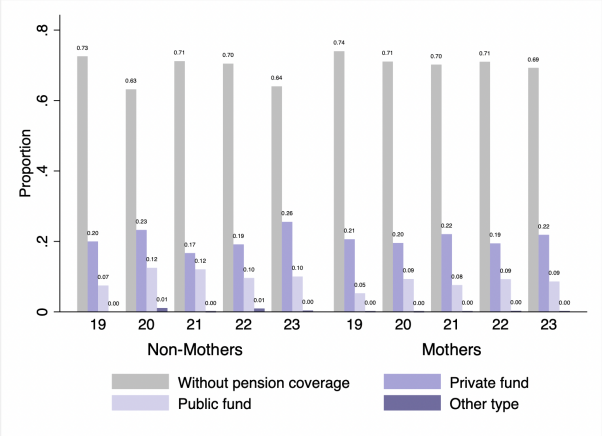
Notes: This figure illustrates the eligibility criteria for accessing maternity benefits before and after the May 2022 reform in Peru. Prior to the reform, women needed to be affiliated with EsSalud before conception and meet a contribution requirement: at least three consecutive or four non-consecutive contributions in the six months before the start of the maternity leave. After the reform, affiliation was allowed at any point during pregnancy, and the contribution requirement was eliminated for women already pregnant at the time of enrollment.

Figure B.6: Health Insurance Coverage by Motherhood Status (reproductive age)



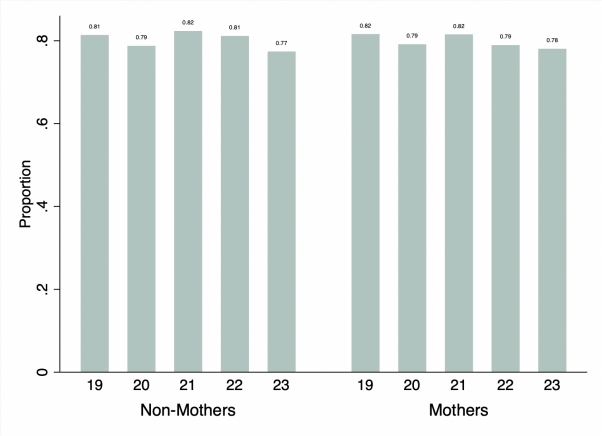
Notes: This figure shows trends in health insurance coverage between 2020 and 2023 for women of reproductive age (15-49 years), disaggregated by motherhood status. Data from the ENAHO survey.

Figure B.7: Pension Coverage by Motherhood Status (reproductive age)



Notes: This figure displays the distribution of pension coverage types among women of reproductive age (15-49 years old), distinguishing between mothers and non-mothers over the period 2019–2023.

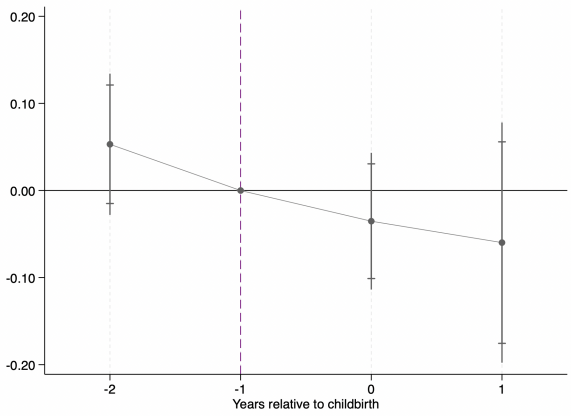
Figure B.8: Informality Rate by Motherhood Status (reproductive age)



Notes: This figure shows the informality rate among women of reproductive age (15-49 years old), comparing mothers and non-mothers from 2019 to 2023.

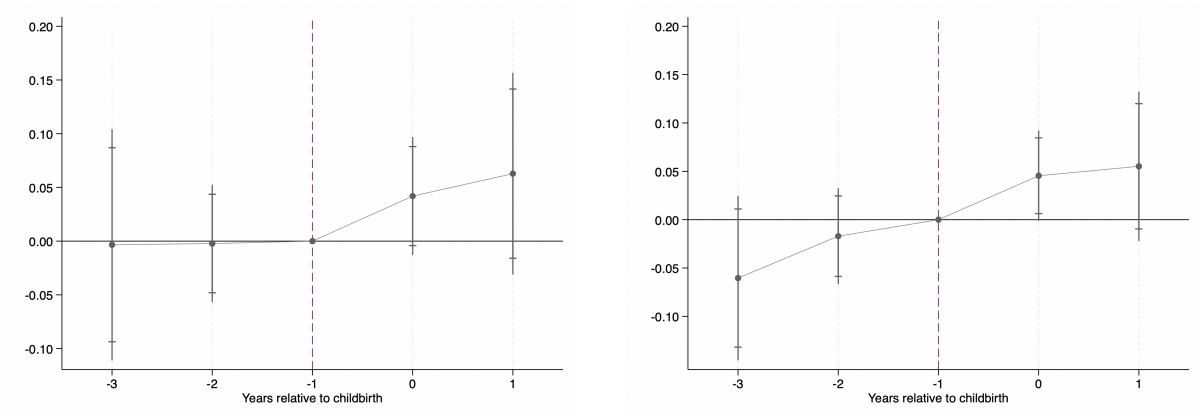
B.1 Additional Results

Figure B.9: Dynamic DiD Results - Outcome: Subsidized Health Insurance



Notes: This figure plots the dynamic difference-in-differences (DiD) estimates of the effect of the 2022 maternity reform on women's likelihood of having subsidized health insurance. The vertical axis reports the estimated effect at each event time (in years relative to childbirth), with 90% and 95% confidence intervals. The vertical dashed line marks the pre-treatment comparison period.

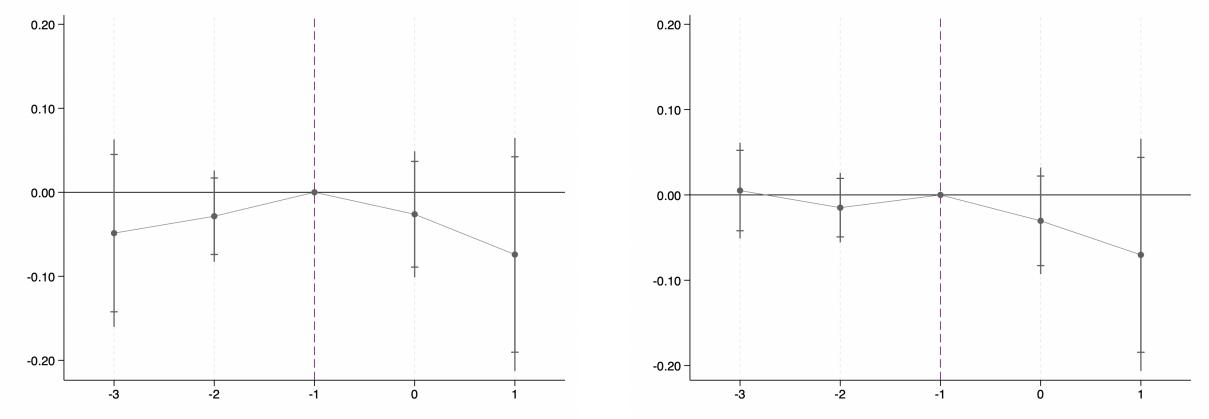
Figure B.10: Dynamic DiD results (TWFE) - Contributory health system affiliation - **Event-time window [-3,1]**



(a) All EsSalud affiliations **(b)** Self-affiliated or relative contributor

Notes: Each panel plots dynamic difference-in-differences (DiD) estimates of the effect of the 2022 maternity reform on women's likelihood of having contributory health insurance (EsSalud). Panel (a) includes all mothers with EsSalud coverage, regardless of whether they or a family member is the contributor. Panel (b) restricts the outcome to those who are self-affiliated or dependent on a contributing household member. **The vertical axis reports the estimated effect at each event time (in years relative to childbirth)**, with 90% and 95% confidence intervals. The vertical dashed line marks the pre-treatment comparison period.

Figure B.11: Dynamic DiD Estimates of Informal Employment: TWFE vs. Sun & Abraham (2021) - **Event-time window [-3,1]**



(a) TWFE specification **(b)** Sun & Abraham (2021) specification

Notes: These figures plot the dynamic difference-in-differences (DiD) estimates of the effect of the 2022 maternity reform on women's likelihood of having an informal job, defined as lacking both health and pension coverage. Panel (a) uses a standard TWFE estimator, while panel (b) implements the interaction-weighted estimator proposed by Sun & Abraham (2021). **The vertical axis reports the estimated effect at each event time (in years relative to childbirth)**, with 90% and 95% confidence intervals. The vertical dashed line marks the pre-treatment comparison period.