The Illusion of Resilience: Labor Supply and Consumption Smoothing in Dissolved Households (2020–2024)

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Abstract

This paper examines the economic consequences of household dissolution during Peru's post-pandemic recovery (2020–2024). Using a difference-in-differences framework applied to the ENAHO longitudinal panel, I identify causal effects while controlling for invariant heterogeneity and government transfers. The analysis yields three findings. First, I document a distinct **Added Worker Effect** where dissolution drives a 15.8 percentage point increase in female labor supply. However, this entry is concentrated in the informal sector and fails to prevent a 21.8% decline in per capita income, suggesting that employment functions as a distress mechanism rather than a recovery tool. Second, the study resolves a "consumption smoothing puzzle" where total expenditure remains stable despite income losses. Decomposition reveals a forced budget restructuring: the loss of economies of scale drives a 26.9% surge in food spending, crowding out investment in education and discretionary goods (-49.4%). Third, structural vulnerabilities are acute among urban mothers, who face a 30.4% income penalty, whereas rural households and childless women show no significant welfare loss. Finally, re-partnering triggers an immediate exit from the labor force but fails to statistically restore per capita income levels. These results highlight the limitations of labor-centric social protection in stabilizing fractured households.

Keywords: Household dissolution, Added Worker Effect, consumption smoothing, informality, Peru **JEL Codes:** D10, J12, J16, O12, O54

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1 Introduction

Economic contractions rarely occur in isolation; they reverberate through the private sphere, straining the very seams of household stability. When the COVID-19 pandemic swept across the globe, it delivered a dual shock that was historically unprecedented: a simultaneous collapse of market activity and a policy-induced confinement that forced families into volatile proximity. While macroeconomists have extensively cataloged the collapse of GDP and employment during this period, we know surprisingly little about how the disintegration of the household unit itself shaped women's economic trajectories during the recovery. In the ideal theoretical model, households function as insurance units, pooling risks to buffer against external shocks. When this unit fractures amidst a broader crisis, the economic fallout is theoretically expected to be mitigated by labor market adjustments—the so-called "Added Worker Effect"—or social safety nets.

However, this idealized buffer falls short in the developing world. In economies characterized by pervasive informality and porous social protections, the dissolution of a household does not merely reduce economies of scale; it fundamentally alters the survival strategy of the remaining members. Previous research has largely examined these phenomena in silos. One stream of literature focuses on the "Added Worker Effect," often assuming that labor market entry translates to welfare recovery (Hellerstein and Morrill, 2013). Another stream examines family stress models, positing that economic hardship acts as a catalyst for divorce (Schaller and Stevens, 2013; Conger and Elder, 2010). Yet, these studies frequently overlook the structural context of the Global South, where 75% of the workforce operates informally, and where "getting a job" often means entering a precarious, low-productivity survival activity rather than a career. Consequently, we lack a clear understanding of whether post-dissolution employment actually insulates women from poverty when the aggregate economy is also in distress.

The consequences of ignoring this intersection are profound. If we assume that labor force participation is a sufficient proxy for economic recovery, we risk celebrating the "resilience" of women who are, in reality, working harder to earn less. This gap in the literature is particularly acute regarding the post-pandemic recovery period (2020–2024), a time when traditional support networks were frayed and inflationary pressures eroded real purchasing power. Current research has yet to fully disentangle the "consumption smoothing puzzle" in this context: how do single-headed households manage to maintain consumption levels when income plummets? Is it resilience, or is it a distressing substitution of quality for basic caloric survival?

This study addresses these gaps by examining the economic consequences of household dissolution in Peru, a country that experienced one of the world's deepest economic contractions and maintains a high rate of labor informality. Drawing on Becker's 1973 theory of household production and the Family Stress Model, this research utilizes the ENAHO longitudinal panel (2020–2024) to test the hypothesis that household dissolution acts as a poverty trap that bypasses traditional labor-centric recovery mechanisms. By applying a difference-in-differences (DID) framework, I isolate the causal effect of dissolution from the broader pandemic shock, aiming to determine whether women's entry into the informal labor market succeeds in stabilizing household welfare.

The analysis yields sobering results that challenge the narrative of recovery. I find that while dissolution drives women into the labor force ($\beta = 0.158$), this entry is concentrated almost exclusively in informal employment and fails to prevent a severe 21.8% decline in per capita income. Furthermore, the study resolves the consumption smoothing puzzle by documenting a forced restructuring of the household budget: rising food expenditures—driven by the loss of economies of scale—crowd out investment in education and discretionary goods. Crucially, I identify structural vulnerabilities where the economic penalty is concentrated among urban mothers, while re-partnering appears to facilitate a return to traditional gender roles rather than financial advancement.

This research matters because it exposes the limitations of generic employment policies in stabilizing fractured households. By highlighting the distinct "child penalty" and the "quality-quantity" trade-off in human capital accumulation, the study provides a roadmap for more targeted social protection interventions.

The remainder of the paper is organized as follows. Section 2 reviews the theoretical and empirical literature. Section 3 details the institutional context, data, and identification strategy. Section 4 presents the empirical results, dissecting the disconnect between labor supply and welfare. Finally, Section 5 concludes with policy implications.

2 Literature Review

To interpret the economic trajectory of dissolved households during the post-pandemic recovery, this study integrates three distinct strands of economic literature: labor supply responses to income shocks, the economics of household formation, and consumption smoothing mechanisms in developing economies.

2.1 The Added Worker Effect: Insurance vs. Distress

Standard labor supply theory posits two competing responses to household income shocks: the "Added Worker Effect" (AWE) and the "Discouraged Worker Effect." The AWE hypothesis suggests that when a primary earner loses income or leaves the household, the secondary earner enters the labor market to smooth consumption (Heckman, 1979; Lundberg, 1985). In developed economies, this mechanism is often muted by the presence of unemployment insurance and robust savings. However, in developing contexts characterized by high informality, the AWE is frequently observed as a dominant response strategy.

The critical debate in development economics concerns the *quality* of this labor market entry. One view frames the informal sector as a flexible buffer that allows households to maintain welfare during crises (Loayza, 2019). A competing view argues that entry into informality during a downturn acts as a distress mechanism. Perry et al. (2007) and Aguiar et al. (2013) suggest that while labor supply increases on the extensive margin (more people working), the marginal return to this labor is often insufficient to replace lost earnings, trapping households in a low-productivity equilibrium. This distinction is vital for my analysis, as it frames the empirical test: does post-dissolution employment represent successful insurance (income recovery) or a survival coping strategy (income depression)?

2.2 Household Production and Dissolution Costs

Economic theory provides a structural framework for understanding why dissolution creates acute vulnerability. Becker (1973) theorized that households generate efficiency gains through economies of scale and specialization. Dissolution destroys these scales, forcing the remaining unit to bear higher per-capita costs for housing and food while simultaneously losing the benefits of labor specialization.

Empirical evidence consistently shows that women bear the brunt of these efficiency losses. McManus and DiPrete (1992) provided foundational evidence that divorced women experience larger and more persistent income declines than men. In the context of Latin America, these penalties are exacerbated by the "Motherhood Penalty." Berniell et al. (2020) and Kleven et al. (2019) demonstrate that childcare responsibilities force mothers into flexible but lower-wage informal arrangements. My research extends this literature by examining how these structural penalties interact with an aggregate economic shock, testing whether the "feminization of crisis" (Elson, 2010) intensifies when the household unit fractures.

2.3 Consumption Smoothing and Coping Strategies

Under the Permanent Income Hypothesis, households strive to smooth consumption against idiosyncratic income shocks through savings, borrowing, or transfers (Deaton, 1992). In developing economies, where formal credit markets are shallow, households often rely on informal risk-sharing networks to mitigate welfare losses (Townsend, 1994). However, recent evidence suggests that when shocks are aggregate—such as a pandemic—these informal networks falter, forcing households into costly coping strategies.

A critical gap in the current literature involves the *composition* of consumption during these periods. While aggregate expenditure levels may appear stable—suggesting successful smoothing—this stability often masks a deterioration in welfare. Frankenberg et al. (2005) and Ferreira and Schady (2013) document a "quality-quantity" trade-off during crises, where households substitute towards calorie-dense but lower-quality foods and reduce investments in human capital. This distinction is essential for interpreting my findings on the "consumption puzzle," where total spending remains flat despite severe income losses.

3 Institutional Context, Data, and Strategy

This section outlines the data construction, the strategy for identifying household dissolution, and the econometric framework employed to estimate economic impacts within the Peruvian context.

3.1 Data Sources and Sample Construction

The analysis utilizes the National Household Survey (ENAHO) panel dataset, administered by Peru's National Institute of Statistics and Information (INEI). I focus on the unbalanced panel component spanning 2020–2024, a period capturing the immediate economic shock of the COVID-19 pandemic and the subsequent recovery phase. This period is characterized by severe labor market disruptions and the rollout of government cash transfer programs, most notably the *Bono Universal* and *Bono Yanapay*, necessitating careful controls for public transfers to isolate the effect of household dissolution from pandemic relief.

To isolate the effects of dissolution on established households, I apply several restrictions to construct the analytical sample. First, I restrict the analysis to women aged 18 to 65 at the baseline year (2020). Second, I include only women who were legally married or in a cohabiting union in 2020. Third, to mitigate bias from attrition, I construct a balanced panel requiring presence in all five survey waves.

The final estimation sample comprises a balanced panel of 858 individual women observed over five years, resulting in a total of 4,262 observations. This sample includes women who maintained stable unions throughout the period (the control group) and those who experienced household dissolution between 2020 and 2024 (the treatment group).

3.2 Variable Definitions

Outcome Variables: Economic welfare is measured through two primary aggregates: real per capita household income and real per capita household expenditure. To analyze consumption smoothing mechanisms, I further disaggregate expenditure into seven categories (food, clothing, housing, furniture, health, transport, and others).

A critical concern in the post-pandemic Peruvian context is the high rate of food inflation (CPI-Food exceeded General CPI in 2021–2023). To ensuring that the observed rise in food expenditure reflects real consumption changes rather than mere price effects, I deflate food expenditure using the specific Food & Beverage CPI component, while all other monetary variables are deflated using the General National CPI (base year 2020). Labor market outcomes are captured via binary indicators for employment status and informal employment.

Treatment Indicators: Household dissolution is defined as a transition from a married or cohabiting status in period $t-1$ to a separated, divorced, or single status in period t. I define a binary treatment variable, $PostDissolution_{it}$, which takes a value of one in the year of dissolution and remains one for all subsequent years.

To test for recovery effects, I construct a secondary indicator, $PostRepartner_{it}$, which takes a value of one if a previously treated woman enters a new union (marriage or cohabitation) in a subsequent period.

3.3 Econometric Strategy

I employ a difference-in-differences (DID) framework to identify the causal impact of household dissolution. My estimation strategy proceeds in three stages: a baseline fixed-effects model, a dynamic event-study analysis to test identifying assumptions, and heterogeneous effects estimation to uncover structural mechanisms.

3.3.1 Baseline Specification

To estimate the average treatment effect on the treated (ATT), I estimate the following two-way fixed effects (TWFE) specification:

$$Y_{it} = \alpha + \beta \cdot \text{PostDissolution}_{it} + \gamma \mathbf{X}_{it} + \lambda_i + \delta_t + \epsilon_{it} \tag{1}$$

where Y_{it} represents the outcome of interest (e.g., log per capita income, employment status) for woman i in year t. The variable $\text{PostDissolution}_{it}$ is a binary indicator equal to one if woman i has experienced household dissolution in year t or any prior year, and zero otherwise.

The term λ_i denotes individual fixed effects, controlling for time-invariant unobserved heterogeneity such as innate ability or permanent income determinants. δ_t represents year fixed effects, capturing common aggregate shocks, such as the national economic contraction in 2020 and subsequent inflationary waves. The vector $\mathbf{X}_{it}$ includes time-varying controls: age (quadratic), categorical education level, and importantly, the log of government transfers. Controlling for transfers (such as the *Bono Yanapay* and *Bono Universal*) is essential to isolate the welfare effect of dissolution from the receipt of pandemic-era emergency aid. Standard errors are clustered at the household level to account for serial correlation.

3.3.2 Dynamic Effects and Identification Checks

Standard TWFE estimators can yield biased estimates in the presence of staggered treatment timing (i.e., households dissolve in different years) and heterogeneous treatment effects over time. To address this and rigorously test the parallel trends assumption, I employ the doubly robust estimator proposed by Callaway and Sant'Anna (2021).

I estimate group-time average treatment effects, $ATT(g, t)$, where g denotes the cohort of women dissolved in year g, and t denotes the calendar year. The dynamic aggregation of these effects allows me to estimate an event study specification:

$$Y_{it} = \sum_{k=-3}^{3} \theta_k \cdot \mathbf{1}(t - g = k) + \gamma \mathbf{X}_{it} + \lambda_i + \delta_t + \nu_{it} \tag{2}$$

Here, θ_k captures the treatment effect k years relative to the dissolution event ($k = 0$). The coefficients for $k < 0$ serve as a test of the parallel trends assumption; statistical insignificance of these pre-trend coefficients supports the validity of the research design.

3.3.3 Mechanisms: Consumption and Re-partnering

To understand how households adjust to the income shock, I decompose the total consumption vector. I re-estimate Equation (1) replacing the dependent variable Y_{it} with the log expenditure on seven distinct categories (food, clothing, housing, furniture, health, transport, and other). This tests whether the stability of total spending masks a substitution towards essential goods.

Furthermore, to assess whether the economic effects are permanent or alleviated by forming a new household, I estimate an augmented specification that disentangles the dissolution effect from the re-partnering effect:

$$Y_{it} = \alpha + \beta_1 \cdot \text{PostDissolution}_{it} + \beta_2 \cdot \text{PostRepartner}_{it} + \gamma \mathbf{X}_{it} + \lambda_i + \delta_t + \epsilon_{it} \tag{3}$$

In this model, β_1 captures the impact of dissolution on women who remain single, while the sum $\beta_1 + \beta_2$ represents the net effect for women who re-partner.

3.3.4 Heterogeneity Analysis

Finally, to identify structural vulnerabilities, I relax the assumption of a homogeneous treatment effect. I stratify the estimation of Equation (1) by two critical dimensions: geographic domain (Urban vs. Rural) and the presence of minors in the household (Has Children vs. No Children). This allows for the detection of specific "poverty traps" facing urban mothers that might be obscured in the aggregate results.

4 Results

This section details the empirical findings regarding the impact of household dissolution on women's economic outcomes during the 2020–2024 period. Table 1 presents the estimates from the difference-in-differences specification defined in Equation (1).

4.1 Labor Supply and Informality

The results indicate a distinct labor supply response consistent with the Added Worker Effect. Column (1) of Table 1 shows that women who experience dissolution increase their probability of employment by 15.8 percentage points ($p < 0.05$) relative to those in stable households.

Column (2) clarifies the nature of this employment expansion. The probability of holding an informal job increases by 14.6 percentage points ($p < 0.05$). Comparing the magnitudes of the coefficients in Columns (1) and (2) suggests that the labor supply response is driven almost entirely by entry into the informal sector. This aligns with the hypothesis that post-dissolution employment in this context is likely a survival strategy characterized by low barriers to entry but high precariousness.

4.2 Income and Consumption Dynamics

Columns (3) and (4) examine the welfare implications of these labor market shifts. Column (3) reveals a significant reduction in household resources; per capita income declines by approximately 21.8% ($p < 0.01$) following dissolution. This finding confirms that the additional earnings from informal employment are insufficient to fully replace the loss of partner income and economies of scale.

However, Column (4) presents a contrast regarding consumption. The estimated effect on per capita spending is small (-0.8%) and statistically insignificant ($p = 0.924$). This divergence between income and consumption suggests that despite the severe income shock, women in the 2020–2024 panel managed to smooth consumption. This resilience likely stems from the depletion of savings or increased debt.

4.3 Disaggregation of the Consumption Puzzle

The aggregate finding—that total consumption remains unchanged despite income losses—masks a fundamental restructuring of household budgets. To investigate this, I disaggregate household spending into seven distinct categories. Table 2 presents the difference-in-differences estimates for each expenditure group.

The results reveal a stark substitution pattern that explains the apparent consumption smoothing. Column (1) shows that food expenditure increases by 26.9% ($p < 0.05$) following dissolution. This counter-intuitive rise in food spending likely reflects the loss of household economies of scale (smaller households are less efficient) and the substitution of home production with market goods due to the mother's time poverty.

Households finance this rising food burden by slashing discretionary spending. Column (7) indicates a 49.4% reduction ($p < 0.05$) in the "Other" category, which captures entertainment, personal care, and miscellaneous goods. Similarly, clothing expenditure (Column 2) falls by 7.7% ($p < 0.10$). These findings clarify that the "consumption smoothing" observed in the aggregate data does not imply welfare preservation; instead, it represents a

Table 1: Impact of Household Dissolution on Economic Outcomes (2020–2024)

Variables	(1) Employed	(2) Informal Emp.	(3) Log Income	(4) Log Spending
Post-Dissolution	**0.158****	**0.146****	**-0.218*****	**-0.008**
	(0.069)	(0.066)	(0.071)	(0.082)
Age	0.003	-0.018	0.004	0.010
	(0.015)	(0.011)	(0.019)	(0.018)
Log (Gov. Transfers)	-0.005	-0.003	0.012	0.007
	(0.005)	(0.005)	(0.007)	(0.007)
Observations	4,262	4,262	4,262	4,262
R-squared (Within)	0.068	0.253	0.098	0.046
Number of PID	858	858	858	858
Individual FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at the household level in parentheses. The dependent variable in Column (3) is the log of real per capita household income; Column (4) is the log of real per capita household spending. Controls include age, education categories, and log of transfers.
*** p<0.01, ** p<0.05, * p<0.10.

survival-driven reallocation where rising essential costs crowd out other consumption.

4.4 Event Study Analysis: Parallel Trends and Dynamic Effects

To validate the identification strategy and explore the dynamic effects of household dissolution, I estimate event studies using the doubly robust estimator proposed by Callaway and Sant'Anna (2021). This approach is robust to treatment effect heterogeneity across cohorts and time, addressing potential biases inherent in standard two-way fixed effects models with staggered adoption.

Figure 1a plots the dynamic treatment effects on log per capita income. Crucially, the coefficients prior to dissolution ($t < 0$) are statistically indistinguishable from zero, confirming the parallel trends assumption: households were not on a differential income trajectory before the shock. In the post-treatment period, estimates exhibit noise due to sample size but reveal no evidence of income recovery, consistent with persistent economic vulnerability.

Figure 1b presents the event study for log per capita spending. Pre-trends are similarly

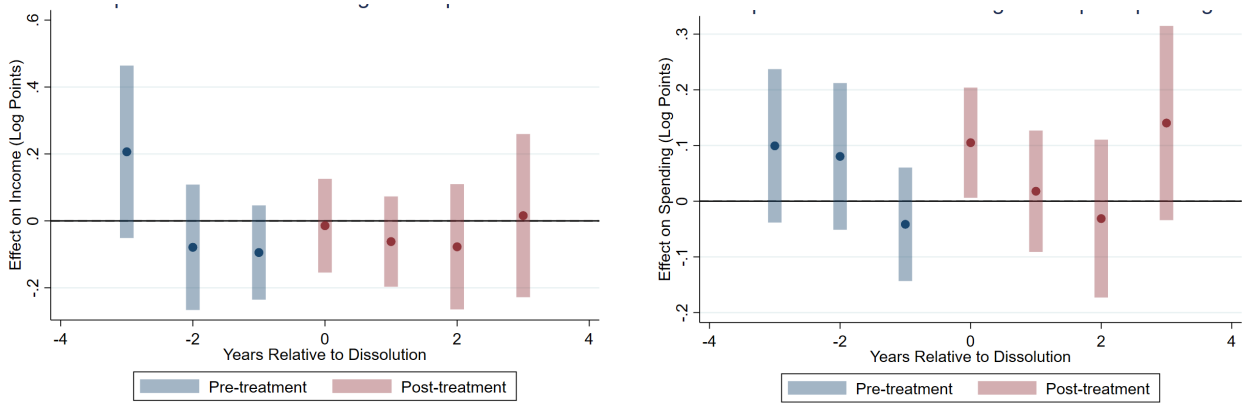
Table 2: Effects of Dissolution on Spending Composition (Log Expenditure)

	(1) Food	(2) Cloth	(3) House	(4) Furn.	(5) Health	(6) Trans.	(7) Other
Post-Dissolution	**0.269****	**-0.077***	**0.351**	**-0.185**	**0.158**	**-0.036**	**-0.494****
	(0.121)	(0.046)	(0.431)	(0.308)	(0.193)	(0.239)	(0.220)
Observations	4,186	4,186	4,186	4,186	4,186	4,186	4,186
R-squared	0.011	0.003	0.017	0.008	0.059	0.017	0.011
Number of PID	838	838	838	838	838	838	838
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at the household level in parentheses. All dependent variables are log of real spending in the category. "Other" includes entertainment, personal care, and miscellaneous services.
*** p<0.01, ** p<0.05, * p<0.10.

flat, validating the research design. Notably, in the year of dissolution ($t = 0$), spending exhibits a positive spike ($\beta \approx 0.10, p < 0.05$). This transient increase likely reflects the immediate costs of household separation, such as relocation and the loss of economies of scale, which necessitate the purchase of duplicate household goods. In subsequent years ($t + 1, t + 2$), spending stabilizes near zero, consistent with the "consumption smoothing" result documented in Table 1. The juxtaposition of falling income and stable (or initially higher) spending confirms that households are drawing down assets or incurring debt to survive the transition.

Figure 1: Event Study: Impact of Dissolution on Household Welfare



(a) Log Per Capita Income

(b) Log Per Capita Spending

Notes: The figures plot the dynamic treatment effects estimated using the doubly robust estimator proposed by Callaway and Sant'Anna (2021). The X-axis represents years relative to the year of household dissolution ($t = 0$). The shaded areas represent 95% simultaneous confidence intervals. The null effects prior to $t = 0$ confirm the parallel trends assumption.

4.5 Heterogeneity Analysis

To understand the mechanisms driving the aggregate results, I explore heterogeneity along two critical dimensions: geographic location (Urban vs. Rural) and the presence of children.

4.5.1 Geographic Heterogeneity: Urban Vulnerability vs. Rural Resilience

Table 3 presents the results stratified by geographic domain. A striking divergence emerges regarding income dynamics. In urban areas (Panel B), household dissolution precipitates a severe economic shock, with per capita income falling by 28.1% ($p < 0.01$). In contrast, rural households (Panel A) experience no statistically significant change in per capita income ($\beta = 0.027$, $p = 0.764$).

This disparity likely reflects the nature of income generation. Urban households rely heavily on labor market earnings, making the loss of a partner's wage an immediate and sharp shock. Rural households, often engaged in family agriculture or subsistence farming, may have income streams that are less strictly coupled to the partner's physical presence or market wage.

Table 3: Heterogeneity by Geographic Location

Variables	(1) Employed	(2) Informal Emp.	(3) Log Income	(4) Log Spending
Panel A: Rural (N = 1,592)				
Post-Dissolution	**0.195*** **	**0.226** **	**0.027**	**0.091**
	(0.074)	(0.089)	(0.089)	(0.082)
R-squared (Within)	0.015	0.197	0.086	0.035
Panel B: Urban (N = 2,670)				
Post-Dissolution	**0.139***	**0.112**	**-0.281*** **	**-0.037**
	(0.084)	(0.078)	(0.081)	(0.098)
R-squared (Within)	0.100	0.065	0.106	0.055
Individual FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at the household level in parentheses. Controls include age, education, and government transfers.
*** p<0.01, ** p<0.05, * p<0.10.

4.5.2 The Child Penalty

Table 4 confirms that the welfare loss is almost entirely concentrated among mothers. Panel B shows that women with children suffer a dramatic 30.4% reduction in per capita income ($p < 0.01$). Conversely, women without children (Panel A) experience a statistically insignificant income change ($\beta = -0.095$, $p = 0.384$). Despite the steeper income drop, mothers do not show a statistically stronger labor supply response than non-mothers, implying a "double

burden" where childcare responsibilities constrain the ability to work enough to offset the loss.

Table 4: Heterogeneity by Presence of Children

Variables	(1) Employed	(2) Informal Emp.	(3) Log Income	(4) Log Spending
Panel A: No Children (N = 2,362)				
Post-Dissolution	**0.110***	**0.151****	**-0.095**	**0.088**
	(0.058)	(0.064)	(0.109)	(0.107)
R-squared (Within)	0.039	0.050	0.061	0.082
Panel B: Has Children (N = 1,900)				
Post-Dissolution	**0.201***	**0.155**	**-0.304*****	**-0.116**
	(0.117)	(0.119)	(0.093)	(0.124)
R-squared (Within)	0.109	0.136	0.167	0.088
Individual FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at the household level. "Has Children" is defined as the presence of any member under age 18 in the household.
*** p<0.01, ** p<0.05, * p<0.10.

4.5.3 Human Capital: Attendance vs. Expenditure

The decline in overall household resources raises concerns about human capital accumulation. I test the impact of dissolution on the child attendance rate. Table 5 presents the results. The coefficient for household dissolution is statistically indistinguishable from zero ($\beta = 0.221$, $p = 0.166$). This null result, combined with the general budget tightening, suggests a "quality-quantity" trade-off: mothers likely cut financial investments in education (e.g., supplies, private tuition) while prioritizing the extensive margin of school enrollment.

4.5.4 Re-partnering

A critical question is whether the economic outcomes observed following dissolution are permanent or contingent on the woman's single status. To test this, I estimate an augmented specification that includes a *Post-Repartnering* indicator.

Table 6 presents the results. Panel A (Columns 1–3) assesses the offset effect of finding a new partner. The results reveal a striking labor supply dynamic. While dissolution forces women into employment ($\beta = 0.179^{**}$), re-partnering triggers a sharp and significant exit from the labor force ($\beta = -0.327^{***}$). The magnitude of the re-partnering coefficient completely offsets the dissolution effect, suggesting that the labor supply response is entirely driven by the lack of a partner's support.

However, Column (3) challenges the assumption that re-partnering restores economic welfare. The coefficient for re-partnering on log per capita income is negative and statistically

Table 5: Effect of Dissolution on Child School Attendance Rate

Variables	(1) Attendance Rate
Post-Dissolution	**0.221**
	(0.159)
Mother's Age	-0.024***
	(0.006)
Has Transfers	0.013
	(0.060)
Observations	1,662
R-squared (Within)	0.035
Number of PID	419
Individual FE	Yes
Year FE	Yes

Notes: Standard errors clustered at the household level in parentheses. Sample restricted to households with school-age children (6–16).
*** p<0.01, ** p<0.05, * p<0.10.

insignificant ($\beta = -0.229$, $p = 0.148$). This implies that while a new partner allows the woman to cease "survival employment," the addition of another adult to the household results in stagnant per capita resources.

Panel B (Columns 4–5) presents a sensitivity check by restricting the sample to women who remain permanently single throughout the panel. The income penalty for these women ($\beta = -0.198^{**}$) is virtually identical to the full sample estimate, confirming that the income shock associated with dissolution is persistent and not easily ameliorated by short-term household recomposition.

5 Discussion

This study leverages longitudinal data from Peru's post-pandemic recovery period (2020–2024) to examine the economic consequences of household dissolution. The results document a disconnect between labor supply responses and welfare outcomes: while dissolution drives women into the labor market, it fails to prevent significant declines in income and neces-

Table 6: The Impact of Re-partnering on Economic Outcomes

	Panel A: Recovery Model (Full Sample)			**Panel B: No Re-partnering** (Restricted Sample)	
	(1)	(2)	(3)	(4)	(5)
Variables	Employed	Informal	Log Income	Log Income	Log Spending
Post-Dissolution	0.179**	0.145**	-0.194***	-0.198**	0.005
	(0.072)	(0.069)	(0.073)	(0.083)	(0.101)
Post-Repartner	-0.327***	-0.093	-0.229	–	–
	(0.115)	(0.088)	(0.158)	–	–
Observations	4,186	4,186	4,186	4,091	4,091
R-squared (Within)	0.074	0.258	0.103	0.106	0.045
Number of PID	838	838	838	819	819
Individual FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes

Notes: Standard errors clustered at the household level in parentheses. Panel A estimates the marginal effect of entering a new union after dissolution. Panel B excludes women who re-partnered during the 2020–2024 period.
*** p<0.01, ** p<0.05, * p<0.10.

sitates a survival-driven restructuring of household consumption. These findings challenge simplistic narratives of female empowerment through workforce participation and highlight the structural rigidities of informal labor markets in developing economies.

5.1 The Failure of the Added Worker Effect in Informal Contexts

The primary finding—that dissolution increases female employment by 15.8 percentage points while per capita income falls by 21.8%—offers a critical test of the "Added Worker Effect" (AWE) in a high-informality context. Standard economic theory posits that in response to negative income shocks, secondary earners enter the labor market to smooth consumption (Heckman, 1979). While my results confirm the extensive margin response predicted by the AWE, the stark decline in income indicates a failure of this mechanism to insure household welfare.

This contradicts findings from developed economies, where social safety nets and formal labor markets often allow divorced women to mitigate income losses more effectively (McManus and DiPrete, 1992; Hellerstein and Morrill, 2013). In the Peruvian context, the

concentration of new employment in the informal sector (14.6 percentage points) suggests that labor market entry is driven by distress rather than opportunity. This aligns with Aguiar et al. (2013), who argue that in developing countries, counter-cyclical labor supply is often a symptom of incomplete insurance markets. My findings extend this by demonstrating that household dissolution acts as an idiosyncratic shock that forces women into a "low-productivity trap," where the marginal return to labor is insufficient to compensate for the loss of a partner's earnings.

Furthermore, the persistence of the income penalty through 2024 challenges the Family Stress Model's implication that economic volatility is a temporary disequilibrium. Instead, the data suggest a structural "feminization of poverty" where the dissolution of the household unit permanently lowers the trajectory of economic accumulation for women, particularly in urban areas where subsistence buffers are absent.

5.2 Economies of Scale and the Consumption Puzzle

The analysis resolves the "consumption smoothing puzzle" through a novel decomposition of expenditure categories. While aggregate spending remains statistically unchanged, the composition reveals a severe welfare loss. The 26.9% increase in food expenditure provides powerful empirical support for Becker's theory of household production functions (Becker, 1973). Becker argued that marriage generates efficiency gains through economies of scale and specialization. My results confirm the converse: dissolution destroys these scales, forcing single-headed households to spend a larger share of a shrinking budget on basic caloric needs.

This finding adds nuance to the literature on consumption smoothing. Previous studies often interpret stable total expenditure as evidence of successful insurance mechanisms such as savings drawdowns or transfers (Blundell et al., 2008). However, my results suggest that "smoothing" in this context is actually "crowding out." The significant reduction in discretionary spending (-49.4%) and educational investments implies that households are sacrificing long-term well-being to meet immediate survival needs. This aligns with the "cheaper calories" hypothesis observed in other crises, where households switch to less nutritious but more affordable food sources, although my data only capture expenditure values rather than caloric intake.

5.3 The Child Penalty and Human Capital Trade-offs

The heterogeneity analysis uncovers a stark "child penalty," where the economic costs of dissolution are borne almost exclusively by mothers ($\beta = -0.304$) rather than childless

women. This finding interacts with the "Motherhood Penalty" literature (Kleven et al., 2019) but situates it within the context of household breakdown. The double burden of earning an income and managing care responsibilities likely restricts mothers to flexible, lower-wage informal jobs, exacerbating the income gap.

Crucially, the null result on school attendance ($\beta = 0.221, p > 0.10$) alongside the drop in education spending ($\beta = -0.546$, though noisy) suggests a "quality-quantity" trade-off. Mothers prioritize the extensive margin of enrollment—perhaps to utilize schools as child-care or due to social norms—while cutting financial investments in educational quality (e.g., supplies, private tuition). This echoes Ferreira and Schady (2013), who noted that during aggregate shocks, school enrollment in Latin America often remains counter-cyclically high, but learning outcomes suffer. My findings suggest that household-level shocks produce similar dynamics, potentially creating an intergenerational transmission of disadvantage where children of dissolved households remain in school but receive lower-quality human capital inputs.

5.4 Re-partnering: Regression to Traditional Roles?

The analysis of re-partnering offers a provocative insight into gender roles during recovery. The finding that re-partnering triggers an immediate, massive exit from the labor force ($\beta = -0.327$) provides strong evidence for the "Specialization Hypothesis" within Becker's framework. Upon re-entering a union, women appear to revert to home production, relinquishing their role as market earners.

However, the failure of re-partnering to statistically restore per capita income ($\beta = -0.229$) contradicts the "Income Recovery" hypothesis often cited in sociology literature (Dewilde and Uunk, 2006). This suggests a pattern of assortative mating where economically vulnerable women re-partner with men who also possess limited earning capacity, or that the new household composition (often blending stepchildren) dilutes per capita resources. I acknowledge that re-partnering is endogenous; women who successfully exit the labor market may possess unobserved characteristics that facilitate high-quality matches. However, the failure of per-capita income to recover suggests that even these "successful" matches do not fully insure the household against the initial shock. Consequently, re-partnering in post-pandemic Peru appears to function as a mechanism for alleviating labor drudgery rather than escaping poverty.

6 Conclusion

The primary objective of this study was to isolate the economic consequences of household dissolution for women during Peru's post-pandemic recovery period (2020–2024). By leveraging longitudinal data within a difference-in-differences framework, this research sought to determine whether labor market responses in a high-informality context are sufficient to buffer the loss of partner income. The empirical evidence reveals a fundamental disconnect between employment and economic security. While dissolution precipitates a significant increase in female labor supply (15.8 percentage points), this entry is concentrated almost exclusively in the informal sector and fails to prevent a severe 21.8% contraction in per capita income. Furthermore, the analysis resolves the "consumption smoothing puzzle" by demonstrating that the stability of total expenditure masks a survival-driven restructuring of the household budget: the loss of economies of scale forces a 26.9% increase in food spending, which crowds out investment in education and discretionary goods.

Theoretically, these findings challenge the applicability of the standard "Added Worker Effect" to developing economies. In contexts where formal safety nets are porous, labor market entry acts not as an optimization strategy for consumption smoothing, but as a distress mechanism that channels women into low-productivity traps. The results also refine Becker's household production theory by quantifying the "child penalty" in a crisis setting; the economic shock is structurally concentrated among urban mothers, for whom the dual burden of income generation and caregiving creates acute vulnerability. The analysis of repartnering further complicates traditional recovery narratives, suggesting that finding a new partner facilitates an exit from survival employment but does not statistically restore per capita income levels, pointing to a reversion to traditional gender roles rather than financial advancement.

These insights carry distinct implications for future research and policy design. Future scholarship should move beyond monetary metrics to incorporate time-use data, as the current analysis likely underestimates the welfare loss by failing to capture the "time poverty" of single mothers who increase labor supply while maintaining domestic responsibilities. Additionally, the null result on school attendance despite collapsing educational expenditures warrants longitudinal investigation into the cognitive and non-cognitive outcomes of children in these households. Researchers should specifically examine whether the "quality-quantity" trade-off documented here leads to intergenerational persistence of inequality.

The study is subject to limitations inherent in observational panel data. While fixed effects control for time-invariant heterogeneity, time-varying unobservables—such as the psy-

chological toll of dissolution or concurrent domestic violence—remain unmeasured and could simultaneously influence labor supply and income. Moreover, the binary classification of informality may obscure heterogeneity within the informal sector, grouping subsistence entrepreneurs with wage laborers.

Ultimately, this study advances the understanding of household economics in the Global South by demonstrating that resilience is not synonymous with well-being. The findings suggest that social protection systems must evolve from generic employment support to targeted income floors and care infrastructure. By identifying household dissolution as a specific pathway to poverty that bypasses traditional labor-centric safety nets, this research highlights the urgent need for policies that protect the consumption floor of single-parent households without forcing a trade-off between essential subsistence and human capital accumulation.

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