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Evidence from Latin America**

Ercio Muñoz
Dario Sansone
João Tampellini

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Ercio Muñoz

Inter-American Development Bank

Dario Sansone

University of Exeter and IZA

João Tampellini

Vanderbilt University

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ABSTRACT

Relative Income and Gender Norms: Evidence from Latin America*

Using data from over 500,000 dual-earner households in Mexico, we provide evidence of discontinuities in the distribution of relative income within households in Latin America. Similar to the situation in high-income countries, we observe a sharp drop at the 50% threshold, i.e., where the wife earns more than the husband, but the discontinuity is up to five times larger and has increased over time. These patterns are robust to the exclusion of equal earners, self-employed individuals, and couples in the same occupation/industry. Discontinuities persist across subgroups, including couples with or without children, those with married or unmarried partners, and those with older wives or female household heads. We also find comparable discontinuities in Brazil and Panama, as well as among some same-sex couples. Moreover, women who are primary earners continue to supply more nonmarket labor than do their male partners, although the gap is narrower than in households where the woman is the secondary earner.

JEL Classification: D13, D91, J12, J15, J16, O15, Z13

Keywords: gender norms, relative income, Latin America

Corresponding author:

Dario Sansone
University of Exeter
Stocker Rd
Exeter EX4 4PY
United Kingdom
E-mail: d.sansone@exeter.ac.uk

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1. Introduction

A set of papers in economics following Bertrand, Kamenica, and Pan (2015) identifies a large discontinuity to the right of the 50% mark in the distribution of households according to the wife's share of income in high-income countries. As traditional models of household formation and labor specialization do not predict such gaps, Bertrand and co-authors attribute the discontinuity, at least partially, to gender norms that discourage women in the U.S. from earning more than their husbands. These patterns provide a straightforward and observable measure of how social norms and economic incentives influence decision-making, labor supply, and overall well-being. Subsequent papers have expanded the findings to other high-income countries and have contested some of the main conclusions (Bertrand et al., 2015; Binder & Lam, 2022; Hederos & Stenberg, 2022; Zinovyeva & Tverdostup, 2021).

Today, however, the majority of the global population resides in low- and middle-income countries, where more conservative gender norms are prevalent and female labor force participation is lower (Inglehart et al. 2014; Verick 2014). In this paper, we use data from Mexico—for which we have more detailed household information—and then expand the analysis to Brazil and Panama to examine the prevalence of these patterns worldwide, particularly in areas with more conservative gender norms. As shown in Figure A1, a significant and persistent proportion of both men and women in these countries holds traditional views on family roles and expresses negative attitudes toward couples in which the woman earns more than her husband. This pattern is broadly consistent with that of other Latin American countries, such as Colombia, but contrasts with the declining prevalence of such views in the U.S. and their rising salience in India and Nigeria.

Our main analyses are based on the 2015 Mexican Intercensal Survey, which includes over 500,000 dual-earner households. Our first result confirms the presence of a discontinuity in the distribution of relative income at 0.5. Using the McCrary (2008) discontinuity test, we find that the discontinuity is approximately twice as large as that in the U.S. and Finland (Bertrand et al., 2015; Zinovyeva & Tverdostup, 2021) and five times as large as that in Sweden (Hederos & Stenberg, 2022). We also document that the discontinuity has grown since 2000. These findings are replicated with census data from Brazil and Panama, highlighting the persistence of this discontinuity over time and across countries.

These results are robust to the exclusion of the mass point of equal earners in the distribution, self-employed individuals, and couples where both individuals work in the same occupation in the same industry. This finding contrasts with previous studies in high-income countries, which argue that such discontinuities are primarily driven by equal earners and co-working couples (Hederos & Stenberg, 2022; Zinovyeva & Tverdostup, 2021). We then find discontinuities at the 0.5 mark in the distributions of relative income among couples both with and without children, thus suggesting that fertility is not the main determinant of this drop. Remarkably, the discontinuity at 0.5 is also found in less traditional households, such as unmarried couples (potentially reflecting changing trends in cohabitation in Latin America, as documented in Esteve, Lesthaeghe, and López-Gay, 2012), couples in which the woman is the household head, and couples in which the woman is older than her partner.

To better understand the role of intrahousehold gender differences, we expand the analysis to same-sex couples, where gender norms may be less salient (Andresen & Nix, 2022; Orefice & Sansone, 2023; Van Der Vleuten et al., 2024). We report the distribution of relative income for younger individuals compared to their older partners, as well as for household heads compared to their partners. Despite the expected lower influence of these norms, we still find a discontinuity at 0.5 among female same-sex couples in Mexico. However, the absence of a consistent pattern among same-sex couples across countries suggests that the influence of gendered behavioral norms may be context specific and may not be universally observed for same-sex households.

We further expand our study by analyzing women's non-market labor supply. We document that the hours gap in non-market labor supplied by the wife and husband is significantly smaller in households where the wife is the primary earner. However, despite the smaller gap, primary-earner women are, on average, still the main suppliers of non-market labor, including childcare, for their households. Additionally, once the woman becomes the primary earner, increases in her share of household income are associated with a slower convergence in the hours of household production between partners. Furthermore, we find that women with higher potential income are more likely to be in the labor force in Mexico, although the effects are small. This finding contrasts with the results of Bertrand et al. (2015), who argue that women who are likely to outearn their husbands reduce their labor supply to avoid reversing traditional gender norms.

By highlighting the importance of structural factors within households, we contribute to the literature on the importance of gender norms in shaping intrahousehold dynamics. Previous work has emphasized the role of gender dynamics in shaping marriage market sorting and outcomes (Choo & Siow, 2006; Goñi, 2022; Lundberg & Pollak, 1996; Pollak, 2019; Torche, 2010) and their implications for intrahousehold bargaining power and labor market allocation (Akerlof & Kranton, 2000; Bursztyn et al., 2017, 2020; Codazzi et al., 2018; Cortés et al., 2024; Jayachandran & Voena, 2025). However, by showing that relative income discontinuities persist in contexts where traditional gender hierarchies are less clear (e.g., same-sex couples) or are disrupted (e.g., female-headed households), our findings suggest that household specialization can emerge from mechanisms beyond norm adherence alone. This possibility highlights the importance of structural factors that may shape intrahousehold bargaining independently of or in interaction with gender norms.

Furthermore, we contribute to the broader literature on household economics (i.e., Greenwood, Guner, and Vandenbroucke 2017; Cortés and Pan 2023), with a particular focus on the intersection of gender norms and the distribution of relative income within couples (Bertrand et al., 2015; Binder & Lam, 2022; Hederos & Stenberg, 2022; Lippmann et al., 2020; Zinovyeva & Tverdostup, 2021) and how it contrasts with traditional Becker models (Becker, 1973, 1981). While prior research has largely concentrated on high-income countries, particularly in Western Europe and the United States, we extend this analysis to middle-income countries, offering the first systematic, cross-country evidence from Latin America. In doing so, we provide novel insights into how these patterns manifest outside the Global North. Additionally, we bridge this literature with the growing body of work on LGBTQ+ issues in economics (Badgett et al., 2021, 2024; Muñoz, Saavedra, et al., 2024; Muñoz, Sansone, et al., 2024; Muñoz & Sansone, 2024; Tampellini, 2024) by being the first to examine the distribution of relative earnings among same-sex couples. Finally, we contribute to the literature on intrahousehold time allocation (i.e., Aguiar and Hurst 2007; Juhn and McCue 2017) by leveraging one of the richest time-use datasets globally to document how couples' decisions regarding nonmarket labor are shaped by their relative earnings within the household.

2. Data and Sample Construction

In this section, we provide details on our data sources and sample construction. Please refer to Appendix B for additional information on the data sources and availability.

2.1. Mexican Census Data

For our main analyses, we use the 10% sample of the 2015 Mexican Intercensal Survey (census data hereafter). These data include demographic information, including gender, age, and race, as well as various socioeconomic characteristics. Additionally, the 2015 Census was, at the time of its collection, the largest survey in the world to collect information on weekly hours spent on nonmarket work across several activity categories.

We define different-sex and same-sex couples based on the reported relationship between household members and the head of household. To set up our main samples, we follow Bertrand, Kamenica, and Pan (2015) and restrict the data to households in which both individuals are between 18 and 65 years old and have positive labor income.¹ In Mexico, the household head is defined as “the person recognized as such by the regular residents of the dwelling, through which the bond or kinship relationship of each resident is known to this person. If no one is identified as the head of the dwelling, then the head is considered the first person of reference 12 years old or older who is mentioned by the Informant.” We restrict the sample to households in which only one household head and one partner are identified and exclude those that report having more than one partner or more than one household head.²

Our measure of income refers to labor earnings and excludes retirement, pensions, social programs, transfers, and other sources.³ While income is technically top-coded, the cap is rarely binding, with only 199 individuals out of over 1 million respondents reporting earnings above the threshold. After these initial restrictions are applied, our overall sample comprises 601,682 different-sex couples (433,284 married and 169,398 cohabiting) and 5,915 same-sex couples

¹ The instructions of the 2015 Intercensal Survey questionnaire specify that income questions should be answered by the individual concerned. However, the census does not record who actually provided the response. Thus, there is no guarantee that reported earnings are self-reported rather than reported by another household member (Muñoz et al., 2024).

² We provide a detailed description of our main variables in Online Appendix B.

³ This differs from previous work in the relative income literature, which includes total household earnings (e.g., Bertrand et al., 2015).

(3,313 female and 2,602 male). We do not distinguish between married and unmarried same-sex couples, as same-sex marriage had not yet been nationally recognized in Mexico in 2015.

2.2. The Case of Equal Earners

For all our main analyses, we make further sample restrictions to make our results comparable to those reported in the previous literature. Prior work has documented that in high-income countries, the observed discontinuities can be largely attributed to a mass point at which both partners report identical earnings (i.e., relative income = 0.5; Zinovyeva and Tverdostup 2021; Hederos and Stenberg 2022). In our dataset of married and cohabiting couples, 16% of households fall into this category. In Appendix Table A1, we show that equal-earning couples are characteristically different from couples in the surrounding relative income ranges, thus supporting previous criticisms: they are twice as likely to earn less than the minimum wage or to be self-employed, and they are significantly more likely to work in agriculture, retail, or education.

While the presence of the mass point may have important underlying social and economic causes, several potential explanations exist that are unrelated to within-household gender norms. For example, Binder and Lam (2022) argue that it could reflect an equal-earning norm for a subset of the population and/or frictions in the marriage market that reduce search costs for individuals in certain occupations. Alternatively, Zinovyeva and Tverdostup (2021) argue that in the Finnish context, mass points are primarily driven by the convergence of earnings among coworking couples. The inclusion of these couples could inflate the observed discontinuity for reasons that are orthogonal to our main research question. Thus, unless stated otherwise, we exclude equal-earning couples from our analyses. Our final sample, excluding equal earners, comprises 511,272 households, of which 503,710 are composed of different-sex couples (362,030 married and 141,680 cohabiting) and 4,851 are composed of married and unmarried same-sex couples (2,726 female same-sex couples and 2,125 male same-sex couples).

Table 1 provides summary statistics for our different samples (excluding equal-earning couples). Cohabiting and same-sex couples tend to be younger and earn less than married couples do, with unmarried women cohabiting with a male partner being particularly concentrated at the lower end of the income distribution. Same-sex couples are also less likely to have children. While these differences are not as large as those documented for high-income countries, they are broadly consistent with patterns observed in other Latin American countries (Muñoz et al., 2024).

Table 1: Summary statistics

<i>Couple type:</i>	Different-sex, married		Different-sex, cohabiting		Same-sex, married or cohabiting	
<i>Sex:</i>	Women	Men	Women	Men	Female	Male
<i>Individual-level variables</i>						
Age	40.005 (9.133)	42.405 (9.543)	35.520 (9.361)	38.211 (10.263)	38.718 (9.827)	38.261 (9.841)
High school diploma	0.527 (0.499)	0.533 (0.498)	0.403 (0.490)	0.401 (0.490)	0.528 (0.499)	0.561 (0.496)
College degree	0.314 (0.464)	0.301 (0.458)	0.179 (0.383)	0.171 (0.376)	0.297 (0.457)	0.335 (0.471)
Monthly income	6,515.85 (8,885.63)	9,404.95 (16,032.37)	5,149.10 (5,549.95)	7,296.91 (12,102.59)	7,674.29 (8,328.85)	8,658.67 (10,766.96)
<1 minimum wage	0.115 (0.319)	0.025 (0.157)	0.138 (0.345)	0.031 (0.175)	0.067 (0.250)	0.049 (0.216)
<2 minimum wage	0.408 (0.491)	0.188 (0.390)	0.513 (0.500)	0.255 (0.436)	0.310 (0.462)	0.269 (0.443)
Self-employed	0.205 (0.403)	0.189 (0.392)	0.196 (0.397)	0.190 (0.392)	0.174 (0.379)	0.191 (0.393)
Employer	0.029 (0.169)	0.048 (0.214)	0.020 (0.139)	0.031 (0.173)	0.034 (0.181)	0.033 (0.179)
Household head	0.106 (0.308)	0.893 (0.308)	0.186 (0.389)	0.813 (0.389)	-	-
Older partner	0.193 (0.395)	0.685 (0.464)	0.259 (0.438)	0.643 (0.479)	-	-
Hours spent on nonmarket work	53.978 (49.751)	19.017 (28.379)	55.255 (51.366)	19.119 (28.351)	31.994 (39.501)	29.074 (37.573)
Hours spent on childcare	25.347 (39.252)	10.526 (21.793)	28.119 (41.297)	10.797 (22.140)	13.977 (28.623)	12.306 (27.309)
<i>Household-level variables</i>						
Relative income	0.413 (0.155)		0.415 (0.148)			
Both self-employed	0.068 (0.252)		0.066 (0.248)		0.060 (0.237)	0.056 (0.231)
Both employers	0.011 (0.105)		0.006 (0.078)		0.012 (0.108)	0.010 (0.101)
Same occupation and industry	0.075 (0.264)		0.080 (0.272)		0.075 (0.263)	0.064 (0.245)
Age gap	3.586 (3.579)		5.127 (4.976)		4.399 (4.493)	4.370 (4.630)
Any children in the HH	0.743 (0.436)		0.714 (0.451)		0.632 (0.482)	0.525 (0.499)
Any children <5 in the HH	0.272 (0.445)		0.344 (0.344)		0.239 (0.482)	0.214 (0.410)
Households	362,030		141,680		2,726	2,125

Notes: Weighted statistics are reported. See Online Appendix B for detailed variable descriptions. Source: 2015 Mexican Intercensal Survey. “<1 minimum wage” and “<2 minimum wage” are indicators equal to one if the individual earns less than the monthly minimum wage or less than two times the monthly minimum wage, respectively. For same-sex couples, we omit variables that require ordering individuals within the couple (e.g., identifying the older partner or household head), as there is no clear way to assign such roles. The standard deviation is in parentheses.

The gender gaps in earnings and nonmarket work are large, with women consistently earning less and contributing significantly more hours to unpaid labor, including childcare. Relatedly, household headship remains highly gendered among different-sex couples, and male partners in different-sex couples are more likely than their female partners to be older.

3. Documenting Patterns in Mexico

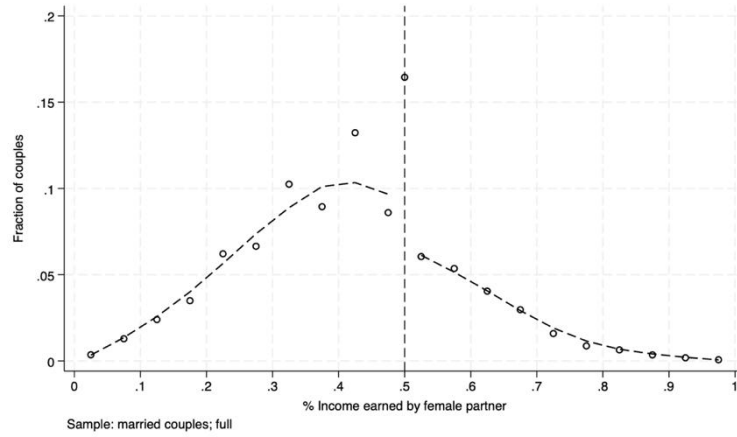
3.1. Graphical Evidence of Discontinuities

Following Bertrand, Kamenica, and Pan (2015), for a different-sex household h , we define $relIncome_h = \frac{wifeIncome_{ih}}{wifeIncome_{ih} + husbIncome_{ih}}$, where i indexes individual income. We first present the results for married different-sex households. Figure 1 shows the distribution of households in Mexico according to the wife's share of household income. In our sample, 26% of wives earn more than their husbands do. We divide households into 20 bins, centered at the midpoint of each bin, and present the distribution along with locally weighted scatterplot smoothing (LOWESS). Panel A shows the distribution including equal-earning couples, and Panel B shows the distribution of couples for the sample used throughout our analysis.

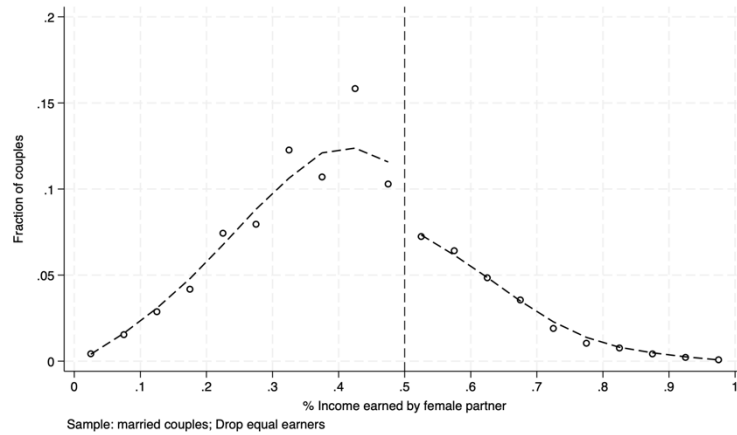
These figures are similar to those in Figure I of Bertrand, Kamenica, and Pan (2015) for the U.S. As documented in previous studies (e.g., Zinovyeva and Tverdostup, 2021; Hederos and Stenberg, 2022), the modal share of household labor income earned by the wife in Mexico ranges between 35% and 40%. Similarly, as reported in Table 1, the average wife's relative income in this group is 41.3%.

As in Bertrand, Kamenica, and Pan (2015), the main finding is a sharp drop to the right of 0.5 in the distribution of the share of total household labor income earned by the wife, even when equal-earning households are not considered. In other words, a wife is much less likely to earn just above her husband's income than to earn just below her husband's income.

Figure 1: Distribution of the share of total household labor income earned by the wife in Mexico



(a) Including equal earners



(b) Excluding equal earners

Notes: Data are from the 2015 Mexican Intercensal Survey. The sample is restricted to different-sex married couples in which both spouses are between 18 and 65 years old and report positive labor income. Couples with identical reported incomes are excluded in Panel (b). Each point represents the share of couples within a 0.05-wide bin of relative income. The vertical line marks the 0.5 threshold, and the curve shows a LOWESS-smoothed fit to the distribution, allowing for a potential discontinuity at 0.5.

To address potential concerns about rounding or bunching around salient thresholds, Figure A2 presents the kernel density of the wife's share of household income. While the use of survey data introduces nonsmoothness in reported earnings, which differs from the administrative tax data used in other studies (i.e., Zinovyeva and Tverdostup 2021; Hederos and Stenberg 2022), we still observe a pronounced discontinuity at 0.5. In Figure A3, we replicate Figure 1 after adding uniformly distributed random noise of $\pm 1\%$ to each individual's income. The noise was added only

to households where relative income is not exactly 0.5, as equal-earning couples may be characteristically different. This noise smooths out small rounding or heaping artifacts in the data, which helps ensure that the observed discontinuities, such as the drop at 0.5 in the wife's share of household income, are not mechanical results of data irregularities. The persistence of the discontinuity under this approach suggests that, despite differences in the data structure from previous studies, similar behavioral mechanisms may be at work.

3.2. Testing for Size and Statistical Significance

We use the McCrary (2008) test for discontinuities in log difference in heights. Let be s_{ijc} be the share of the household income earned by female partner i in couple j , with $s_{ij} \in (0,1]$. We analyze the distribution of this variable using its cumulative distribution function, $F(s) = \Pr(S \leq s)$, and the associated probability density function, $f(s) = \frac{dF(s)}{d(s)}$. We use the automatically selected bin and bandwidth provided by the test (McCrary, 2008). For the cutoff point $c = 0.50001$, the coefficient of interest θ is given by:

$$\theta = \log \lim_{s \downarrow c} f(s) - \log \lim_{s \uparrow c} f(s) \equiv \log f^+ - \log f^- \quad (1)$$

We first quantify the discontinuity shown in Figure 1, restricting our sample to married couples. Table 2 shows the resulting estimates. As shown in Column (1), we estimate a sharp drop of 21.6 log points at the 0.50001 threshold in the distribution of households according to relative income, and it is statistically significant at the 1% level. This result implies that among households near the cutoff, those where the wife earns just more than half the total income are approximately 19.4% less common than those just below the threshold, reflecting a sharp drop in the density of the relative income distribution at 0.5. This estimate is robust to the use of alternative cutoffs that are slightly different ($c = 0.5$ and $c = 0.49999$), as shown in Table A2.

These discontinuities are robust to the exclusion of couples where both individuals are self-employed and where both individuals report working in the same occupation and industry (Table 2, Columns (2)-(4)). This extension is noteworthy, as these groups were the main drivers of the discontinuities previously documented in the literature for Europe and the U.S. (i.e., Hederos & Stenberg, 2022; Zinovyeva & Tverdostup, 2021). The coefficient of the discontinuity becomes even larger when employers and self-employed individuals are excluded from the sample and

smaller (but still larger and significant) when couples working in the same industry and occupation are excluded. This latter group is particularly relevant, as spouses working in the same occupation and industry are considerably more likely to share a workplace (Hyatt, 2019), which may introduce workplace-based constraints on household decision-making. In previous studies, such shared work environments were shown to reinforce social comparisons or peer effects that amplify norm-driven behaviors. The fact that we continue to find strong discontinuities even after removing these cases suggests that the patterns that we observe are not merely artifacts of shared professional environments and, instead, reflect deeper household-level dynamics.

Table 2: McCrary test for discontinuity in the distribution of the woman's share of total household labor income—Different-sex married partners

<i>All samples below exclude equal-earning couples</i>				
	Full sample	Excluding employers/self-employed	Excluding couples in the same occupation and industry	Excluding employers/self-emp./same occ. and industry
	(1)	(2)	(3)	(4)
Panel A: 2015				
log distance at 0.50001	-0.216*** (0.010)	-0.245*** (0.012)	-0.175*** (0.010)	-0.200*** (0.013)
<i>N</i>	362,030	211,517	331,978	191,820
Panel B: 2000				
log distance at 0.50001	-0.176*** (0.013)	-0.207*** (0.014)	-0.142*** (0.013)	-0.170*** (0.014)
<i>N</i>	231,118	164,691	214,303	153,027

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. Each cell reports the estimated discontinuity in the density of the woman's share of total household labor income at the 50% threshold via the McCrary (2008) test. The dependent variable is the log difference in density just above versus just below the 50% threshold. All samples exclude couples with exactly equal earnings. Panel A uses data from the 2015 Mexican Intercensal Survey, whereas Panel B uses the 2000 Mexican Census. Column (1) includes the full sample of different-sex married couples. Column (2) excludes self-employed and employer couples. Column (3) excludes couples where both spouses work in the same occupation and industry. Column (4) excludes both self-employed/employers and couples in the same occupation and industry. Standard errors are in parentheses.

Overall, we find that the discontinuities documented in Mexico are 4-5 times larger than those previously documented in Sweden and 2 times larger than those previously documented in Finland and the United States. Importantly, these estimates are obtained after equal-earning couples are excluded from the sample. Thus, unlike previous findings for North America and Europe (Bertrand et al., 2015; Hederos & Stenberg, 2022; Zinovyeva & Tverdostup, 2021), the results are not driven by the presence of a mass point at the midpoint of the distribution.

Furthermore, these discontinuities have grown over time. Using data from the 2000 Mexican Census and applying the same sample restrictions as those in our main analysis, in Panel (a) of Figure A4 and Panel B of Table 2, we show that the gap actually grew from 17.6% to 21.6% in 15 years. The results for the 2010 Census, in Panel (b), show a magnitude similar to that in 2000. In Panel (c) of Figure A4, we include the figure for the 2020 Mexican Census, in which the magnitude of the discontinuity remains similar to that in 2015. Notably, however, at the time of writing, the publicly available version of the 2020 data does not include fully harmonized occupation and income information.

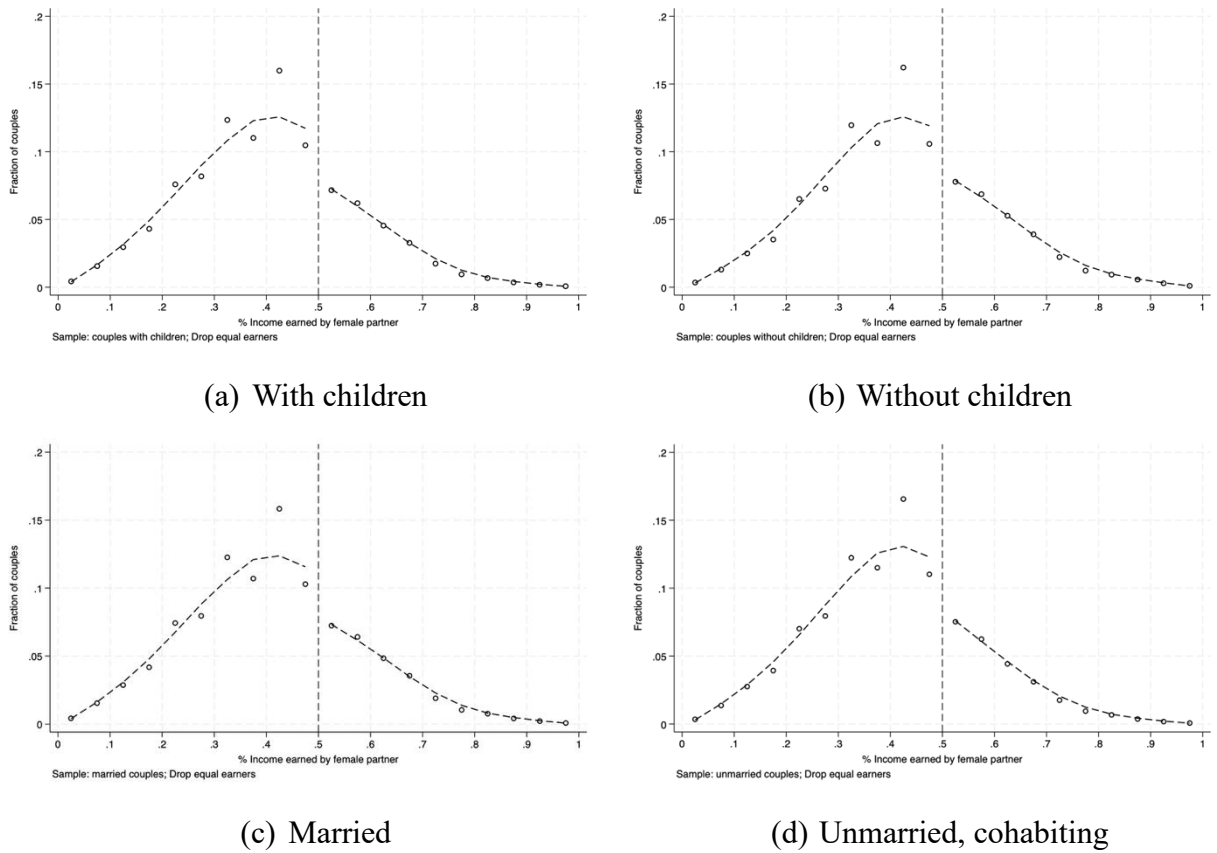
3.3. Heterogeneity by Family Composition

We then explore whether differences in the structure of dual-earner families help explain the observed discontinuities in the distribution of households by the wife's share of labor income. Specifically, we examine heterogeneity in terms of marital status and the presence of children.

Children may influence incentives around relative income in various ways, especially given the large literature on the motherhood penalty and fatherhood premium (Goldin, 2014; Kleven et al., 2019; Waldfogel, 1998): according to the Child Penalty Atlas, Mexico has one of the largest child penalties for women worldwide (Kleven et al., 2024). Nevertheless, Mexico does not offer tax benefits for married couples: individuals are not allowed to file jointly regardless of marital or parental status. In Panels (a) and (b) of Figure 2, we show that the distributions of relative income in households with and without children are similar. In Table A3, we show that the coefficients of the McCrary test are larger in magnitude for households with children, although sizeable discontinuities are also observed for households without children. Overall, it is unlikely that parental status is the main driver of these gaps, even though women are disproportionately responsible for childcare and even when they are the breadwinners (see Section 5.3 for a more detailed discussion of time use).

We then turn to unmarried, cohabiting couples. Using data from the Netherlands, Kalmijn, Loeve, and Manting (2007) showed a heterogeneous impact of relative income on household dynamics: for married couples, increasing the wife's share of household earnings was associated with an increase in the probability of divorce for married couples, whereas the opposite was true for cohabiting couples. While we are unable to observe marital dynamics over time, in Panels (c) and (d) of Figure 2, as well as Table A4, we show that clear discontinuities are present for both married and cohabiting couples.

Figure 2: Distribution of relative earnings according to the family structure



Notes: Data are from the 2015 Mexican Intercensal Survey. The sample is restricted to different-sex couples in which both individuals are between 18 and 65 years old and report positive labor income. Further sample restrictions are described in each subfigure caption. Couples with identical reported incomes are excluded. Each point represents the share of couples within a 0.05-wide bin of relative income. The vertical line marks the 0.5 threshold, and the curve shows a LOWESS-smoothed fit to the distribution, allowing for a potential discontinuity at 0.5.

While initially counterintuitive, as cohabiting couples are already diverging from traditional social expectations by living together before marriage, such dynamics may reflect recent cohabitation patterns in Latin America, where cohabitation has become increasingly common

among individuals with lower income and educational levels (Esteve et al., 2012). Indeed, Table A5 shows that since at least 2000, cohabiting couples in Mexico have become increasingly negatively selected relative to those who marry in terms of income and educational attainment. Therefore, cohabiting couples with low levels of income and education may actually hold stronger gender norms than married couples do, which would explain the observed patterns.

4. Sorting, Preferences, and Other Household Dynamics

In this section, we explore a range of intrahousehold dynamics that may contribute to discontinuities in the distribution of relative income. Binder and Lam (2022) argue that such discontinuities are shaped not only by gender norms but also by marriage market sorting—and by the underlying distributions of traits correlated with income along which couples sort. Thus, even in the absence of explicit gender norms, gaps can emerge if people consistently match on characteristics related to income. While we are unable to observe couple formation *ex ante*, these decisions may reflect underlying power dynamics or economic considerations that, once a couple is formed, interact with household labor decisions in ways that shape relative income.

To provide an intuitive exercise with regard to the potential role of sorting, we simulate a counterfactual in which individuals are randomly matched to different-sex partners, thus removing any systematic sorting by income or other traits. In Figure A5, we present the average distribution of relative income across 100 random reassignments, showing that the sharp discontinuity fully disappears. While this exercise helps us rule out the possibility that our results are artifacts of the data structure, we emphasize that random matching does not account for underlying differences in the distribution of traits along which couples often sort (e.g., education and income; Binder and Lam 2022). Hence, we interpret the exercise primarily as a plausibility check rather than evidence on matching behavior. These results can also be viewed as a placebo test. Specifically, once individuals are randomly matched, there is no discontinuity at 0.5. This finding suggests that the discontinuity observed in Figure 1 is not something that would arise by chance; rather, it reflects deeper mechanisms beyond random noise in the data.

4.1. Household Head Dynamics

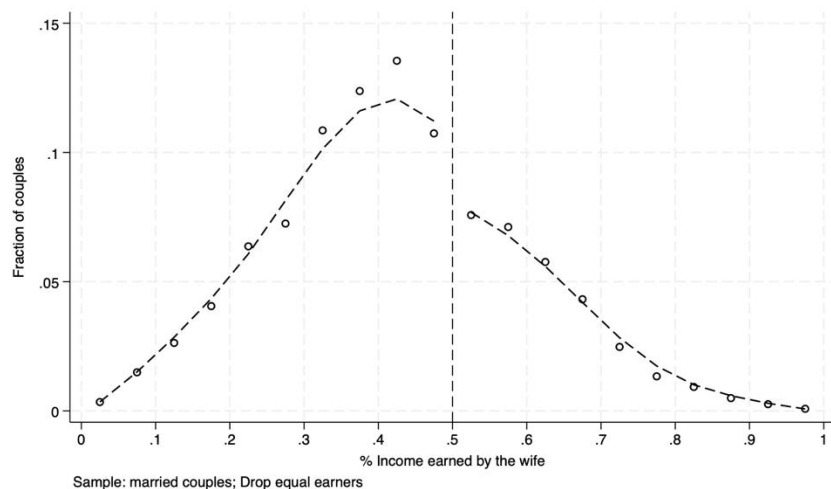
One intrahousehold dimension that may influence how couples make labor decisions is who is designated as the household head. In our data, the head is identified at the time of enumeration, and this designation may reflect social expectations (or administrative convenience). As shown in Table 1, men are overwhelmingly identified as the household head in different-sex couples, which is consistent with traditional views of male authority within the household. We provide additional details on how this variable was collected in Appendix B.

If household headship is correlated with bargaining power or normative expectations, it could influence labor supply decisions and, in turn, the distribution of relative income. To assess this possibility, we test for discontinuities separately for couples where the wife is identified as the household head. These households may already depart from conventional gender roles; thus, differences in the distribution of relative income may clarify whether the observed discontinuities reflect broader social dynamics.

Figure 3 shows the distribution of households according to the wife's share of income in households where she is identified as the household head. While these couples may appear to challenge conventional gender roles, we still observe a clear discontinuity at the 50% threshold. This finding suggests that the designation of household headship does not necessarily translate into higher relative earnings or more egalitarian household dynamics. Previous work has shown that even when women hold formal markers of authority, deeply rooted social norms can still shape labor and income decisions (Gu et al., 2024; Ke, 2021). Thus, in our context, household headship may reflect administrative formality more than actual changes in bargaining power.

Relatedly, Panel (a) in Figure A6 presents the distribution of households ordered by the share of income earned by the nonhousehold head, regardless of gender. We find a clear discontinuity at the 50% threshold, which is similar in magnitude to our main results. Given that 89% of households in our sample are headed by men, this alternative ordering largely mirrors the dynamics of female earners in male-headed households.

Figure 3: Distribution of households according to relative income in households where the wife is the household head



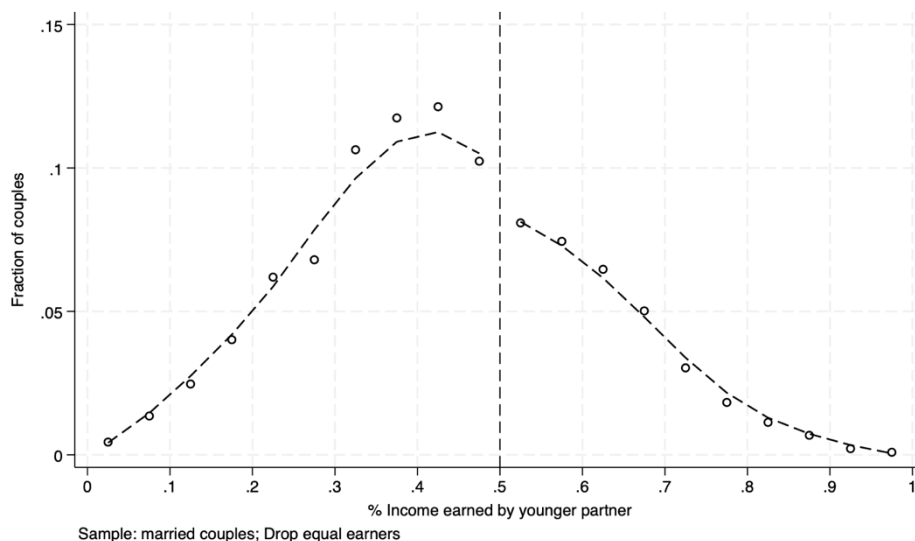
Notes: Data are from the 2015 Mexican Intercensal Survey. The sample is restricted to different-sex married couples in which both spouses are between 18 and 65 years old, both spouses report positive labor income, and the wife is identified as the household head. Couples with identical reported incomes are excluded. Each point represents the share of couples within a 0.05-wide bin of relative income. The vertical line marks the 0.5 threshold, and the curve displays a LOWESS-smoothed fit to the distribution.

4.2. Differences in Age

Another intrahousehold factor that may shape earnings dynamics is the age differences between partners. In our different-sex couple samples, men are older than their partners are, which is a pattern that is often linked to traditional social norms. When this pattern is reversed, the couple may already deviate from conventional gender roles, potentially affecting the salience of gender norms.

To explore this possibility, we test for discontinuities in the distribution of relative income for couples where the woman is the older partner by 5 years or more. If the observed drop at the 50% mark is largely driven by traditional gender roles, we would expect the discontinuity to be smaller for these households. Figure 4 shows that this is not the case, as the discontinuity persists, although it is smaller in magnitude. This finding suggests that while age dynamics may interact with gendered expectations, they are not sufficient to fully eliminate the broader structural patterns shaping relative income within households.

Figure 4: Distribution of households according to relative income in households where the wife is 5+ years older than her husband is



Notes: Data are from the 2015 Mexican Intercensal Survey. The sample is restricted to different-sex married couples in which both spouses are between 18 and 65 years old, both spouses report positive labor income, and the wife is at least five years older than her husband is. Couples with identical reported incomes are excluded. Each point represents the share of couples within a 0.05-wide bin of relative income, as measured by the share earned by the younger partner. The vertical line marks the 0.5 threshold, and the curve displays a LOWESS-smoothed fit to the distribution.

Nevertheless, in Figure A7, we show that the observed discontinuities become smaller as the age gap between partners increases. For couples where the wife is at least ten years older than her husband, the discontinuity disappears entirely. These couples likely differ in both social dynamics and incentives surrounding labor decisions, as these partners are likely in different stages of their careers. One interpretation is that reversing the typical age hierarchy helps in offsetting the effects of assortative matching, where couples tend to form based on traits that reinforce traditional gender expectations. In these less conventional couples, traditional expectations around income and household roles may be less salient, leading to smoother relative income distributions.

Relatedly, in Panel (b) of Figure A6, we show a sizable discontinuity when households are ranked by the income share of the younger partner, regardless of gender. Given that men are the older partner in 68% of households, this pattern is consistent with the idea that relative age, similar to household headship, may proxy for bargaining power or normative expectations.

5. The Case of Same-Sex Couples

Thus far, our results point to large discontinuities in the distribution of households by the female partner's earnings. These discontinuities have been persistent over time and cannot be fully explained by differences in marital status, marriage type, or the presence of children. To better understand the role of intrahousehold gender norms in shaping these patterns, we next turn to same-sex couples—a comparison that has been largely underexplored in the relative income literature. Previous studies have used same-sex couples to understand the role of biology and gender dynamics in household decision-making, suggesting that intrahousehold gender bargaining may be less relevant for same-sex households (i.e., Andresen and Nix 2022; Oreffice and Sansone 2023; Van Der Vleuten, Evertsson, and Moberg 2024; Moberg and Van Der Vleuten 2025).

As described in the data section, we identify same-sex couples using the *relationship to the household head* variable, following previous work (Badgett et al., 2021; Muñoz, Sansone, et al., 2024). Specifically, we define a couple as same-sex if the person listed as the household head's partner (married or unmarried) is of the same sex as the household head.⁴ We then apply the same sample restrictions as those described in Section 2.

By construction, the couples in our sample are composed of individuals of the same sex. As such, we are unable to present discontinuities along the distribution of households according to the *wife's* share of household earnings. Therefore, our main results in this section present discontinuities along the share of income earned by the *nonhousehold head* member. In Table A6, we also present discontinuities for the distribution of income earned by the *younger* partner. While these comparisons are not directly equivalent to those used for different-sex couples, we note that the husband is the household head in 89% and the older partner in 69% of the households in our sample of different-sex households. Nonetheless, as discussed in the previous sections, in Figure A6, we show that substantial discontinuities remain in the different-sex married sample when we use the same measures described in this section: the younger partner is less likely to earn just above his or her partner's earnings than to earn just below it. The same is true for the nonhousehold heads

⁴ We make no distinction between married and unmarried cohabiting partners in our sample of same-sex households since same-sex unions were not nationally recognized in Mexico as of 2015. Unlike the United States, which forcibly recoded same-sex couples as different-sex couples until 2008 (Badgett et al., 2021), we still observe 3,537 same-sex couples who report being married (2,001 female and 1,536 male).

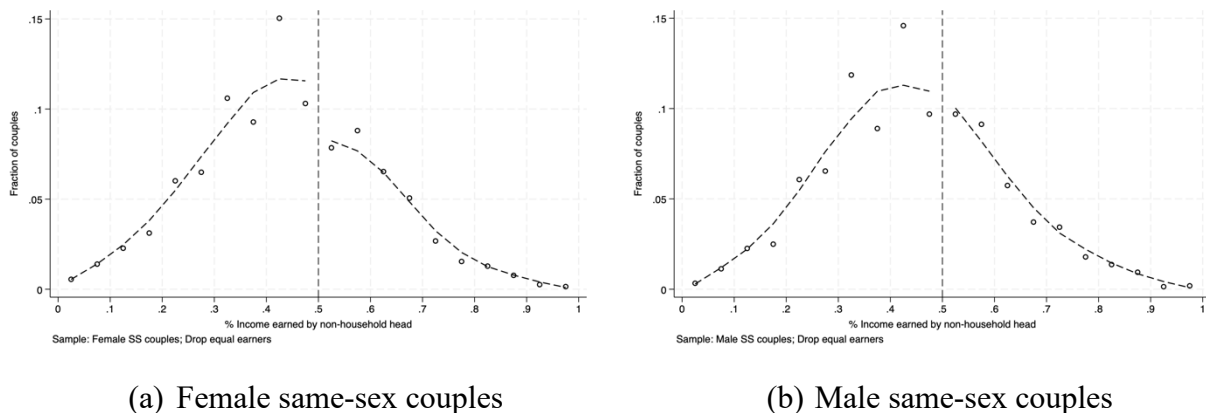
in different-sex couples. Again, this finding is in line with the main results in Figure 1, as the vast majority of the younger partners and nonhousehold heads in different-sex couples are women.

We show our main results for same-sex couples in Figure 5, where we detect sizeable discontinuities for female same-sex couples in Mexico but not for male same-sex couples. In Figure A8, we show that the results are qualitatively unchanged when households are ordered by the share of income earned by the younger partner instead of focusing on nonhousehold heads. Table A6 presents the corresponding McCrary test results, where we show a 25-log-point gap for female same-sex households in Mexico. Notably, in this context, the limited sample sizes—fewer than 3,000 households per subgroup—can limit the interpretation of estimates obtained for density-based statistical tests. A large literature has documented that local polynomial density estimators may underperform in small samples, particularly when there is bunching at specific values or limited support near the cutoff (Cattaneo et al., 2020; Kuehnle et al., 2021; Rosenberg, 2024). Therefore, we interpret these estimates with caution and place greater emphasis on the visual patterns.

The inexistence of a discontinuity among male same-sex couples in Mexico aligns with the hypothesis of gender norms being less salient for sexual minorities. However, the presence of a discontinuity for female same-sex couples raises the possibility that factors beyond gender norms may shape household income dynamics. One possibility is that gender norms are not the primary driver of these patterns. Previous work has shown that same-sex couples tend to specialize less than different-sex couples do, which is in line with Beckerian expectations, although the gap has narrowed over time (Giddings et al., 2014; Hofmarcher & Plug, 2022). Instead, the observed discontinuities may reflect structural differences in household bargaining or other unobserved preferences that shape labor decisions, even outside of traditional gender roles.

Alternatively, the inconsistent pattern of discontinuities may reflect varying preferences for more egalitarian household labor allocations. Prior work has suggested that sexual minorities may hold stronger egalitarian preferences than their heterosexual counterparts do (Ciscato et al., 2020). For instance, Verbakel & Kalmijn (2014) argue that same-sex couples tend to sort more strongly on educational attainment and that the similarity in schooling levels can facilitate a more equal division of labor within the household. Thus, couples who prioritize shared participation in the labor market may be less likely to develop large differences in earnings.

Figure 5: Distribution of the share of total household labor income earned by the nonhousehold head in same-sex couples



Notes: Data are from the 2015 Mexican Intercensal Survey. The sample includes same-sex couples where both partners are between 18 and 65 years old and report positive labor income. Couples with equal reported incomes are excluded. Relative income is measured by the share of total household labor earnings contributed by the nonhousehold head. Each point represents the share of couples within a 0.05-wide bin of relative income. The vertical line denotes the 0.5 threshold, and the curve shows a LOWESS-smoothed fit to the distribution. Panels (a) and (b) present the results separately for female and male same-sex couples, respectively.

Another possibility is that some same-sex couples may, to some extent, reproduce gendered norms even absent gender differences. Previous work has shown that the roles within same-sex households can resemble traditional gender arrangements, with partners sometimes differentiating along lines of gender expression (Badgett, 1995; Doan & Quadlin, 2019; Lamos, 1995; Oreffice, 2011; Van Der Vleuten et al., 2024). This phenomenon could lead to patterns of specialization that resemble those in different-sex households. While speculative, this interpretation is consistent with the idea that social norms may be internalized even in the absence of gender differences.

Importantly, these interpretations are not mutually exclusive. While we are unable to fully disentangle these mechanisms with the available data, the findings reinforce the central theme of this paper: gender norms and their influence on household decisions are complex and are shaped by both observable and unobservable traits, even where gender differences may be less salient.

6. Relative Income and Labor Supply

In the previous sections, we have shown that discontinuities in the distribution of households by the wife's share of income are widespread, are significantly larger than previously documented, and can be partially explained by observable household characteristics or matching patterns. In

this section, we turn to labor supply decisions within the household to better understand how relative earnings relate to how couples divide their time, especially with respect to labor force participation.

6.1. Labor Force Participation

We conduct an exercise that is analogous to that in Section IV of Bertrand, Kamenica, and Pan (2015). Here, we are interested in understanding whether couples in which the wife's potential labor market earnings exceed those of the husband respond by simply removing the wife from the labor market, which would represent a strong form of conformity to traditional gender norms.

For this exercise, we expand the sample to include couples where the wife has zero labor income while still requiring the husband to have positive labor income. We estimate each woman's potential labor market earnings following Bertrand, Kamenica, and Pan (2015). We begin by assigning women to demographic groups based on their ethnicity (nonindigenous and indigenous), five-year age bins, their educational level, and their state of residence. Then, for each woman i in household h belonging to group g , we compute the p th percentile of earnings for women with positive labor income in group g , denoted as $w_{i,g}^p$, where $p \in \{5, \dots, 95\}$. Then, for a husband with observed income $husbIncome_h$, we define $PrWifeEarnsMore_{ih} = \frac{1}{19} \sum_p \mathbf{1}\{w_{i,g}^p > husbIncome_h\}$, which reflects the likelihood that a woman with her demographic profile would outearn her husband based on the earnings distribution of similar working women. The mean of $PrWifeEarnsMore_{ih}$ is 0.289 for the sample, which is similar to the value reported by Bertrand, Kamenica, and Pan (2015) for the 2010 American Community Survey (ACS) in the United States. Then, we estimate the following model:

$$wifeLFP_{ih} = \alpha_0 + \beta_1 PrWifeEarnsMore_{ih} + \beta_2 \log husbIncome_h + \mathbf{w}_{i,g}^p \Phi + \mathbf{X}_{ih} \Gamma + \varepsilon_{ih} \quad (2)$$

where $\mathbf{w}_{i,g}^p \Phi$ are controls for the wife's potential income at each of the vigintiles and $\mathbf{X}_{ih} \Gamma$ include controls for the wife's and husband's education, race, and state of residence fixed effects. Standard errors are clustered at the woman's demographic group level. The coefficient, β_1 , as displayed in the table, represents the effect of the probability that the wife outearns her husband moving from 0 to 1. When discussing the results below, we scale the coefficient to a one-standard-deviation change for ease of interpretation.

Table 3 presents the estimates obtained. In the baseline specification, we find that a one-standard-deviation increase in the probability that the wife outearns her husband is associated with a 1.1-percentage-point decrease in her probability of participating in the labor force. The negative coefficient, while consistent with the idea that couples may conform to traditional gender norms, is 75% smaller in magnitude than the effect estimated by Bertrand, Kamenica, and Pan (2015).

In Column (2), we introduce a cubic polynomial in the log of the husband’s earnings to flexibly control for household income. In doing so, the estimate obtained becomes positive. One interpretation is that, absent these controls, the negative association between the wife’s earning potential and labor force participation partially reflects the notion that women who are married to lower-earning husbands are both more likely to outearn them and more likely to stay out of the labor force for financial or other reasons. Once we account for the nonlinear relationship between the husband’s income and the wife’s labor supply, the residual variation in the wife’s earning potential is positively associated with her labor market participation, potentially reflecting stronger labor market attachment among higher potential earnings. Figure A9 supports this interpretation, showing a strong positive relationship between labor force participation rates and the median income within a demographic group. Nonetheless, while statistically significant, this relationship is relatively small: a one-standard-deviation increase in the likelihood of a woman outearning her husband is associated with an increase of 0.3 percentage points (1.3% of the mean) in her likelihood of participating in the labor force. In Columns (3) and (4), we further include controls for the presence of children in the household, and the coefficients remain relatively stable, further suggesting that parental status is not a main determinant of labor decisions in this context.

Importantly, the average labor force participation in our sample among married women, 28%, is significantly smaller than that (78%) reported in Bertrand, Kamenica, and Pan (2015), which could affect the interpretation of the results.⁵ Notably, the earnings distribution used to calculate potential income is estimated via realized income among working women, which may not capture the unobserved characteristics of nonworking women in the same group. In contexts of low female labor force participation, such as Mexico, selection into the labor market likely reflects differences in preferences and, potentially, gender norms (i.e., Cavapozzi, Francesconi, and Nicoletti 2021).

⁵ The labor force participation rate for married women in our sample is similar to that estimated by Bhalotra and Fernández (2024).

This possibility would likely lead to an upward-biased measure of potential income for nonworking women, and thus increase the likelihood that nonworking women outearn their husbands. This reason may explain why we observe only minor effects of predicted relative income on labor force participation.

Table 3: Potential income and female labor force participation

	(1)	(2)	(3)	(4)
<i>PrWifeEarnsMore</i>	-0.041*** (0.003)	0.013*** (0.004)	0.016*** (0.004)	0.009** (0.004)
Mean of <i>wifeLFP</i>	0.283	0.283	0.283	0.283
S.D. of <i>PrWifeEarnsMore</i>	0.285	0.285	0.285	0.285
<i>N</i>	2,351,606	2,351,606	2,351,606	2,351,606
<i>R</i> ²	0.119	0.120	0.121	0.129
<i>Additional controls:</i>				
Cubic in <i>logHusbIncome</i>		X	X	X
Children in the HH			X	X
Children under 5 in the HH				X

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. This table reports the relationship between the wife's predicted likelihood of outearning her husband and her labor force participation. The sample includes married couples in which the husband has positive labor income. The variable *PrWifeEarnsMore* reflects the fraction of percentile earnings thresholds at which a woman with a given demographic profile outearns her husband based on the distribution of labor earnings among similar working women. The dependent variable is an indicator for whether the wife participates in the labor force. All specifications control for the wife's and husband's education, race, and state fixed effects. Columns (2)–(4) sequentially add controls: a cubic polynomial in log husband income and indicators for whether the couple has children in the household and whether the couple has children under 5. Standard errors are clustered at the woman's demographic group level.

6.2. Gap between Potential Income and Realized Income

If couples make labor and earnings decisions influenced by gender norms, another possible margin of adjustment may be to reduce the wife's earnings so that she earns less than her husband does.

To understand this possibility, for a woman i in household h , we define a variable $incomeGap_{ih} = \frac{wifeIncome_{ih} - wifePotential_{ih}}{wifePotential_{ih}}$, where $wifePotential_{ih}$ is the mean of the potential income distribution for a woman's demographic group, as described in the previous section. This captures

distortions in actual earnings relative to expected earnings among women who are active in the labor market. To minimize the influence of extreme outliers, we restrict the sample to women between the 1st and 99th percentiles of the $incomeGap_{ih}$ distribution. This analysis follows the same structure as that in Section 5.1. The outcome in Table 4 is $incomeGap_{ih}$ instead of $wifeLFP_{ih}$.

Table 4: Potential income and the wife's realized earnings

	(1)	(2)	(3)	(4)
<i>PrWifeEarnsMore</i>	-0.167*** (0.008)	-0.123*** (0.008)	-0.114*** (0.008)	-0.115*** (0.008)
Mean of <i>incomeGap</i>	-0.045	-0.045	-0.045	-0.045
S.D. of <i>PrWifeEarnsMore</i>	0.285	0.285	0.285	0.285
<i>N</i>	613,990	613,990	613,990	613,990
<i>R</i> ²	0.144	0.149	0.152	0.153
<i>Additional controls:</i>				
Cubic in <i>logHusbIncome</i>		X	X	X
Children in the HH			X	X
Children under 5 in the HH				X

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. This table reports the relationship between the wife's predicted likelihood of outearning her husband and the gap between her realized and potential earnings. The dependent variable is defined as the difference between observed and predicted earnings (based on demographic group averages), normalized by potential earnings. The sample is restricted to women in the labor force and excludes extreme outliers by keeping observations between the 1st and 99th percentiles of the outcome variable. All specifications include controls for the wife's and husband's education, race, and state fixed effects. Columns (2)–(4) sequentially add a cubic polynomial in log husband income and indicators for whether there are children in the household and whether any children are under 5. Standard errors are clustered at the woman's demographic group level.

The estimate obtained from the baseline specification, presented in Column (1), shows that a one-standard-deviation increase in the probability that a wife outearns her husband increases the gap between her realized income and potential income by 4.8 percentage points. This estimate is similar in magnitude to that presented by Bertrand, Kamenica, and Pan (2015) using data from the 2008-2010 ACS. However, once we add controls for a cubic polynomial in the husband's income and the presence of children in the household, the coefficient becomes smaller: a one-standard-

deviation increase in the probability of a wife outearning her husband increases the gap by 3.3 percentage points.

This measure of the income gap, which follows directly from Bertrand, Kamenica, and Pan (2015), is based on the mean of the potential income distribution within each demographic group. As income distributions are typically right skewed, the use of the mean may overstate the potential earnings for many women, particularly those in lower-income groups. Thus, the income gap would be mechanically inflated, especially among those with below-median earnings. Thus, in Table A7, we present an alternative version where the income gap is measured according to the distance to the median income within a woman's demographic group. On average, the gap between a woman's earnings and the median income for her demographic group is positive. Thus, the coefficient of *PrWifeEarnsMore* becomes smaller in magnitude and becomes statistically insignificant when we add controls for the presence of children in the household.

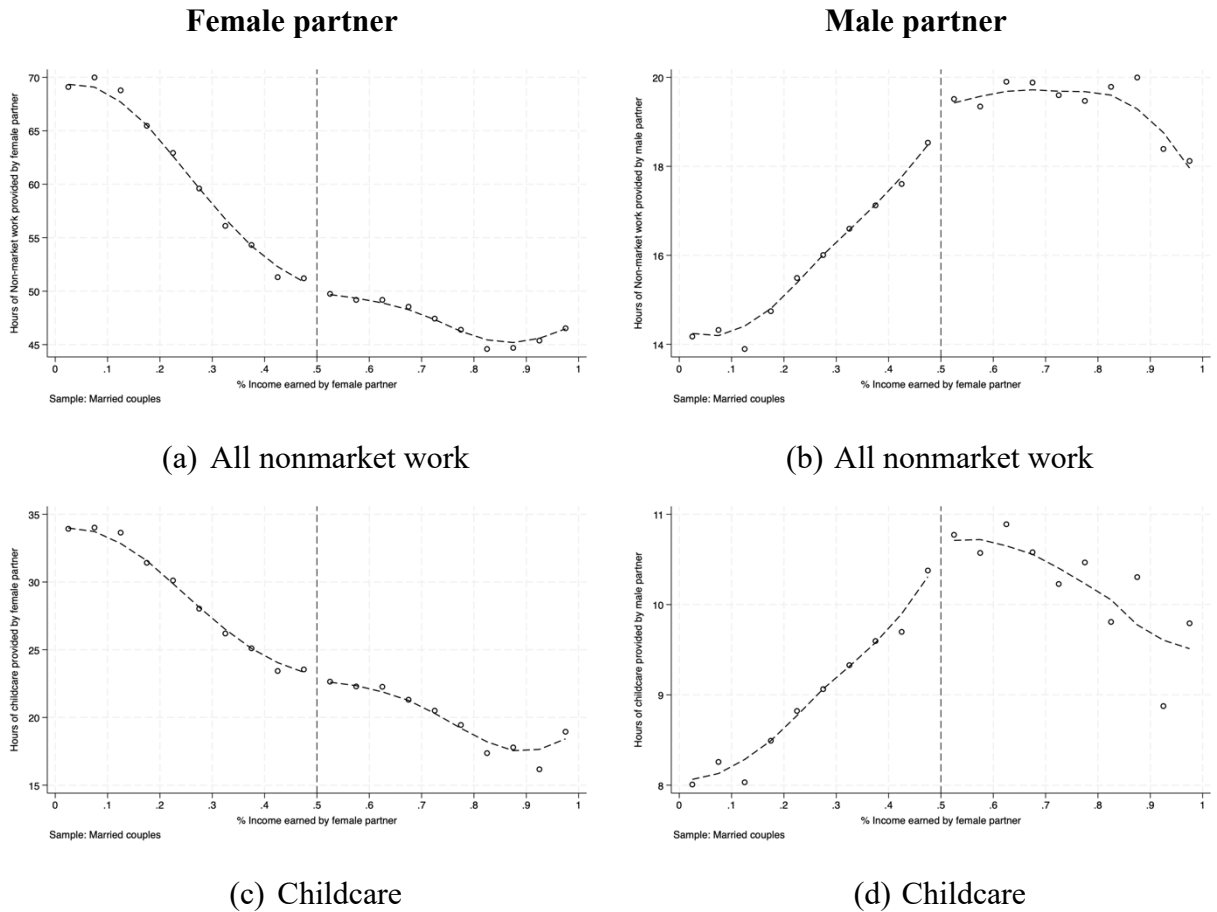
6.3. Nonmarket Labor Supply

In this section, we explore the relationship between relative income within households and the provision of nonmarket labor. The 2015 Mexican Intercensal Survey included, for the first time, an item for the distribution of hours spent on nonmarket activities across several categories. We provide a detailed description of each category in Appendix B. We focus on two outcomes: total nonmarket work (including childcare) and hours spent on childcare for households with children. We use the same sample as that in our main analysis, which includes only different-sex married couples where both partners have positive labor earnings and excludes equal-earning couples. In Figure A10, we show that our analysis results remain qualitatively unchanged by including equal-earning couples. Notably, however, both men and women in equal-earning couples spend less time on nonmarket work than do those around the 0.5 threshold (as expected if they are both working full time).

We begin by documenting patterns in the distribution of hours supplied on nonmarket labor according to the wife's relative earnings. In Panels (a) and (b) of Figure 6, we show that there are no discontinuities at the 0.5 threshold in the number of hours of nonmarket labor provided by the female partner. For most of the relative income range, the wife's nonmarket labor supply monotonically decreases, reversing the pattern only when she earns more than 90% of the household's income. For husbands, we show a clear change in slope at the 0.5 threshold. While

the husband is the primary earner, his nonmarket labor supply monotonically increases as the wife's income share increases. However, when the wife becomes the primary earner, the husband's nonmarket labor supply is either stable or decreases. Across the full relative income range, women remain the main providers of nonmarket labor, supplying more than twice the number of hours as their husbands do, even when they are the breadwinners.

Figure 6: Relative income and the distribution of households according to hours spent on nonmarket work



Notes: Data are from the 2015 Mexican Intercensal Survey. The sample includes different-sex married couples where both spouses are between 18 and 65 years old and report positive labor income. Panels (a) and (b) show average hours spent on all nonmarket work by the female and male partner, respectively, across the distribution of relative income. Panels (c) and (d) focus specifically on time allocated to childcare. Each point represents the mean within a 0.05-wide bin of relative income, defined as the share of household earnings contributed by the female partner. The vertical line marks the 0.5 threshold, and the curves show LOWESS-smoothed fits.

Panels (c) and (d) of Figure 6 replicate these patterns, focusing specifically on hours spent on childcare. The female partner's childcare time decreases with her income share, whereas the male partner's time increases up to the 0.5 threshold but flattens or slightly declines beyond it. While

the magnitude of childcare hours is smaller than that of total nonmarket work hours, the behavioral patterns around the threshold are remarkably similar, suggesting that the discontinuity reflects a broader resistance to shifting household responsibilities, even within a narrower domain such as childcare. Remarkably, in this case, the distribution of hours dedicated to childcare by men is always below that by women.

One advantage of our data is the inclusion of time-use information for all adult respondents in the household, which was not present in Bertrand, Kamenica, and Pan (2015). This information allows us to formally test the relationship between relative income and the distribution of nonmarket labor in households. We estimate the following equation:

$$\begin{aligned} gapNonMarketWork_h = & \alpha_0 + \beta_1 wifeEarnsMore_h + \beta_2 relIncome_h \\ & + \beta_3 wifeEarnsMore_h \times relIncome_h \\ & + \beta_4 \log HHIncome_h + \mu_s + \varepsilon_h \end{aligned} \quad (3)$$

where $gapNonMarketWork_h$ is the number of hours of nonmarket labor provided by the wife minus the number of hours of nonmarket labor provided by the husband. β_1 represents the average difference in the gap in households where the wife is the primary earner; β_2 captures the evolution of the gap across the relative income distribution for households where the husband is the primary earner; and β_3 is the change in slope once the wife becomes the primary earner. We also include a control for the log of total household income and state fixed effects μ_s .

Table 5 shows that, on average, women supply 36 more weekly hours of nonmarket work than their husbands do. This gap is larger for households with children (41 hours) and smaller for households without children (21 hours). For childcare specifically, women supply almost 20 more hours than their husbands do. The coefficient of $relIncome$ is negative, suggesting that as the woman's share of household income increases, the gender gap in nonmarket work becomes smaller, which is consistent with Beckerian expectations of household specialization. Similarly, in households where the wife is the primary earner, the overall gap is smaller but still positive.

Interestingly, the positive coefficient of the interaction term $wifeEarnsMore \times relIncome$ suggests that once the woman becomes the primary earner, increases in her share of household income are associated with a slower convergence in hours of nonmarket labor supply. While this pattern is broadly consistent with that reported by Bertrand, Kamenica, and Pan (2015), we do not find evidence that women who outearn their husbands increase their unpaid household labor—

potentially to “compensate” for violating gender norms—as they document for the U.S. Instead, the gap declines continuously, although at a slower rate, suggesting a more nuanced norm enforcement.

Table 5: Relative income and gender differences in nonmarket work

Sample:	All households	Households without children	Households with children	
Outcome:	Female–male nonmarket work hours gap			Female–male childcare hours gap
	(1)	(2)	(3)	(4)
<i>wifeEarnsMore</i>	-25.650*** (0.881)	-17.044*** (1.054)	-27.597*** (1.133)	-14.841*** (0.877)
<i>wifeEarnsMore X relIncome</i>	0.545*** (0.015)	0.356*** (0.018)	0.582*** (0.019)	0.325*** (0.015)
<i>relIncome</i>	-0.646*** (0.006)	-0.339*** (0.008)	-0.696*** (0.007)	-0.424*** (0.005)
Mean of Dep. Var.	36.057	21.252	41.391	19.756
N	566,976	150,150	416,826	416,826

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. This table presents estimates of the relationship between household relative income and the gender gap in nonmarket labor hours, as measured by the difference between hours supplied by the wife and the husband. The key explanatory variable is a binary indicator for whether the wife is the primary earner, interacted with the continuous measure of her share of household earnings. Column (1) includes all households; Columns (2) and (3) stratify by the presence of children in the household. Column (4) restricts the sample to households with children and focuses on hours spent on childcare. All regressions include controls for log household income and state fixed effects. The sample is restricted to different-sex couples with positive labor earnings and excludes equal-earning couples.

7. Validity and Extensions

To assess the generalizability of our findings, we replicate our main analyses using data from the 2010 Brazilian Census (10% sample) and the 2023 Panamanian Census (full count). We apply consistent sample restrictions and estimation strategies across all three countries. While the Mexican data remain uniquely rich in offering time-use measures, the Brazilian and Panamanian Censuses still allow us to explore the distribution of relative earnings within households and to detect potential discontinuities around the 50% threshold.

In Appendix C, we present the results for Brazil, where we observe patterns that are broadly similar to those found for Mexico. For different-sex couples, we again find a sharp drop at the 50%

threshold in the wife's share of household income (Figures C1-C2 and Table C1), larger than those discontinuities found in Europe and the U.S. and comparable to that in Mexico, thus reinforcing the idea that such discontinuities are not unique to Mexico. These results are consistent with the findings of existing research on labor force participation and gender norms in Brazil (Codazzi et al., 2018), which documents the persistence of unequal labor market dynamics within households.

Regarding Mexico, similar discontinuities are also found over time (Figure C3) in couples with and without children (Figure C4), among unmarried couples (Figure C5), and among female-headed households (Figure C9).

We also detect a significant discontinuity for male same-sex couples but not for female same-sex couples when focusing on the distribution of the share of total household labor income earned by the nonhousehold head (Figure C6). Furthermore, we find visual evidence of discontinuities for both male and female same-sex couples when examining the distribution of the share of income earned by the younger partner (Figure C7). In all cases, the discontinuities are not statistically significant (Table C3), likely due to the sample size, which further reinforces the need for future research to explore intrahousehold dynamics in same-sex couples by leveraging larger datasets.

The Brazilian data further allow us to explore the potential influence of the marriage type. In Latin America, religiosity is often linked to more traditional gender norms (Vaggione & Machado, 2020), which may shape labor market behavior and household dynamics. We compare couples reporting religious marriages (either religious only or religious and civil) to those with civil marriages only. We find no meaningful differences in the distribution of relative earnings by marriage type (Figure C11). This finding suggests that formal marriage arrangements rooted in religious practice are not the primary drivers of the observed gaps.

Finally, we replicate the main results using the 2023 Panamanian Census. These analyses are limited to different-sex couples, as the data in the Panamanian Census do not allow for the identification of same-sex partnerships. The distribution of relative earnings in Panama closely mirrors the patterns observed in Mexico and Brazil, including a drop at the 50% threshold (Figures D1-D2 and Table D1). Taken together, these cross-country comparisons underscore the robustness of our findings across Latin America and suggest that these patterns are not idiosyncratic to a single country or a single institutional context.

8. Conclusion

This paper documents a sharp and persistent discontinuity in the distribution of relative income at the 0.5 threshold in Mexico, where the wife begins to earn more than her male partner does. The size of the discontinuity, which is substantially larger than that found in high-income countries, suggests strong underlying dynamics shaping intrahousehold earnings. We show that this pattern is robust across a wide set of specifications and household types, including couples with and without children, households headed by women, and households where the wife is older than her husband. Similar patterns emerge in other Latin American countries and partially in same-sex couples. We expand the discussion of relative household income beyond Northern Europe and North America, leveraging detailed time-use data and, for the first time, examining the income dynamics among same-sex couples. Despite these advances, we are still unable to fully determine whether the observed discontinuity at the 0.5 mark in the relative income distribution is driven primarily by gender norms or by other factors.

Some findings, such as the persistence of the discontinuity even after equal-earning couples are excluded and its persistence over time and across countries, suggest that the observed discontinuity is not entirely attributable to coworking arrangements or idiosyncratic confounding variables. However, other results paint a more nuanced picture. For instance, unlike previous U.S.-based research, we do not find consistent evidence that women increase their household work hours when they earn more than their male partners do. Additionally, the presence of a discontinuity among some same-sex couples (though not consistently across countries or couple types) suggests that gendered expectations may not be the only explanatory mechanism. These patterns could reflect a combination of internalized norms or other structural factors shaping household specialization. However, due to data limitations, we are unable to fully disentangle these mechanisms.

Another shortcoming of this study is the lack of data on sexual orientation and gender identity. As a result, we cannot distinguish bisexual individuals in either same-sex or different-sex couples, nor can we draw conclusions about couples that include transgender or nonbinary individuals. Since these individuals are likely to be gender nonconforming and to reject traditional norms, it would be particularly valuable to expand the analyses to these couples to better understand the role of gender norms in driving the discontinuity in relative income.

Collecting longitudinal data from Latin America would allow researchers to examine how income dynamics affect household outcomes such as fertility, the division of labor, and divorce, particularly when women earn more than their male partners do. Furthermore, linking survey data with administrative and tax records would improve the accuracy of income measures and reduce measurement error. Finally, larger and more inclusive datasets are essential to gain a deeper understanding of same-sex couples: how they divide household labor, how these patterns evolve over time, and how they may shift after key life events such as becoming parents.

Our findings suggest that policies aimed at reducing the social or economic penalties associated with nontraditional household arrangements, such as women earning more than their partners do, could help ease constraints on household decision-making. As already emphasized by Bertrand, Kamenica, and Pan (2015), understanding how gender norms shape intrahousehold decisions on matters such as labor supply, childbearing, household production, marriage and divorce is important for policy-makers, especially in a world of rapidly declining fertility and marriage rates.

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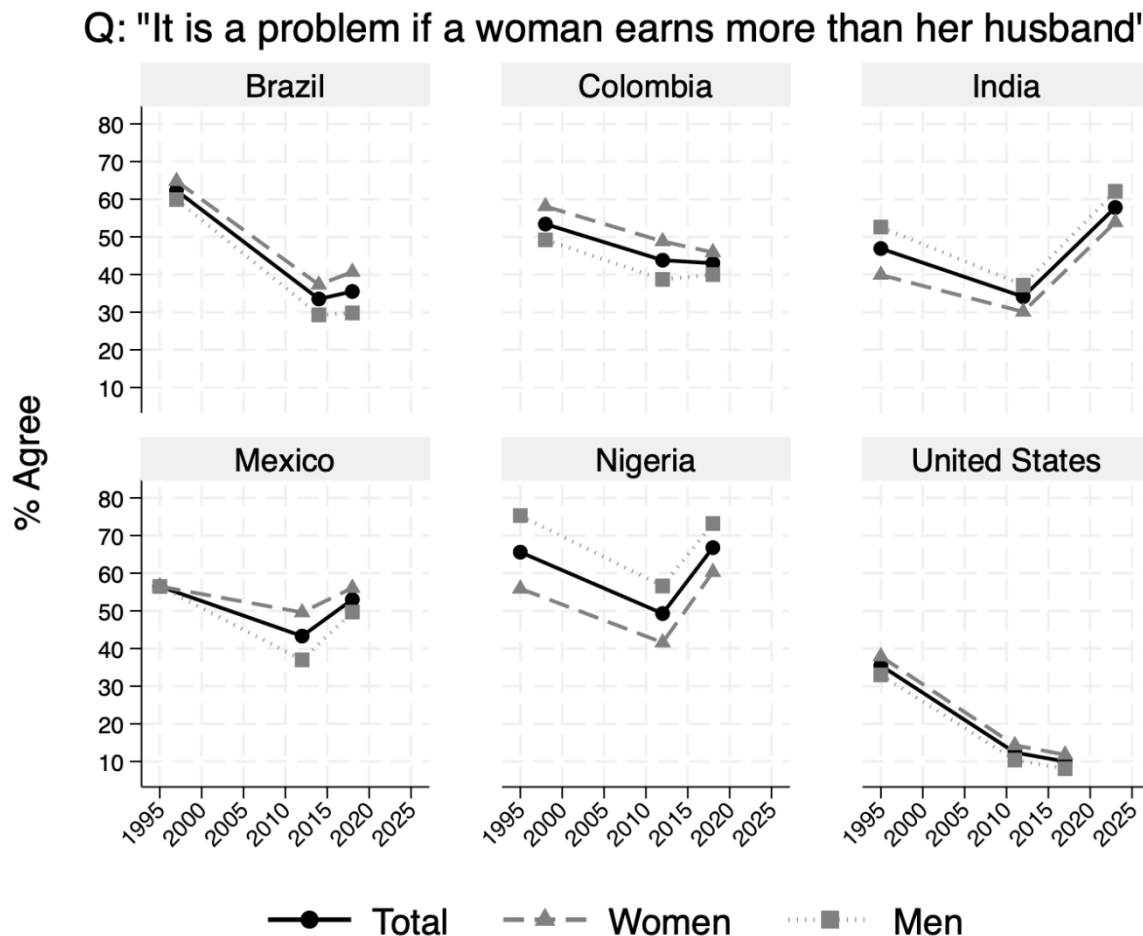
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**Online Appendix for “Relative Income and Gender Norms: Evidence from Latin America”
(NOT MEANT FOR PUBLICATION)**

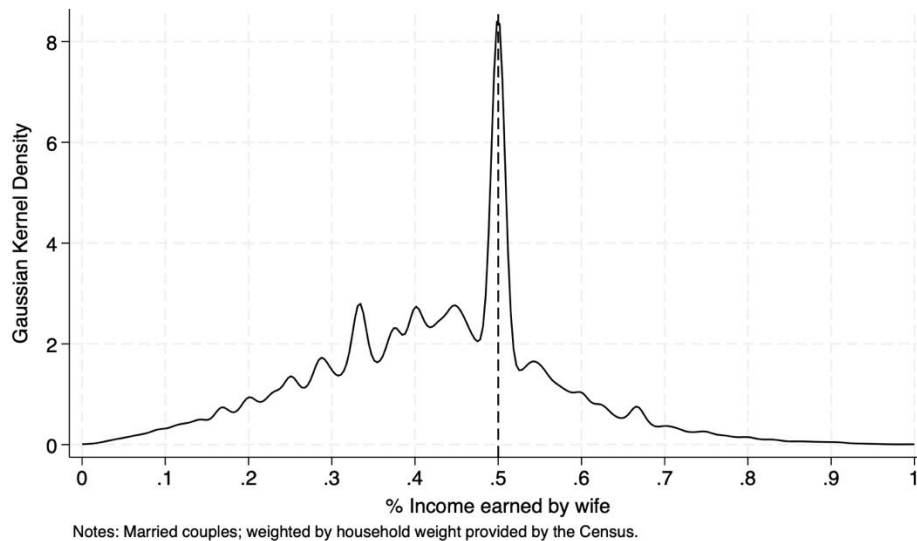
Appendix A. Supplemental Figures and Tables

Figure A1: Attitudes towards women outearning their husbands in Brazil and Mexico between 1995 and 2020

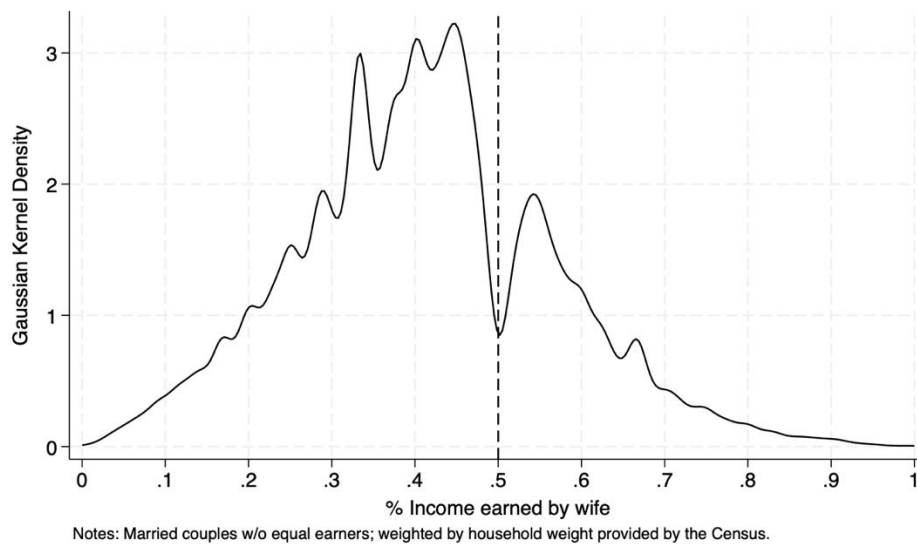


Notes: Data are from various waves (1995-2020) of the World Values Survey (WVS). Respondents were asked whether they agree with the following statement: “It is a problem if a woman earns more than her husband.” The figure reports the share of respondents agreeing separately by gender in Brazil, Colombia, India, Mexico, Nigeria, and the United States. Data for Panama are not available.

Figure A2: Kernel density of relative income—Mexico, 2015



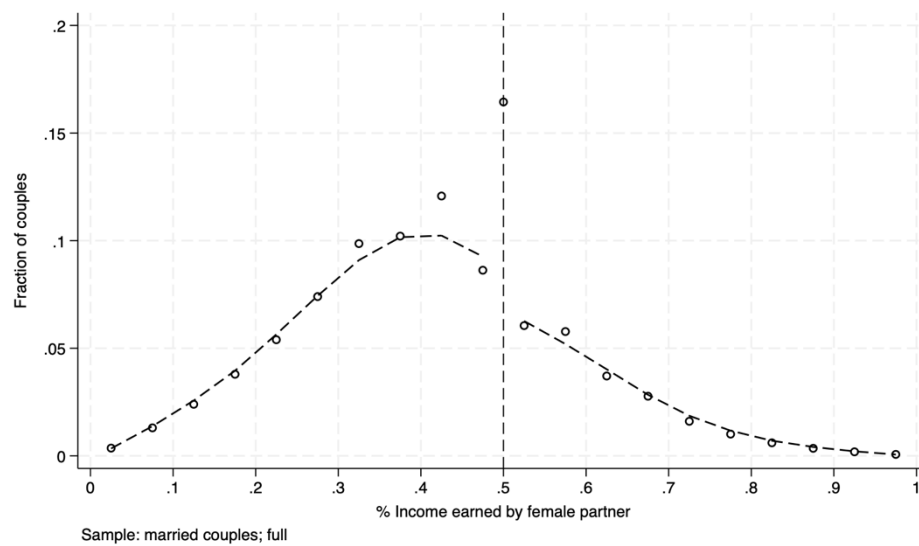
(a) Full sample



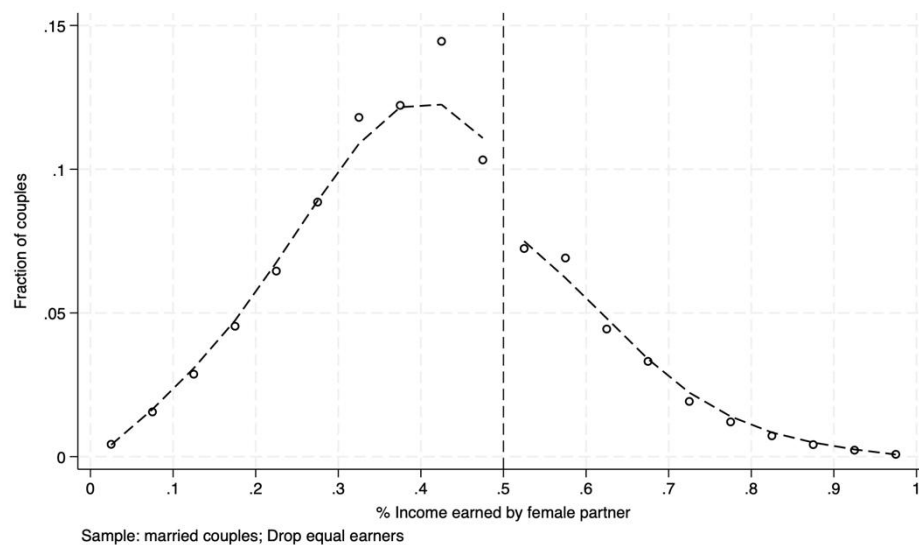
(b) Without equal earners

Notes: Data are from the 2015 Mexican Intercensal Survey. The sample includes different-sex married couples in which both spouses are between 18 and 65 years old and report positive labor income. Densities are estimated via a Gaussian kernel and household weights provided by the census. Panel (a) includes all couples; Panel (b) excludes equal earners. The vertical line at 0.5 marks the point at which the wife earns more than her husband does.

Figure A3: Distribution of relative income after adding random noise to individual income



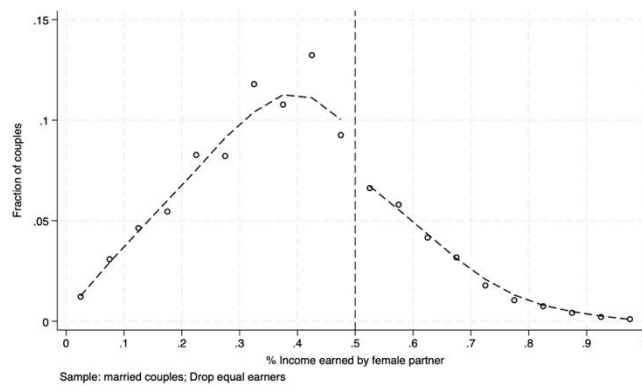
(a) Full sample



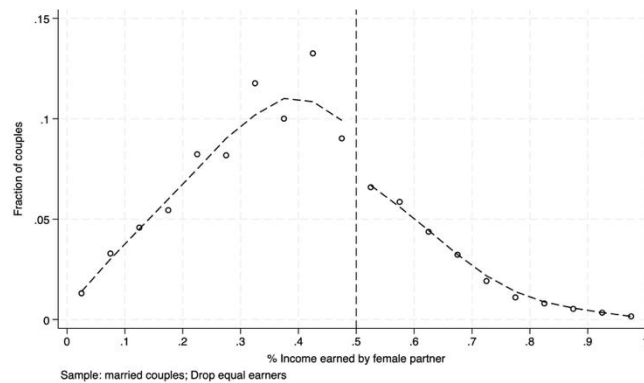
(b) Without equal earners

Notes: Data are from the 2015 Mexican Intercensal Survey. The sample includes different-sex married couples in which both spouses are between 18 and 65 years old and report positive labor income. We add random noise equal to $\pm 1\%$ of each individual's labor income before computing relative earnings. Panel (a) shows the full sample; Panel (b) excludes couples with exactly equal earnings. Each point represents the share of couples within a 0.05-wide bin of relative income. The vertical line marks the 0.5 threshold.

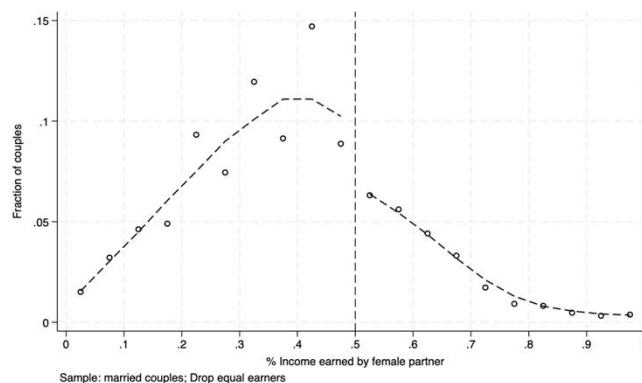
Figure A4: Distribution of the share of total household labor income earned by the wife in Mexico in 2000, 2010, and 2020



(a) Mexico (2000)



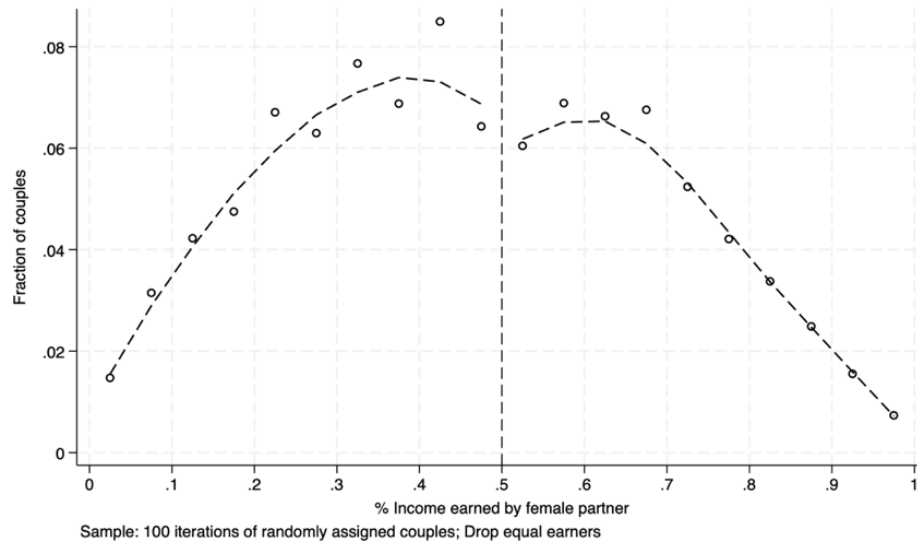
(b) Mexico (2010)



(c) Mexico (2020)

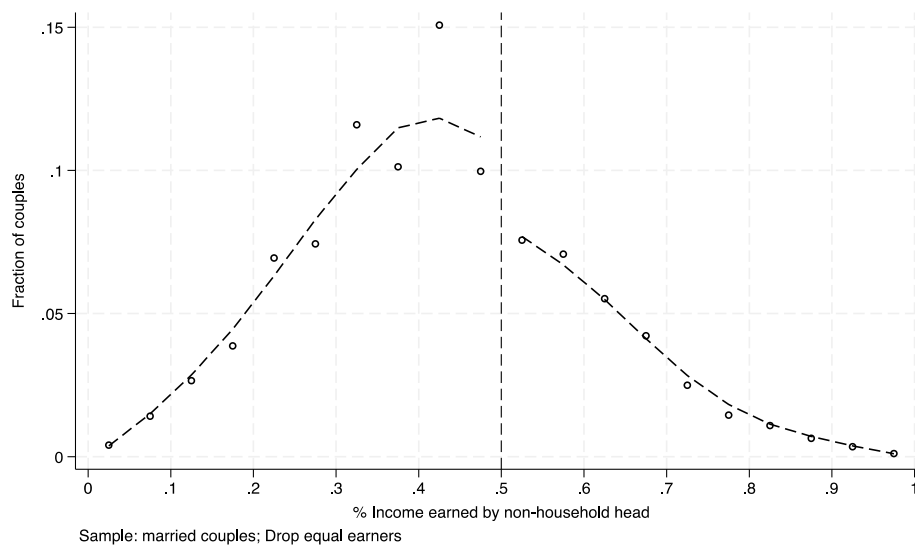
Notes: Data are from the 2000, 2010, and 2020 Mexican Censuses. The sample includes different-sex married couples in which both spouses are between 18 and 65 years old and report positive labor income. Couples with identical reported incomes are excluded. Each point represents the share of couples within a 0.05-wide bin of relative income earned by the wife. The vertical line marks the 0.5 threshold, and the curve shows a LOWESS-smoothed fit to the distribution.

Figure A5: Distribution of the relative income earned by the wife under random coupling

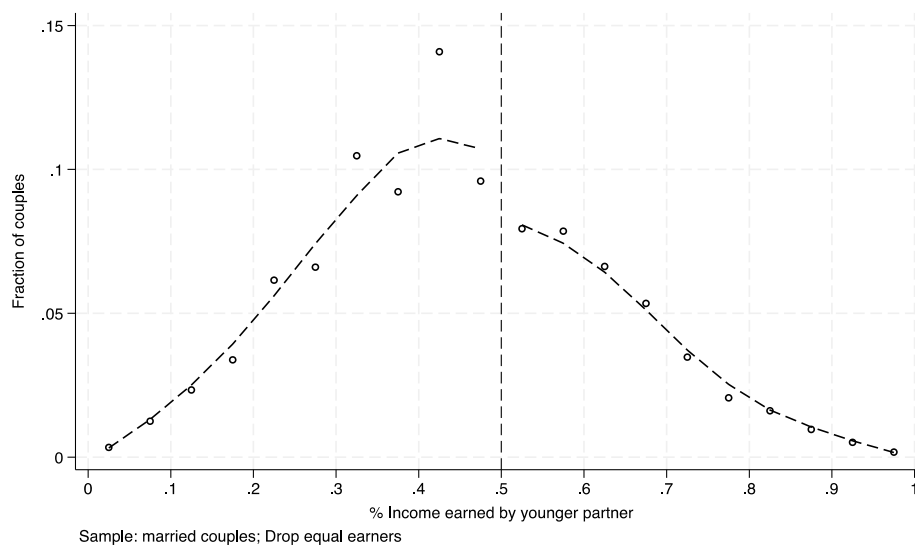


Notes: Data are from the 2015 Mexican Intercensal Survey. Each point represents the share of couples within a 0.05-wide bin of the wife's income share based on 100 iterations of random matching using different-sex couples. In each iteration, we randomly pair men and women drawn from the same sample as in Figure 1 and exclude equal-earning couples. The vertical line marks the 0.5 threshold, and the curve shows a LOWESS-smoothed fit to the simulated distribution.

Figure A6: Relative income earned by the younger partner and nonhousehold head



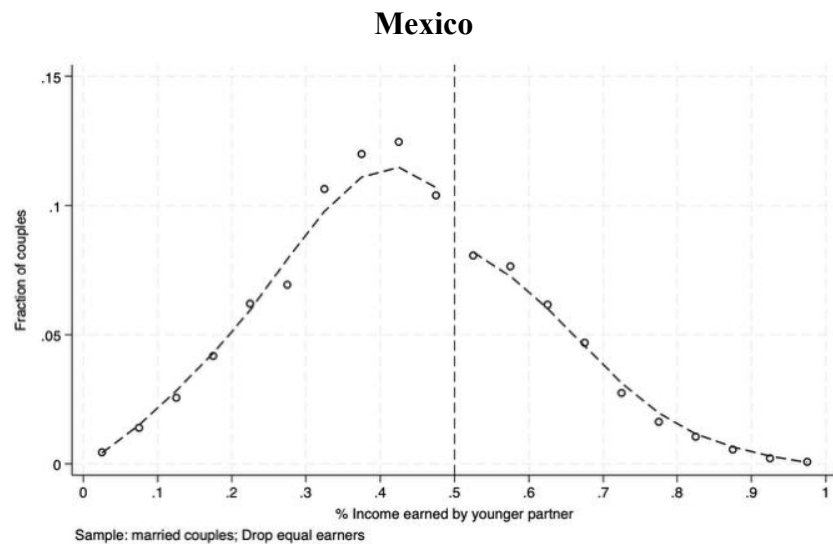
(a) Relative income earned by the nonhousehold head



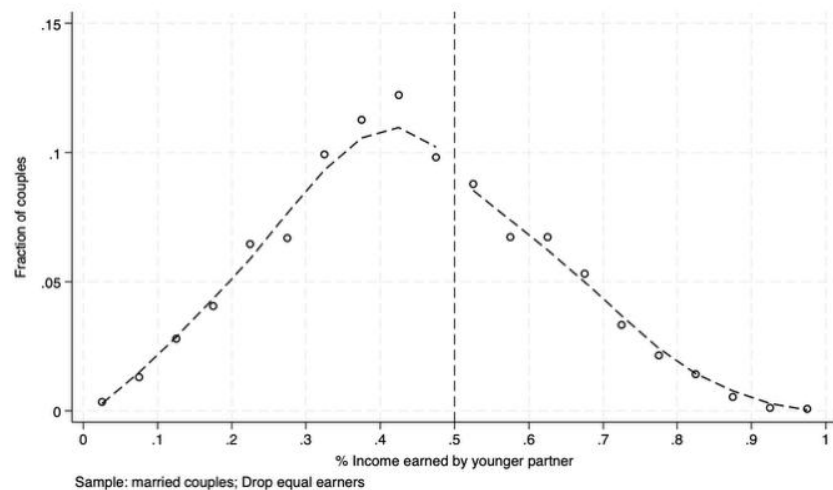
(b) Relative income earned by the younger partner

Notes: Data are from the 2015 Mexican Intercensal Survey. The sample includes different-sex married couples in which both spouses are between 18 and 65 years old and report positive labor income. Couples with identical reported incomes are excluded. Each point represents the share of couples within a 0.05-wide bin of relative income earned by (a) the nonhousehold head and (b) the younger partner. The vertical line marks the 0.5 threshold, and the curve shows a LOWESS-smoothed fit to the distribution.

Figure A7: Distribution of households according to relative income in households where the wife is older than her husband is



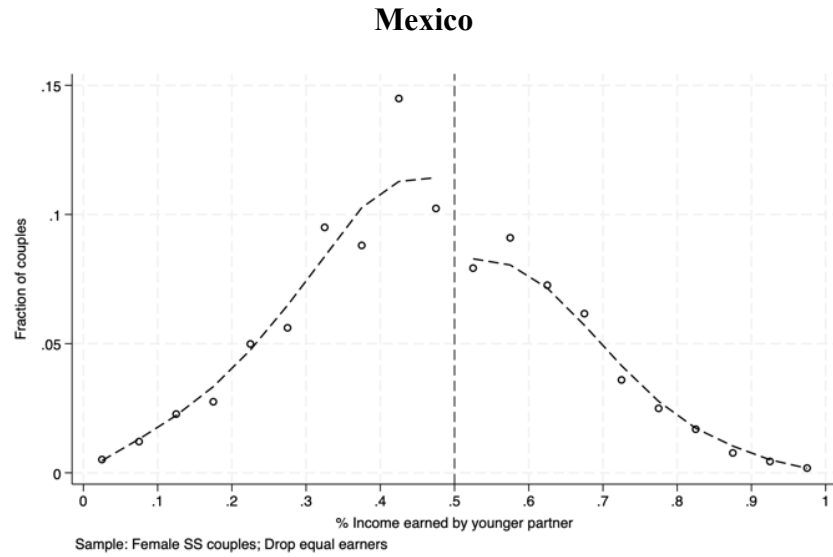
(a) Wife is older by >3 years



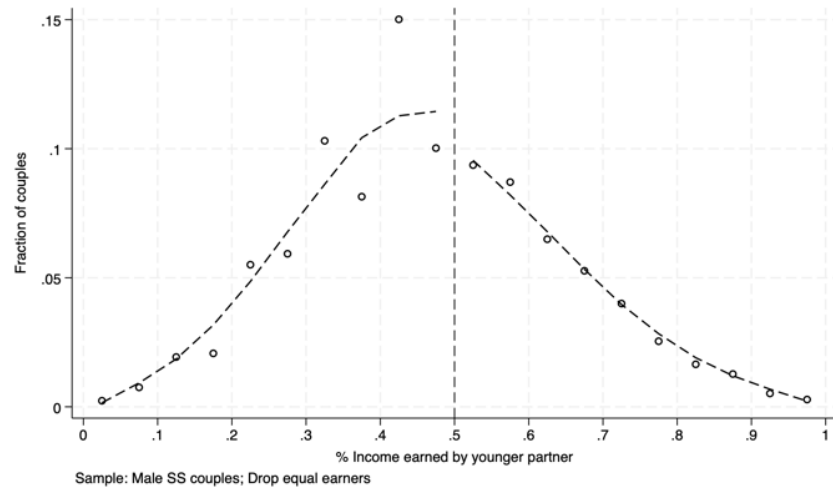
(b) Wife is older by >10 years

Notes: Data are from the 2015 Mexican Intercensal Survey. The sample includes different-sex married couples in which both spouses are between 18 and 65 years old and report positive labor income. Couples with identical reported incomes are excluded. Each point represents the share of couples within a 0.05-wide bin of relative income earned by the younger partner. Panel (a) restricts the sample to couples where the wife is more than 3 years older than the husband is; Panel (b) restricts the sample to those where she is more than 10 years older. The vertical line marks the 0.5 threshold, and the curve shows a LOWESS-smoothed fit to the distribution.

Figure A8: Distribution of the share of total household labor income earned by the younger partner in same-sex couples in Mexico



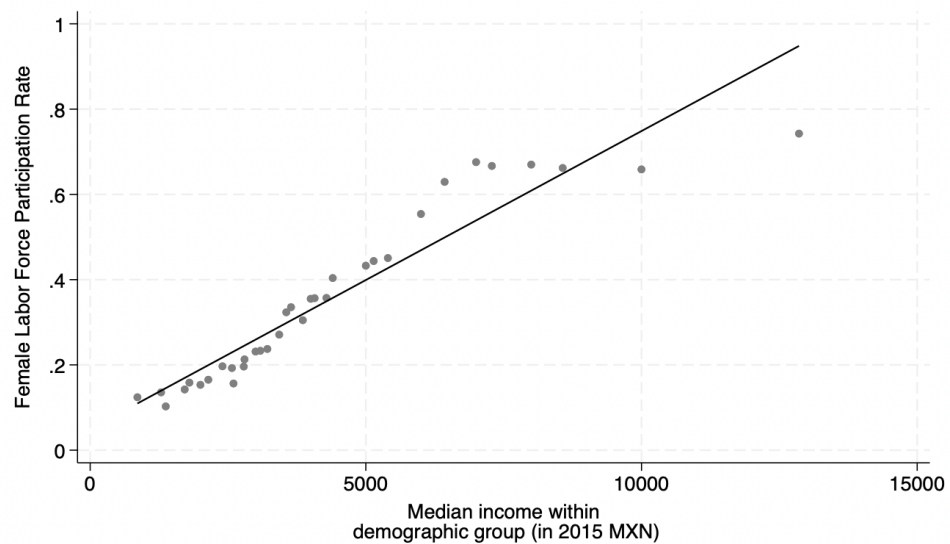
(a) Female same-sex couples



(b) Male same-sex couples

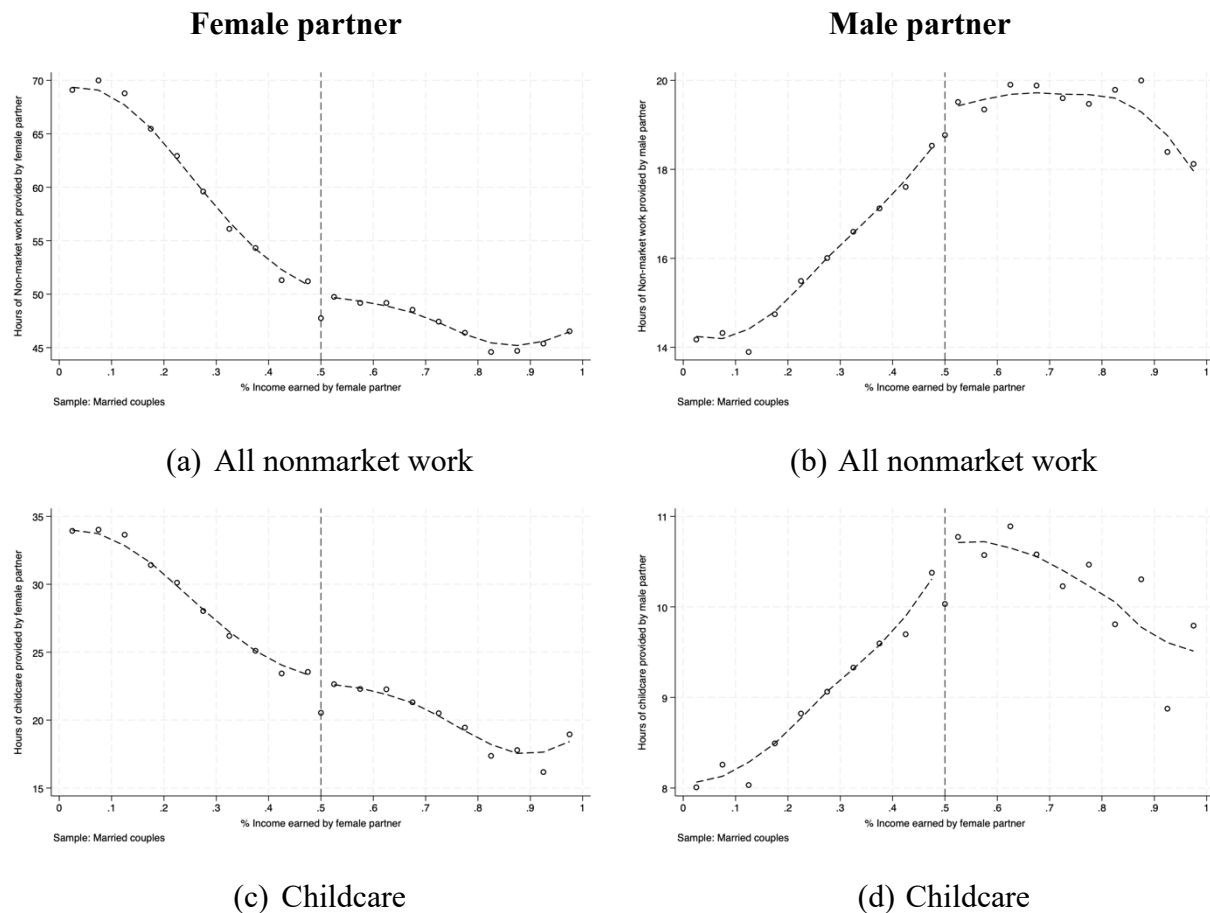
Notes: Data are from the 2015 Mexican Intercensal Survey. The sample includes same-sex couples in which both partners are between 18 and 65 years old and report positive labor income. Couples with identical reported incomes are excluded. Each point represents the share of couples within a 0.05-wide bin of relative income earned by the younger partner. Panel (a) includes female same-sex couples; Panel (b) includes male same-sex couples. The vertical line marks the 0.5 threshold, and the curve shows a LOWESS-smoothed fit to the distribution.

Figure A9: Labor force participation rate according to the median income in the demographic group



Notes: Each dot represents a demographic group defined by race, five-year age bins, education, and the state of residence in the 2015 Mexican Intercensal Survey. The horizontal axis shows the median monthly labor income of individuals in each group (in 2015 Mexican pesos), while the vertical axis shows the corresponding female labor force participation rate. The line displays the best linear fit.

Figure A10: Relative income and the distribution of households according to hours spent on nonmarket work—Including equal earners



Notes: Each panel plots the number of hours spent on nonmarket work (top row) or childcare (bottom row) by the female (left column) or male (right column) partner against the share of household labor income earned by the wife. Unlike the baseline analysis, these graphs include couples where both partners earn exactly the same amount. The sample includes married couples in Mexico in 2015.

Table A1: Differences between workers in the 0.5 mass point and surrounding areas

	Relative income range:	
	= .5 (3)	$\in (.4, .6) \setminus \{.5\}$ (4)
<i>Occupation</i>		
Agricultural workers	0.083	0.058
Teachers	0.109	0.081
Retail workers	0.219	0.148
<i>Industry</i>		
Agriculture	0.092	0.069
Wholesale/retail	0.238	0.169
Hotels/restaurants	0.103	0.078
Education	0.137	0.118
Income < Min. wage	0.070	0.039
Income < 1.5x Min. wage	0.202	0.135
Self-employed	0.377	0.195

Notes: This table presents summary statistics for individuals in couples where the wife earns exactly 50% of household income (Column (3)) and those in nearby ranges of the income distribution, excluding equal earners (Column (4)). The sample includes different-sex couples from the 2015 Mexican Intercensal Survey. The values correspond to the share of individuals in each category.

Table A2: McCrary test for discontinuity in the distribution of the woman's share of total household labor income with alternative cutoffs—Different-sex married partners

<i>All samples below exclude equal-earning couples</i>				
	Full sample	Excluding employers/self-employed	Excluding couples in the same occupation and industry	Excluding employers/self-emp./same occ. and industry
	(1)	(2)	(3)	(4)
Panel A: 0.5				
log distance at 0.5	-0.220*** (0.010)	-0.248*** (0.012)	-0.176*** (0.010)	-0.200*** (0.013)
Panel B: 0.49999				
log distance at 0.49999	-0.224*** (0.010)	-0.250*** (0.012)	-0.179*** (0.010)	-0.200*** (0.013)
<i>N</i>	362,030	211,517	331,978	191,820

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. McCrary test for discontinuity in the distribution of the woman's share of total household labor income at alternative thresholds (0.5 and 0.49999). The sample includes different-sex married couples from the 2015 Mexican Intercensal Survey, excluding equal-earning couples.

Table A3: McCrary test for discontinuity in the distribution of the woman's share of total household labor income—By parental status

<i>All samples below exclude equal-earning couples</i>				
	Full sample	Excluding employers/self-employed	Excluding couples in the same occupation and industry	Excluding employers/self-emp./same occ. and industry
	(1)	(2)	(3)	(4)
Panel A: Households with children				
log distance at 0.50001	-0.238*** (0.011)	-0.267*** (0.014)	-0.193*** (0.012)	-0.215*** (0.015)
<i>N</i>	269,205	162,588	247,050	147,322
Panel A: Households without children				
log distance at 0.50001	-0.156*** (0.020)	-0.168*** (0.025)	-0.123*** (0.021)	-0.122*** (0.027)
<i>N</i>	92,825	87,579	84,928	44,498

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. Each cell reports the estimated discontinuity in the density of the woman's share of total household labor income via the McCrary (2008) test. The dependent variable is the log difference in density just above versus just below the threshold. All samples exclude couples with exactly equal earnings. Panel A restricts the sample to households with children; Panel B to those without. Column (1) includes the full sample of different-sex married couples. Column (2) excludes self-employed and employer couples. Column (3) excludes couples where both spouses work in the same occupation and industry. Column (4) excludes both self-employed/employers and couples in the same occupation and industry. Standard errors are in parentheses.

Table A4: McCrary test for discontinuity in the distribution of the woman's share of total household labor income—Different-sex unmarried partners

<i>All samples below exclude equal-earning couples</i>				
	Full sample	Excluding employers/self-employed	Excluding couples in the same occupation and industry	Excluding employers/self-emp./same occ. and industry
	(1)	(2)	(3)	(4)
log distance at 0.50001	-0.247*** (0.015)	-0.289*** (0.018)	-0.205*** (0.016)	-0.236*** (0.020)
<i>N</i>	141,680	87,579	129,648	79,120

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. Each cell reports the estimated discontinuity in the density of the woman's share of total household labor income via the McCrary (2008) test. The dependent variable is the log difference in density just above versus just below the threshold. All samples exclude couples with exactly equal earnings. Column (1) includes the full sample of different-sex unmarried, cohabiting couples. Column (2) excludes self-employed and employer couples. Column (3) excludes couples where both spouses work in the same occupation and industry. Column (4) excludes both self-employed/employers and couples in the same occupation and industry. Standard errors are in parentheses.

Table A5: Summary Statistics for the 2000 Mexican Sample

<i>Couple type:</i>	Different-sex, married		Different-sex, cohabiting	
<i>Sex:</i>	Women	Men	Women	Men
<i>Individual-level variables</i>				
Age	36.066 (8.577)	38.801 (9.337)	33.712 (8.756)	36.597 (10.030)
High school diploma	0.426 (0.494)	0.414 (0.492)	0.223 (0.416)	0.227 (0.419)
College degree	0.182 (0.386)	0.219 (0.413)	0.072 (0.259)	0.091 (0.287)
Income	3324.29 (9942.09)	5440.48 (14002.17)	2422.26 (9431.17)	3728.65 (11417.25)
Self-employed	0.290 (0.454)	0.266 (0.442)	0.271 (0.444)	0.254 (0.435)
Household head	0.030 (0.290)	0.970 (0.442)	0.089 (0.285)	0.910 (0.285)
Older partner	0.173 (0.378)	0.701 (0.457)	0.270 (0.444)	0.636 (0.481)
<i>Household-level variables</i>				
Relative income	0.387 (0.172)		0.388 (0.167)	
Both self-employed	0.113 (0.317)		0.107 (0.309)	
Same occupation and industry	0.141 (0.141)		0.146 (0.353)	
Any children in the HH	0.689 (0.463)		0.709 (0.454)	
Any children <5 in the HH	0.347 (0.476)		0.380 (0.485)	
Households	191,040		41,326	

Notes: Summary statistics for different-sex married and cohabiting couples in the 2000 Mexican Census, excluding equal-earning couples. Means and standard deviations (in parentheses) are shown for individual- and household-level variables separately by sex. Household-level variables refer to characteristics of the couple or household. “Older partner” indicates the share of individuals who are older than their partner is. “Relative income” refers to the woman’s share of total household labor income.

Table A6: McCrary test for discontinuities in the distribution of the nonhousehold head/younger partner's share of total labor earnings—Same-sex partners

	log distance at 0.50001	
	Female S.S. households (1)	Male S.S. households (2)
Panel A: Nonhousehold head partner		
All dual-earner couples	-0.250** (0.124)	0.183 (0.141)
N	2,726	2,125
Panel B: Younger partner		
All dual-earner couples	-0.230* (0.125)	-0.008 (0.140)
N	2,726	2,125

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. Each cell reports the estimated discontinuity in the density of the share of total labor earnings contributed by the nonhousehold head or younger partner in same-sex couples via the McCrary (2008) test. The dependent variable is the log difference in density just above versus just below the 50% threshold. All samples are restricted to dual-earner same-sex couples. Panel A defines the reference partner as the household head, whereas Panel B defines the reference partner as the older partner. Standard errors are in parentheses.

Table A7: Earnings potential and realized income of the wife—Using the median of the potential income distribution

	(1)	(2)	(3)	(4)
<i>PrWifeEarnsMore</i>	-0.064*** (0.011)	-0.024** (0.011)	-0.012 (0.011)	-0.013 (0.008)
Mean of <i>incomeGap</i>	0.129	0.129	0.129	0.129
<i>N</i>	616,556	616,556	616,556	616,556
<i>R</i> ²	0.158	0.167	0.170	0.170
<i>Additional controls:</i>				
Cubic in <i>logHusbIncome</i>		X	X	X
Children in the HH			X	X
Children under 5 in the HH				X

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. Each cell reports estimates from a regression of the income gap on the probability that the wife outearns her husband. The income gap is defined by the median of the potential income distribution for women with similar demographic characteristics. All specifications include fixed effects for the wife's demographic group. Additional controls are included as indicated. Standard errors are in parentheses.

Appendix B. Data Sources and Construction

B1. Data Sources

Country	Year	Source
Mexico	2000	Instituto Nacional de Estadística, Geografía y Informática (INEGI), provided by Ruggles et al., 2025
	2010	INEGI, provided by Ruggles et al., 2025
	2015	INEGI, available here: https://en.www.inegi.org.mx/programas/intercensal/2015/#microdata
	2020	INEGI, provided by Ruggles et al., 2025
Brazil	2000	Instituto Brasileiro de Geografia e Estatística (IBGE), provided by Ruggles et al., 2025
	2010	IBGE, provided by Ruggles et al., 2025
Panama	2000	Instituto Nacional de Estadística y Censo (INEC), provided by Ruggles et al., 2025
	2010	INEC, provided by Ruggles et al., 2025
	2023	INEC (full count version; restricted access)

B2. Variable descriptions

Sex reports whether the person was male or female. Our data do not allow us to distinguish between sex and gender. In all of our datasets, there are no flags indicating whether sex was imputed.

Each household contains an individual designated as the household head. All other household members report their relationship to the household head according to a predefined set of categories. Couples are identified when an individual reports being the spouse or partner of the household head. We define same-sex couples where both partners in a household (household head and spouse/partner) report having the same sex.

Age reports the respondent's age in years at the time of the interview.

Ethnicity and race. Ethnicity is a multidimensional concept that can be measured via a diverse set of approaches, including ethnic ancestry or origin, ethnic identity, cultural origins, nationality, race,

color, minority status, language, religion, or various combinations thereof. The countries in our sample asked individuals to self-identify, phrasing the question to include some of the concepts listed above. In Brazil, individuals could choose between *white, yellow, brown, black, or indigenous*. For those who do not self-identify as *indigenous*, a supplemental yes/no question was presented to ask whether they consider themselves indigenous. In Mexico and Panama, individuals were asked yes/no questions about belonging to any indigenous people or to the African-descendant community.

Education. We use discrete classifications that emphasize the highest level completed by the respondent. For Brazil, the options are *less than primary completed, primary completed, secondary completed, and university completed*. For Mexico, the options are *no education, preschool, primary completed, secondary completed, high school (general), high school (technical), vocational degree with primary completed, vocational degree with secondary completed, vocational degree with high school completed, university degree, master's degree, and doctoral degree*. For Panama, the options include *primary school incomplete, primary school complete, secondary school incomplete, 1st cycle of secondary complete, and 2nd cycle of secondary complete*.

Income is a continuous variable that indicates monthly labor income in the national currency. In Brazil, the variable refers to the respondent's earnings for his or her main job in July 2010 and does not include retirement, pensions, social programs, transfers, or other sources. In Mexico, labor income includes earnings from the respondent's main job. In Panama, income is measured in U.S. dollars and refers to monthly labor income.

Work position. In Brazil and Mexico, we define a couple as being in the same occupation and position if both individuals report working in the same occupation and in the same industry. The Panamanian Census did not collect information on occupation. Thus, we classify an individual's work position according to his or her response to the following statement: In your main job, [RESPONDENT] was: *employee/laborer, day laborer/farmhand, paid assistant, employer, self-employed worker, and unpaid worker*.

Marital status. In Brazil, respondents were given the following options: *married, separated, divorced, widowed, and single*. Respondents who reported being married were asked a subsequent question about the nature of their marital union. The possible categories were *civil and religious marriage, only civil marriage, only religious marriage, and consensual union*. In Mexico,

Household head. In Brazil, in 2010, the household head is defined as the person who is recognized as such by other household residents. The census enumerator was instructed to fill out who was recognized as the household head. In Mexico, the household head portion of the questionnaire reads as follows: “Please tell me the names of everyone who normally lives in this home, including young children and the elderly. Also include any domestic staff who sleep here. Start with the head of the household.” The Panamanian Census does not give any instructions on how to define the household head. Instead, respondents are just asked to fill out the individual information sheet starting with the household head.

[illegible]

II. Lista de personas

1. LISTA DE PERSONAS	2. INFORMANTE
<p>Por favor, dígame el nombre de todas las personas que viven normalmente en esta vivienda, incluya a las niñas y niños chiquitos y a las personas ancianas. También al personal doméstico que duerme aquí. Empiece con la jefa o jefe.</p> <p><i>ANOTE EL NOMBRE DE LAS PERSONAS EN CADA RENGLÓN</i></p>	<p><i>CIRCULE EL NÚMERO DEL INFORMANTE</i></p>
PERSONA 1 <i>JEFA O JEFE</i>	1
PERSONA 2	2
PERSONA 3	3
PERSONA 4	4
PERSONA 5	5
PERSONA 6	6

(b) Household questionnaire in the 2015 Mexican Intercensal Survey

IV. LISTA DE OCUPANTES DEL HOGAR				
A CONTINUACIÓN, ANOTAREMOS A LOS RESIDENTES HABITUALES DEL HOGAR. TENGA EN CUENTA QUE EL RESIDENTE HABITUAL ES LA PERSONA QUE VIVE HABITUALMENTE O DUERME LA MAYOR PARTE DEL TIEMPO EN LA VIVIENDA, ASÍ COMO AQUELLAS QUE TIENEN LA INTENCIÓN DE RESIDIR AQUÍ.				
DÍGAME LOS NOMBRES Y APELLIDOS DE TODAS LAS PERSONAS QUE RESIDEN HABITUALMENTE EN ESTE HOGAR, EMPEZANDO CON EL JEFE O JEFA Y CONTÍÑUE EN EL SIGUIENTE ORDEN: CÓNYUGE, LOS HIJOS(AS) SOLTEROS(AS) DE MAYOR A MENOR, LOS HIJOS(AS) CASADOS(AS) CON SUS CÓNYUGES E HIJOS, OTROS PARIENTES, LOS NO PARIENTES Y LOS MIEMBROS DEL SERVICIO DOMÉSTICO QUE RESIDEN HABITUALMENTE EN EL HOGAR.				
Persona N.º	1. Nombres y apellidos (La primera persona de la lista debe ser el jefe o la jefa del hogar)	2. Sexo		3. Edad
		Hombre	Mujer	Años cumplidos
01		<input type="radio"/> 1	<input type="radio"/> 2	<input type="text"/> <input type="text"/> <input type="text"/>
02		<input type="radio"/> 1	<input type="radio"/> 2	<input type="text"/> <input type="text"/> <input type="text"/>

(c) Household questionnaire in the 2023 Panamanian Census

B3. Time-use data in Mexico

In 2015, the Mexican Intercensal Survey included questions regarding time use in household-related activities. All individuals over 12 years old were asked to estimate the number of hours, between 0 and 140, spent on the following categories:

In the past week, without getting paid, how many hours have you dedicated to:	Categories	Possible range
	Attending to individuals with special needs (help with food, movement, medications, etc.)	0-140 hours
	Attending to infirm individuals who require special needs (help with food, movement, medications, etc.)	0-140 hours
	Attending to a healthy child under 6 years old (children, grandchildren, nieces/nephews; help with food, dressing, taking them to school, etc.)	0-140 hours
	Attending to a healthy child 6-14 years old (children, grandchildren, nieces/nephews; help with food, dressing, taking them to school, etc.)	0-140 hours
	Attending to an individual over 60 years old who requires continuous care? (parents, grandparents; help with food, doctor appointments, dressing, etc.)	0-140 hours
	Preparing or serving food to your family	0-140 hours
	Cleaning your home, washing/ironing your family's clothes	0-140 hours
	Shopping for food or cleaning supplies	0-140 hours

As individuals can report up to 140 hours spent on each activity, it is possible that the weekly number of hours spent on nonmarket work exceeds 168. Mexico's National Institute of Statistics and Geography (INEGI) does not recode the number of hours for cases in which this outcome occurs.

Appendix C: Results for Brazil

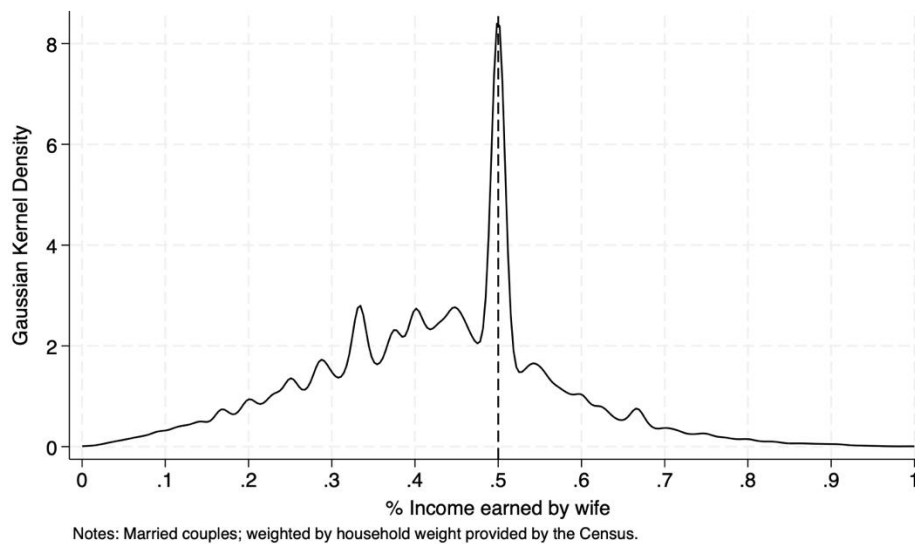
We present evidence from the 2010 Brazilian Census using the same approach as that taken in the Mexican analysis. The results reveal similar discontinuities, slightly larger in magnitude, in the distribution of the woman's share of household labor income. This finding suggests that the behavioral patterns that we document are not unique to Mexico and may reflect broader dynamics across Latin America.

We further examine whether these discontinuities vary by marital status. The discontinuities are larger for unmarried couples, which is consistent with prior research on the rise of cohabitation in the region during the 21st century (Esteve et al., 2012). Uniquely, the Brazilian Census distinguishes between civil marriages, religious marriages, and unions that are both civil and religious. While this differentiation allows us to explore heterogeneity by union type—potentially capturing more traditional views on gender roles—we caution that these categories may have been inconsistently understood by the respondents. In Appendix Figure C11, we find no meaningful differences in discontinuities between couples who report any religious component to their union and those who do not. We also include the results for same-sex couples. While the estimates are less precise, we find evidence of a discontinuity in the distribution of relative income for male same-sex couples but not for female same-sex couples.

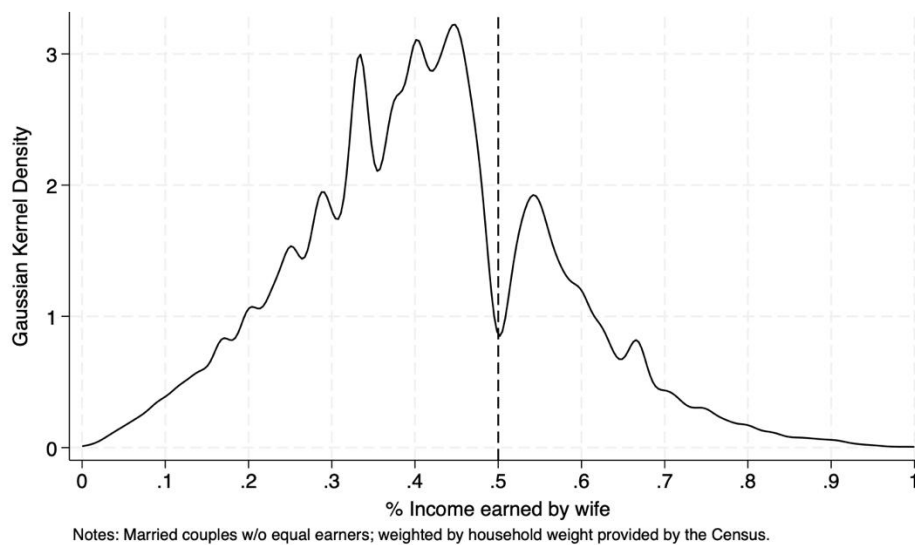
Taken together, the Brazilian findings reinforce the idea that the observed discontinuities reflect structural features of gender and intrahousehold bargaining that extend beyond any single national context.

This section is organized as follows. Figure C1 show the Gaussian kernel density of relative income (Figure A2 for Mexico). Figures C2 and C3 show the relative income distribution in Brazil for 2010 and 2000, respectively (Figures 1 and A4 for Mexico). Figure C4 shows the heterogeneous distributions according to parental status (Figure 2, Panels (a) and (b)). Figure C5 shows the distribution for unmarried, cohabiting couples in Brazil (equivalent to Figure 2, Panel (d)). Figures C6 and C7 show the distribution of relative income in same-sex households according to household headship and age (Figures 5 and A8). Figure C8 shows the counterfactual distribution of relative income in Brazil under random sorting (Figure A5). Figure C9 shows the distribution for households where the wife is the household head (Figure 3). Figure C10 shows the distribution for households where the wife is older than her husband is (Figures 4 and A7). Figure C11 shows the distribution according to the union type (religious and nonreligious).

Figure C1: Kernel density of relative income—Brazil, 2010



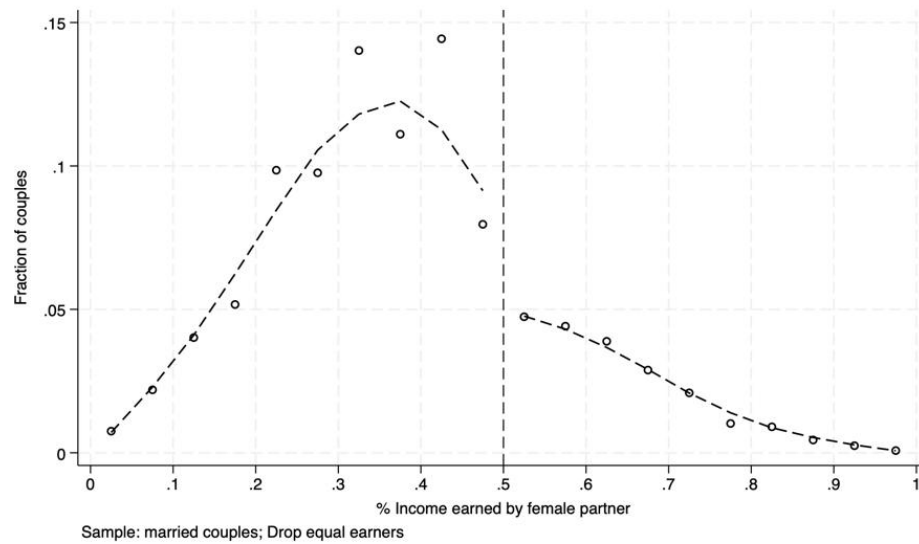
(a) Full sample



(b) Without equal earners

Notes: The sample includes married different-sex couples in the 2010 Brazilian Census (10% sample). Panel (a) shows the distribution of the wife's share of household labor income via Gaussian kernel density and household sampling weights. Panel (b) drops couples with equal earnings.

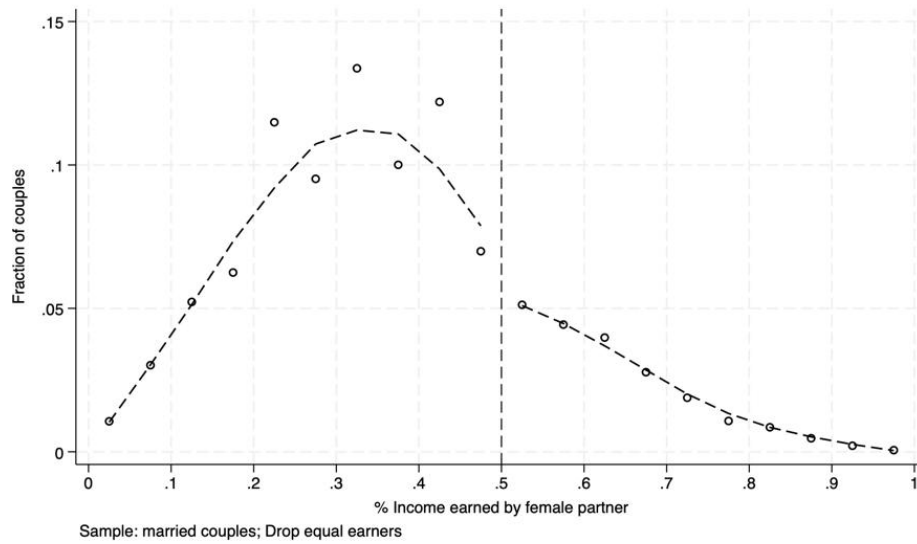
Figure C2: Distribution of the share of total household labor income earned by the wife in Brazil



(a) Brazil

Notes: This figure plots the distribution of the wife's share of total household labor income via data from the 2010 Brazilian Census (10% sample). The sample includes married different-sex couples and excludes equal earners. The vertical line marks the 50% threshold in relative income.

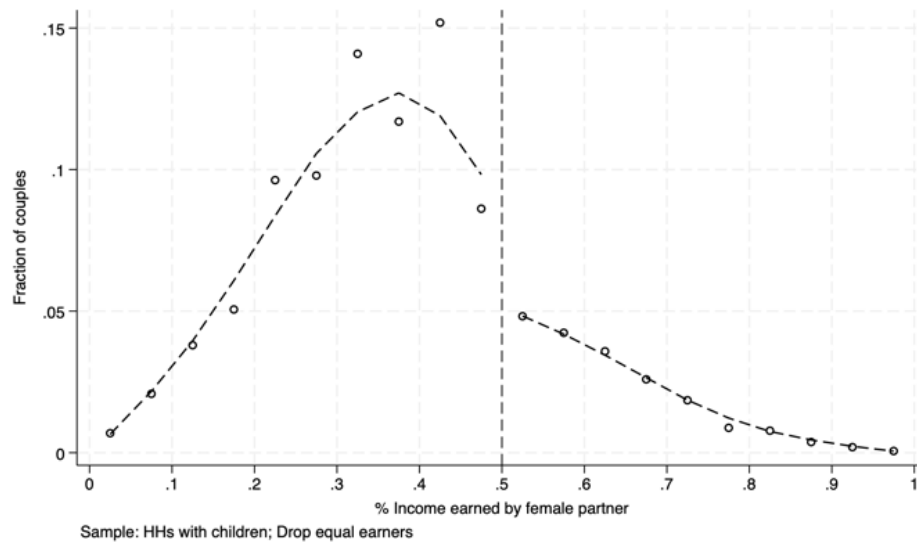
Figure C3: Distribution of the share of total household labor income earned by the wife in Brazil in 2000



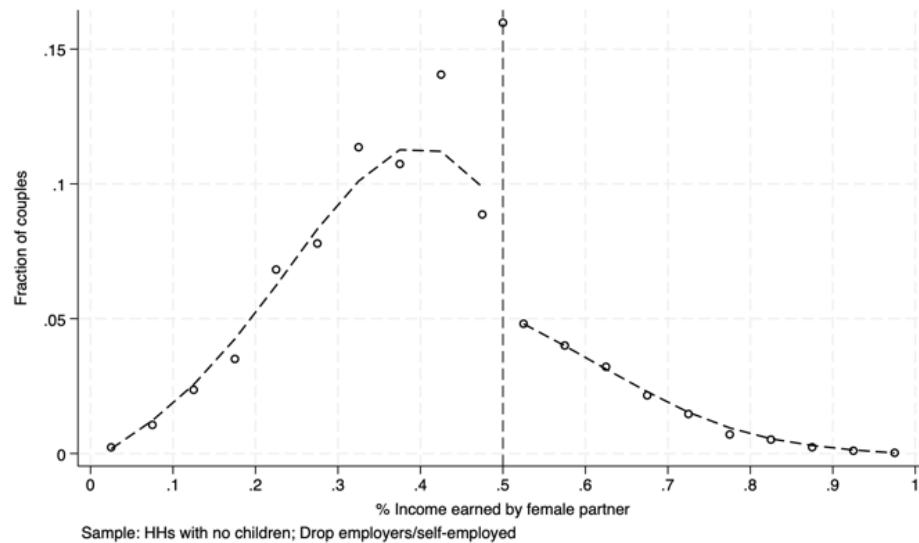
(a) Brazil (2000)

Notes: This figure plots the distribution of the wife's share of total household labor income via data from the 2000 Brazilian Census (10% sample). The sample includes married different-sex couples and excludes equal earners. The vertical line marks the 50% threshold in relative income.

Figure C4: Distribution of couples by the relative earnings of the female partner according to parental status in Brazil



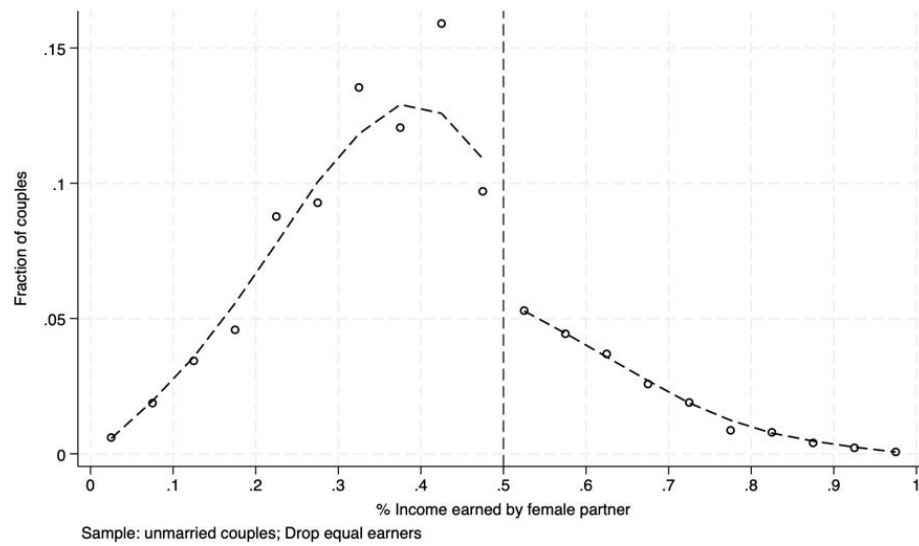
(a) With children



(b) Without children

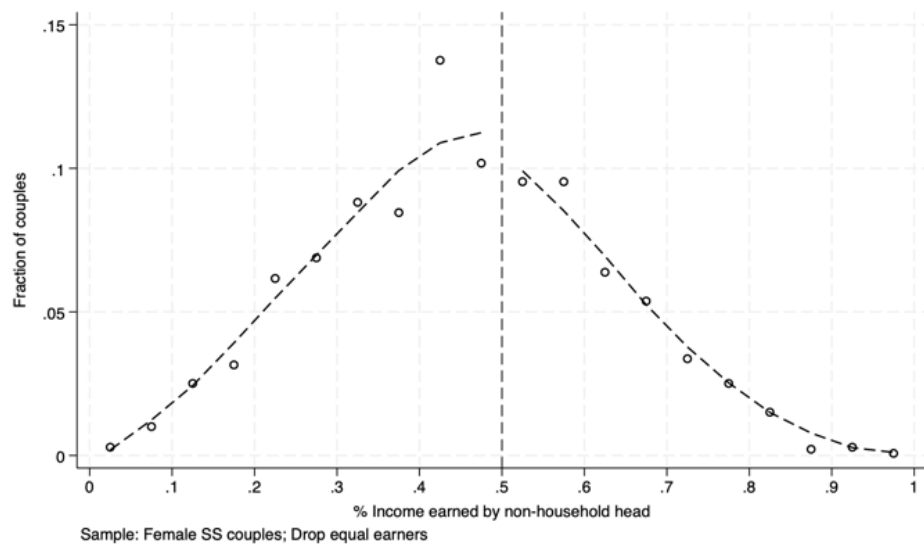
Notes: This figure uses data from the 2010 Brazilian Census (10% sample) to show the distribution of the female partner's share of household labor income by parental status. Panel (a) restricts the sample to households with children, whereas Panel (b) includes only households without children and excludes employers and self-employed individuals. Equal earners are dropped in both panels. The vertical line marks the 50% income share threshold.

Figure C5: Discontinuities for unmarried, cohabiting couples in Brazil

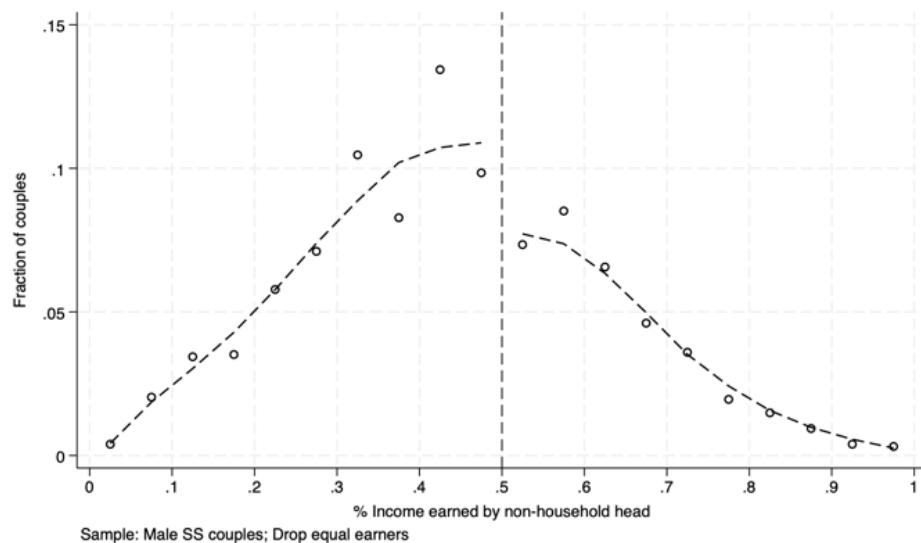


Notes: This figure uses data from the 2010 Brazilian Census (10% sample) to examine the distribution of relative earnings among unmarried, cohabiting couples. The sample excludes equal earners.

Figure C6: Distribution of the share of total household labor income earned by the nonhousehold head in same-sex couples in Brazil



(a) Female same-sex couples

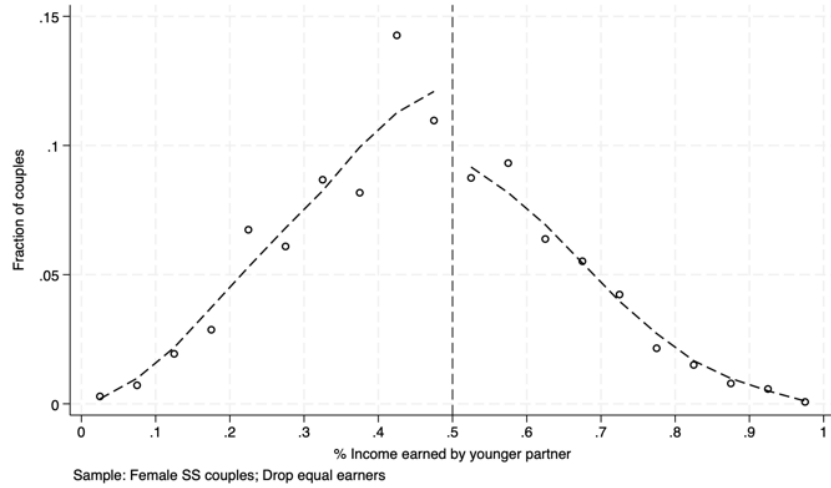


(b) Male same-sex couples

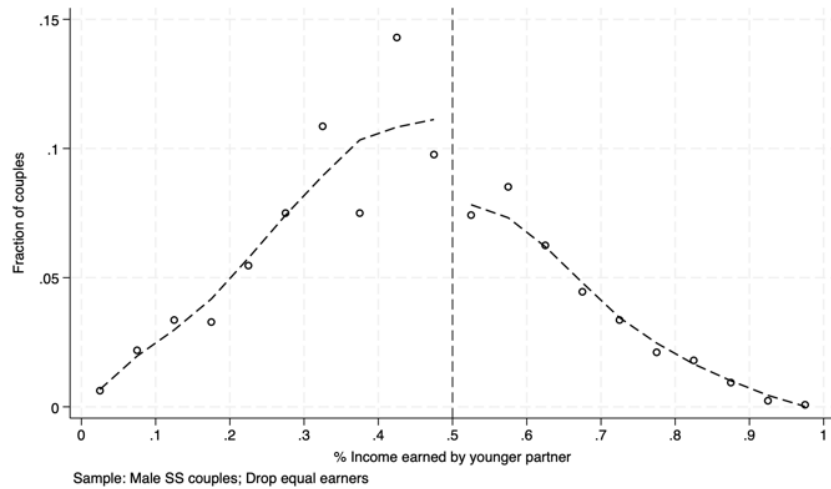
Notes: This figure uses data from the 2010 Brazilian Census (10% sample). It shows the distribution of the share of total household labor income earned by the nonhousehold head in same-sex couples. Equal earners are excluded. Panel (a) displays the distribution for female same-sex couples, whereas Panel (b) displays the distribution for male same-sex couples.

Figure C7: Distribution of the share of total household labor income earned by the younger partner in same-sex couples

Brazil



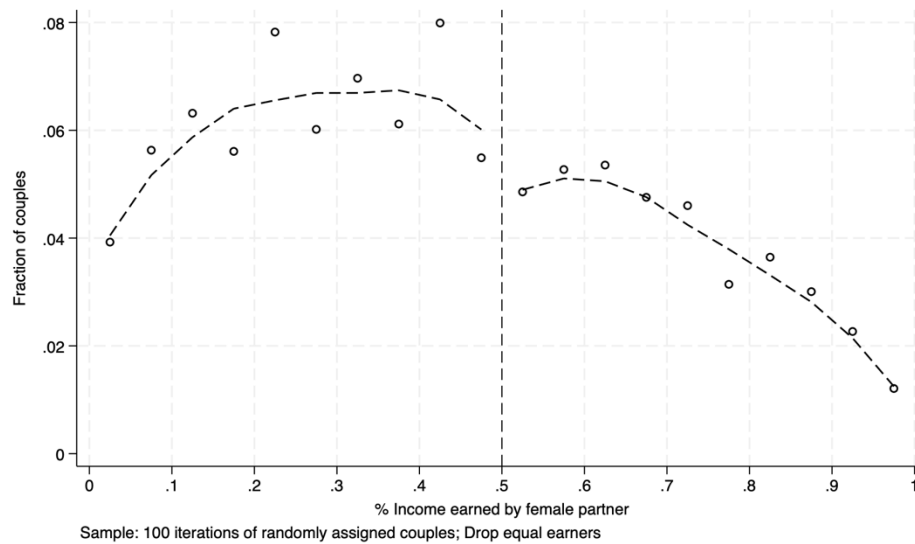
(a) Female same-sex couples



(b) Male same-sex couples

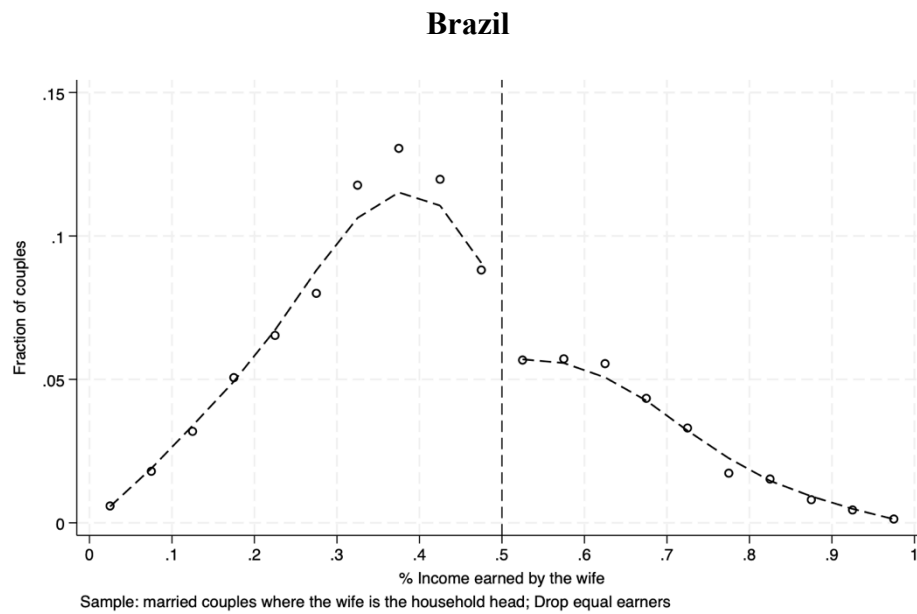
Notes: This figure uses data from the 2010 Brazilian Census (10% sample). It presents the distribution of the share of total household labor income earned by the younger partner in same-sex couples. Equal earners are excluded. Panel (a) shows female same-sex couples, whereas Panel (b) shows male same-sex couples.

Figure C8: Distribution of the relative income earned by the wife under random coupling in Brazil



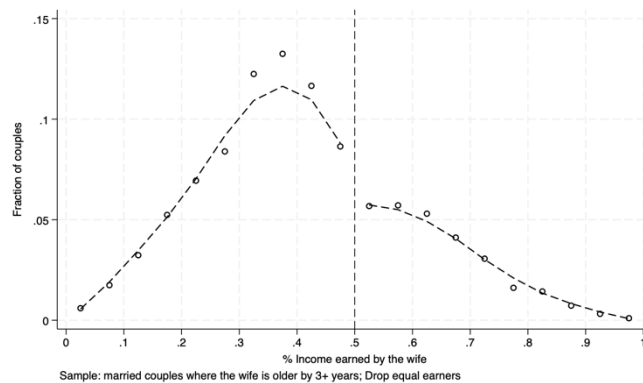
Notes: This figure uses data from the 2010 Brazilian Census (10% sample). It presents the distribution of the share of total household labor income earned by the wife under simulated random coupling. The figure is based on 100 iterations of randomly assigned different-sex couples. Equal earners are excluded.

Figure C9: Distribution of households according to relative income in households where the wife is the household head

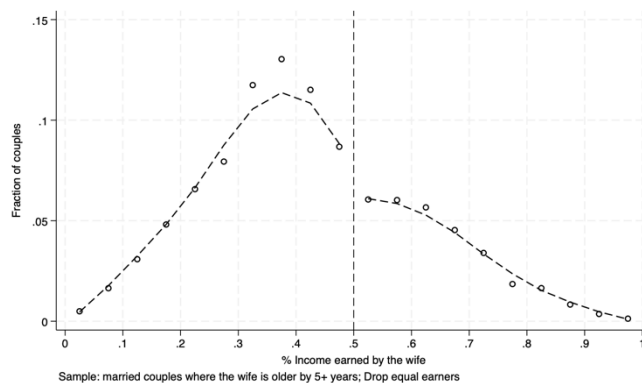


Notes: This figure uses data from the 2010 Brazilian Census (10% sample). It shows the distribution of the share of total household labor income earned by the wife, restricting the sample to married couples in which the wife is listed as the household head. Equal earners are excluded.

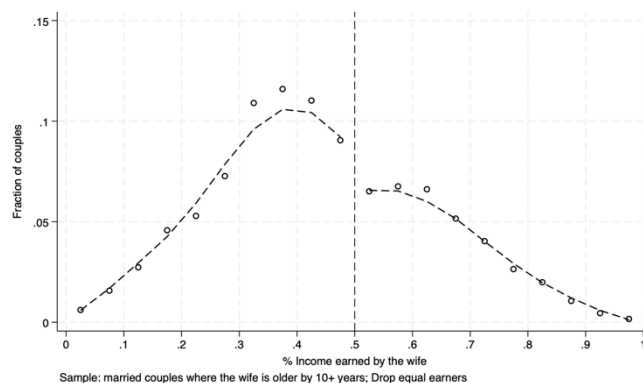
Figure C10: Distribution of households according to relative income in households where the wife is older than her husband is



(a) Wife is older by >3 years



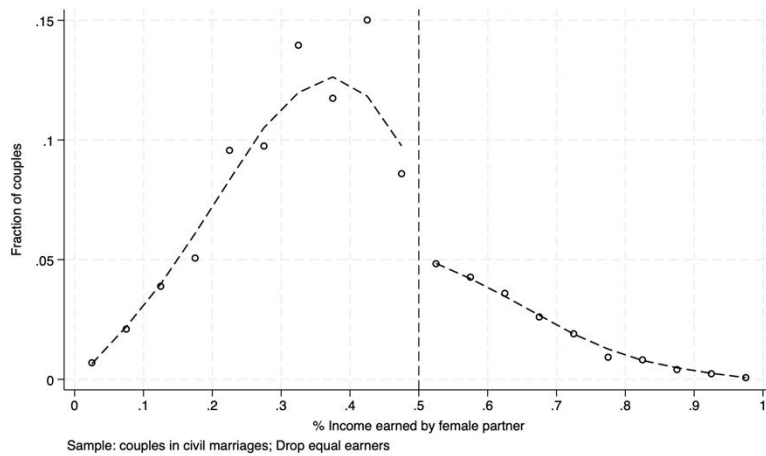
(b) Wife is older by >5 years



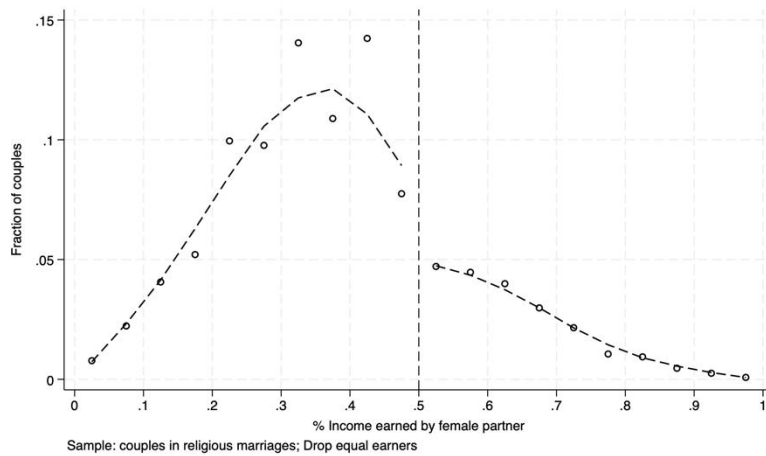
(c) Wife is older by >10 years

Notes: This figure uses data from the 2010 Brazilian Census (10% sample). It shows the distribution of the share of total household labor income earned by the wife among married couples in which the wife is older than the husband is. The panels vary by age difference thresholds: more than 3 years (Panel (a)), more than 5 years (Panel (b)), and more than 10 years (Panel (c)). Equal earners are excluded from the sample.

Figure C11: Heterogeneity by type of union in Brazil



(a) Civil marriages



(b) Religious marriages

Notes: This figure uses data from the 2010 Brazilian Census (10% sample). It presents the distribution of the share of total household labor income earned by the female partner separately for married couples reporting civil marriages only (Panel (a)) and those reporting religious marriages, which include both religious-only marriages and civil and religious marriages (Panel (b)). Equal earners are excluded from both samples.

Table C1: McCrary test for discontinuity in the distribution of the woman's share of total household labor income—Different-sex married partners

	log distance at 0.50001
	Brazil
	(1)
<i>Sample:</i>	
All employed couples	-0.250*** (0.007)
N	850,593
Drop employers/self-employed	-0.257*** (0.008)
N	729,870
Drop same position and occupation	-0.217*** (0.008)
N	736,755
Drop employers and self-employed/same position and occupation	-0.220*** (0.008)
N	675,389

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. Each cell reports the estimated discontinuity in the density of the woman's share of total household labor income at the 50% threshold via the McCrary (2008) test. The dependent variable is the log difference in density just above versus just below the 50% threshold. All samples include different-sex married couples in the 2010 Brazilian Census (10% sample). Row 1 includes all employed couples. Row 2 excludes couples in which either partner is an employer or is self-employed. Row 3 excludes couples in which both partners work in the same occupation and position. Row 4 applies both exclusions. Standard errors are in parentheses.

Table C2: McCrary test for discontinuity in the distribution of the woman's share of total household labor income in 2000—Different-sex partners

	log distance at 0.50001	
	Brazil Married partners	Brazil Unmarried, cohabiting partners
	(1)	(1)
<i>Sample:</i>		
All employed couples	-0.096*** (0.006)	-0.368*** (0.009)
N	945,179	444,796
Drop employers/self-employed	-0.106*** (0.007)	-0.378*** (0.010)
N	719,965	397,710
Drop same position and occupation	-0.067*** (0.007)	-0.337*** (0.010)
N	883,250	395,413
Drop employers and self-employed/same position and occupation	-0.072*** (0.007)	-0.343*** (0.010)
N	689,550	368,308

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. Each cell reports the estimated discontinuity in the density of the woman's share of total household labor income at the 50% threshold via the McCrary (2008) test. The dependent variable is the log difference in density just above versus just below the 50% threshold. All samples include different-sex couples from the 2000 Brazilian Census. Column (1) restricts the sample to married partners; Column (2) restricts the sample to cohabiting, unmarried partners. Row 1 includes all employed couples. Row 2 excludes couples in which either partner is an employer or is self-employed. Row 3 excludes couples in which both partners work in the same occupation and position. Row 4 applies both exclusions. Standard errors are in parentheses.

Table C3: McCrary test for discontinuities in the distribution of the nonhousehold head/younger partner's share of total labor earnings—Same-sex Partners, Brazil

	log distance at 0.50001	
	Female S.S. households (1)	Male S.S. households (2)
Panel A: Nonhousehold head partner		
All dual-earner couples	-0.059 (0.151)	-0.217 (0.179)
N	1,395	1,280
Panel B: Younger partner		
All dual-earner couples	-0.135 (0.152)	-0.072 (0.166)
N	1,395	1,280

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. Each cell reports the estimated discontinuity in the density of the designated partner's share of total labor earnings at the 50% threshold via the McCrary (2008) test. The dependent variable is the log difference in density just above versus just below the 50% threshold. The sample includes same-sex dual-earner couples from the Brazilian Census. Panel A defines the designated partner as the nonhousehold head; Panel B defines the designated partner as the younger partner. Column (1) reports estimates for female same-sex households; Column (2) reports estimates for male same-sex households. Standard errors are in parentheses.

Table C4: Potential income and female labor force participation

	Brazil
	(1)
<i>PrWifeEarnsMore</i>	0.025*** (0.005)
Mean of <i>wifeLFP</i>	0.641
<i>N</i>	2,881,649

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. Each cell reports the coefficient from a regression of female labor force participation on the probability that the wife earns more than her husband does if both work full time. The sample includes married different-sex couples in Brazil. Standard errors are in parentheses.

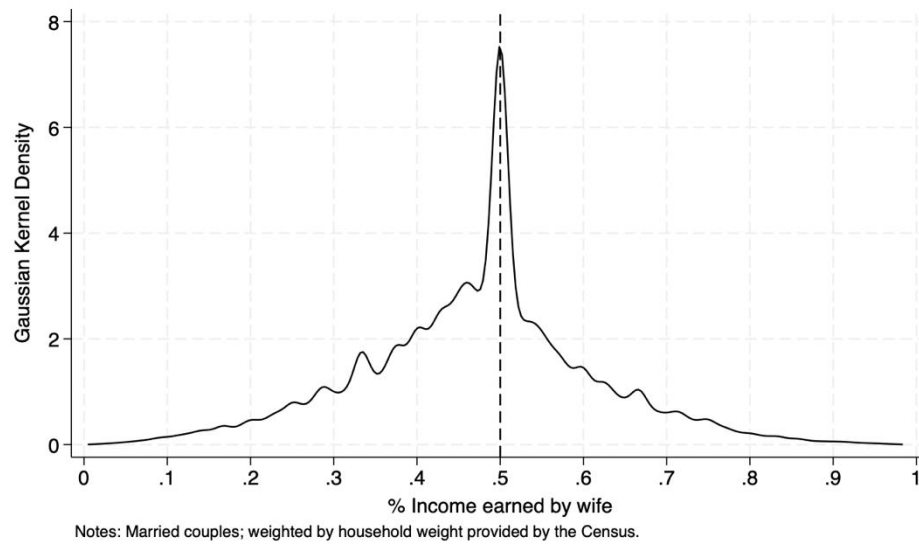
Appendix D. Results for Panama

We replicate our main analyses using the full-count 2023 Panamanian Census. While the data offer national coverage, they include far less detail on the household structure, labor market behavior, and marital characteristics than the Mexican and Brazilian Censuses do. As a result, our analysis is limited to different-sex couples, and we are unable to explore heterogeneity by union type or examine same-sex households.

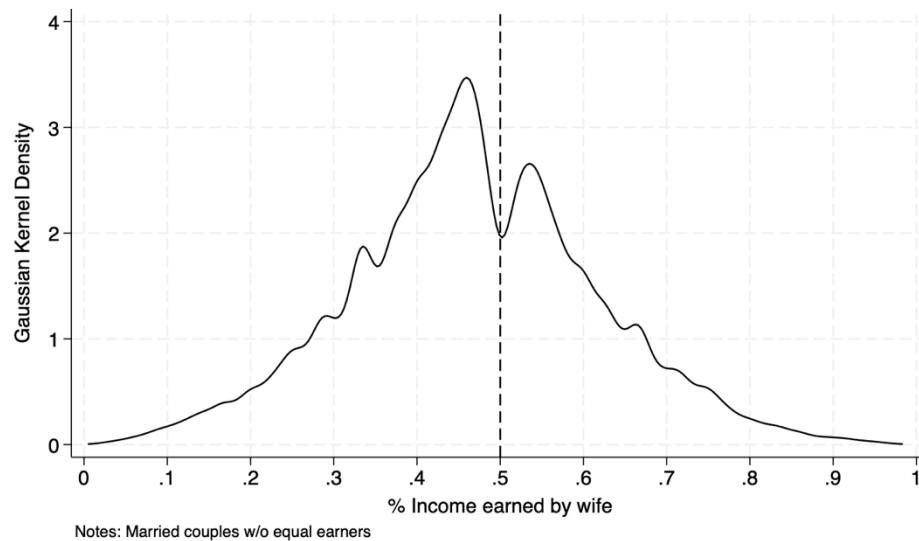
Despite these limitations—and despite a substantially smaller analytical sample relative to Mexico and Brazil—all main patterns are replicated. We continue to find a clear discontinuity in the distribution of the woman’s share of household income at the 50% threshold, with magnitudes that are slightly smaller than those in the Mexican data are. The only exception is the division by relative age: unlike in Mexico and Brazil, we do not find stronger discontinuities when the wife is younger than the husband is. This exception may reflect noise due to the smaller sample.

This section is organized as follows. Figure D1 show the Gaussian kernel density of relative income (Figure A2 for Mexico). Figures D2 and D3 show the relative income distribution in Panama for 2023, 2010 and 2000 (Figures 1 and A4 for Mexico). Figure D4 shows the heterogeneous distributions according to parental status (Figure 2, Panels (a) and (b)). Figure D5 shows the counterfactual distribution of relative income in Panama under random sorting (Figure A5). Figure D6 shows the distribution for households where the wife is the household head (Figure 3). Figure D7 shows the distribution for households where the wife is older than her husband is (Figures 4 and A7).

Figure D1: Kernel density of relative income—Panama, 2023



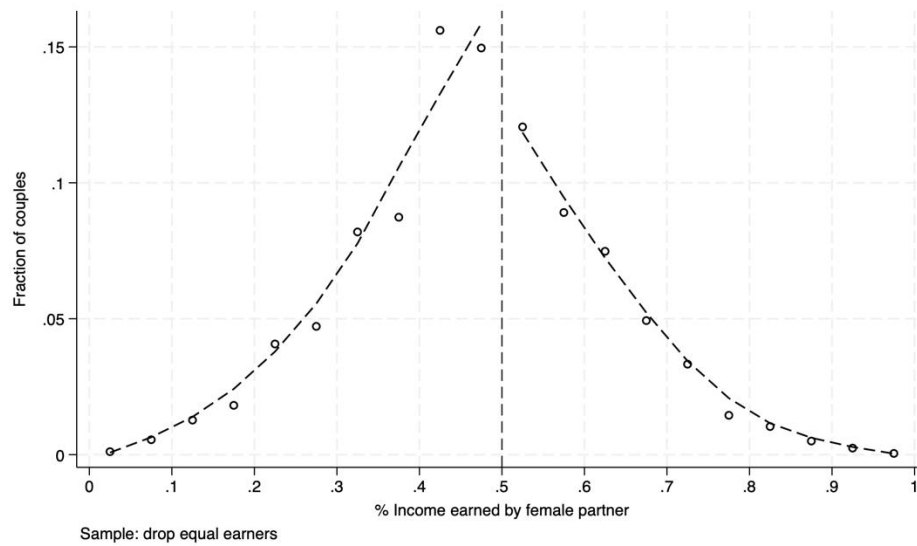
(a) Full sample



(b) Without equal earners

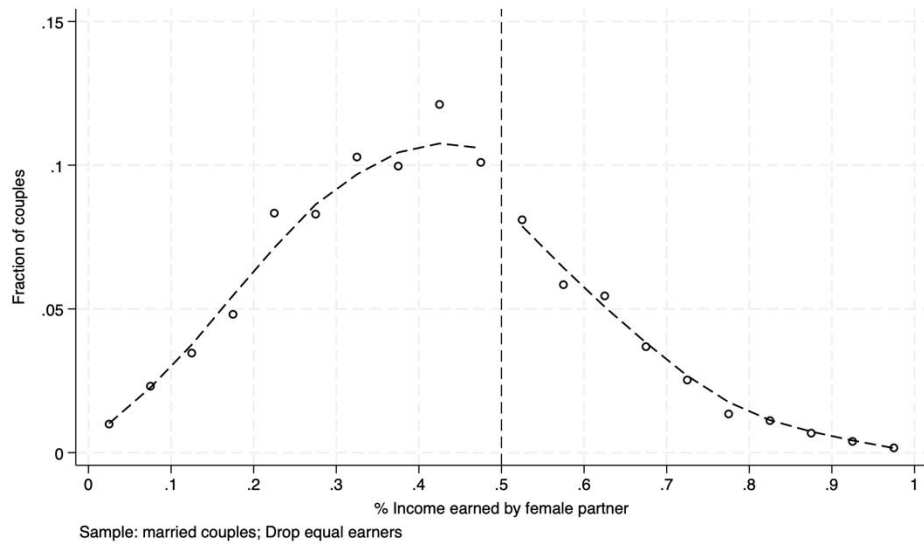
Notes: The sample includes married different-sex couples in the full-count 2023 Panamanian Census. Panel (a) shows the distribution of the wife's share of household labor income via Gaussian kernel density and household sampling weights. Panel (b) drops couples with equal earnings.

Figure D2. Distribution of the share of total household labor income earned by the wife in Panama

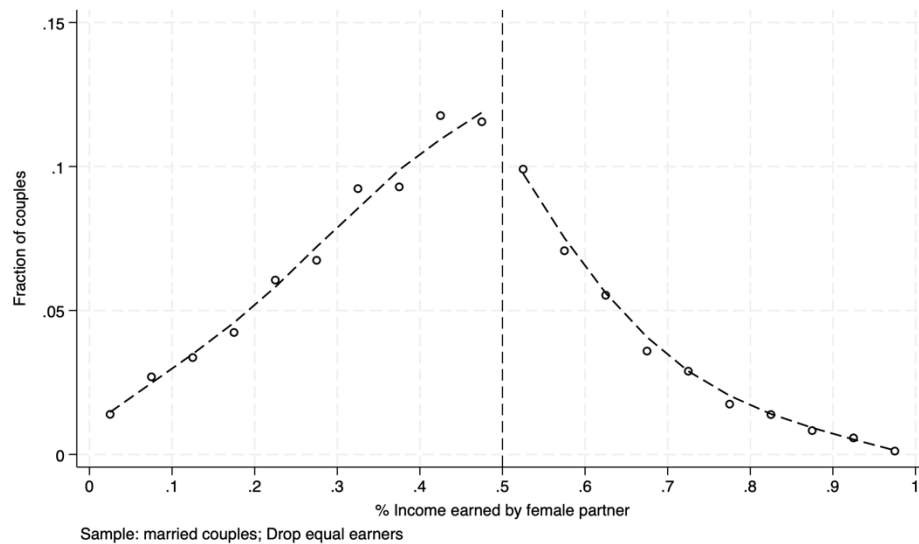


Notes: This figure uses data from the 2023 Panamanian Census (full count). It displays the distribution of the share of total household labor income earned by the female partner among different-sex couples. Equal earners are excluded from the sample.

Figure D3: Distribution of the share of total household labor income earned by the wife in Panama in 2000 and 2010



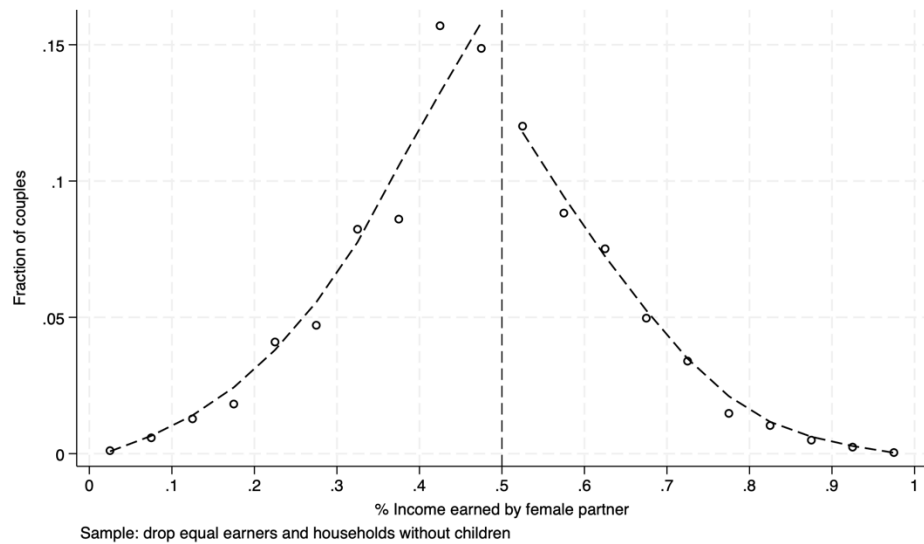
(a) Panama (2000)



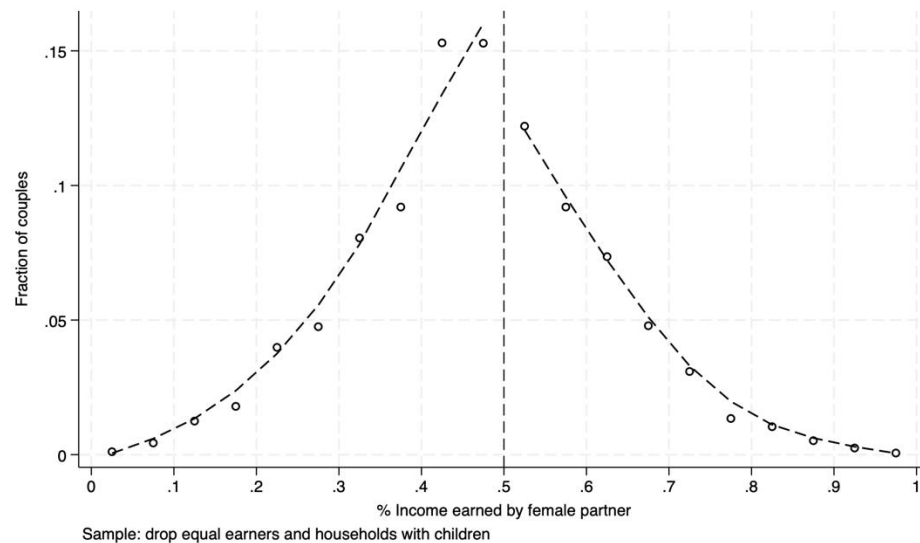
(b) Panama (2010)

Notes: This figure plots the distribution of the wife's share of total household labor income via data from the 2000 and 2010 Panamanian Censuses (10% sample). The sample includes married different-sex couples and excludes equal earners. The vertical line marks the 50% threshold in relative income.

Figure D4: Distribution of couples by the relative earnings of the female partner according to parental status in Panama



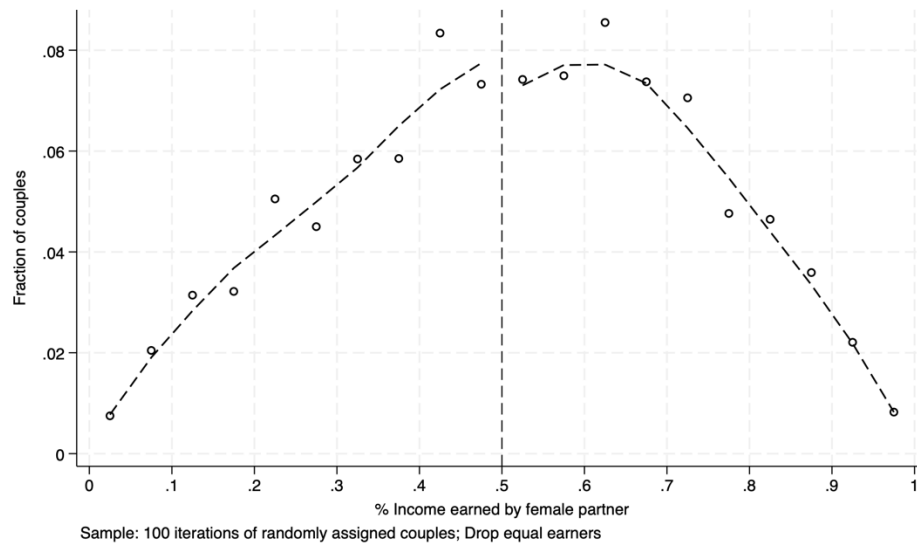
(a) With children



(b) Without children

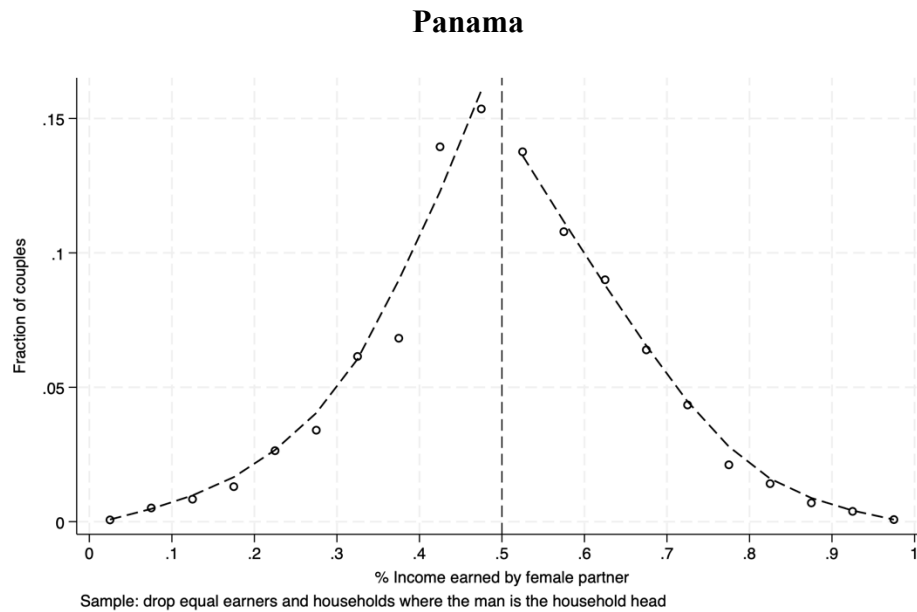
Notes: This figure uses data from the full-count 2023 Panamanian Census to show the distribution of the female partner's share of household labor income by parental status. Panel (a) restricts the sample to households with children, whereas Panel (b) includes only households without children and excludes employers and self-employed individuals. Equal earners are dropped in both panels. The vertical line marks the 50% income share threshold.

Figure D5: Distribution of the relative income earned by the wife under random coupling in Panama



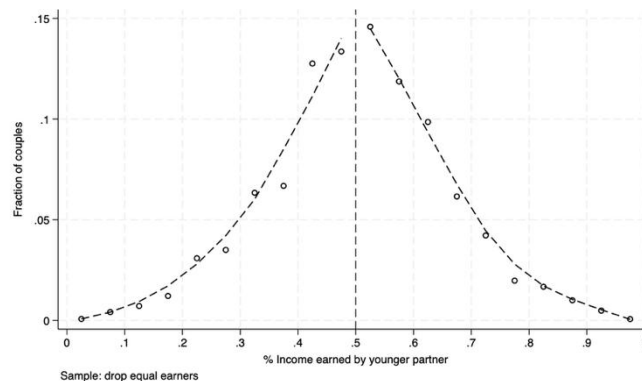
Notes: This figure uses data from the full-count 2023 Panamanian Census. It presents the distribution of the share of total household labor income earned by the wife under simulated random coupling. The figure is based on 100 iterations of randomly assigned different-sex couples. Equal earners are excluded.

Figure D6: Distribution of households according to relative income in households where the wife is the household head

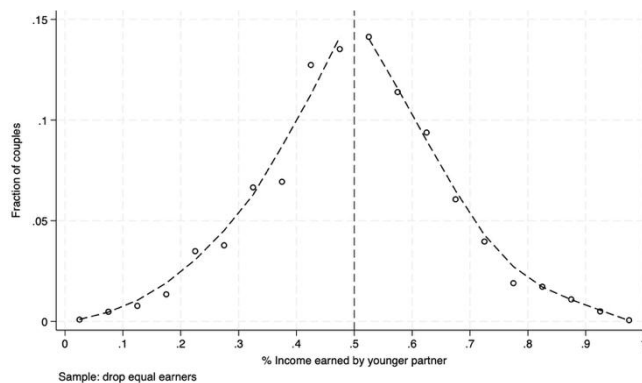


Notes: This figure uses data from the full-count 2023 Panamanian Census. It shows the distribution of the share of total household labor income earned by the wife, restricting the sample to married couples in which the wife is listed as the household head. Equal earners are excluded.

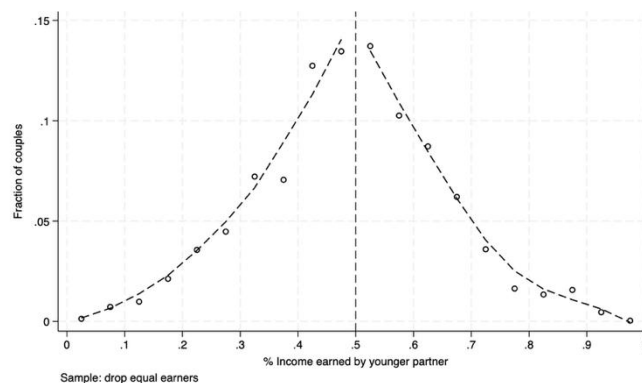
Figure D7: Distribution of households according to relative income in households where the wife is older than her husband is



(a) Wife is older by >3 years



(b) Wife is older by >5 years



(c) Wife is older by >10 years

Notes: This figure uses data from the 2023 full-count Panamanian Census. It shows the distribution of the share of total household labor income earned by the wife among married couples in which the wife is older than her husband is. The panels vary by age difference thresholds: more than 3 years (Panel (a)), more than 5 years (Panel (b)), and more than 10 years (Panel (c)). Equal earners are excluded from the sample.

Table D1. McCrary test for discontinuity in the distribution of the woman's share of total labor household earnings—Different-sex married partners in Panama

	log distance at 0.50001	
	Panama Full sample	Panama Excluding equal earners
	(1)	(1)
<i>Sample:</i>		
All employed couples	-1.306*** (0.011)	-0.183*** (0.013)
N	130,917	112,175
Drop employers/self-employed	-1.304*** (0.011)	-0.183*** (0.013)
N	130,668	111,965
Drop same position and occupation	-1.169*** (0.014)	-0.162*** (0.016)
N	85,471	75,133
Drop employers and self-employed/same position and occupation	-1.166*** (0.014)	-0.162*** (0.016)
N	85,240	74,933

Notes: *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$. Each cell reports the estimated discontinuity in the density of the woman's share of total household labor income via the McCrary (2008) test. The dependent variable is the log difference in density just above versus just below 0.50001. Column (1) includes the full sample of different-sex married couples in Panama. Column (2) excludes couples with exactly equal earnings. Each row drops additional subsets: self-employed and employer couples, couples in the same position and industry, or both exclusions. Standard errors are in parentheses.