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The male breadwinner norm in Brazil

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Abstract

In this paper we provide evidence of the male breadwinner norm, a cultural norm that establishes that "a man should earn more than his wife". First we show that there is a large discontinuity in the relative intra-household earnings distribution at the 50% threshold. Then we argue that the male breadwinner norm is responsible for it by empirically rejecting alternative explanations, such as marriage between co-workers or self-employed, misreporting, and assortative matching. We conclude that the social norm effectively is a main driver of the high gender inequality observed in the country.

1 Introduction

Social norms are defined as shared standards or rules that define what are acceptable and appropriate behaviors by certain groups. Regarding women, it is still common to hear that "men should be the breadwinners, while women should take care of the house and the family" and that "women should not earn more money than their husbands". According to the World Values Survey (Haerpfer, 2020), more than 35% of respondents in Brazil agree with the sentence that "if a woman earns more than her husband, it's almost certain to cause problems", while other 14.5% of respondents neither agree nor disagree.[1] Here, we argue that entrenched social norms prevent the equal distribution of household responsibilities between men and women in Brazil. Indeed, according to the Brazilian census, on average the population aged 14 and over spent 16.8 hours a week on household chores or caring for people in 2019. Women dedicated 21.4 hours a week, while men dedicated 11 hours.

This article aims to analyze the male breadwinner norm, which states that a man should always earn more than his female partner. There has been a recent surge of interest in the male breadwinner norm in economics, which mostly stems from observations of an empirical occurrence seen in several countries: the population distribution of relative spousal

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[1] Although this finding also implies that half of Brazilians disagree with that sentence, it is important to note that most people do not need to agree with a social norm for them to have sizable economic consequences. If one-third of Brazilian women alter their behavior because of this social norm, for example, that is enough to generate a large effect on the aggregate labor supply.

earnings tends to show a large discontinuity around the point where women start out-earning their husbands. This phenomenon also occurs in Brazil, as can be seen in Figure 1 below.
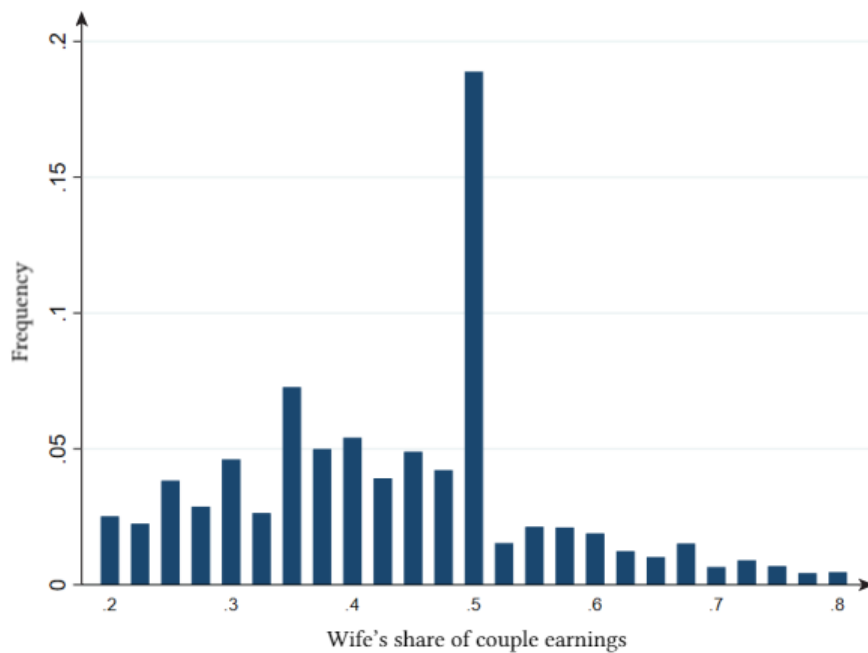

Figure 1: Distribution of wife's earning shares – Censo 2010

Note: Histogram of wife's earnings as a share of household earnings for cohabiting couples between 25 and 65 years of age, where the male is described as the head of the household.

This norm was first recognized by Bertrand, Kamenica, and Pan (2015), which have shown this discontinuity for the United States, and estimated the effects of the male bread-winner norm on different wives' labor market outcomes.

Some studies, however, have recently disputed Bertrand et al. (2015) and similar works by questioning the use of the wife's relative earnings distribution as an identification strategy for the male breadwinner norm. Zinovyeva and Tverdostup (2021) suggest that the discontinuity at the 0.5 point of the wife's relative household earnings might be instead driven by how couples split earnings when they have the same job or are self-employed. They support this view primarily by showing that the distribution discontinuity seems to disappear for a Finnish administrative dataset when excluding coworking and self-employed couples. Inversely, when looking exclusively into those couples, a sizable discontinuity around the 0.5 threshold appears, as many of them have equal or very similar earnings.

Elsewhere, Roth and Slotwinsk (2021) show evidence of misreporting in respondent´s income around the point where the woman earns more than the man. Finally, using models of assortative matching, Binder and Lam (2022) simulate distributions of couples' earnings shares that are very similar to the observed distribution, except for the discontinuity in the probability mass to the right of the 0.5 point. As there is also a sharp drop at the left of the 0.5 point, they conclude that it is not that simple to infer preferences about couples' attributes from the observed distribution.

Our contribution to this literature is to: firstly, establish robust evidence of the male breadwinner norm and its size for Brazil, a large middle-income economy, and secondly, to catalog and address all these various objections in the literature, showing that in Brazil they do not explain the discontinuity by gender in family income.

Our work relates to the broad literature of economics and identity, spearheaded by Akerlof and Kranton (2000), expanded in terms of behavioral responses to couples' earning inequalities by Bertrand et al. (2015), and followed by Codazzi, Pero, and Sant'Anna (2018), Sprengholz, Wieber, and Holst (2020), Dongcheng, Fanbo, and Zixun (2021) and Galván (2022).[2]

The paper is organized in four sections, besides this introduction. Section 2 presents the data. Section 3 discusses the effects of coworking and self-employed coupling. Section 4 presents the consequences of minimum wage laws and rounding effects. Section 5 discusses the possibility of assortative matching. Section 6 concludes.

2   Data

We use the nationally representative Census survey in Brazil, the *Censo Demográfico*, assembled by the *Instituto Brasileiro de Geografia e Estatística* (IBGE) for the year 2010. The Census survey collects data by interviewing all households across the country, and its main questionnaire consists of basic demographic information and population count. Concur-

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[2]Other papers discuss the relationship between the social norm and other outcomes. Greenstein (2000) argues that both men and women adjust their domestic production to neutralize the cost of deviating from gender roles. Bianchi, Milkie, Sayer, and Robinson (2000) found a negative linear relationship between a wife's relative income and the amount of time spent on housework in the United States, while Bittman, England, Sayer, Folbre, and Matheson (2003) found a U-shaped relationship in Australia - after the wife earns more than her husband, greater increases in her relative income translate into greater inequalities in housework. Finally, Cooke (2006) finds that in the United States, the likelihood of divorce among couples where the wife earns more than the husband is lower if the wife engages in "compensatory behavior", that is, she does more household work.

rently with the main questionnaire, IBGE conducts a more detailed interview with a large random sample of households, in which they survey more detailed socio-demographic information from all residents, including total earnings and relationship status. This latter survey will be the basis for our empirical analysis. We use the universe of dual-earning couples where both spouses are between 25 and 65 years of age, cohabiting together, and the male is described as the head of the household. Our earnings variable corresponds to the usual monthly income in July 2010, from the main occupation as well as other jobs that the person had. The relative earning is determined by comparing the wife's income to the combined income of the wife and husband.

3   Coworking and self-employment

Zinovyeva and Tverdostup (2021) argue that self-employed spouses want to split earnings equally for the sake of simplicity or for tax reasons, and that couples who work for the same firm may be exposed to less informational asymmetry or job role differences, and therefore will have more similar pay relative to what they would get if working for two different employers.

Since the Brazilian Census doesn't have firm-level information, we instead categorize coworking status using 4-digit activity and occupation-level codes for spouses between 25 and 65 years of age cohabiting together. Illustrative results for the 2010 survey are shown in Figure 2, with bin widths of 0.025. Although the frequency of couples at the midpoint bin is expected to be smaller for spouses in different firms or not self-employed, visually it is clear that the discontinuity cannot be explained away by this hypothesis.
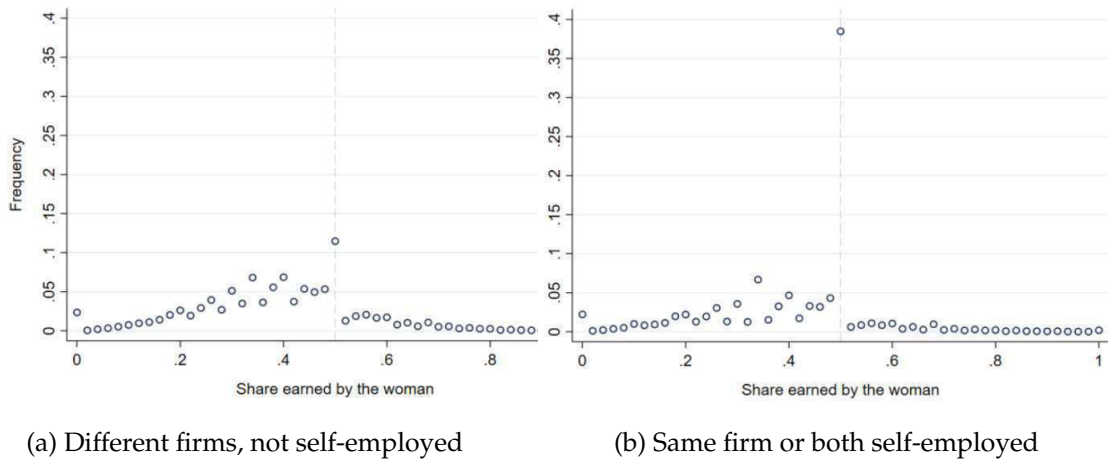
(a) Different firms, not self-employed   (b) Same firm or both self-employed

Figure 2: Relative earnings of women, by coworking status – Censo 2010

Note: Histogram of wife's earnings as a share of household earnings for cohabiting couples between 25 and 65 years of age, where the male is described as the head of the household. In Panel (a), we restrict the sample to couples working on different 4-digit activity codes, as well as those not self-employed. In Panel (b) we restrict attention to the complementary sample.

4   Minimum wage laws and rounding effects

The discontinuity at 50% of household income could also be explained by earnings rigidity introduced by minimum wage laws. As a fixed rate for the entire labor force, the minimum wage creates a bunching at its level in the entirety of the working population, and therefore a higher frequency at the 0.5 relative earnings bin if both spouses earn the minimum wage. Namely, since both spouses earn the same salary (the minimum wage), by construction both members of the household will earn half the household income each. In that case, the discontinuity would not represent a behavioral reaction to male breadwinner norms, but instead a mechanical response to labor laws.[3]

Another different, but related, issue is how open-ended survey questions about total earnings may suffer response biases related to rounding effects (Roth and Slotwinsk (2021)). Rounding occurs when survey respondents report total earnings equal to a close, arbitrary round number, erasing underlying earning gaps and affecting estimates sensitive to a specific threshold. As the male breadwinner norm is a relative measure, round-number fixed effects cannot be used in the standard estimation, which creates identification problems. In Figure 3 we explore this issue by omitting earnings that are multiples

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[3]While Brazil has a variety of local wage floors that vary by region and sector, in this paper we only address the federal minimum wage, which is the most representative one.

of 500 and 100 from the data. This exercise increases the fraction of very similar or equal earning couples at each new restriction, which we attribute to higher relative importance on the remaining observations of the alternative issues discussed previously.
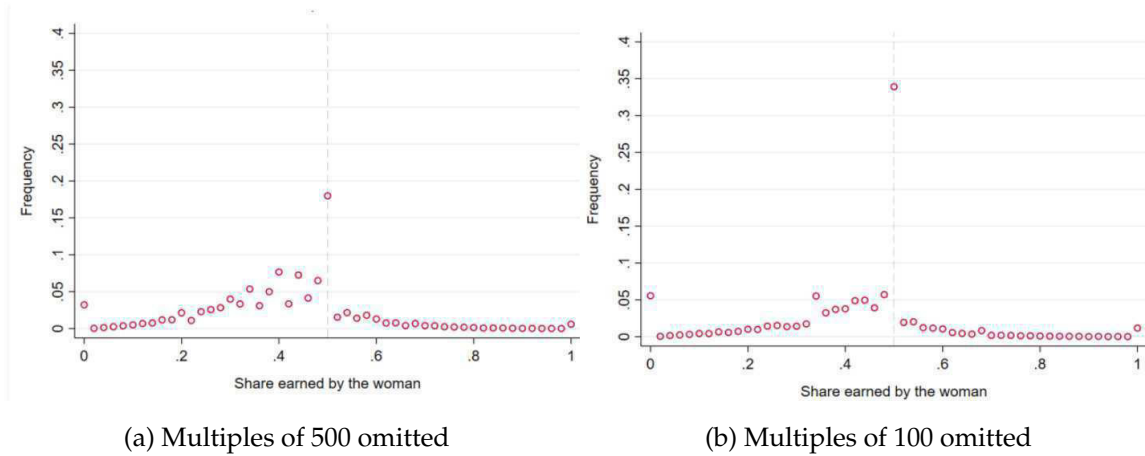

(a) Multiples of 500 omitted   (b) Multiples of 100 omitted

Figure 3: Relative earnings of women, by round number exclusion – Censo 2010

Note: Histogram of wife's earnings as a share of household earnings for cohabiting couples between 25 and 65 years of age, where the male is described as the head of the household. In Panel (a), we restrict the sample to earnings that are not (exact) multiples of R$500. In Panel (b) we restrict it further to earnings that are not (exact) multiples of R$100.

To assess this array of the above-mentioned alternative explanations for the discontinuity at the 50% relative earnings threshold, we proceed by using a McCrary discontinuity test for the histogram of the wife's share of household earnings for the cartesian product of our possible explanations. First, we divide the sample by coworking and self-employed status. For rounding effects, we divide between the entire sample, a sample excluding multiples of 500, and a sample excluding multiples of 100. To check for the minimum wage explanation, we separate between samples omitting and not omitting households with members earning the minimum wage. Then, inside each of these bins, we use a Mc-Crary test to test for the discontinuity within that subsample. We present these results in Table 1.

McCrary (2008) developed an estimator for a density function discontinuity at a selected cutoff, where the test is implemented as a Wald test for the null hypothesis that the discontinuity is zero. The estimation consists of two local nonlinear functions used to fit the density function on both sides of the threshold. Given a histogram of the relative earnings, the discontinuity estimator is given by $\hat{\theta} = ln\hat{f}^+ - ln\hat{f}^-$, where $\hat{f}^+$ is the fitted density estimate of the data points just after the threshold, and $\hat{f}^-$ just before. Namely, we test the

null hypothesis that the difference in density of women's proportion of household income below and above 50%, $\hat{\theta}$, is zero (they are the same), against the alternative assumption that it is different from zero (the breadwinner norm).

As in Bertrand et al. (2015), we chose the relative earnings threshold to be 0.501, and the results for each interaction can be found in Table 1. Log difference estimates suggest that the discontinuity persists even when considering all possible combinations of coworking status, minimum wage coupling, and 2-digit round number biases.[4]

Table 1: McCrary density test for above the 50% threshold

| | Non-coworking and not self-employed | | | Coworking or both self-employed | | |
| | Round numbers omitted: | | | Round numbers omitted: | | |
	None	Multiples of 500	Multiples of 100	None	Multiples of 500	Multiples of 100
With minimum-wage earners	-1.579 (0.006)	-1.809 (0.008)	-2.105 (0.010)	-3.454 (0.015)	-3.672 (0.022)	-3.828 (0.030)
Without minimum wage earners	-1.386 (0.007)	-1.294 (0.008)	-1.462 (0.019)	-3.317 (0.015)	-3.415 (0.022)	-3.456 (0.034)

Notes: McCrary test for a discontinuity at the right side of the 50% (namely, 0.501) relative earnings point of the distribution for different subsamples. Standard errors of the estimators are within parenthesis. Data is from Censo 2010.

This seemingly persistent discontinuity around the point where women start making more than their spouses strengthens the evidence of possible behavioral earnings responses within couples to avoid threats to the breadwinner status of husbands.

5   Assortative matching

Binder and Lam (2022) approach the discontinuity of the woman's earnings at half the household income through the lens of standard marital matching models. They argue that a male breadwinner norm cannot be inferred from the data alone, as skewed distributions of spousal earnings can be generated through marriage markets that result in positive assortative matching and make no assumptions about underlying preferences.

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[4]The minimum wage is the exclusive responsibility of the central government. It aims to guarantee the minimum survival conditions for workers regardless of their professional qualifications. However, salary floors can be established by states (Federal Constitution and Complementary Law 103/2000) and must also take into account the specific professions that are intended to benefit. In 2010, 5 states adopted salary floors. The lowest floors per state were: São Paulo (R$560), Rio de Janeiro (R$553.31), Rio Grande do Sul (R$546.57), Paraná (R$663), and Santa Catarina (R$587). Since only a few states adopt salary floors and their values are not that different from the minimum wage, we believe that the use of federal minimum wages does not lead to important inaccuracies in our analysis. Indeed, using separate wage floors for each state we obtain almost identical estimates for the McCrary test, namely -3.245 (0.044) for coworking or both self-employed (column 4) and -1.422 (0.005) for non-coworking and not self-employed.

Their argument is based on Becker (1974) and runs as follows: if utility is transferable between spouses, and individuals are characterized by multiple attributes which include earnings, then the distribution of earnings gaps in a marriage market where the marriage output is a function of these attributes will depend on how they are correlated with earnings in the population. The Beckerian matching equilibrium can consist of sorting on earnings, without any specific social norm-based preference, if the collection of attributes matching is positively correlated with earnings in the population, as some degree of sorting on earnings must occur after market clearing. And, given a significant gender gap in earnings, this model could predict a result in which a higher number of wives have similar or equal earnings as their husbands and fewer have higher earnings, regardless of whether the joint distributions could sustain a larger fraction of out-earning wives.

In general, what these models predict is that the rank-order, rather than the level of incomes, will tend to coincide between wives and husbands under minimal dependency assumptions in marriage formation, and as such the relative earnings distribution can easily be skewed unless the earnings distributions for both spouses are similar on the level.

What implicitly follows from this setting is that if it is available to us the attributes underlying the matching process, we should arrive at a distribution of the wife's relative earnings with the same key patterns as the empirical one by randomly rearranging couples over these attributes. If such patterns cannot emerge, it is reasonable to assume that the matching process is not the reason for the midway point discontinuity or the small fraction of wives out-earning their husbands.

We attempt to simulate these random matches using Brazilian data. First, we divide our main specification sample of spouses into attribute groups combining the following characteristics: age (three age groups: 25-39, 40–49, and 50–65 years old); educational level (four schooling levels: without schooling or incomplete primary education, complete primary education or incomplete high school, complete high school or incomplete undergraduate and complete undergraduate or higher); region of residence (five regions: North, Northeast, Southeast, South, and Midwest); and religion (five religious groups: catholic, traditional evangelical, pentecostal evangelical, neo pentecostal evangelical and irreligious or others). Then, we randomly re-matched husbands to wives within each collection of attribute groups and checked the resulting kernel density distribution estimations. Figure 4

shows our results for this re-matching exercise through an increasing number of attribute groups.
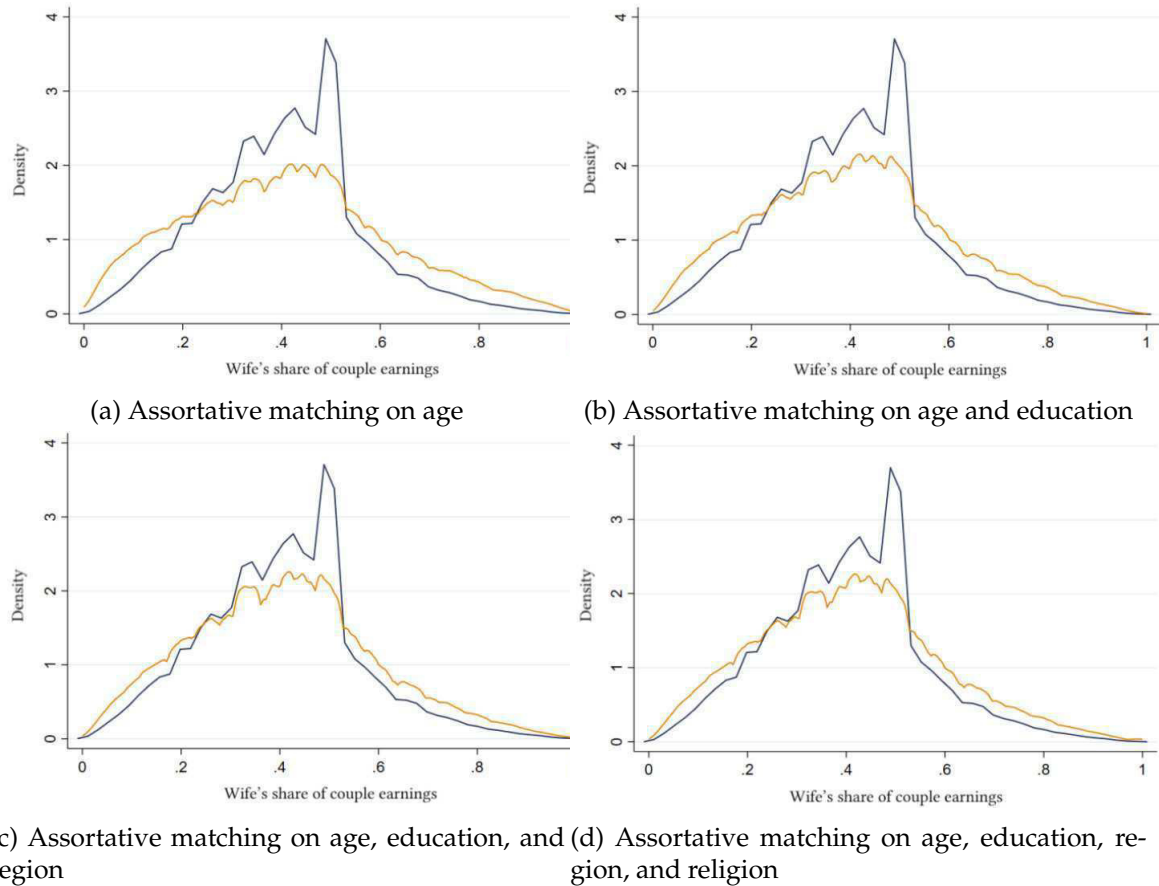

(a) Assortative matching on age

(b) Assortative matching on age and education

(c) Assortative matching on age, education, and region

(d) Assortative matching on age, education, region, and religion

Figure 4: Kernel density of couple rematch over attribute groups – Censo 2010

Note: The blue line is the distribution of the wife's earnings as a share of household earnings for cohabiting couples between 25 and 65 years of age, where the male is described as the head of the household. The yellow line is the simulated distribution in a model without a male breadwinner norm but with assortative matching along age (panel a), age and education (panel b), age, education, and region (panel c), and all variables plus religion (panel d).

In Figure 4, panel (a), the rematch occurs only over age groups; in panel (b) over age and education; in panel (c) over age, education, and region; and, finally, in panel (d) over all the preceding groups and religion. Although these are not exhaustive attribute groups in which couples may choose to match, it is clear in Figure 4 that these rematched samples have a similar overall distribution to the empirical histogram. Importantly, however, they lack the extra mass just below the 50% threshold.

Corroborating that, our simulation exercises show that a discontinuity point around the 0.5 relative earnings threshold does not appear in the simulated sample, which gives credence to the idea that the observed empirical discontinuity occurs after couples are

together.

6   Conclusion

The purpose of this paper was to evaluate alternative explanations for the sharp bunching in the relative intra-household earnings distribution at the 0.5 threshold, using Brazilian Census data. We find evidence that it cannot be explained by alternative sources of discontinuity in women's earnings as a share of household income namely, coworking and self-employed coupling (Zinovyeva and Tverdostup (2021)), misreporting (Roth and Slotwinsk(2021)), and assortative matching (Binder and Lam(2022)). As a consequence, we conclude that the discontinuity at the right of couples' equal earnings can be explained by the existence of a male breadwinner norm which states that men are supposed to be the main earners in a couple.

The discontinuity in relative income at 50% of household income does not demand that women are not allowed to earn more than their husbands, but rather that they seem to adjust their behavior to comply with the norm. According to Codazzi et al. (2018) the greater the probability that a Brazilian woman earns more than her husband, the fewer the number of hours that she offers on the labor market, and the higher the probability of her engaging in the informal labor market where the financial gains are smaller. In our scenario, we cannot directly discern between real and reporting responses to the social norm.[5] It is important to note, however, that whether Brazilian women reduce their labor supply or misreport their earnings to surveyors, both effects are evidence of the strength of breadwinner norms in the country.

Our findings have important policy implications. Although social norms are difficult to change, because they involve deeply ingrained cultural traditions as well as economic and political institutions, they can still be molded through a combination of cultural campaigns (such as television shows that normalize women earning more than men) as well as public policies that stimulate women's labor supply and facilitate women reaching highly-paid positions. Moreover, our findings provide additional support for policies such as free childcare and tax incentives for women in the workforce (such as enhanced social security benefits, as seen in various countries, including Brazil). These measures could help

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[5]But the fact that we observe stronger effects on co-working and self-employed couples points towards real effects being relevant.

alleviate the impact of the prevailing breadwinner norm.

References

Akerlof, G., & Kranton, R. (2000). 'Economics and Identity". *The Quarterly Journal of Economics*, *115(3)*, 715-753.

Becker, G. (1974). "A theory of social interactions". *Journal of Political Economy*, 1063-1093.

Bertrand, M., Kamenica, E., & Pan, J. (2015). "Gender identity and relative income within households". *The Quarterly Journal of Economics*, *130*, 571–614.

Bianchi, S., Milkie, M., Sayer, L., & Robinson, J. (2000). "Is anyone doing the housework? Trends in the gender division of household labor". *Social Forces*, *79.1*, 191-228.

Binder, A., & Lam, D. (2022). "Is there a male breadwinner norm? The hazards of inferring preferences from marriage market outcomes". *Journal of Human Resources*, *57*, 1885-1914.

Bittman, M., England, P., Sayer, L., Folbre, N., & Matheson, G. (2003). "When does gender trump money? Bargaining and time in household work". *American Journal of Sociology*, *109.1*, 186-214.

Codazzi, K., Pero, V., & Sant'Anna, A. (2018). "Social norms and female labor participation in Brazil". *Review of Development Economics*, *22.4*, 1513-1535.

Cooke, L. (2006). ""Doing" gender in context: Household bargaining and risk of divorce in Germany and the United States". *American Journal of Sociology*, *112(2)*, 442-472.

Dongcheng, H., Fanbo, K., & Zixun, W. (2021). "Gender identity and relative income within households: Evidence from China". *arXiv preprint*.

Galván, E. (2022). "Gender identity and quality of employment". *Economia*, *89(354)*, 409-436.

Greenstein, T. (2000). "Economic dependence, gender, and the division of labor at home: A replication and extension". *Journal of Marriage and Family*, *62.2*, 322-335.

Haerpfer, C. (2020). "World Values Survey: Round seven–country-pooled datafile". *Madrid, Spain & Vienna, Austria: JD Systems Institute & WVSA Secretariat*.

McCrary, J. (2008). "Manipulation of the running variable in the regression discontinuity design: A density test". *Journal of Econometrics*, *142.2*, 698-714.

Roth, A., & Slotwinsk, M. (2021). "Gender norms and income misreporting within households". *CESifo Working Paper*, 2364-1428.

Sprengholz, M., Wieber, A., & Holst, E. (2020). "Gender identity and wives' labor market outcomes in West and East Germany between 1983 and 2016". *Socio-Economic Review*, *20.1*, 257-279.

Zinovyeva, N., & Tverdostup, M. (2021). "Gender identity, coworking spouses, and relative income within households". *American Economic Journal: Applied Economics, 13.4*, 258-84.