

Unraveling the Unpaid Work Gender Gap: Insights from Ecuador

by

Nicolle Alejandra Jaramillo Jaramillo

Submitted in partial fulfilment of the requirements
for the degree of Master of Development Economics

at

Dalhousie University

Halifax, Nova Scotia

February, 2024

Dalhousie University is located in Mi'kma'ki, the
ancestral and unceded territory of the Mi'kmaq.
We are all Treaty people.

©Copyright by Nicolle Alejandra Jaramillo Jaramillo, 2024

Table of Contents

List of Tables	iv
List of Figures	v
Abstract	vi
Acknowledgements	vii
1 Introduction	1
2 Literature Review	3
2.1 Theoretical Frameworks and Models	3
2.2 Existing Empirical Research and Key Findings	5
3 Methodology	8
3.1 Ordinary Least Squares Regression	8
3.2 Censored Regression Model	9
3.3 Oaxaca-Blinder Two-Fold Decomposition	10
3.4 Time-Use Classification and Surveys	11
4 Data	13
4.1 Descriptive statistics	14
5 Results	17
5.1 Ordinary Least Squares Regression	17
5.2 Censored Regression Model (Tobit)	21
5.3 Oaxaca-Blinder Two-Fold Decomposition	22
6 Robustness Checks	26
7 Conclusion	28
References	31

List of Tables

1	Time-use Classification	34
2	Compiled Definitions: Education and Marital Status	35
3	Compiled Definitions: Ethnicity	36
4	Descriptive Statistics by Gender	37
5	Education Level by gender	40
6	Marital Status by Gender	41
7	Ethnicity by Gender	42
8	Associates between Relative within Household Income and Weekly Unpaid Work: OLS Results	43
9	Associates between Relative within Household Income and Weekly House- work: OLS Results	46
10	Associates between Relative within Household Income and Weekly Child- care: OLS Results	49
11	Associates between Relative within Household Income and Weekly Unpaid Work: Tobit Results	52
12	Associates between Relative within Household Income and Weekly House- work: Tobit Results	55
13	Associates between Relative within Household Income and Weekly Child- care: Tobit Results	58
14	Overall Two-Fold Oaxaca-Blinder Coefficients	61
15	Detailed Two-Fold Oaxaca-Blinder Coefficients	62
16	Weekly Unpaid Work with Single, Childless, and Provinces	67
17	Relative Unpaid Work, Housework and Childcare	68

List of Figures

1	Sample Selection Process	14
2	Paid and Unpaid Work by Gender	15
3	Relative Unpaid Work vs Relative Income	16

Abstract

Ecuadorian women dedicate an average of 38.68 extra weekly hours (5.53 additional hours daily) to unpaid work than men. This study explores the impact of gender, relative income and socio-demographic factors on allocating unpaid work within households. It uses data from the 2007 National Survey on Employment, Unemployment, and Underemployment and the 2012 National Time-Use Survey. The study employs various empirical methods such as Ordinary Least Squares (OLS), Censored Regression Models, and the Oaxaca-Blinder Two Fold Decomposition to investigate how relative income is associated with unpaid work allocation. If the gender gap in relative income were eliminated, women's relative income should increase by 30.58%; this change would be associated with a reduction of 3.87 hours in weekly unpaid work (33.18 minutes daily). Notably, only 17.60% of the gap is explained by differences in relative income, underscoring the influence of social norms perpetuating gender biases on the remaining unpaid work disparity.

Keywords: Unpaid Work, Gender Disparities, Ecuador, Time Allocation, Time-use Surveys

JEL codes: J16, J22, D13

Acknowledgements

To my beloved husband and family, whose unwavering support and encouragement have been my anchor throughout this journey. Your belief in my capabilities and words of encouragement have fueled my perseverance and determination.

A special acknowledgment to my supervisor, Daniel Rosenblum, whose guidance and expertise have been invaluable. Your mentorship has shaped the trajectory of this thesis, and I am grateful for your support.

To my readers, Mevlude Akbulut-Yuksel and Lars Osberg, thank you for your constructive feedback and insightful contributions. Your engagement with my work has enriched its quality, and I appreciate the time and effort you dedicated to shaping this research.

1 Introduction

The persistence of gender disparities in unpaid work¹ allocation remains a significant concern globally, contributing to broader inequalities in various aspects of women’s lives, such as their educational attainment, participation in the labour force, and representation in political spheres (Grunow, 2019). Despite ongoing efforts, no country has achieved parity in allocating time between paid² and unpaid work (Charmes et al., 2019), with men’s contribution to unpaid work consistently remaining below 25% of the total workload³ (Charmes et al., 2019). In this thesis, I investigate economic factors influencing unpaid work in Ecuador, focusing on relative incomes⁴ within households.

In Ecuador, where gender norms and societal barriers can normalize such unpaid work disparities, the need for a comprehensive understanding of the factors influencing the predominance of women in unpaid work activities becomes crucial. Moreover, the country has larger gender differences in total work allocation compared to peer countries like Peru and Mexico (Campaña et al., 2018). It has been one of the countries in the region to conduct a national survey on time use more than once (Antonopoulos & Hirway, 2010). Additionally, considering that women in Ecuador devote significantly more hours to unpaid work than men, with a difference of 38.68 hours per week, an investigation into the underlying drivers of this disparity is more than necessary. Amongst these complex dynamics, what is the role of relative income in broadening or narrowing the unpaid work gap?

To answer this question, I use the 2007 time-use module in the National Survey on Employment, Unemployment, and Underemployment (ENEMDU) and the 2012 time-use national survey to analyze the correlation of various characteristics on women’s predomi-

¹Unpaid work includes housework, childcare, disabled care, care of others, and activities for other households, community, or volunteering. *Table 1* has the activities classification used for this thesis.

²Paid work includes working hours, commuting to and from work, job search, and self-consumption activities.

³Total workload is the sum between paid work and unpaid work.

⁴Income is reported in Ecuador’s national currency, USD. It is the sum of income from monthly wages, income in kind, and transfers minus taxes. I used real income for relative income calculation, taking 2010 as the base year, where $RelativeIncome_i = \frac{Income_i}{Income_m + Income_w} * 100$

nance over men's unpaid work activities in Ecuador, and mainly the role of relative income in time allocation. To explore the interplay between weekly unpaid work and observable characteristics such as age, area, number of adults and children within the household, education, marital status, and ethnicity, I use Ordinary Least Squares (OLS) regressions as a benchmark. I use a Censored Regression Model to correct for biases from the non-trivial frequency of zeros across time-use variables. Lastly, I use the Oaxaca Blinder Two Fold Decomposition to understand better how each socio-demographic characteristic impacts time allocation. Additionally, the unexplained portion of the decomposition can be used to indicate gender bias or discrimination in time allocation. Men's higher relative income, amongst other factors, may broaden the unpaid work burden on women.

Research on unpaid work time allocation in Ecuador has primarily relied on interviews and the 2012 national survey, using OLS as the primary econometric approach. Overall, these studies collectively demonstrate that economic, gender, and cultural factors influence the unpaid work gap in Ecuador. This thesis adds to the existing literature by extending the time horizon with the 2007 ENEMDU module, which can be compared to the 2012 time-use national survey. This study incorporates a Censored Regression Model for robustness as a methodological extension to the OLS estimates. Applying the Oaxaca-Blinder Two-Fold decomposition to Ecuadorian data enhances the depth of the analysis of the unpaid work gap. It distinguishes the impact of socio-demographic characteristics on weekly unpaid work hours and measures gender bias in time allocation, contributing to the existing literature. Additionally, I examine unpaid domestic work by disaggregating household chores and childcare responsibilities, providing a more comprehensive analysis of how socioeconomic factors influence this type of labour, which limited information is provided in the current literature.

This thesis is organized as follows. Section Two presents the literature review. Section Three explains the methodology. In Section Four, I describe the data. Then, Section Five provides the results, Section Six presents robustness checks, and Section Seven concludes and briefly discusses further steps to study the unpaid work gender gap.

2 Literature Review

2.1 Theoretical Frameworks and Models

The unpaid work gap between women and men has always been present in our society, and it has evolved alongside social and cultural norms. Grunow (2019) describes the changing world trends in household time allocation over 70 years. At the macro level, she emphasizes the importance of context, such as “work-family policies, welfare state regimes and national levels of gender equality” (p. 254), shaping family relations and generating diverse trends across countries. At the micro level, economic rationality relies on individuals specializing in the activity with the lower relative opportunity cost. In this case, referring to the time allocation in paid and unpaid work activities may explain specialization within time allocation. However, economic dependency also illustrates differences in time allocation that may arise and the incentives to avoid housework activities.

Grunow (2019) further identifies four theories that govern the existing literature. First, *Economic Dependency and Bargaining of Resources* theory, which I use in this thesis, focuses on explaining the differences in time allocation by analyzing the existing power imbalance where the individual with higher resources or earnings has more power to avoid unpaid work activities. Second, *Time Availability* theory suggests that individuals, due to fewer paid work hours per week, should allocate more time to unpaid work. While this theory could potentially explain some of the trends observed in this research, it does not fully account for the complexities of household power imbalances due to differences in income. Therefore, it is not utilized as the primary explanatory framework.

Third, *Doing Gender* theory emphasizes social norms strongly influencing how individuals of a specific gender allocate their time. Women often carry most of the unpaid work in the household due to their perceived role as caregivers, while men are seen as breadwinners. Fourth, *Deviance Neutralization* theory links an individual’s relative resources and prevailing gender ideologies, suggesting that when women earn more than men, they may compensate by doing more unpaid work to conform to traditional gender norms. While

these theories offer valuable insights into the complex interplay between time allocation, gender roles, and social norms, this thesis primarily adopts the *Economic Dependency and Bargaining of Resources* theory due to the challenges posed by Ecuadorian data limitations.

The theoretical framework of *Economic Dependency and Bargaining of Resources* is covered by Gary Becker in his book *A treatise on the family* (1991). Becker (1991) developed a model explaining the gains of specialization when allocating time between household and market activities. The former usually being done by women and the latter by men because of the different productivity levels in each type of activity. In this framework, the unpaid work gap widens with little investment in labour market human capital and a high household workload for women. This conclusion is built upon his former work (Becker, 1965), where he analyses time allocation based on the joint utility-maximizing distribution between work and leisure.

Mincer (1962) emphasis on differentiating between work at home and leisure when analyzing women's time allocation inspired Gronau (1977) to revisit Becker's model and develop a version of the model separating work, home production, and leisure. This thesis analyzes time allocation based on Becker's (1965) initial steps coupled with Mincer (1962) and Gronau (1977) additions to the model. Hence, I divide time allocation into four main components: market work, housework, care, and leisure, commonly done in current time-use literature.

Adopting a more flexible utility function specification allows for a detailed examination of how time allocation impacts utility (Kooreman & Kapteyn, 1987). Qualitative approaches, such as interviews with dual-earner couples, shed light on a "second shift" (Hochschild & Machung, 2012). Cooperative bargaining frameworks explore scenarios where the optimal solution resembles a "dictatorial marriage" (Manser & Brown, 1980). These alternative approaches offer valuable insights into time allocation dynamics. However, due to specific data limitations and the primary focus of this thesis, these approaches do not serve as the primary theoretical frameworks for the analysis.

2.2 Existing Empirical Research and Key Findings

The gender wage gap and its effect on unpaid household work is a complex issue influenced by various factors. Existing literature suggests that women who earn less than men tend to perform most unpaid household work due to productivity differentials. In contrast, there is no significant effect on men's allocation of unpaid work when they earn less than women (Grunow, 2019). Initially, it was theorized that increases in the market wage rate tend to decrease the hours devoted to unpaid work (Gronau, 1977; Mincer, 1962). However, the conclusion may not always hold due to additional factors in the decision-making process, such as compliance with social norms and lack of public policies focused on achieving parity, including free daycare and labour regulations (Hochschild & Machung, 2012). Achieving parity in unpaid household work requires a comprehensive approach that involves not only market wage rate increases but also social norm changes and public policies focused on providing support for working families, especially women.

On the one hand, scholars in developed countries have studied the impact of income and time distribution on household gender roles. Scholars investigating the impact of income and time distribution in developed countries have found that women spend more time on unpaid work and caregiving and less on leisure than men (Moyser & Burlock, 2018). Higher education is associated with reducing housework time and increasing childcare (Bloemen & Stanca, 2014; Leibowitz, 1973; Sullivan, 2013). Time allocation within the household is often decided based on economic exchange and gender theoretical frameworks (Bittman et al., 2003; Brines, 1994; Sullivan, 2013). Women's childcare time increases correlate with higher men's income and their own (Kalenkoski et al., 2009), and it is also related to the number and age of children and time devoted to paid work (Garcia et al., 2009). Husbands' wages rise is linked with women spending less time on paid work (Bloemen & Stanca, 2014). Interestingly, there are also casual estimations where if women earn more than their male counterparts, they will perform additional unpaid work to compensate for the deviation from the established social norm in earnings (Bertrand et al., 2015; Lippmann et al., 2020). Countries with an equal share of paid employment (Grunow, 2019) or normalized access to the labour market (Charmes et al., 2019) promote

a higher bargaining power for women. The studies suggest that equal access to the labour market and normalized access to paid employment can increase women's bargaining power and reduce the income and time distribution gap, leading to a more equitable distribution of household work and caregiving responsibilities.

On the other hand, gender-based disparities in unpaid work are intensified by poverty in developing countries. Research focused on time-use trends in developing countries has found that poverty intensifies gender-based disparities in unpaid work (Antonopoulos & Hirway, 2010; Dominguez-Amoros et al., 2021). Studies analyzing solely Latin American countries show that women's two-way discrimination -gender and income- leads to a double shift (Canelas & Salazar, 2014). Age, education, and income influence the time spent on housework (Amarante & Rossel, 2018, 2021), where dual-earner households (Amarante & Rossel, 2021) and egalitarian countries (Campaña et al., 2018) have a more narrow gap. Additionally, a higher work-life balance tends to be achieved by being self-employed (Campaña et al., 2020). In order to achieve a more equitable distribution of unpaid work, efforts must be made to address the intersectionality of gender and income while also considering factors such as age, education, and household structure.

The existing literature on time allocation in Ecuador provides valuable insights into the complex factors influencing unpaid work gaps between women and men. Faulkner and Lawson (1991) emphasize the role of economic resources and job access in shaping time allocation and bargaining power, underlining the influence of control over economic resources on household activities. Newman (2002) highlights the impact of women's increased employment on housework dynamics, with improved bargaining power reducing women's burden. On the other hand, Deere and Twyman (2012) link an egalitarian unpaid work allocation to real estate ownership, revealing significant predictors like age, residence, and assets. Canelas and Salazar (2014) show that correlation magnitudes, rather than characteristic differences, primarily account for the gender gap in Ecuador's unpaid work, aligning with the economic dependency theory. Campana et al. (2018) emphasize Ecuador's larger gender gap in total work compared to Mexico and Peru and note the negative correlation between women's hourly wage and time spent in unpaid work. Palermo

and Capogrossi (2020) underscore how Kichwa women and girls sustain social structures through unpaid labour in other households. The research highlights the need for policy interventions that address the root causes of the gender gap in unpaid work, such as economic and social inequalities, to promote a fair and equal distribution of household and care responsibilities between men and women.

Overall, these studies collectively suggest that economic, gender, and cultural factors influence the unpaid work gap in Ecuador. While various theories such as time availability, “doing gender,” and deviance neutralization attempt to explain these gender dynamics in unpaid work, in this thesis, I primarily focus on the economic dependency theory and how relative income differences potentially affect time allocation in Ecuador.

3 Methodology

I analyze how socio-demographic characteristics are associated with the predominance of women over men working in unpaid work activities. Specifically, what relative income differences contribute to the unpaid work gap across genders? Therefore, I investigate the outcomes of three econometric approaches: Ordinary Least Squares, Censored Regression Model, and Oaxaca-Blinder Two Fold Decomposition.

The Ordinary Least Squares Regression serves as a benchmark, providing the linear relationship between time allocated to unpaid work and relative incomes after controlling for socio-demographic characteristics. On the other hand, the Censored Regression Model considers the nature of time-use surveys where a significant number of observations report zero time for specific activities. The Oaxaca-Blinder Two-Fold Decomposition provides a deeper understanding of how each socio-demographic characteristic is associated with men and women differently in time allocation between paid and unpaid work.

3.1 Ordinary Least Squares Regression

I start the analysis with Ordinary Least Squares Regressions (OLS). Its results serve only as a benchmark for analyzing the outcomes obtained by the additional econometric tools used. I estimate the following regressions that relates to the hours devoted to unpaid work last week for individual i , Y_{iw} and Y_{im} , as follows:

$$Y_{iw} = X_{iw}\beta_w + \varepsilon_{iw} \quad (1)$$

$$Y_{im} = X_{im}\beta_m + \varepsilon_{im} \quad (2)$$

The subscript w refers to women, and the subscript m refers to men. X_{iw} and X_{im} include the relative income between household members calculated as follows:

$$RelativeIncome_i = \frac{Income_i}{Income_m + Income_w} \quad (3)$$

as well as control variables with socio-demographic characteristics such as age, area, number of adults and children within the household, education, marital status, and ethnicity. β_w and β_m capture the relationship between the dependent and independent variables. ε_{iw} and ε_{im} are the error terms. I use bootstrapped standard errors by randomly sampling with replacement from original data, allowing control for stability and higher accuracy of estimates. The main advantage of bootstrapping standard errors is the precision that it brings since it does not make distributional assumptions, thus well representing the sample distribution (Efron, 1992).

3.2 Censored Regression Model

The estimator provided by the previous OLS regression may be biased because Y_{iw} and Y_{im} are non-negative, and there is a non-trivial frequency of zeros across the time-use variables. Therefore, I estimate a Censored Regression Model or Tobit Regression through maximum likelihood. I then estimate the latent regression model as follows:

$$Y_{iw}^* = X_{iw}\beta_w + \varepsilon_{iw} \quad (4)$$

$$Y_{iw} = \begin{cases} Y_{iw}^* & \text{if } \alpha_1 < y_{iw}^* < \alpha_2, \\ \alpha_1 & \text{if } y_{iw}^* \leq \alpha_1, \\ \alpha_2 & \text{if } y_{iw}^* \geq \alpha_2, \end{cases} \quad (5)$$

The observed outcome for individual i is defined based on the following censoring rule, and the subscript w will occur when the individual is a woman. Equations (4) and (5) have the subscript m instead of w if the individual is a man. For the analysis, $\alpha_1 = 0$ and $\alpha_2 = 135$, assuming that individuals must devote 5 hours per day to sleeping and caring for themselves, following Amarante and Rossel (2018). Additionally, as with the OLS

regression, I use bootstrapped standard errors to have a higher accuracy of the estimates.

3.3 Oaxaca-Blinder Two-Fold Decomposition

One of the tools used for analyzing gaps created by outcome differences due to group characteristics is the Oaxaca-Blinder Decomposition. It divides differentials between two groups into an explained and unexplained part. The former captures group differences in socio-demographic factors that may explain the gap, such as age, education level, marital status, number of people living in the household, etc. The latter represents the portion of the gap that observable characteristics cannot explain; hence, it is used as a measure of gender bias or discrimination (Jann, 2008).

The method estimates the mean differences between women and men and is expressed as follows:

$$UnpaidWorkGap = E(Y_{im}) - E(Y_{iw}) \quad (6)$$

w subscript denotes woman, and m describes man. Further, $E(Y)$ refers to the expected value of the weekly unpaid work hours. Based on equations (1) and (2):

$$Y_{iw} = X_{iw}\beta_w + \varepsilon_{iw} \quad (7)$$

$$Y_{im} = X_{im}\beta_m + \varepsilon_{im} \quad (8)$$

Plugging that into equation (6):

$$Gap = E(X_{im}\beta_m + \varepsilon_{im}) - E(X_{iw}\beta_w + \varepsilon_{iw}) \quad (9)$$

$$Gap = E(X_{im}\beta_m) + E(\varepsilon_{im}) - E(X_{iw}\beta_w) - E(\varepsilon_{iw}) \quad (10)$$

where $E(\varepsilon_{iw}) = 0$ and $E(\varepsilon_{im}) = 0$ by assumption.

$$Gap = E(X_{im}\beta_m) - E(X_{iw}\beta_w) \quad (11)$$

Assuming that β^* captures the nondiscriminatory coefficients⁵, I can divide the gap into two sections to capture explained and unexplained portions:

$$Gap = [E(X_{im}) - E(X_{iw})]' \beta^* + [E(X_{im})'(\beta_m - \beta^*) + E(X_{iw})'(\beta^* - \beta_w)] \quad (12)$$

The first section of this two-fold decomposition is $[E(X_{im}) - E(X_{iw})]' \beta^*$ that captures the gap explained by group differences. The remaining $[E(X_{im})'(\beta_m - \beta^*) + E(X_{iw})'(\beta^* - \beta_w)]$ captures the gap that can be explained through group differences in unobservable characteristics or by group discrimination. Additionally, as with the OLS and Tobit regressions, I use bootstrapped standard errors.

3.4 Time-Use Classification and Surveys

Activities are classified following the Economic Commission for Latin America and the Caribbean (ECLAC) guidelines to harmonize time-use surveys⁶ in Latin American and the Caribbean, specifically called Classification of Time-Use Activities for Latin America and the Caribbean (ECLAC, 2015). In this classification, they define two main categories: productive and non-productive activities. The latter includes personal activities such as personal care, training, learning, social coexistence, hobbies, sports, and communication media, including TV, radio, and social media platforms.

Productive activities are divided between paid and unpaid work. On the one hand, paid work includes working hours, commuting to and from work, job search, and self-

⁵It delves from an alternative decomposition prominent in the literature from the concept that there is some nondiscriminatory coefficients vector (β^*) that should be used to determine the contribution of the differences in the predictors (Jann, 2008).

⁶As per data availability, these surveys rely on stylized questions instead of diaries to capture time-use allocation.

consumption activities. On the other hand, unpaid work consists of housework, childcare, disabled care, care of others, and activities for other households, community, or volunteering. *Table 1* summarizes the activities' classification used for this thesis.

I use time-use surveys to provide insights into how unpaid work is divided among household members and the role of relative income within the household. Time-use surveys are the principal method to collect information about time allocation. As outlined in the ECLAC (2022), this methodological tool measures people's activities and how long they engage in them in a specific period, which can be either within the last 24 hours or seven days. Section 4 describes in-depth time-use surveys used for this analysis.

4 Data

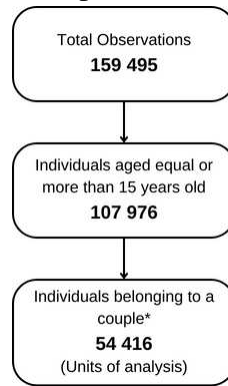
In my empirical analysis, I use the National Survey on Employment, Unemployment, and Underemployment (2018) or ENEMDU for its acronym in Spanish. It measures various socioeconomic indicators at the individual and household levels and provides insights to study employment levels, economic activities, and the Ecuadorian population's income sources. It retrieves information from every Ecuadorian resident over five years old from March, June, September, and December since June 2007. The survey has two main sections: fixed and specific modules. The former has all the necessary information needed to identify units of analysis and provide socio-economic context. The latter collects information to understand a particular phenomenon of the economy (Rivadeneira et al., 2018). For this study, I utilize those surveys that have included time-use questions in specific modules. Specifically, I utilize data from December 2007.

Additionally, I use the information obtained through the National Time-Use Survey (EUT) of November-December 2012. It provided in-depth information on gendered trends in paid and unpaid work across the Ecuadorian population. It focuses on the Ecuadorian population over 12 years old (Instituto Nacional de Cuentas Estadísticas y Censos, 2013). Both surveys use probabilistic sampling, ensuring the results obtained from the selected sample are generalizable to the entire population. They also recollect cross-sectional data, providing snapshots of the people at a specific time. Furthermore, both follow the same guidelines and methodology for time-use information recollection. I note that both surveys collect time used by all household members, not only the household head, as is customary in other time-use surveys.

Both surveys use questionnaires of stylized questions instead of diaries to capture time-use allocation. This might lead to measurement errors due to people not accounting correctly for the time invested in a specific activity. Moreover, it may underestimate or overestimate the time invested in different unpaid work activities that may be done simultaneously. ENEMDU and EUT use the previous week as the period of reference, putting a limit of 168 hours in all the activities performed by an individual, assuming no simultane-

ous activities due to data limitations, i.e., the survey does not provide context on whether the activities were done at the same. The units of analysis include couples⁷ of individuals over 15 years old. It leads to a sample size of 54,416 individuals for analysis.

Figure 1: Sample Selection Process



The survey asks the respondents for their time-use habits during the previous week, and every time variable is expressed in hours. To control for observable differences besides time allocation, each regression includes age, number of adults and children over and under five years old living in the household, education level, marital status, and ethnicity.

4.1 Descriptive statistics

Table 4 provides a clear comparison between men and women based on their mean values. On average, women are 3.91 years younger than men. It is also noticeable that women tend to have lower levels of education than men. However, no significant differences were observed between men and women regarding marital status, ethnicity, years of education, household size, and the number of adults and children living within the household. *Table 5* shows that most have attained primary education, followed by secondary education and university degrees. *Table 6* highlights that the majority of the individuals are married or in common-law marriages. *Table 7* shows that nearly all are either mestizo or indigenous.

Data reveals that women earn an average of \$158.79 less per month than their male

⁷An individual is considered part of a couple if they reside within a household headed by one person (the household head) and share that household with a partner, with the individual being one of the two members of the couple.

counterparts, resulting in a significant 61.16% disparity in relative earnings. As *Figure 2* illustrates, women devote an average of 15.56 hours less per week to paid work activities than men. This significant difference highlights an apparent discrepancy in paid work activities. However, we observe that women tend to spend more time on self-consumption activities, although this difference only reaches statistical significance at a 90% confidence level. Conversely, men allocate more time to work-related activities, mobilization, and job search.

Figure 2: Paid and Unpaid Work by Gender



Figure 2 also presents the significant gender disparity in unpaid work activities, with women dedicating 38.68 hours more per week than men to these tasks. This difference is particularly evident in household chores, where women invest an additional 29.31 hours weekly compared to men. The primary component of it is cooking activities, where women spend 11.07 hours more than men, and cleaning, with a difference of 11.90 hours. Furthermore, women devote an extra 9.61 hours per week to caregiving activities. A deeper analysis reveals that women spend 10.99 more hours per week on childcare and 7.50 more on disabled care than their male counterparts. Interestingly, men tend to dedicate more time to community service and volunteering than women. Women spend 2.03 more hours in personal activities than men, mainly due to time spent on personal care and learning.

Figure 3: Relative Unpaid Work vs Relative Income

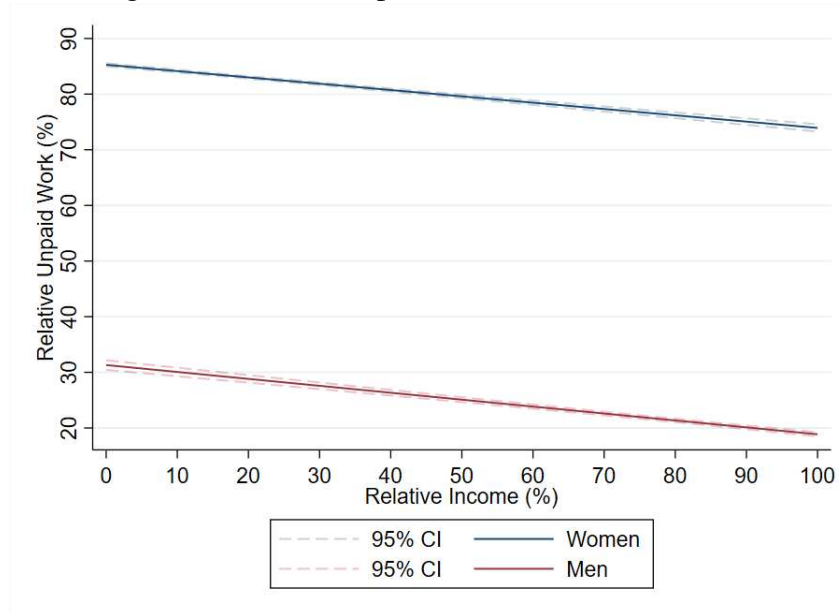


Figure 3 shows the negative relationship between relative income and relative unpaid work⁸ within the household. As the individuals provide a higher percentage of the household income, the number of hours spent in unpaid work decreases. This relationship is more pronounced for women than men. When analyzing the relative unpaid work, the notorious gap between men and women is also worth noting. Men contributing 0% on the household income fulfill around 30% of the unpaid work activities done at home, while women contributing the same perform over 80% of the total unpaid work activities.

⁸ $RelativeUnpaidWork_i = \frac{RelativeUnpaidWork_i}{RelativeUnpaidWork_m + RelativeUnpaidWork_w} * 100$

5 Results

5.1 Ordinary Least Squares Regression

Table 8 presents the estimates for the OLS regression over weekly unpaid work by sex. Relative income has a significant negative relationship for both men and women, but the effect is larger for women. Women contributing 1% (percentage point) more to the household income is associated with a decrease of 0.13 hours in the time spent in weekly unpaid work. A 30.58% increase in women's relative income, necessary for contributing half of the household income, associates with a 3.87-hour reduction in weekly unpaid work (33.18 minutes daily). This effect aligns with the findings observed in the current literature (Amarante & Rossel, 2018, 2021; Bittman et al., 2003; Bloemen & Stancanelli, 2014; Canelas & Salazar, 2014; Garcia et al., 2009; Kalenkoski et al., 2009; Newman, 2002). It can be explained by the gain in bargaining power allowing women to reduce the time devoted to unpaid work.

Women's unpaid work negatively correlates with age, while no significant correlation was found for men. Contrary to the findings in the relevant literature (Amarante & Rossel, 2018; Newman, 2002), there is no positive diminishing or u-shaped relationship between age and unpaid work activities in Ecuador. Living in an urban rather than a rural setting is associated with a decrease in the time spent in unpaid work activities for both. For men, this correlates with a reduction of 1.66 unpaid work hours per week, while women experience an even more significant decrease of 4.09 hours. Women in urban settings may have daycare centers, food delivery, and other resources that significantly reduce time spent at home, which aligns with the findings reported in Charmes (2019). Additionally, having one extra adult living in the household is related to a significant reduction in time spent in unpaid work activities for both, with women having a slightly larger reduction which has also been found by Amarante and Rossel (2018).

Having one extra child under 5 years old is associated with increased time devoted to unpaid work, specifically 1.90 hours per week for men and 9.03 hours per week for women.

There is a similar, but smaller, significant effect with children over 5 years old, where men devote 0.30 more hours (18 minutes) and women 2.70 additional hours. Overall, the presence of children has a significantly larger correlation in women than in men. The intensity of the effect varies by children's age which is aligned with the literature findings (Amarante & Rossel, 2018, 2021; Bloemen & Stancanelli, 2014; Charmes et al., 2019; Garcia et al., 2009; Kalenkoski et al., 2009). Leibowitz (1973) attributes this effect to changes in marginal productivity between men and women. With children, specifically young children, women have greater marginal productivity at home than in paid work activities.

Regarding the education level compared to having primary⁹ education, having basic education is correlated with a decreased time spent at home by 0.25 hours (15 minutes) per week for men and 3.36 hours per week for women. Given an education system reform in 2009, basic and primary education differ for the grades completed to achieve the corresponding level. The generational gap between these groups may explain the decrease in the time spent compared to primary education. Women with a secondary education degree devote 1.14 additional hours at home, while men with a non-university higher education degree allocate 3.43 more hours. It is worth noting that having a university or graduate degree correlates with time spent in unpaid work activities differently. On the one hand, men with a university degree are associated with assigning 3.17 extra hours to unpaid work, while women distribute 3.07 fewer hours. On the other hand, men with a graduate degree correlate with distributing 3.06 extra hours while women allocate 11.90 fewer hours. Generally, women's increasing their educational level is related to reduced time spent on unpaid work activities, while for men, it is associated with increased time spent at home. These findings are consistent with the literature (Amarante & Rossel, 2018; Charmes et al., 2019; Leibowitz, 1973).

In terms of marital status¹⁰ compared to being married, all the remaining marital statuses are correlated to a decrease in time spent at home, demonstrating the association

⁹Primary (Grades 1 to 6) and Secondary (Grades 7 to 13) refer to education level classification before the Ecuadorian education system reforms of 2009 and 2012, while Basic education (Grades 1 to 10) and Middle education (Grades 11 to 13) belong to the categories after the reforms.

¹⁰Couples are the unit of analysis, consisting of two individuals living together. Estimates for individuals who are single, widowed, divorced, or separated are based on those who are also living with a partner.

of being married with additional unpaid work hours as found in the literature (Bloemen & Stancanelli, 2014; Charmes et al., 2019; Newman, 2002). Additionally, being in a common law relationship is associated with a significant decrease in the time spent at home by 1.59 hours for men and 3.28 hours for women. In common-law marriages¹¹, men typically contribute more to household income and therefore have the greater bargaining power to opt out of unpaid work activities. Interestingly, widowed men are associated with a sharp decrease in unpaid work activities, with 7.40 fewer hours per week than married men.

When analyzing different ethnicities compared to being mestizo¹², being indigenous¹³ is related to an increase in unpaid work for men by 2.47 hours per week. Due to the fact that 83.69% of indigenous people reside in rural areas where manual labour is more demanding, unpaid work activities become more challenging. Being Afro¹⁴ is associated with a decrease in unpaid work of 2.78 hours for men and 6.46 hours for women. Individuals identifying as Afro are more likely to be in a common-law marriage, at 56.37%. Meanwhile, mestizos tend to be married, at 68.98%. As seen before, marital status correlates with differences in relative household income, impacting each individual's bargaining power.

Table 9 and 10 present the results of OLS regressions using weekly housework and childcare as alternative dependent variables. The findings indicate that an increase of 1%p of relative income is associated with a reduction of 0.03 weekly housework hours (2 minutes) for men and 0.90 hours (5.39 minutes) for women. While an increase of 1%p of relative income correlates to a reduction of 0.02 weekly childcare hours (1.39 minutes) for men and 4.45 hours (2.67 minutes) for women. When comparing these results to those ob-

¹¹Common-law refers to the stable and monogamous union between two persons free of marriage, of legal age, who form a de facto household, generate the same rights and obligations that families constituted by marriage have and give rise to a property partnership (Rivadeneira et al., 2018).

¹²An individual born of a white father and an indigenous mother or a white mother and an indigenous father (Rivadeneira et al., 2018).

¹³Considered indigenous by the fact of descending from populations that inhabited the country or a geographic region to which the country was part at the time of conquest or colonization or the establishment of state borders, and who, whatever their legal status, retain some or all of their own social, economic, cultural and political institutions or part of them (Rivadeneira et al., 2018).

¹⁴These are the African descent in America. The denomination obeys traits of socio-racial identification of the person whose basic characteristics have to do with the pigmentation of the skin and the somatic constitution of the body (Rivadeneira et al., 2018).

tained for weekly unpaid work, we observe that the relationship with housework accounts for 71% of the associations found in unpaid work. At the same time, the correlations on childcare represent 35% of the unpaid work estimate. These results emphasize the critical role of income in shaping unpaid work patterns, with housework being particularly associated with changes in relative income.

Exploring the estimates found for housework and childcare, there is a u-shaped relationship between age and housework activities. Living in urban areas is associated with decreased housework activities but not childcare. Having one extra adult at home is related to a higher decrease in childcare hours than housework, and having an extra child under five years old significantly correlates with an additional 7.06 hours of childcare and 0.94 hours of housework. Attending a literacy center¹⁵ have gained significance being associated with 3.38 additional hours of housework and 2.58 fewer hours of childcare.

Additionally, housework presents the same association of university and graduate degrees as unpaid work, but these are associated with increased childcare hours for both men and women. It highlights that individuals with higher levels of education tend to devote more time to childcare. Being in a common-law marriage is associated with a decrease in housework and childcare compared to being married. Being indigenous correlates with an increase in housework activities but not childcare, and being Afro is related to a decrease in housework but not childcare. Only two ethnicities are associated with a decrease in childcare, montubio¹⁶ and white¹⁷, with 1.72 and 1.76 fewer hours, respectively.

¹⁵Educational institutions focused on the population over 15 years old who have never gone to primary school and have been unable to learn how to read, write and perform basic mathematics. It gives this population segment the tools to start and finalize primary education and later enroll and graduate from high school (Rivadeneira et al., 2018).

¹⁶A group of human collectives organized and self-defined as Montubios, with characteristics typical of the coastal region and subtropical zones, born naturally in the rural zone as an organic social unit endowed with a common spirit and ideals; possessing a cultural and political formation that determines them as a result of a long process of spatiotemporal conditioning, which has its ancestral worldview and maintains its natural habitat (Rivadeneira et al., 2018).

¹⁷A person who comes from the European or Caucasian racial ethnicity (Rivadeneira et al., 2018).

5.2 Censored Regression Model (Tobit)

Table 11 presents Tobit estimates which, compared to OLS regressions, include upper and lower bounds that correct for any bias. Overall, the direction and magnitude of the correlations remain almost the same as the OLS differing by no more than 5 minutes of weekly unpaid work. Relative income still has a significant negative relationship for both men and women, as a 1% increase in relative income is associated with a decrease of 0.13 weekly hours for women and 0.05 weekly hours for men. Age is still significant only for women and presents a negative diminishing relationship with weekly unpaid work. Living in an urban area rather than a rural setting still is associated with decreased time spent in unpaid work activities for both. For men, it correlates with a reduction of 1.65 unpaid work hours per week, while women experience an even more significant decrease of 4.09 hours. In addition, having one extra adult still relates to a reduced time spent at home, with a larger magnitude on women's time allocation which is linked with a decrease of 1.42 unpaid work hours per week. Having one extra child under or over five years old still correlates with increased time devoted to unpaid work for both men and women with a larger magnitude with children under five years old.

Women with a secondary education degree are associated with 1.13 additional hours at home, while men with a non-university higher education are related to allocating 3.43 more hours. A university or graduate degree still is correlated with time spent in unpaid work activities differently. Men with a university (3.16) or a graduate degree (3.06) are correlated with extra hours of unpaid work, while for women, it is linked to distributing 3.01 and 11.84 fewer hours, respectively. In terms of marital status, separated, single, divorced, widowed, common-law and single individuals are associated with fewer unpaid work hours compared to being married.

Analyzing different ethnicities compared to being mestizo. Being indigenous is correlated with an increase of 2.43 unpaid work hours per week for men. Being afro is associated with decreased unpaid work for men and women. For women, being black¹⁸ (2.13) or

¹⁸From the political point of view, the denomination of "blacks" obeys the communities of African descent that in Ecuador group other derived socio-racial forms: mulattos, morenos, zambos, trigueños, niches, prietos,

mulatto¹⁹ (2.28) has a negative correlation significant at 90%, which are not significant in the OLS estimates. *Tables 12 and 13* presents the Tobit regression estimates using weekly housework and childcare as alternative dependent variables, which showcase almost the same correlation's direction and magnitudes as the OLS. Within housework estimates, the number of children over five years old and having a non-university higher education degree no longer has a significant association with men's weekly housework.

5.3 Oaxaca-Blinder Two-Fold Decomposition

Table 14 presents the overall coefficients for the Two-Fold Oaxaca-Blinder decomposition. The first column focuses on weekly unpaid work. It estimates that weekly unpaid work for women is 52.98 hours while for men it is 13.17 hours, which leads to a gap of 39.80 hours per week. If women had the same endowments as men, their time spent in unpaid work activities per week would decrease by 7.61 hours per week because of different responses. On the other hand, women's weekly unpaid work would decrease by 32.20 hours per week if their response to endowments (coefficients) were the same as those of men and only endowments differed, i.e., only characteristics differ, but women and men react the same way to the same characteristic. It shows that 19.11% of the gap can be explained based on differences in relative income, age, household composition, education level, marital status, and ethnicity. Thus, the current observed individual characteristics cannot fully explain the Ecuadorian unpaid work gap. It highlights the prominent role of current social norms impacting time allocation in Ecuadorian households. Hence, policies that equalize income or education will not narrow the unpaid work gap. These initiatives must be coupled with campaigns motivating a change in social norms, leading to the denormalization of gender discrimination.

The second column focuses on weekly housework; it estimates that weekly housework for women is 38.77, while for men, it is 9.02 hours, which leads to a gap of 29.75 hours per week. If women had the same characteristics (endowments) as men, their time

cafecitos, among others (Rivadeneira et al., 2018).

¹⁹Mestizo with dominant Afro-descendant component (Rivadeneira et al., 2018).

spent in housework activities per week would decrease by 4.59 hours per week because of different responses. Additionally, women's weekly housework would decrease by 25.16 hours per week if their response to endowments were the same as those of men and only endowments differed. Here, 15.42% of the gap can be explained based on differences in relative income, age, household composition, education level, marital status, and ethnicity.

The third column focuses on weekly childcare; it estimates that weekly childcare for women is 18.88, while for men, it is 7.66 hours, which leads to a gap of 11.22 hours per week. If women had the same endowments as men, their time spent in childcare activities per week would decrease by 2.91 hours per week because of different responses. Additionally, women's weekly housework would decrease by 8.31 hours per week if their response to endowments were the same as those of men and only endowments differed. Here, 25.91% of the gap can be explained based on differences in relative income, age, household composition, education level, marital status, and ethnicity.

Table 15 presents a detailed decomposition of the differences in characteristics contributing to the existing gap if women and men had the same responses, which are presented in the "explained" columns. For weekly unpaid work, relative income and age are the only estimates with a 99% significance level. If women had the same relative income as men, women's unpaid work would decrease by 7.01 hours per week. It is worth noting that relative income forms 92.13% of the explained part of the gap, which highlights the importance of differences in income in explaining time-allocation gaps. Despite the differences in income, they are not sufficient to bridge the gap in unpaid work, as it only contributes to 17.60% of the overall gap, taking into account both explained and unexplained factors.

Decomposing the weekly housework gap, relative income and age have a 99% significance level, same as with unpaid work, but having a graduate degree also plays a significant relationship. If women had the same relative income as men, women's housework would decrease by 4.54 hours, which is 98.87% of the explained portion of the gap and 15.25% of the total gap. If women and men had graduate degrees in the same proportion, the housework gap would decrease by 0.02 hours (1.19 minutes) per week.

Analyzing the weekly childcare gap, relative income and age have a 99% significance

level, the same as with unpaid work and housework. However, other variables play a role, including living in an urban area, the number of adults and children over and under five years old, and educational attainment. If women had the same relative income as men, women's childcare would decrease by 2.83 hours, which is 97.40% of the explained portion of the gap and 25.25% of the total gap. The number of adults and children under five years old increases the time spent in childcare as well as having no education, university or graduate degree.

The "unexplained" columns of *Table 15* present how differences in response to specific endowments contribute to the overall gap in weekly unpaid work, housework and childcare. Most of the gap not explained by differences in endowments can be attributed to differences in men's and women's responses to their relative income, age, living area, number of adults, number of children under and over five years old, educational attainment, marital status, and ethnicity.

Estimates suggest women's weekly unpaid work, housework, and childcare would increase by 5.43, 3.62, and 1.71 hours per week, respectively, if women responded to relative income the same way as men. Weekly unpaid work and housework would increase by 1.25 and 0.75 hours if women responded as men to the proportion of individuals living in urban rather than rural areas. Additionally, weekly unpaid work and childcare would increase by 1.28 and 1.41 hours if women responded the same as men to an extra adult in the household.

Women's weekly unpaid work, housework and childcare would be decreased by 3.31, 0.33, and 3.90 hours per week, respectively, if they responded the same as men to an extra child under five years old living in the household. Also, women's weekly unpaid work, housework, and childcare would be decreased by 2.58, 1.15 and 0.47 hours per week if they responded the same as men to an extra child over five years old. It could mean that the presence of children generates different responses between men and women, perhaps based on widely accepted traditional social norms.

Moreover, women's weekly unpaid work, housework, and childcare would decrease by 2.39, 1.46, and 0.80 hours per week if women responded to educational attainment the

same way as men. These effects are more significant in unpaid work and housework than in childcare. Specifically, women's weekly unpaid work would reduce by 0.21, 1.49, and 1.16 hours per week if they responded to the proportion of individuals with no education, primary and secondary education, the same way as men, respectively. Additionally, women's weekly housework would decrease by 0.14, 0.02, 1.19, 0.04, and 0.64 hours per week if they responded to the proportion of individuals with no education attending a literacy center, with primary, basic and secondary education, respectively. Finally, similar responses to the proportions found within marital statuses and ethnicities do not play a significant role.

6 Robustness Checks

To investigate the robustness of the previous findings, I explore how increases in relative income correlate with single and childless individuals. I also added a control variable focused on provincial effects. *Table 16* presents a summary of the estimates focused on weekly unpaid work and relative income. The correlation between relative income and unpaid work is no longer significant in the subsample of single individuals. They may exhibit a reduced correlation due to the absence of household bargaining based on income.

For individuals without children, the correlation between relative income and unpaid work remains significant but with smaller magnitudes. Childless households, not burdened with additional unpaid work responsibilities, show a weaker connection between relative income and time spent at home. Adding provinces as an additional control variable slightly reduces the magnitude of the correlation between relative income and unpaid work for men and slightly increases it for women. Tobit estimates are consistent with the correlations found with the OLS regressions.

Panel C presents the Two-Fold Oaxaca Blinder Decomposition results focusing on Weekly Unpaid work. Single individuals display an unpaid work gap of 13.17, with 0.52% attributed to differences in endowments, while relative income accounts for 68.33% of the explained portion. Interestingly, compared to individuals in a couple, this sample shows a reduced unpaid work gap, and the influence of differences in relative income is less pronounced in explaining this disparity. This shift may be attributed to the absence of household bargaining dynamics within the single individual context.

Individuals without children exhibit an unpaid work gap of 27.09, with 10.58% attributable to differences in endowments and relative income accounting for 95.60% of the explained portion. Despite having a smaller unpaid work gap compared to individuals in a couple, those without children still maintain a significant correlation with income. It could be attributed to the absence of childcare responsibilities, reducing the overall gap yet emphasizing the persistent role of relative income in shaping disparities in housework activities. Including provinces as an additional control variable reveals consistent trends,

aligning with the patterns observed in the estimates without this variable. It suggests that the provincial factor does not significantly alter the observed relationships within the unpaid work gap, reinforcing the robustness of the conclusions drawn from the previous analysis.

In *Table 17*, an alternative perspective is adopted, examining the relative proportions of weekly unpaid work, housework, and childcare within households rather than absolute values. The findings indicate that a 1% increase in income is associated with a decrease in the relative weekly contributions to unpaid work, housework, and childcare for both. Specifically, men experience reductions of 10.82%, 11.06%, and 13.43%, while women see decreases of 9.07%, 8.55%, and 7.48%, in unpaid work, housework and childcare, respectively. Within a couple, a 1% increase in an individual's relative income is linked to a substantial decrease of 53.94%, 55.46%, and 45.37% in their relative contributions to unpaid work, housework, and childcare. Tobit estimates confirm these correlations identified in OLS regressions.

Oaxaca-Blinder estimates demonstrate a consistent gap in time allocation, with women contributing 61.78%, 63.94%, and 50.73% more to unpaid work, housework, and childcare activities. Relative income loses significance in explaining the relative housework and childcare gap, accounting for 11.61% of the estimated unpaid work gap. This shift to relative measures underscores the role of income in influencing the distribution of unpaid work responsibilities within households, providing insights into the dynamics of intra-household bargaining and resource allocation. The identified patterns corroborate that relative income plays a crucial role in shaping gendered unpaid work dynamics, influencing the negotiation and distribution of household responsibilities.

7 Conclusion

In this study, I conducted a comprehensive analysis of the factors influencing the predominance of women over men in unpaid work activities. I employed various econometric approaches, including Ordinary Least Squares, Censored Regression Model, and Oaxaca-Blinder Two-Fold Decomposition, to investigate the relationship between unpaid work and relative incomes, controlling for socio-demographic characteristics. The data was drawn from the National Survey on Employment, Unemployment, and Underemployment (ENEMDU)'s time-use module 2007 and the National Time-Use Survey of November-December 2012 (EUT) in Ecuador.

The analysis yielded several crucial findings. Firstly, there is a consistent discrepancy between how much time women and men allocate to unpaid work. Women spend significantly more time on housework, caring for others, and helping others. This gendered division of labour is, to some degree, influenced by factors such as age, rural or urban residence, the presence of children in the household, and educational attainment. Nonetheless, based on the Oaxaca-Blinder Two Fold Decomposition findings, the unpaid work gap is reduced by only 19.11% when observable differences are considered. It highlights that the primary contributor to the unpaid work gap is the current social norms that lead to gender biases. Addressing these norms will require significant effort to bring about change.

Relative income within household incomes played a crucial role in the effect on unpaid work of observable differences, as an increase in relative income is associated with a reduction in unpaid work for both men and women. However, the correlation was more pronounced for women, indicating that higher income levels empower women to negotiate a more equitable division of household labour. When analyzing housework and childcare as dependent variables, relative income still poses a prominent correlation.

Urban residence is associated with decreased time spent on unpaid work for both genders, suggesting that urban environments provide greater access to resources that reduce the time required for household tasks. It did not have a significant correlation with weekly childcare activities. Additional adults in the household are related to reduced unpaid work,

with a larger magnitude observed for women, potentially due to shared responsibilities. Conversely, the presence of children, especially those under 5 years old, significantly correlates with increased unpaid work, highlighting the impact of childcare responsibilities.

Education played a prominent but complex role as different levels of education had varying correlations. Compared to those with primary education, having basic education is linked with reduced time spent at home for both men and women. Women with secondary education invest additional hours at home, while men with non-university higher education allocate more time. For men, higher education levels were related to increased unpaid work, while for women, they were linked to reduced unpaid work. This suggests that as women attain higher education, they may prioritize paid work over unpaid labour, while men with advanced degrees may take on more household responsibilities. Additionally, achieving a university or graduate degree is associated with a larger reduction in weekly unpaid work than with increases in relative income. However, when decomposing the gap, it plays a more minor role.

Marital status also correlates with unpaid work. Compared to being married, all other marital statuses are linked to a reduction in time spent at home. This aligns with previous studies, suggesting that married women often shoulder more household responsibilities. Ethnicity had significant but varied effects. Indigenous ethnicity was related to increased unpaid work for men but was not significant for women, while Afro-ethnicity was linked with decreased unpaid work for both genders. These findings suggest that cultural norms and traditions play a role in shaping unpaid work patterns.

While this study provides valuable insights into the factors influencing unpaid work, it has several limitations. Firstly, the data relies on self-reported time-use surveys, which may be subject to recall bias and measurement errors. Additionally, the study focused on Ecuadorian data, and the findings may not be directly generalizable to other regions or countries with different social and economic contexts. Given data limitations, the study couldn't perform causal analysis or account for cultural and societal factors influencing unpaid work, such as gender norms and expectations or simultaneous activities. Additionally, the study did not explore the impact of policies and interventions to reduce gender

disparities in unpaid work.

Future research could explore the role of cultural norms and societal expectations in shaping unpaid work patterns in Ecuador. Beyond the impact of relative income, particularly noteworthy is the role of education, notably higher education, which often aligns with a more balanced distribution of unpaid work. A focused exploration of how educational levels shape unpaid work allocation could offer valuable insights. Moreover, examining the impact of policy interventions, such as parental leave policies or subsidized childcare, on the division of unpaid labour could provide valuable insights into promoting gender equality in household tasks. Furthermore, expanding the analysis to include a wider range of countries and regions would allow for a more comprehensive understanding of the global dynamics of unpaid work and its relationship with gender, income, education, and other socio-demographic factors. Finally, longitudinal studies tracking changes in unpaid work patterns over time could shed light on the evolving nature of gender roles in Latin American households.

References

- Amarante, V., & Rossel, C. (2018). Unfolding patterns of unpaid household work in latin america. *Feminist Economics*, 24(1), 1–34.
- Amarante, V., & Rossel, C. (2021). Gender differences in housework and earnings: Intra-household evidence from latin america. *Serie Documentos de Trabajo; 08/21*.
- Antonopoulos, R., & Hirway, I. (2010). Unpaid work and the economy. In *Unpaid work and the economy: Gender, time use and poverty in developing countries* (pp. 1–21). Springer.
- Becker, G. S. (1965). A theory of the allocation of time. *The economic journal*, 75(299), 493–517.
- Becker, G. S. (1991). *A treatise on the family: Enlarged edition*. Harvard University Press.
- Bertrand, M., Kamenica, E., & Pan, J. (2015). Gender identity and relative income within households. *The Quarterly Journal of Economics*, 130(2), 571–614.
- 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.
- Bloemen, H. G., & Stancanelli, E. G. (2014). Market hours, household work, child care, and wage rates of partners: An empirical analysis. *Review of Economics of the Household*, 12, 51–81.
- Brines, J. (1994). Economic dependency, gender, and the division of labor at home. *American Journal of sociology*, 100(3), 652–688.
- Campaña, J. C., Gimenez-Nadal, J. I., & Molina, J. A. (2020). Self-employed and employed mothers in latin american families: Are there differences in paid work, unpaid work, and child care? *Journal of Family and Economic Issues*, 41, 52–69.
- Campaña, J. C., Gimenez-Nadal, J. I., & Molina, J. A. (2018). Gender norms and the gendered distribution of total work in latin american households. *Feminist Economics*, 24(1), 35–62.
- Canelas, C., & Salazar, S. (2014). Gender and ethnic inequalities in lac countries. *IZA Journal of Labor & Development*, 3, 1–15.
- Charmes, J., et al. (2019). *The unpaid care work and the labour market: An analysis of time use data based on the latest world compilation of time-use surveys*. ILO Geneva.
- Deere, C. D., & Twyman, J. (2012). Asset ownership and egalitarian decision making in dual-headed households in ecuador. *Review of Radical Political Economics*, 44(3), 313–320.
- Dominguez-Amoros, M., Mu níz, L., & Rubilar, G. (2021). Social times, reproduction and social inequality at work: Contrasts and comparative perspectives between countries. *Towards a Comparative Analysis of Social Inequalities between Europe and Latin America*, 331–359.
- ECLAC. (2015). Classification of time-use activities for latin america (causal). http://repositorio.cepal.org/bitstream/handle/11362/40170/S1600307_en.pdf?sequence=1&isAllowed=y

- ECLAC. (2022). Methodological guide on time-use measurements in latin america and the caribbean. https://repositorio.cepal.org/bitstream/handle/11362/48020/S2100866_en.pdf?sequence=1&isAllowed=y
- Efron, B. (1992). Bootstrap methods: Another look at the jackknife. In *Breakthroughs in statistics: Methodology and distribution* (pp. 569–593). Springer.
- Faulkner, A. H., & Lawson, V. A. (1991). Employment versus empowerment: A case study of the nature of women’s work in ecuador. *The Journal of Development Studies*, 27(4), 16–47.
- Garcia, I., Molina, J. A., & Montuenga, V. M. (2009). *Intra-household time allocation: Gender differences in caring for children* (tech. rep.). IZA Discussion Papers.
- Gronau, R. (1977). Leisure, home production, and work—the theory of the allocation of time revisited. *Journal of political economy*, 85(6), 1099–1123.
- Grunow, D. (2019). Comparative analyses of housework and its relation to paid work: Institutional contexts and individual agency. *Kolner Zeitschrift fur Soziologie und Sozialpsychologie*, 71(1), 247–284.
- Hochschild, A., & Machung, A. (2012). *The second shift: Working families and the revolution at home*. Penguin.
- Instituto Nacional de Cuentas Estadísticas y Censos. (2013). Metodología de la encuesta específica de uso del tiempo - 2012. https://www.ecuadorencifras.gob.ec/documentos/web-inec/Uso_Tiempo/Metodologia_EUT_2012.pdf
- Jann, B. (2008). A stata implementation of the blinder-oaxaca decomposition. *Stata journal*, 8(4), 453–479.
- Kalenkoski, C. M., Ribar, D. C., & Stratton, L. S. (2009). The influence of wages on parents’ allocations of time to child care and market work in the united kingdom. *Journal of Population Economics*, 22, 399–419.
- Kooreman, P., & Kapteyn, A. (1987). A disaggregated analysis of the allocation of time within the household. *Journal of Political Economy*, 95(2), 223–249.
- Leibowitz, A. S. (1973). Women’s allocation of time to market and non-market activities: Differences by education.
- Lippmann, Q., Georgieff, A., & Senik, C. (2020). Undoing gender with institutions: Lessons from the german division and reunification. *The Economic Journal*, 130(629), 1445–1470.
- Manser, M., & Brown, M. (1980). Marriage and household decision-making: A bargaining analysis. *International economic review*, 31–44.
- Mincer, J. (1962). Labor force participation of married women: A study of labor supply. In *Aspects of labor economics* (pp. 63–105). Princeton University Press.
- Moyser, M., & Burlock, A. (2018). *Time use: Total work burden, unpaid work, and leisure* (tech. rep.). Statistics Canada.
- Newman, C. (2002). Gender, time use, and change: The impact of the cut flower industry in ecuador. *the world bank economic review*, 16(3), 375–395.
- Palermo, H. M., & Capogrossi, M. L. (2020). *Tratado latinoamericano de antropología del trabajo [latin american treatise on the anthropology of labor]*. CLACSO. <http://www.jstor.org/stable/j.ctv1gm012v>

- Rivadeneira, D., Sandoval, D., Zambonino, D., Alban, A., & Garces, C. (2018). Encuesta nacional de empleo, desempleo y subempleo (enemdu) documento metodologico. https://www.ecuadorencifras.gob.ec/documentos/web-inec/EMPLEO/2018/Septiembre-2018/ENEMDU_Metodologia%20Encuesta%20Nacional%20de%20Empleo%20Desempleo%20y%20Subempleo.pdf
- Sullivan, O. (2013). What do we learn about gender by analyzing housework separately from child care? some considerations from time-use evidence. *Journal of Family Theory & Review*, 5(2), 72–84.

Appendix

Table 1: Time-use Classification

Category	Activities
Paid Work	Work
	Mobilization and job search
	Self-consumption activities
Unpaid Work	Cooking and meal preparation
	Cleaning
	Garment care
	Housework
	Groceries shopping
	Household repairs
	Additional purchases
	Additional household chores
	Childcare
	Care activities
Disabled care	
Help others	Additional caregiving
	Domestic work for other households
Personal activities	Community service and volunteering
	Basic needs and personal care
	Learning and schooling
	Recreation and Entertainment
	Social and religious activities

Notes: Further information on activity classification is available upon request

Table 2: Compiled Definitions: Education and Marital Status

Term	Definition (Rivadeneira et al., 2018)
Literacy Center	Educational institutions focused on the population over 15 years old who have never gone to primary school and have been unable to learn how to read, write and perform basic mathematics. It gives this population segment the tools to start and finalize primary education and later enroll and graduate from high school.
Primary	Grades 1 to 6, valid before the education reforms held in 2009 and 2012.
Basic education	Grades 1 to 10, valid after the education reforms held in 2009 and 2012.
Secondary	Grades 7 to 13, valid before the education reforms held in 2009 and 2012.
Middle education	Grades 11 to 13, valid after the education reforms held in 2009 and 2012. Also referred to as high school.
Common-law	Stable and monogamous union between two persons free of marriage, of legal age, who form a de facto household, generate the same rights and obligations that families constituted by marriage have and give rise to a property partnership.
Marriage	Solemn contract by which a man and a woman unite to live together, procreating and helping each other. Modified in 2022 to marriage as a solemn contract by which two persons unite to live together and assist each other.

Table 3: Compiled Definitions: Ethnicity

Term	Definition (Rivadeneira et al., 2018)
Indigenous	Considered indigenous by the fact of descending from populations that inhabited the country or a geographic region to which the country was part at the time of conquest or colonization or the establishment of state borders, and who, whatever their legal status, retain some or all of their own social, economic, cultural and political institutions or part of them.
Afro	These are the African descent in America. The denomination obeys traits of socio-racial identification of the person whose basic characteristics have to do with the pigmentation of the skin and the somatic constitution of the body.
Black	From the political point of view, the denomination of "blacks" obeys the communities of African descent that in Ecuador group other derived socio-racial forms: mulattos, morenos, zambos, trigueños, niches, prietos, cafecitos, among others.
Mulatto	Mestizo with dominant Afro-descendant component.
Montubio	A group of human collectives organized and self-defined as Montubios, with characteristics typical of the coastal region and subtropical zones, born naturally in the rural zone as an organic social unit endowed with a common spirit and ideals; possessing a cultural and political formation that determines them as a result of a long process of spatiotemporal conditioning, which has its ancestral worldview and maintains its natural habitat.
Mestizo	An individual born of a white father and an indigenous mother or a white mother and an indigenous father.
White	A person who comes from the European or Caucasian racial ethnicity.

Table 4: Descriptive Statistics by Gender

Variables (unit)	Men	Women	Mean difference
Age (years)	47.65	43.73	3.9132*** (0.1288)
Education (years)	8.74	8.76	-0.0114 (0.0500)
Household size (individuals)	4.53	4.53	0.0004 (0.0165)
Number of adults	3.00	3.00	0.0004 (0.0108)
Number of children under 5 years old	0.45	0.45	0.0000 (0.0060)
Number of children over 5 years old	1.08	1.08	0.0000 (0.0101)
Real income (USD 2010, hourly)	1.25	0.44	0.8152*** (.02077)
Real income (USD 2010, monthly)	229.95	71.16	158.7907*** (3.0507)
Relative income (percentage)	80.58	19.42	61.1522*** (0.0034)
Total work (hours)	58.95	70.08	-11.1327*** (0.2473)
Paid work (hours)	49.33	33.77	15.5587*** (0.2072)
Work hours (Labour Market)	45.55	37.62	7.9376*** (0.1799)
Mobilization and job search (hours)	5.14	4.10	1.0482*** (0.0602)

Variables (unit)	Men	Women	Mean difference
Self-consumption activities (hours)	2.26	2.44	-0.1770* (0.0957)
Unpaid work (hours)	13.72	52.40	-38.6762*** (0.2009)
<i>Housework (hours)</i>	<i>9.49</i>	<i>38.80</i>	<i>-29.3079***</i> <i>(0.1374)</i>
Cooking (hours)	4.97	16.04	-11.0664*** (0.0951)
Cleaning (hours)	3.29	15.19	-11.9048*** (0.0652)
Garment care (hours)	1.22	2.60	-1.3813*** (0.0317)
Groceries shopping (hours)	2.47	2.55	-0.0795** (0.0158)
Buying miscellaneous (hours)	1.46	1.38	0.0854** (0.0304)
Household repairs (hours)	3.88	3.50	0.3850 (0.2446)
Household miscellaneous chores (hours)	4.15	4.61	-0.4624*** (0.0643)
<i>Care (hours)</i>	<i>7.60</i>	<i>17.21</i>	<i>-9.6107***</i> <i>(0.1566)</i>
Caregiving miscellaneous (hours)	3.85	4.18	-0.3326*** (0.0896)
Childcare (hours)	7.71	18.70	-10.9943*** (0.1751)
Disabled care (hours)	13.32	20.82	-7.4999*** (1.2554)

Variables (unit)	Men	Women	Mean difference
<i>Help Others (hours)</i>	5.16	4.86	0.3029 (0.1948)
Domestic work for other households (hours)	4.20	4.69	-0.4912 (0.3379)
Community service and volunteering (hours)	5.31	4.51	0.8004*** (0.2245)
Personal activities (hours)	89.82	91.86	-2.0335*** (0.1757)
Necessities and personal care (hours)	70.18	71.98	-1.7926*** (0.1191)
Learning and schooling (hours)	14.27	15.87	-1.6022*** (0.5587)
Social activities (hours)	10.53	10.96	-0.4366*** (0.0888)
Recreation and entertainment (hours)	11.53	10.97	0.5578*** (0.0793)

Notes: Mean calculations use data from 2007 and 2012 for individuals over 15, which are part of a couple.

Total number of observations: 54 416

Number of observations if the individual is a woman: 27 206

Number of observations if the individual is a man: 27 210

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 5: Education Level by gender

Education level (percentage)	Men (mean)	Women (mean)	Mean difference
No education	7.02	9.15	-2.1332*** (0.0023)
Literacy center	0.61	0.90	-0.2868*** (0.0007)
Primary	51.52	47.81	3.7030*** (0.0043)
Basic education	0.87	1.41	-0.5405*** (0.0009)
Secondary	26.15	27.52	-1.3722*** (0.0038)
Middle education	0.72	1.18	-0.4669*** (0.0008)
Non-university higher education	0.92	0.88	0.0366 (0.6508)
University	11.35	10.80	0.5529** (0.0027)
Graduate	0.86	0.35	0.5071*** (0.0007)

Notes: Primary (Grades 1 to 6) and Secondary (Grades 7 to 13) refer to education level classification before the Ecuadorian education system reforms of 2009 and 2012, while Basic education (Grades 1 to 10) and Middle education (Grades 11 to 13) belong to the categories after the reforms.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 6: Marital Status by Gender

Marital status (percentage)	Men	Women	Mean difference
Married	68.29	68.26	0.0352 (0.0040)
Separated	1.16	1.17	-0.0076 (0.0009)
Divorced	0.07	0.07	0.0037 (0.0002)
Widowed	0.04	0.08	-0.0368* (0.0002)
Common-law	30.10	30.08	0.0202 (0.0039)
Single	0.33	0.34	-0.0074 (0.0005)

Notes: Couples are the unit of analysis, consisting of two individuals living together. Estimates for individuals who are single, widowed, divorced, or separated are based on those who are also living with a partner.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 7: Ethnicity by Gender

Ethnicity (percentage)	Men	Wome	Mean difference
Indigenous	9.77	9.82	-0.0533 (0.0025)
Afro	0.72	0.72	0.0001 (0.0007)
Black	1.78	1.95	-0.1724 (0.0012)
Mulatto	1.85	1.68	0.1694 (0.0011)
Montubio	2.08	2.12	-0.0364 (0.0012)
Mestizo	79.01	78.96	0.0476 (0.0035)
White	4.48	4.40	0.0780 (0.0018)
Other	0.32	0.35	-0.0330 (0.0005)

Notes: $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 8: Associates between Relative within Household
Income and Weekly Unpaid Work: OLS Results

Weekly Unpaid Work	Men	Women
Relative Income	-0.0500*** (0.0041)	-0.1266*** (0.0065)
Age	-0.0767 (0.0505)	-0.2926*** (0.0849)
Age squared	0.0010** (0.0005)	-0.0001 (0.0009)
Urban	-1.6605*** (0.2538)	-4.0901*** (0.4064)
Number of adults	-0.9822*** (0.1217)	-1.4216*** (0.1916)
Number of children under 5 years old	1.9033*** (0.1862)	9.0305*** (0.3717)
Number of children over 5 years old	0.2957*** (0.1017)	2.7005*** (0.2047)
<i>Education Level (Compared to Primary)</i>		
No education	-0.2914 (0.5581)	-0.3887 (0.8528)
Literacy center	3.1166 (2.0802)	3.0146 (2.3484)
Basic education	-0.2552 (0.9984)	-3.3572** (1.5188)
Secondary	0.4891* (0.2902)	1.1405** (0.5555)
Middle education	0.9016 (1.2922)	-0.5909 (1.9190)

Weekly Unpaid Work	Men	Women
Non-university higher education	3.4269*** (1.2260)	-0.6687 (2.0520)
University	3.1702*** (0.4036)	-3.0689*** (0.6506)
Graduate	3.0579*** (1.0243)	-11.8959*** (2.4226)
<i>Marital Status (Compared to Married)</i>		
Separated	0.4156 (1.2606)	-3.1225* (1.7329)
Divorced	3.9304 (4.9138)	-2.8171 (7.1119)
Widowed	-7.3997*** (2.4131)	-2.5831 (3.5525)
Common-law	-1.5940*** (0.2730)	-3.2812*** (0.4027)
Single	1.4227 (2.3879)	-4.0751 (2.8917)
<i>Ethnicity (Compared to Mestizo)</i>		
Indigenous	2.4704*** (0.5810)	-0.3235 (0.9634)
Afro	-2.7648** (1.1328)	-6.4677*** (2.3986)
Black	-1.0075 (0.7447)	-2.1588 (1.4627)
Mulatto	-0.3424 (0.8551)	-2.2052 (1.4435)
Montubio	-0.5280 (0.7343)	-1.6467 (1.2591)

Weekly Unpaid Work	Men	Women
White	0.6070 (0.5125)	-1.4400 (0.9972)
Other	4.8236 (3.0457)	1.3249 (3.2569)
Constant	20.5771*** (1.2245)	68.8049*** (1.9323)
<i>Observations</i>	15,599	17,169
<i>R-squared</i>	0.0366	0.1828

Notes: Bootstrapped standard errors with 200 repetitions.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 9: Associates between Relative within Household
Income and Weekly Housework: OLS Results

Weekly Housework	Men	Women
Relative Income	-0.0329*** (0.0031)	-0.0899*** (0.0044)
Age	0.0160 (0.0400)	0.3555*** (0.0641)
Age squared	0.0004 (0.0004)	-0.0045*** (0.0007)
Urban	-1.1907*** (0.2048)	-2.5106*** (0.3041)
Number of adults	-0.4418*** (0.0896)	-0.2976** (0.1349)
Number of children under 5 years old	0.0020 (0.1250)	0.7058*** (0.2202)
Number of children over 5 years old	-0.1318* (0.0894)	0.9390*** (0.1329)
<i>Education Level (Compared to Primary)</i>		
No education	0.1401 (0.4382)	-0.1314 (0.5559)
Literacy center	1.8774 (1.6321)	3.3881** (1.7285)
Basic education	0.1794 (0.7449)	0.5137 (1.1361)
Secondary	0.1270 (0.2250)	-0.3060 (0.3740)
Middle education	-0.5118 (0.6606)	-1.5609 (1.1122)

Weekly Housework	Men	Women
Non-university higher education	1.3389* (0.8052)	-1.9779 (1.3386)
University	1.6148*** (0.2452)	-4.4955*** (0.4360)
Graduate	1.5476** (0.7373)	-12.5577*** (1.7062)
<i>Marital Status (Compared to Married)</i>		
Separated	0.9368 (0.8932)	-0.4761 (1.3337)
Divorced	1.3854 (2.1761)	-4.1506 (4.7664)
Widowed	-4.6595** (1.9275)	-3.0676 (3.5537)
Common-law	-0.9729*** (0.1694)	-1.9404*** (0.3024)
Single	1.3233 (1.5196)	-0.9497 (2.6927)
<i>Ethnicity (Compared to Mestizo)</i>		
Indigenous	1.6343*** (0.4385)	-0.5800 (0.6324)
Afro	-2.1730*** (0.6602)	-5.3484*** (1.1488)
Black	-0.4787 (0.4954)	0.0094 (0.9213)
Mulatto	-0.3081 (0.6541)	-1.4645 (0.9662)
Montubio	-0.2936 (0.4919)	0.3264 (0.9208)

Weekly Housework	Men	Women
White	0.3239 (0.4635)	-0.3885 (0.6939)
Other	3.9673 (2.5242)	3.8462 (3.4367)
Constant	12.0181*** (0.9305)	36.9439*** (1.4388)
<i>Observations</i>	15,400	17,225
<i>R-squared</i>	0.0303	0.0652

Notes: Bootstrapped standard errors with 200 repetitions.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 10: Associates between Relative within Household
Income and Weekly Childcare: OLS Results

Weekly Childcare	Men	Women
Relative Income	-0.0232*** (0.0044)	-0.0445*** (0.0051)
Age	-0.0595 (0.0600)	-0.4880*** (0.0956)
Age squared	0.0005 (0.0006)	0.0032*** (0.0011)
Urban	-0.4120 (0.2570)	-0.3897 (0.3615)
Number of adults	-0.9090*** (0.1079)	-1.4311*** (0.1420)
Number of children under 5 years old	1.6944*** (0.1957)	7.0573*** (0.2648)
Number of children over 5 years old	0.0124 (0.1022)	0.3507** (0.1503)
<i>Education Level (Compared to Primary)</i>		
No education	-1.3927*** (0.5157)	-0.8160 (0.7775)
Literacy center	0.0422 (2.6036)	-2.5782* (1.3908)
Basic education	0.0602 (0.9473)	-0.3519 (1.4032)
Secondary	0.6361** (0.2685)	1.9062*** (0.3891)
Middle education	4.3132** (2.1452)	3.0962* (1.7243)

Weekly Childcare	Men	Women
Non-university higher education	3.2608*** (1.1452)	3.2834* (1.7243)
University	2.0608*** (0.4385)	2.8007*** (0.5529)
Graduate	3.1681** (1.3173)	2.6062 (2.0189)
<i>Marital Status (Compared to Married)</i>		
Separated	0.0475 (1.7092)	-2.9403* (1.5164)
Divorced	9.1267 (6.1905)	-3.6516 (5.7023)
Widowed	-5.7838*** (0.8638)	-5.0040 (4.4112)
Common-law	-0.3155 (0.2394)	-1.1561*** (0.3570)
Single	-0.5772 (1.5926)	-2.5801 (1.9146)
<i>Ethnicity (Compared to Mestizo)</i>		
Indigenous	0.2965 (0.5514)	0.6307 (0.6901)
Afro	2.2193 (2.1147)	2.1133 (2.0442)
Black	0.8656 (0.7006)	-0.8866 (1.2281)
Mulatto	-0.2704 (0.8875)	-0.7873 (1.0134)
Montubio	0.6563 (0.8573)	-1.7245* (0.9301)

Weekly Childcare	Men	Women
White	0.1110 (0.5155)	-1.7630** (0.6939)
Other	0.2616 (2.2076)	-0.7074 (2.6127)
Constant	11.8105*** (1.3828)	30.7649*** (1.8624)
<i>Observations</i>	5,794	10,661
<i>R-squared</i>	0.0558	0.1722

Notes: Bootstrapped standard errors with 200 repetitions.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 11: Associates between Relative within Household
Income and Weekly Unpaid Work: Tobit Results

Weekly Unpaid Work	Men	Women
Relative Income	-0.0500*** (0.0043)	-0.1267*** (0.0063)
Age	-0.0744 (0.0479)	-0.2908*** (0.0846)
Age squared	0.0010* (0.0005)	-0.0001 (0.0009)
Urban	-1.6529*** (0.2842)	-4.0999*** (0.4360)
Number of adults	-0.9881*** (0.0982)	-1.4225*** (0.1789)
Number of children under 5 years old	1.9071*** (0.1975)	8.9469*** (0.3566)
Number of children over 5 years old	0.2989*** (0.1011)	2.6896*** (0.1894)
<i>Education Level (Compared to Primary)</i>		
No education	-0.3130 (0.565)	-0.3535 (0.7905)
Literacy center	3.1382 (2.1673)	2.8440 (2.4581)
Basic education	-0.2444 (1.1757)	-3.2863** (1.4501)
Secondary	0.4869* (0.2914)	1.1326** (0.5166)
Middle education	0.9127 (1.3027)	-0.6677 (1.7798)

Weekly Unpaid Work	Men	Women
Non-university higher education	3.4347*** (1.3707)	-0.7449 (2.0309)
University	3.1653*** (0.4092)	-3.0109*** (0.6887)
Graduate	3.0617*** (0.9045)	-11.8380*** (2.4530)
<i>Marital Status (Compared to Married)</i>		
Separated	0.3650 (1.1933)	-3.0960* (1.8740)
Divorced	3.9357 (4.8139)	-2.7737 (7.3907)
Widowed	-7.3947** (2.8432)	-2.5109 (3.5732)
Common-law	-1.5839*** (0.2856)	-3.2364*** (0.4903)
Single	1.4329 (2.2271)	-3.9917 (2.7210)
<i>Ethnicity (Compared to Mestizo)</i>		
Indigenous	2.4275*** (0.3126)	-0.3584 (0.7847)
Afro	-2.7631** (1.1805)	-6.5492*** (2.0225)
Black	-1.0050 (0.7248)	-2.1322* (1.4201)
Mulatto	-0.3392 (0.8506)	-2.2844* (1.3704)
Montubio	-0.5221 (0.6652)	-1.6268 (1.2655)

Weekly Unpaid Work	Men	Women
White	0.6144 (0.6031)	-1.4419 (0.8981)
Other	4.8267* (2.8507)	1.3985 (3.3086)
Constant	20.5264*** (1.2278)	68.7232*** (1.9156)
<i>Observations</i>	15,599	17,169
<i>Pseudo R-squared</i>	0.0046	0.0216

Notes: Bootstrapped standard errors with 200 repetitions.

Tobit's lower limit equals 0, and the upper limit equals 135.

1 observation was left-censored, and 18 observations were right-censored.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 12: Associates between Relative within Household
Income and Weekly Housework: Tobit Results

Weekly Housework	Men	Women
Relative Income	-0.0329*** (0.0030)	-0.0899*** (0.0045)
Age	0.0162 (0.0385)	0.3546*** (0.0566)
Age squared	0.0004 (0.0004)	-0.0045*** (0.0006)
Urban	-1.1876*** (0.1884)	-2.5120*** (0.3049)
Number of adults	-0.4417*** (0.0779)	-0.2952** (0.1276)
Number of children under 5 years old	0.0016 (0.1164)	0.7021*** (0.2155)
Number of children over 5 years old	-0.1305 (0.0823)	0.9433*** (0.1312)
<i>Education Level (Compared to Primary)</i>		
No education	0.1422 (0.4357)	-0.1416 (0.5978)
Literacy center	1.8801 (1.4920)	3.4056* (1.8989)
Basic education	0.1810 (0.7264)	0.4646 (1.1392)
Secondary	0.1261 (0.2177)	-0.3015 (0.3591)
Middle education	-0.5105 (0.6874)	-1.5494 (1.1388)

Weekly Housework	Men	Women
Non-university higher education	1.3382 (0.8428)	-1.9632 (1.3178)
University	1.6058*** (0.2523)	-4.4832*** (0.4357)
Graduate	1.5452** (0.7618)	-12.5439*** (1.7979)
<i>Marital Status (Compared to Married)</i>		
Separated	0.9378 (0.3050)	-0.4635 (1.2913)
Divorced	1.3859 (2.8304)	-4.1391 (4.8733)
Widowed	-4.6614** (1.8344)	-3.0539 (3.8173)
Common-law	-0.9723*** (0.1924)	-1.9304*** (0.2946)
Single	1.3251 (1.5497)	-0.9338 (2.4973)
<i>Ethnicity (Compared to Mestizo)</i>		
Indigenous	1.6183*** (0.4065)	-0.6011 (0.6266)
Afro	-2.1744*** (0.7032)	-5.3422*** (1.1878)
Black	-0.4793 (0.5222)	0.0158 (0.9610)
Mulatto	-0.3086 (0.5394)	-1.4712 (0.9799)
Montubio	-0.2939 (0.5002)	0.3351 (0.9046)

Weekly Housework	Men	Women
White	0.3243 (0.4337)	-0.3769 (0.6963)
Other	3.9669 (2.5107)	3.8309 (3.1660)
Constant	12.0110*** (0.8767)	36.9382*** (1.2572)
<i>Observations</i>	15,400	17,225
<i>Pseudo R-squared</i>	0.0041	0.0078

Notes: Bootstrapped standard errors with 200 repetitions.

Tobit's lower limit equals 0, and the upper limit equals 135.

1 observation was left-censored, and 18 observations were right-censored.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 13: Associates between Relative within Household
Income and Weekly Childcare: Tobit Results

Weekly Childcare	Men	Women
Relative Income	-0.0232*** (0.0044)	-0.0445*** (0.0047)
Age	-0.0595 (0.0619)	-0.4872*** (0.0899)
Age squared	0.0005 (0.0006)	0.0032*** (0.0011)
Urban	-0.4120* (0.2379)	-0.3948 (0.3544)
Number of adults	-0.9090*** (0.1061)	-1.4296*** (0.1540)
Number of children under 5 years old	1.6944*** (0.18889)	7.0586*** (0.2486)
Number of children over 5 years old	0.0124 (0.1081)	0.3523** (0.1363)
<i>Education Level (Compared to Primary)</i>		
No education	-1.3927*** (0.5041)	-0.8173 (0.8275)
Literacy center	0.0422 (2.4548)	-2.5780* (1.4879)
Basic education	0.0602 (1.0056)	-0.3412 (1.4128)
Secondary	0.6361** (0.2465)	1.9082*** (0.3551)
Middle education	4.3132** (1.9430)	3.1084** (1.5655)

Weekly Childcare	Men	Women
Non-university higher education	3.2608** (1.3097)	3.2941** (1.6678)
University	2.0608*** (0.4111)	2.8115*** (0.5185)
Graduate	3.1681** (1.2173)	2.6162 (1.9908)
<i>Marital Status (Compared to Married)</i>		
Separated	0.0475 (1.4881)	-2.9339** (1.4199)
Divorced	9.1267 (6.3798)	-3.6460 (4.7395)
Widowed	-5.7838*** (0.8134)	-4.9950 (4.3406)
Common-law	-0.3155 (0.2445)	-1.1493*** (0.3214)
Single	-0.5772 (1.6042)	-2.5723 (1.7870)
<i>Ethnicity (Compared to Mestizo)</i>		
Indigenous	0.2965 (0.5169)	0.6366 (0.6831)
Afro	2.2193 (1.7780)	2.1191 (1.8755)
Black	0.8656 (0.7494)	-0.8827 (1.0619)
Mulatto	-0.2704 (0.7895)	-0.7828 (0.9880)
Montubio	0.6563 (0.8821)	-1.7209* (0.9201)

Weekly Childcare	Men	Women
White	0.1110 (0.5384)	-1.7577** (0.7384)
Other	0.2616 (2.0807)	-0.7025 (2.4321)
Constant	11.8105*** (1.4838)	30.7301*** (1.8197)
<i>Observations</i>	5,794	10,661
<i>Pseudo R-squared</i>	0.008	0.0221

Notes: Bootstrapped standard errors with 200 repetitions.

Tobit's lower limit equals 0, and the upper limit equals 135.

1 observation was left-censored, and 18 observations were right-censored.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 14: Overall Two-Fold Oaxaca-Blinder Coefficients

<i>Overall</i>	Weekly Unpaid work	Weekly Housework	Weekly Childcare
Group 1 (Men)	13.1741*** (0.1238)	9.0185*** (0.0817)	7.6589*** (0.1108)
Group 2 (Women)	52.9761*** (0.2049)	38.7657*** (0.1356)	18.8800*** (0.1671)
Difference	-39.8020*** (0.2401)	-29.7471*** (0.1538)	-11.2211*** (0.2049)
Explained	-7.6049*** (0.2559)	-4.5888*** (0.1521)	-2.9076*** (0.2223)
Unexplained	-32.1971*** (0.3298)	-25.1583*** (0.1987)	-8.3135*** (0.2727)

Notes: Difference = Explained + Unexplained as mentioned in equation (12)

$$Gap = [E(X_{im}) - E(X_{iw})]' \beta^* + [E(X_{im})'(\beta_m - \beta^*) + E(X_{iw})'(\beta^* - \beta_w)]$$

Bootstrapped standard errors with 200 repetitions.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 15: Detailed Two-Fold Oaxaca-Blinder Coefficients

	Weekly Unpaid work		Weekly Housework		Weekly Childcare	
	Explained	Unexplained	Explained	Unexplained	Explained	Unexplained
Relative Income	-7.0061*** (0.2395)	5.4298*** (0.3785)	-4.5369*** (0.1503)	3.6240*** (0.2438)	-2.8321*** (0.2011)	1.7133*** (0.3685)
Age	-1.9290*** (0.2212)	10.6745** (4.2901)	0.3598*** (0.1366)	-14.4915*** (3.0961)	-1.6248*** (0.2206)	16.7666*** (4.0674)
Age squared	1.3394*** (0.1925)	1.2560 (2.1108)	-0.3681*** (0.1263)	10.0888*** (1.5559)	1.1218*** (0.1869)	-4.8259*** (1.8494)
Urban	-0.0069 (0.0164)	1.3905*** (0.3333)	-0.0047 (0.0110)	0.7548*** (0.2085)	-0.0159* (0.0082)	-0.0094 (0.2648)
Number of adults	0.0134 (0.0146)	1.2835** (0.6095)	0.0035 (0.0041)	-0.4197 (0.4519)	0.1381*** (0.0271)	1.4090*** (0.5029)
Number of children under 5 years old	-0.0079 (0.0432)	-3.3095*** (0.1941)	-0.0024 (0.0031)	-0.3263*** (0.1162)	0.1593*** (0.0589)	-3.8982*** (0.2323)
Number of children over 5 years old	-0.0267 (0.0222)	-2.5819*** (0.2415)	-0.0106 (0.0076)	-1.1472*** (0.1808)	-0.0234** (0.0105)	-0.4668* (0.2630)

	Weekly Unpaid work		Weekly Housework		Weekly Childcare	
<i>Education Level</i>						
No education	0.0200*	-0.2058***	-0.0032	-0.1460***	0.0415***	-0.0308
	(0.0103)	(0.0619)	(0.0068)	(0.0457)	(0.0128)	(0.0298)
Literacy center	-0.0059	-0.0171	-0.0070*	-0.0211*	0.0102*	0.0039
	(0.0039)	(0.0146)	(0.0038)	(0.0116)	(0.0056)	(0.0065)
Primary	-0.0029	-1.4872***	0.0118	-1.1861***	0.0111	-0.1043
	(0.0101)	(0.3018)	(0.0079)	(0.2174)	(0.0117)	(0.2744)
Basic education	0.0144*	-0.0044	-0.0053	-0.0393***	0.0119	0.0041
	(0.0077)	(0.0199)	(0.0054)	(0.0140)	(0.0099)	(0.0169)
Secondary	-0.0100	-1.1557***	-0.0046	-0.6400	-0.0032	-0.5001**
	(0.0065)	(0.2200)	(0.0047)	(0.1439)	(0.0050)	(0.2025)
Middle education	-0.0002	-0.0216	0.0038	-0.0194	-0.0158*	0.0109
	(0.0062)	(0.0232)	(0.0042)	(0.0130)	(0.0092)	(0.0285)
Non-university higher education	0.0007	0.0100	-0.0003	0.0086	0.0080	-0.0037
	(0.0021)	(0.0255)	(0.0012)	(0.0156)	(0.0058)	(0.0228)
University	-0.0011	0.4201***	-0.0148**	0.4988***	0.0642***	-0.1721
	(0.0045)	(0.1149)	(0.0060)	(0.0825)	(0.0177)	(0.1192)
Graduate	-0.0067	0.0738***	-0.0199***	0.0810***	0.0318**	-0.0106
	(0.0073)	(0.0198)	(0.0051)	(0.0141)	(0.0140)	(0.0185)

	Weekly Unpaid work		Weekly Housework		Weekly Childcare	
<i>Marital Status</i>						
Married	0.0045 (0.0128)	-1.3911 (1.2231)	0.0030 (0.0071)	-0.9456 (0.8285)	0.0201 (0.0205)	-1.8290* (0.9607)
Separated	0.0002 (0.0018)	0.0162 (0.0285)	0.0004 (0.0022)	-0.0003 (0.0195)	-0.0001 (0.0025)	0.0002 (0.0229)
Divorced	0.0000 (0.0013)	0.0036 (0.0059)	0.0000 (0.0009)	0.0032 (0.0034)	0.0006 (0.0024)	0.0059 (0.0039)
Widowed	0.0024 (0.0022)	-0.0051* (0.0030)	0.0022 (0.0020)	-0.0021 (0.0018)	0.0009 (0.0018)	-0.0023 (0.0024)
Common-law	0.0006 (0.0060)	-0.1360 (0.5951)	0.0003 (0.0037)	-0.1503 (0.4070)	-0.0087 (0.0175)	-0.7886 (0.5578)
Single	-0.0001 (0.0014)	0.0122 (0.0128)	-0.0003 (0.0012)	0.0031 (0.0100)	-0.0001 (0.0014)	-0.0036 (0.0101)
<i>Ethnicity (Compared to mestizo)</i>						
Indigenous	-0.0012 (0.0046)	0.0514 (0.0816)	-0.0008 (0.0023)	0.0955 (0.0611)	0.0010 (0.0036)	-0.0892 (0.0772)
Afro	0.0017 (0.0040)	0.0131 (0.0171)	0.0018 (0.0042)	0.0185* (0.0103)	-0.0023 (0.0038)	-0.0054 (0.0161)

	Weekly Unpaid work		Weekly Housework		Weekly Childcare	
Black	-0.0011 (0.0022)	-0.0152 (0.0273)	-0.0003 (0.0011)	-0.0222 (0.0189)	-0.0001 (0.0020)	0.0159 (0.0263)
Mulatto	0.0025 (0.0032)	-0.0032 (0.0295)	0.0031 (0.0028)	0.0064 (0.0200)	0.0020 (0.0032)	-0.0075 (0.0247)
Montubio	-0.0008 (0.0021)	-0.0204 (0.0313)	0.0002 (0.0011)	-0.0316 (0.0238)	0.0002 (0.0026)	0.0322 (0.0278)
Mestizo	0.0014 (0.0031)	-1.6567** (0.6562)	0.0002 (0.0019)	-0.6425 (0.5105)	-0.0003 (0.0027)	-0.7396 (0.5431)
White	-0.0003 (0.0014)	0.0013 (0.0582)	-0.0001 (0.0013)	-0.0031 (0.0452)	-0.0030 (0.0044)	0.0416 (0.0407)
Other	0.0006 (0.0028)	0.0044 (0.0117)	0.0004 (0.0026)	-0.0020 (0.0110)	-0.0005 (0.0025)	0.0003 (0.0106)
Constant	-40.8268*** (2.8168)		-20.1044*** (1.8435)		-14.8299*** (2.9086)	
<i>Observations</i>	32,768		32,625		16,455	

	Weekly Unpaid work	Weekly Housework	Weekly Childcare
<i>Men</i>	<i>15,599</i>	15,400	5,794
<i>Women</i>	<i>17,169</i>	17,225	10,661

Notes: Bootstrapped standard errors with 200 repetitions.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 16: Weekly Unpaid Work with Single, Childless, and Provinces

	Single		Childless		Provinces	
<i>Panel A: OLS Regressions over Weekly Unpaid Work</i>						
	Men	Women	Men	Women	Men	Women
Relative Income	-0.0009 (0.0006)	-0.0027 (0.0022)	-0.0295*** (0.0066)	-0.0512*** (0.0096)	-0.0482*** (0.0042)	-0.1285*** (0.0064)
<i>Observations</i>	5,776	5,322	4,289	4,649	15,599	17,169
<i>R-squared</i>	0.0183	0.1512	0.0335	0.0593	0.0439	0.2002
<i>Panel B: Tobit Regressions over Weekly Unpaid Work</i>						
	Men	Women	Men	Women	Men	Women
Relative Income	-0.0009** (0.0005)	-0.0027 (0.0021)	-0.0294*** (0.0068)	-0.0510*** (0.0095)	-0.0482*** (0.0040)	-0.1285*** (0.0063)
<i>Observations</i>	5,776	5,322	4,289	4,649	15,599	17,169
<i>R-squared</i>	0.0025	0.0183	0.0042	0.0069	0.0059	0.0239
<i>Panel C: Two-Fold Oaxaca Blinder Decomposition over Weekly Unpaid Work</i>						
Group 1 (Men)	7.8545*** (0.1327)		11.9674*** (0.2423)		13.1741*** (0.1147)	
Group 2 (Women)	21.0258*** (0.2843)		39.0536*** (0.3139)		52.9761*** (0.2098)	
Difference	-13.1713*** (0.3054)		-27.0861*** (0.3747)		-39.8020*** (0.2345)	
	Explained	Unexplained	Explained	Unexplained	Explained	Unexplained
Overall	-0.0682 (0.1075)	-13.1031*** (0.2997)	-2.8649*** (0.2945)	-24.2212*** (0.5004)	-7.6129*** (0.2466)	-32.1891*** (0.3241)
Relative Income	-0.0466** (0.0216)	0.0863*** (0.0773)	-2.7390*** (0.3096)	1.6945*** (0.5775)	-7.0014*** (0.2182)	5.6036*** (0.3755)
<i>Observations</i>	11,098		8,938		32,768	

Notes: Bootstrapped standard errors with 200 repetitions.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012

Table 17: Relative Unpaid Work, Housework and Childcare

	Relative Unpaid Work			Relative Housework			Relative Childcare		
<i>Panel A: OLS Regressions</i>									
	Men	Women	Both	Men	Women	Both	Men	Women	Both
Relative Income	-0.1082*** (0.0059)	-0.0907*** (0.0048)	-0.5393*** (0.0032)	-0.1106*** (0.0063)	-0.0855*** (0.0045)	-0.5546*** (0.0034)	-0.1343*** (0.0127)	-0.0748*** (0.0070)	-0.4537*** (0.0053)
Observations	15,599	17,169	32,768	15,400	17,225	32,625	5,794	10,661	16,455
R-squared	0.0708	0.0824	0.4504	0.0742	0.0776	0.4561	0.1335	0.0462	0.3812
<i>Panel B: Tobit Regressions</i>									
	Men	Women	Both	Men	Women	Both	Men	Women	Both
Relative Income	-0.1082*** (0.0053)	-0.0907*** (0.0052)	-0.5393*** (0.0032)	-0.1106*** (0.0061)	-0.0855*** (0.0048)	-0.5546*** (0.0033)	-0.1343*** (0.0116)	-0.0748*** (0.0077)	-0.4537*** (0.0051)
Observations	15,599	17,169	32,768	15,400	17,225	32,625	5,794	10,661	16,455
R-squared	-0.1115	-0.2343	0.7521	-0.1024	-0.2226	0.7259	1.3529	-0.1132	0.8006
<i>Panel C: Two-Fold Oaxaca Blinder Decomposition</i>									
Group 1 (Men)		0.2131*** (0.0016)			0.2018*** (0.0016)			0.3448*** (0.0032)	
Group 2 (Women)		0.8309*** (0.0012)			0.8412*** (0.0012)			0.8522*** (0.0019)	
Difference		-0.6178*** (0.0022)			-0.6394*** (0.0020)			-0.5073*** (0.0036)	
	Explained	Unexplained	Explained	Unexplained	Explained	Unexplained	Explained	Unexplained	
Overall	-0.0717 (0.0023)	-0.5461 (0.0033)	-0.0702*** (0.0023)	-0.5692*** (0.0032)	-0.0786*** (0.0043)	-0.4288*** (0.0058)			
Relative Income	-0.0727*** (0.0025)	0.0018 (0.0044)	0.0713 (0.0021)	-0.0022 (0.0039)	-0.0802 (0.0043)	-0.0191 (0.0080)			
Observations		32,768		32,625		16,455			

Notes: Bootstrapped standard errors with 200 repetitions.

$p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Sources: ENEMDU 2007 and Time-Use Survey 2012