Unpaid Household Work in Latin America: Unfolding Patterns and Determinants

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Abstract

This article considers time use patterns for men and women in four Latin American countries (Colombia, Mexico, Peru and Uruguay). Using recent time use surveys, we provide original comparative evidence of the significance of unpaid household work, its distribution between men and women and the main determinants of this distribution. Our descriptive analysis shows that all four countries share common patterns in terms of the distribution of working hours: women spend approximately double the time on unpaid household tasks, they dedicate less time to paid work and, by the end of the day, when adding up both types of work, women end up working more hours than men. Our econometric estimations on the determinants of time devoted to unpaid work by men and women indicate that, after controlling for many co-funding variables, this time is more responsive to the age cycle for women, and does not show a decreasing pattern with age. Women's behavior in terms of unpaid work is much more responsive to income and schooling than that of men, showing an inverse U pattern. The presence of children in the household is associated with considerable more time of unpaid work for women than for men.

Keywords: unpaid household work, determinants, Latin America, time-use surveys

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1. Introduction

The importance of unpaid work for modern economies and societies constitutes one of the main issues in gender studies and feminist economics. Its relevance has been emphatically pointed out in the last decades, trespassing the academic frontier and impacting public policy debate. This trajectory parts from the critique of traditional economic models and seeks to widen the scope of what is taken into account when studying inequalities between and within households. And a key step in this process has been the measurement of unpaid work through time use surveys.

The literature from developed countries has been prolific in describing the main differences in the distribution of unpaid work between men and women, and in explaining those differences by a set of other variables, like socioeconomic status, education, age or household composition. Also, different patterns of the role of families and the social management and distribution of unpaid work have been identified from the comparative analysis of time use surveys' results.

In Latin America, however, research around unpaid work is much more recent and fragmented. Although there is growing evidence from recent time use surveys and many scholars are studying unpaid work, its systematic and comparative analysis is still weak, both from a descriptive and –mostly from- an explanatory perspective. But the political debate about national care systems and their gender implications seems to be moving fast, making clear the need for refining the analysis and moving towards more comprehensive analytical tools on what is happening when households – and women specifically- allocate all or part of their time to unpaid domestic work.

This paper seeks to contribute to filling this gap, by offering original comparative evidence of the significance of unpaid work, its distribution between men and women and the main determinants of this distribution. By analyzing recent evidence from four Latin American countries, based on time use surveys, the paper also compares configurations of variables influencing allocation of unpaid work between countries.

The evidence analyzed in this paper comprises Colombia, México, Peru and Uruguay, and goes directly to meet the need for a more systematic approach on the factors that influence the distribution of unpaid domestic work in Latin America. The paper is organized as follows: we first discuss the importance of unpaid domestic work and the evidence coming from developed countries (section 2). Then, we provide a review of research advances in unpaid domestic work in Latin America (section 3). The methodological aspects of this paper, including a discussion on our data and the specification of the model to estimate, are presented in section 4. Our results are presented in section 5, which describes the main stylized facts about unpaid domestic work in selected Latin American countries, and in section 6, which discusses the determinants of the time allocated to unpaid domestic work. Finally, our concluding remarks are presented in section 7.

2. Unpaid household work: why is it important?

From an analytical perspective, time can be allocated in different activities classified as paid work, unpaid work and no work (Antonopoulos, 2009). Usually, paid work includes all the activities that receive remuneration. Unpaid work, in contrast, includes all non-remunerated activities that are somehow considered a type of work but are not socially recognized as such (Antonopoulos, 2009). No work activities are those related to leisure and personal care.

This classification, however, is not free of debate. The theoretical distinction between paid and unpaid work seems straightforward because it rests on the existence of any type –cash or in kind- of remuneration. But the division between unpaid work and no work is less clear. In theory, the latter refers to free time but also to the situation of being out of work due to unemployment (Antonopoulos, 2009).

Also, unpaid work is a debated category itself. Usually, the concept involves unpaid household maintenance activities (housework) and direct care of other people (children, older people, people with disabilities) inside the household, both of them constituting unpaid household work(OECD, 2011). The sum of these two components has also been defined as unpaid care work (Budlender, 2008), considering that "care" refers no only to direct care activities (people taking care of people) but also to activities oriented to providing a healthy environment through preparing food, cleaning (Harvey & Taylor, 2000), and accessing the materials to do so (shopping), and some intermediate inputs that require overhead time (paying bills, transporting family members) (Antonopoulos, 2009). But unpaid work also includes activities related to helping other households or the community in broader sense and - in addition to all these non-economic activities- some specific activities related to procuring inputs and producing for own use (Antonopoulos, 2009).

Work	Unpaid	Economic	(building a house, subsistence production work, collection of basic necessities, unpaid family work for crop production that reaches the market)	
		Non-economic	Unpaid household work/Unpaid care work	*Unpaid housework* (cleaning, laundry, minor home maintenance, meal preparation and cooking, grocery shopping, administrative tasks related to household maintenance, other household chores, pet and garden care)
				Unpaid direct care work (providing care for infants and children, care for the permanently ill or temporarily sick, as well as for older relatives and the disabled)
			Unpaid Non-household work	Volunteer work for community services, helping other households
	Paid	Economic	All remunerated work included in National Account Systems	
No work	*Leisure time* (sports, entertainment activities, socializing with friends and family, playing games, watching television, using computers, recreational activities) and p*ersonal care (*sleeping, eating and drinking, and other household, medical, and personal service)			

Researchers' concerns around unpaid household work emerges partially from feminist critiques to the neoclassical economic approach on time allocation and its relevance for

analyzing economic relationships. Basically, those critiques unfold the dynamics of decision-making within households, questioning the idea that individuals make free independent choices for allocating their time -including the decision for dedicating it to market or non-market activities- (Folbre, 2004) and that female specialization in the latter is the result of a self-interest orientation and a resource efficiency evaluation.

The basic argument is that men and women are in unequal positions when deciding what to do with their time and how much time to devote to market and nonmarket activities. Factors that structure gender inequality in time allocation decisions relate to dimensions that are far more complex than the simple consideration of the comparative advantage and opportunity costs in a competitive market(Folbre, 2004). Altruistic behavior and positive externalities related to unpaid work (Simon, 1992) and intra-household power relationships and conflicts are only a sample of the areas where feminist economists observe neoclassical theory falls short (Folbre, 2004).

Simultaneously, unpaid household work also entered the debate around welfare regimes. The importance of domestic/nonmarket activities in the provision of welfare and the relationship between unpaid and paid work in welfare's configuration were the main ideas this debate brought (Lewis, 1992; Sainsbury, 1999). New theoretical approaches about gender relations and welfare states typologies emerged, paying particular attention to how the transformation of the male breadwinner model and female's growing participation in the labour market were impacting on the distribution (and redistribution) of unpaid household work (Daly & Rake, 2003). Following that roadmap and triggered by deep demographic and cultural changes in families and gender roles, most research started focusing on the factors intervening in the unequal distribution of unpaid household work between men and women(Sainsbury, 1999). This perspective helped constructing the idea that welfare regimes and policies could be more or less *familiarized* or *defamiliarized* (Esping-Andersen, 1999), depending on the degree to which they lay back on household-welfare production, which is largely based on women's unpaid labour. For that reason, the need for disentangling the structural variables that influence gender division of labour has become a key aspect in welfare research. Also, gender differences in family-welfare relationships, household economy and decision-making started seeping in the research agenda.

Extensive empirical research on unpaid household work in developed countries reveals that although slowly changing in the last decades[3], women do most of the unpaid work and men tend to be more devoted to paid-market work. Studies based in the analysis of time use surveys have confirmed this gender bias systematically over the years and cross-nationally (Budlender, 2002; Anxo et al., 2007; Krantz-Kent, 2009; Treas & Drobnic, 2010; Antonopoulos & Hirway, 2010; Miranda, 2011; OECD, 2011).

This trend, however, does not necessarily imply that men and women have similar work hours -although in many countries there seems to be a balance explained by the fact that the latter are less engaged in paid work than the former- (Miranda, 2011). Actually, it reveals that the latter usually add unpaid workhours to the amount of time they devote to paid activities, having to face a double burden (Anxo et al., 2007). In sum, women work longer hours than

[3] Partially due to a global decline of the total time devoted to unpaid housework (Bianchi, Milkie, Sayer, & Robinson, 2000) and partially because of a slow transformation in cultural patterns that contribute to a more equal distribution of unpaid work between men and women within households(Neilson & Stanfors, 2014).

men. This trends are even more evident when considering only care work within unpaid household work time (OECD, 2011).

Evidence from developing countries is consistent with findings in more developed economies. However, the gender gap seems to be wider in the former (Miranda, 2011). Indeed, while the average gender gap in OECD is 2 hours and 28 minutes per 24-hours day, in less developed countries (such as Turkey, Mexico or India) it raises to 4.3-5 hours more on unpaid work done by women than by men, while in Nordic countries it decreases to approximately one hour per day(Miranda, 2011).

3. Explaining unpaid household work time

Confirming the fact that women actually the main responsible for the unpaid work within their households is not equal to explaining it. Immediately after time-use surveys revealed this gender pattern, researchers started looking for explanations. At the cross-national level, economic development, labor market configurations, demographic trends and the existence of strong family policies –most of them also related to each other- are identified as the main factors that explain the amount of unpaid work taking place and the predominant role of women in carrying out (Lewis, 1992;Folbre & Nelson, 2000; Gornick & Meyers, 2003; Hook, 2006; Antonopoulos & Hirway, 2010; Miranda, 2011; Neilson & Stanfors, 2014). Also cultural factors and social norms seem to be affecting the gender balance in unpaid household work.

At the individual level, time devoted to unpaid household work (including housework and direct care) seems to be related to a wide set of variables. The bulk of descriptive research reveals that, beyond gender, the overall division of time between paid and unpaid work depends upon many factors including age, social class, and geographic location, to name a few. The type of household structure and marital status affects the amount of time devoted to household work: married women –even if they don't have children- tend to do more unpaid household work that single ones, a variation that is not present among men (Shelton & John, 1993).

On the other hand, women's employment plays a significant role in the explanation, usually negatively associated with time spent in unpaid household work (Gershuny & Robinson, 1988; Brines, 1994). Also, women's level of education seems to be related in the same direction (Gershuny & Robinson, 1988; Brines, 1994; Shelton, 1992). The amount of time men dedicated to unpaid work, however, doesn't not relate to these variables in the same way. Men's employment, for example, doesn't alter the amount of time they spend in household labor (Shelton & John, 1993).

More recent econometric analyses confirm these trends, adding more information on how gender combines with other variables in explaining unpaid work time allocation. Exercises carried out in developed countries found that demographic variables exert most influence on household time spent on unpaid work. At the same time, a negative effect of the female wage rate has been found to affect the amount of time devoted to unpaid activities (Ross, 1992). Finally, the number and age of children in the households, socio economic status and area of residence (rural/urban) are determinants of unpaid household work (Treas & Drobnic, 2010). Recent research is also showing that these determinants vary depending of the type of unpaid work (within household and non-household) that is allocated. In all of them, however, gender appears consistently as the main determinant(McCloughan, Batt, Costine, & Scully, 2011).

In developing countries, a study comparing evidence from six developing countries Budlender (2008) finds –based in tobit estimations- that employment status and age- are behind the explanation of how unpaid care work is allocated (Budlender, 2008). Increases in women's educational level seem to be negatively related to unpaid care work, although the relationship doesn't seem to be – as in other studies- linear (Budlender, 2008). Also, the ethnic origin – a relevant variable in some unequal and less developed societies- reveals a clear relationship between being white and spending less time in unpaid work activities. As in developed countries, being married increases the probability of time spent in unpaid household work.

The study clearly shows that women that are employed tend to devote less time to unpaid household activities than those that are unemployed or "inactive". However employed women keep participating in unpaid care tasks (Budlender, 2008). Also, in the six countries considered the presence of young children in the household tend to increase the amount of unpaid care work, and this starts decreasing as the age of the youngest child increases (Budlender, 2008).

4. Unpaid household work in Latin America: research and political agenda

The study of unpaid household work in Latin America is relatively recent and has direct relationship to two deep transformations that occurred in families in the last decades: (i) changing patterns on marriage and divorce, which have changed the "shape" of families and (ii) the massive incorporation of women into the labor market. The first transformation is observable, for example, in the significant increase in single-parent families (Rico & Maldonado, 2011). The second one is reflected in the increase or participation rate of women aged 15 and older in the labor force increased from 39 to 52% between 1990 and 2010, narrowing the gender gap in this dimension (CEPAL, 2012).

The are several implications of these changes in traditional patterns. One of the is the tension generated by the requirement to meet the demands that in the past were solved through women's unpaid work. This is challenging both domestic redistribution of unpaid work and the role of public policy in this new equation. Given that care is a relevant part of unpaid domestic work, the region is facing a "care crisis" and this emergency scenario cannot be circumvented (ECLAC, 2010; Rico, 2011).

Research on unpaid household work is still incipient in Latin America, although some studies about its importance and gender distribution have been carried on. Based on national surveys, various authors find similar patterns to the ones found in moredeveloped countries. The unequal distribution of unpaid work between men and women within households has been convincingly addressed in several countries (Batthyány, 2004; ECLAC, 2007&2010; Aguirre, 2007; Esquivel, 2009); Villamizar, 2011). In Chile, for example, 23.7% of women's daily time is devoted to unpaid work inside their homes, while among men this percentage is only 10.2% (SERNAM, 2007). Similar results were found in Uruguay, where in 90% of the households with children women have most of the care responsibility of their children, devoting an average of 43 hours weekly to it (Batthyány, 2004). Moreover, studies show that the entry of women into paid work has not resulted in a redistribution of the time they spend in unpaid domestic activities. As a result, the total workload (the amount of hours they work, adding paid and unpaid activities) is significantly higher for women when compared to men (ECLAC, 2007&2010).

Research also reveals that there is a segmentation of the type of activities developed by men and women regarding unpaid care work. In families with children, men tend to be more associated to transportation of children and playing activities, while women seem to be more engaged in daily childcare and other domestic chores (Villamizar, 2011)[4].On the other hand, women often bear a greater extent of the tasks of organization and distribution of tasks than men, devoting a significant portion of their time to washing and ironing, cleaning and cooking, while men tend to assume the tasks of home repairs, shopping and other efforts outside the home (Aguirre and Batthyány, 2005). In sum, there is not only a gender gap in the distribution of unpaid work (vs. paid work), but also a gender segregation pattern within the latter (Villamizar, 2011).

Although still very limited, research on the factors that influence unpaid work's distribution show that the socioeconomic level is a significant variable. Income and other socioeconomic measures are very much related to the way unpaid work distributes between men and women: lower income women present more hours of unpaid workload that their peers with higher income.. Among men, however, the time spent on unpaid work does not seem to be affected by this variable, which reflects the "very rigid roles, regardless of socioeconomic status, more freely to combine paid and unpaid work" (ECLAC, 2010: 183). In sum, the burden of paid and unpaid work is strongly influenced by economic status and the evidence indicates that in the region social inequalities are closely linked to the way families solve their care demands. For that reason, unequal access to care choices operate as a key factor: when women have choices, they usually delegate some of the unpaid work to other people – services, domestic labor-, but when they don't have choices, they just carry with the care demands themselves (Espejo, Filgueira, & Rico, 2010). And because in Latin America the development of child care services is still very weak, poor women are confined to be the major responsible for the care of children, which installs a huge barrier for the possibility to enter the labor market" (ECLAC, 2010).

Finally, the distribution of the burden of unpaid care work also presents variations by sector of activity in which women work. Agricultural workers, along with those working in the production-repair-maintenance of goods and services, sales and service delivery have higher unpaid workload, while those that spend less time on unpaid domestic work have senior management positions and other higher income occupations (Salvador, 2007).

5. Methodological aspects

5.1 Time use surveys

Time use surveys provide information on the activities done by individuals in a certain period, and the amount of time they spend on each activity. In Latin America, these surveys were based on what is known as the stylized approach(Budlender, 2007), which is asking the respondents to specify how much time they devote to perform a predetermined set of

[4] This gender gap, however, is less important than the one identified in the distribution of unpaid care work related to old age or sick people, where the distances between men and women are higher (Rodríguez, 2007).

activities.[5]The first round of this type of survey was conducted in the region in the early 2000s and, from that moment on, several countries have improved their questionnaires and samples[6].

With their application, several important problems in terms of quality of information collected and homogenization of criteria started to arise. [7] Among these problems is the fact that respondents may take different approaches to answer questions, for example some may include the time spent taking their children to school in the activity of caring for their children, while others may consider this is a different activity. Responses can also be affected by cultural factors: people may tend to underestimate the amount of time devoted to certain activities that are perceived as not socially valued (leisure or housework), while they usually emphasize other that are perceived as valued or important (child care). In addition, there are difficulties to report the time spent on activities that are intermittently done throughout the day. Finally, the simultaneous development of different activities is another problem that can affect the quality of the information. This may be particularly relevant in the case of household work activities that can be developed simultaneously with other tasks(Budlender, 2007).Despite these limitations, time use surveys are useful to illustrate on time use patterns and differences both within and between households of different strata or compositions. Moreover, when done simultaneously in several countries, these surveys can shed light on different distribution patterns of paid and unpaid work, although these analysis should be aware of the possible influence of cultural and even demographic factors that could be behind those differences.

Achieving regionally, or even internationally comparable time use statistics is still a challenge for Latin American countries.[8] In this study, time use surveys for Colombia (2010), Mexico (2010), Peru (2010) and Uruguay (2007) are used. In all cases except in Peru, time use data was collected by means of a special module in the traditional household survey. In Peru, a special time use survey was carried on. The main characteristics of our data are presented in table 1. All the surveys have national coverage. There are differences in terms of the age groups for which time use information is collected, the respondent to time use questions, and the reference period.

[5] The other way to collect data on time use consists on the diary approach: respondents are asked to report their activities for a period of 24 hour day. This is the approach mainly used in European countries.

[6] For a review on the main features and trade-offs in Latin American time-use surveys see (Valeria Esquivel, Budlender, Folbre, & Hirway, 2008)

[7] A discussion of methodological and logistical issues related to the implementation of time use surveys in developing countries can be found in Esquivel et al (2008).

[8] For European countries, Eurostat was mandated to develop recommendations for Harmonised European Time Use Surveys (HETUS). These recommendations include a common activity coding list, common questionnaires, and the use of dairy days to record daily activities. Despite this initiative, important divergences in time use surveys persist.

Table 1. Main characteristics of time use surveys

Country and year	Implementation	Coverage	Time use information for	Respondent	Reference period
Colombia (2010)	Special module in Household Survey	National	All members of the household aged 10 years or older	Direct responses from household members aged 18 or more or from members between the ages of 10 and 17 who currently hold a job or are looking for a job. For the rest, responses are taken from any adult family member (18 years or older) who can adequately answer for them.	Week
México (2010)	Special module in Income and Expenditure Household Survey	National	All members of the household aged 12 years or older	Direct responses from each member of the household, aged 12 years or older.	Week
Peru (2010)	Independent survey	National	All members of the household aged 12 years or older	Direct responses from each member of the household, aged 12 years or old.	Week
Uruguay (2007)	Special module in Household Survey	National	All members of the household aged 14 years or older	Member of the household identified as the main caretaker of household chores, aged 14 years or older. 74% of respondents are women	Day

Source: Authors' elaboration based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.

As mentioned, unpaid household work should includes time devoted to cleaning, cooking, taking care of others, as well as time involved in the supervision or organization of these activities, and even, ideally, the related activities such as traveling in the city for performing those activities.[9] In the four surveys analyzed in this paper there are different approaches for asking about the time spent on housework. Although they are broadly comparable, the activities covered by the questions in each questionnaire are not the same in all countries (see table A.1). For comparative purposes, our analysis refers to individuals between 15 and 65 years; this age group also corresponds to the one used internationally to report labor market statistics. Unpaid and paid hours are expressed in weekly terms. Considering all individuals who report some information on time devoted to unpaid household work, the sample size in each country is reported in table 2.

[9]International efforts for classifications of activities in time use surveys include the International Classification of Activities for Time Use Statistics (ICATUS) and Clasificación de Actividades de Uso del Tiempo para América Latina (CAUTAL).

Table 2. Sample size. Individuals aged 15-65, reporting information in unpaid household work

Country and year	Women	Men	Total
Colombia (2010)	290,178	247,517	537,695
México (2010)	36,132	32,983	69,115
Peru (2010)	5,546	5,262	10,808
Uruguay (2007)	3,821	3,352	7,173

Source: Authors' elaboration based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.

5.2 Estimation of determinants of hours of unpaid household work

The exploration of the determinants of hours of unpaid domestic work is done through the estimation of an econometric model, where the dependent variables is weekly hours of unapaid household work, and the independent variables reflect possible factors that may influence decisions about the allocation of hours to unpaid work. These include personal characteristics (sex, age, educational level, labor market situation, relative income) and household characteristics (household composition, presence of children and their age, income, ownership of appliances).

Our dependent variable has an upper and a lower limit. Individual responses have a lower bound on zero. In our data, a considerable proportion of individuals report dedicating zero hour to unpaid household work. This proportion is especially important among men, as shown in table 3. Additionaly, we impose an upper bound at 135, and we impose an upper bound at 135, considering that any person must devote at least five hours to sleep and take care of herself.

Table 3. Individuals reporting zero time devoted to unpaid household work

	Colombia	Mexico	Peru	Uruguay
Women	6,9%	8,7%	4,9%	3,0%
Men	41,2%	39,1%	8,0%	15,6%
Total	23,6%	23,3%	6,5%	8,9%

Source: Authors' elaboration based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.

Considering the large number of zeros in our data, a natural approach is to estimate Tobit models to explore the determinants of time devoted to unpaid household work. The estimation of Tobit models trough maximum likelihood is adequate to deal with significant censoring in the data, and this method has been used in similar studies on determinants of time use (see among others Floro and Miles, 2003; Budlender, 2008; Kalenkoski et al (2005, 2007 and 2009; Kimmel and Connely, 2007).

Nevertheless, this methodological decision is not free of discussion. If zeros in time use data arise from a mismatch between the reference period of the data and the period of interest, the Tobit model may not be adequate. In that cases, zero may not imply that the individual never does the activity, but rather that he did not performed it in the reference period. Zeros would then represent measurement errors, and the estimation of linear regressions through Ordinary Least Squares should be preferred. The literature discusses this problem in relation to time-diary data, where there may be an important chance that the activities were not performed during the short reference period (dairy day) and zeros may represent

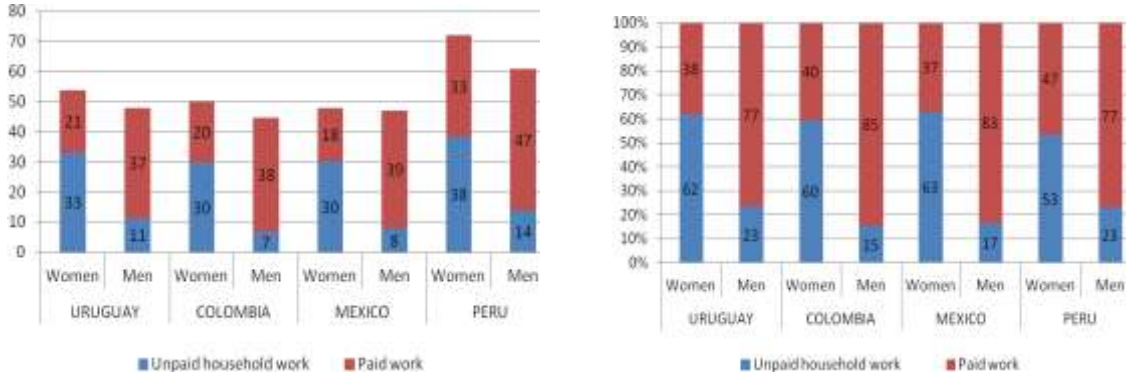
measurement errors. Methodological discussions about the performance of alternative estimation procedures can be found in Stewart (2009) and Foster and Kalenkoski (2010). Given that our main focus is not methodological, we estimate both Tobit and OLS regressions. Results from OLS are presented in the annex, and when results differ between the two methods, these differences are reported.

6. Descriptive patterns of unpaid household work in four Latin American countries

As pointed out by previous analysis of Latin American time-use surveys, the allocation of paid and unpaid work is clearly structured by gender categories. In Uruguay, for instance, women devote 33 hours per week to unpaid household work, while men spend only 11 hours. This difference is confirmed in the other three countries studied: 33 vs. 7 in Colombia, 39 vs. 8 in Mexico and 38 vs. 14 hours in Peru. Conversely, although time devoted by men to paid work tends to compensate this unbalanced relationship, in the four countries the total hours of work (paid plus unpaid) are slightly higher amongst women (see figure 1). The main difference in terms of total hours of work of women and men corresponds to Peru, and is mainly explained by the fact that hours of paid work are relatively high for women.

In terms of proportions, women spend more than half of their total working hours to unpaid household work, while men dedicate less than a quarter of their total working time to this kind of tasks. Countries with the largest differences in regards to this proportion are Colombia and Mexico, where women spend 60% and 63% (respectively) of their time to unpaid household work, while men only devote only 15% and 17% of their time to these tasks. The Peruvian case appears to be the most equitable in this sense (although it is the case where the difference between total hours of work of men and women is higher): women's distribution of time seems to be almost split in half (53% dedicated to unpaid household work, 47% dedicated to paid work). Lastly, women in Uruguay spend 62% of their time to unpaid household tasks, while men do so for only 23% of their working time (see figure 1).

Figure 1. Distribution of paid work and unpaid household work per week, by gender
(in hours and percentages within total work hours)

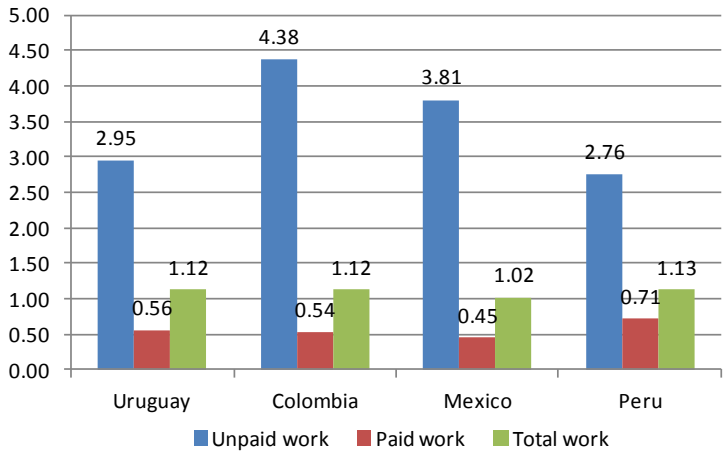


Source: Authors' elaboration based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.

This trend is even clearer when analyzing the gender ratios between hours spent on paid work, unpaid household work and total work (figure 2). These ratios range from 2.8 in Peru to 4.4 in Colombia in the case of unpaid work. In terms of paid work, women's hours of work are between 0.45 and 0.71 of that worked by men. As a result of these disparities in contrary directions, total hours of work are more balanced: the ratio ranges from 1.03 in Mexico to 1.13 in Peru.

Figure 2. Gender ratio (women/men) between hours spent on paid work, unpaid household work and total work

(In hours' ratios)



Source: Authors' elaboration based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.

Other variables, apart from gender, seem also to be related to the allocation of paid and unpaid work. When analyzing the distribution of working hours by age, the first thing that stands out is the little variation among men of different ages in relation to hours spent on unpaid household work (figure 3). Uruguay appears to be the country where this varies the most, and the range of variation is of barely of 10 hours. In the other countries, hours spent by men on unpaid household work do not vary for more than approximately 5 hours across all age groups. Another interesting pattern is that the unequal distribution of unpaid household work is seen even in the earlier ages analyzed (e.g. for 15-18 year olds, girls spend approximately 10 more hours weekly on unpaid household tasks).

Among women from all four countries the amount of time spent on unpaid household tasks grows sharply as age increases, reaching its highest point around the early thirties (childbearing age). Afterwards, the line generally begins to descend, although slightly, and in some cases it increases once again. More specifically: in Uruguay, once it reaches its peak (40 hours, ages 35-38), the average time spent on unpaid household tasks is reduced by approximately 5 hours and then slowly increases again after the late 50s- early 60s, reaching similar levels than the maximum point (38 hours). In Colombia the trend is similar, although the distribution remains quite steady after its decrease from the peak (35 hours, ages 31-34). The Mexican case also behaves similarly but the decrease in unpaid working hours, after its maximum point of 36 hours for women aged 31-34, is even less than 5 hours weekly. In Peru,

the peak of the distribution also occurs between the ages of 31 and 34, where women dedicate, on average, 49 hours to unpaid household work. This peak is the most noticeable since unpaid working hours decrease up to 10 hours as age increases.

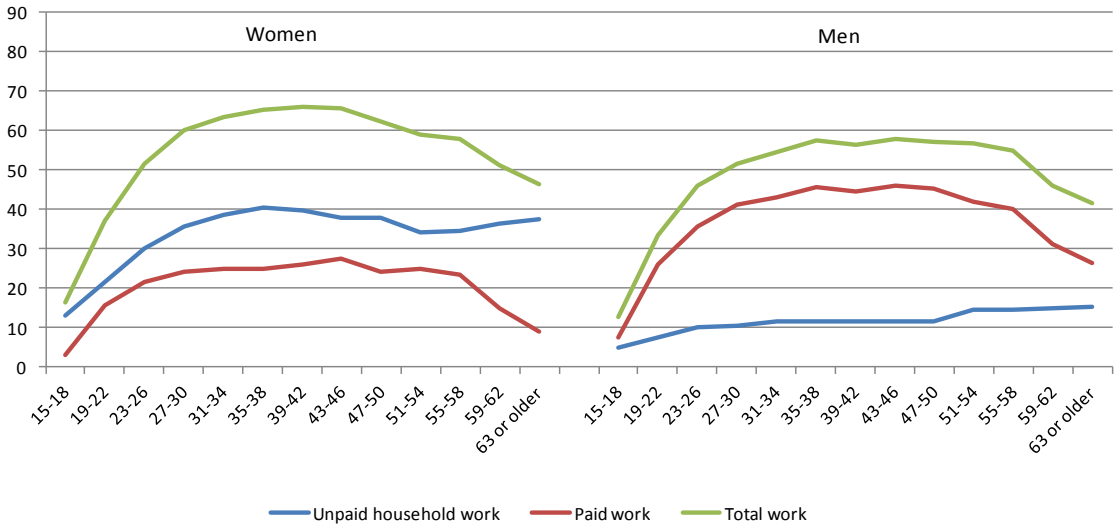
Time devoted to paid work is distributed similarly through ages in both sexes. As expected, this distribution adopts an inverse U-shape: the amount of hours spent in paid work increases as age increases up until (approximately) the fifties, where it begins to decrease. It is noteworthy that although the amount of hours spent on paid work tends to decrease at the end of the age distribution, the amount of hours spent on unpaid household work among women does so very slightly, as described above. This is insignificant among men since the variation of hours spent on unpaid work does not vary across age.

As seen also in figure 1, men devote significantly more time to paid work than women. Generally speaking, men (in these four countries) spend about 40 hours per week in paid work, while women dedicate approximately half of this time. In Uruguay, the most hours women spend on paid work is between 26 and 27, and they do so between the ages of 39 and 46. The maximum amount of time that men dedicate to paid work, on the other hand, is 46 hours. Similarly, in Colombia women between the ages of 31 and 46 are the ones that dedicate the most hours to paid work (26 to 27 hours), while men dedicate up to 47 hours to paid work. In Mexico, the maximum amount of paid working hours for women is the lowest (women aged 39 to 46 years old work on average 23 hours per week), while the most hours men work is 47 hours per week. The distribution of paid work in Peru is the most constant, whereas the amount of hours increases rapidly and then maintains a certain stability throughout the rest of the age distribution (except for a slight decrease for women aged 31 through 34). The maximum amount of hours women dedicate to paid work is 37 hours per week, and the women that do so are the ones in their early fifties. Men in Peru spend up to 52 hours on paid work.

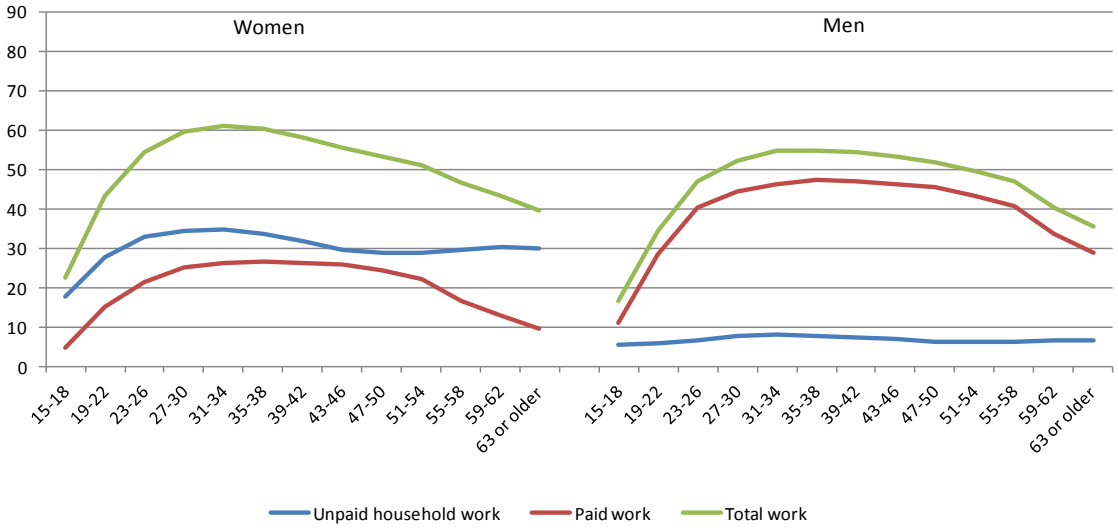
Nonetheless, also as noted in figure 1, women end up working more hours than men when accumulating both unpaid household work and paid work. More specifically, in Uruguay, Peru and Colombia, this is true across all age groups, whereas men in no point in the age distribution work more than women (total working hours). In Uruguay, the largest difference in total working hours occurs between the ages of 39 and 42: women, in total, work 10 more hours per week than men. In Peru, women between the ages of 35 and 38 work 13 more hours per week than men. Lastly, in Colombia, the largest gap occurs between 19 and 22 year olds, where women work 9 more hours than men. In Mexico, on the other hand, although in the majority of the age groups women still work more than men, the differences in total working hours are not more than 2 hours per week.

Figure 3. Distribution of paid work and unpaid household work per week, by gender and age
(in hours)

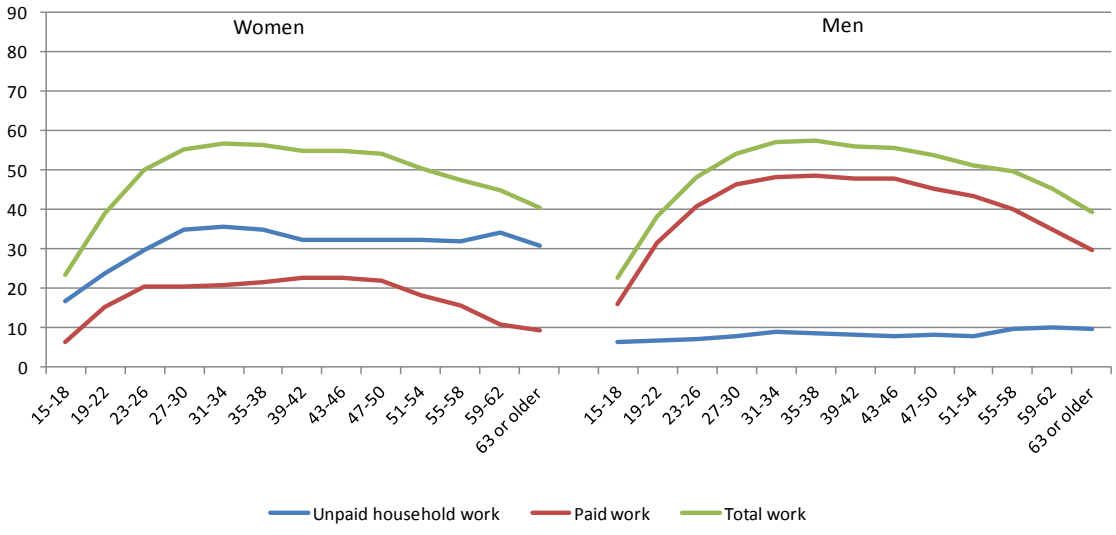
a. Uruguay



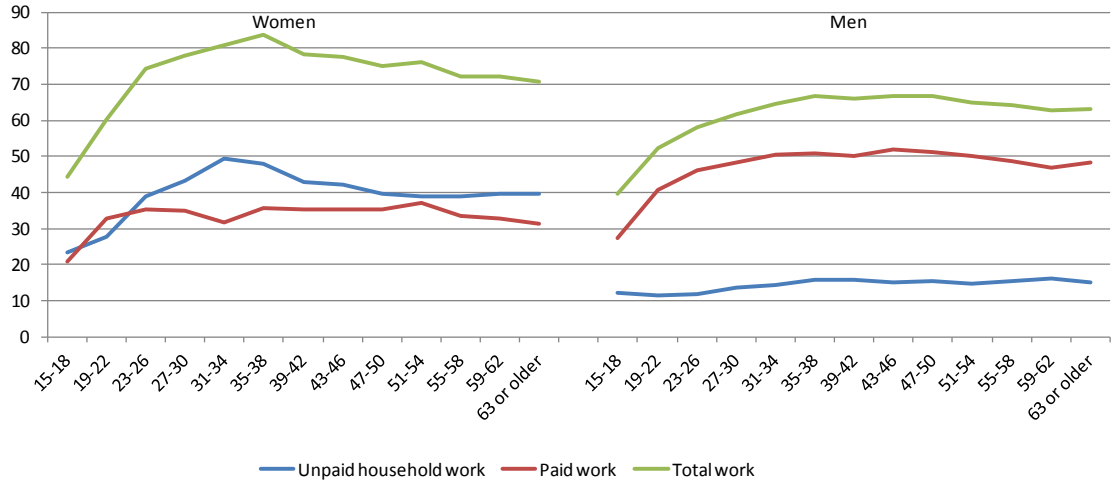
b. Colombia



c. Mexico



d. Peru



Source: Authors' elaboration based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.

If the distribution of working hours is compared by income (and gender), it is clear that men's minimal role in unpaid household work remains the same across all quintiles, again varying by less than 5 hours in all four countries. Women's time spent on unpaid work does show a significant decrease as income increases (and, conversely, hours dedicated to paid work show an increase). In all four cases- although in some more noticeably than others- women in the fifth quintile spend more time on paid work than on unpaid work, although not as a an effect of a more equitable distribution of unpaid working hours with the men, but because, most probably, these women live in households where their high income allows them to hire someone to do these type of tasks.

In Uruguay, women on the first quintile spend, on average, 40 hours per week to unpaid household work, while dedicating less than 10 to paid work. In the fifth quintile, on the other hand, 27.6 hours and 28.2 hours are spent on unpaid and paid work respectively. Uruguay is

the country that, among the four analyzed, has the least difference (only by decimal points) between time spent by women of the fifth quintile on both dimensions. When comparing total working hours, though, women in the fourth and fifth quintile spend more time working than women in the lowest quintile (56 hours vs. 49 hours respectively). Men in Uruguay increase their time dedicated to paid work from 28 hours (quintile 1) to 40 hours (quintile 5). This variation is not seen when regarding unpaid work: the hours spent on these type of activities increase only by 3 hours among the two extremes of the income categorization. When analyzing total working hours, men in the highest income level work approximately 15 more hours per week than men in the lowest income level.

The same pattern is observed in Colombia, with greater differences in the distribution of hours among women in the first and fifth quintile. Women in the poorest households generally spend 35 hours on unpaid work vs. 10 hours to paid work; women in the richest household dedicate only 22 hours to unpaid household work vs. 29 hours to paid work. Concerning total working hours, women on quintile 4 are the ones that work the most (53 hours per week), while women in quintile 1 are the ones that work the least amount of hours (45 hours per week). Between Colombian men, on the contrary, there are no differences regarding unpaid household work (amount of hours varies between 6 and 7); regarding paid work, the men in the fifth quintile work, on average, 10 more hours than men in the first quintile. Also among the men, it is those who live in households categorized in the fourth quintile who work the most amount of total hours (48) and the men in the lowest quintile are those who work the least amount of hours (37).

In Mexico, the distribution of working hours for women across the different quintiles is similar to that of Uruguay: the amount of hours spent on unpaid household activities differs by approximately 10 hours between the lowest and highest income; women on the fifth quintile, moreover, spend 15 more hours per week on paid work than women on the first quintile. Women on the fifth quintile, more specifically, dedicate the same amount of time to both types of work, which is why both lines never cross on the graph. Respecting total working hours, again it is the women in the fourth quintile who work the most (48 hours) vs. the women in the first quintile (44 hours). Among the men in Mexico, the distribution of hours dedicated to paid work varies only by 3 hours between the two extremes of the quintiles (37 hours vs. 40 hours) and the distribution of hours dedicated to unpaid work varies only by 2 (6 hours vs. 8 hours). Total working time, therefore, is also relatively stable: 43 hours for men in quintile 1 vs. 48 hours for men in quintile 5.

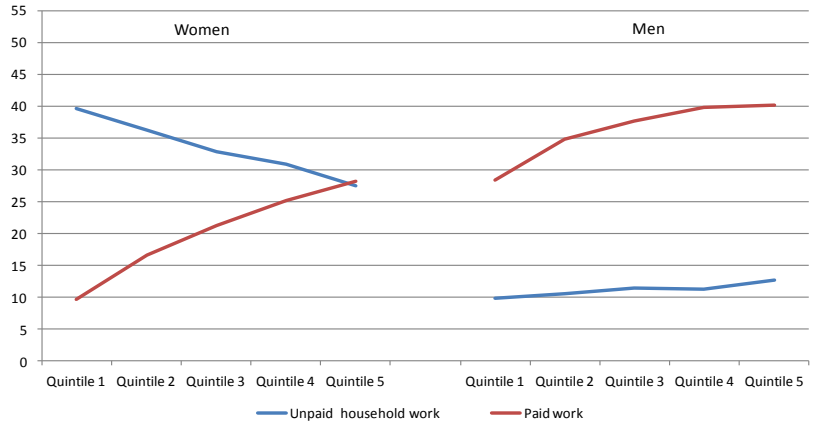
In the case of Peruvian women the general pattern seen above still stand (wealthier households, less time spent on unpaid work and more time spent on paid work), resembling even more the case of Colombia, where women in the richest households spend more time on paid work than on unpaid work. Women on the lowest quintile dedicate 11 more hours on household activities than women on the highest income; on the other hand, they spend 13 less hours on paid work than women on the top quintile. The case of Peruvian men across quintiles does not differ from the patterns seen in the other countries: static distribution of unpaid work and a rise of 6 hours between the two extremes of the income category with respect to paid work.

Disregarding the analysis by gender and only considering the differences in income, again it is evidenced that the wealthier the household, the less time is spent on unpaid household activities: on average, household members on the lowest quintile tend to dedicate 25 hours to

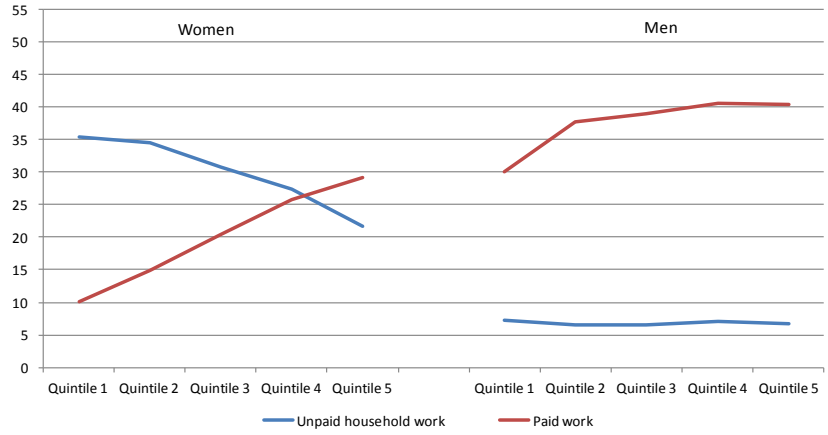
unpaid work, while members on the top quintile spend 18 hours. Inversely, hours spent on paid work increases from 24 to 36 hours.

Figure 4. Distribution of paid work and unpaid household work per week, by gender and per capita income *(in hours)*

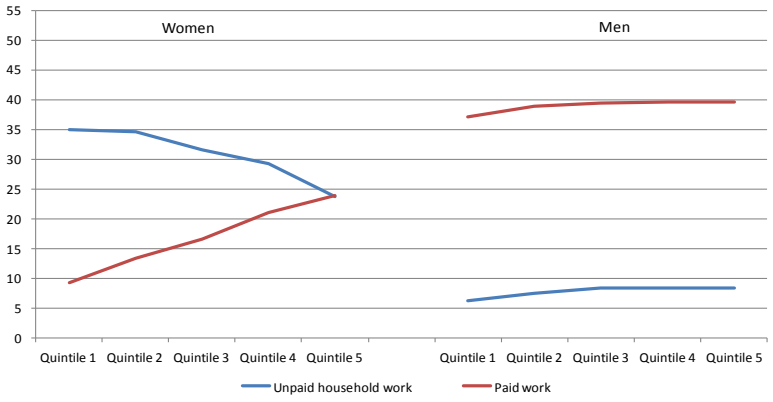
a. Uruguay



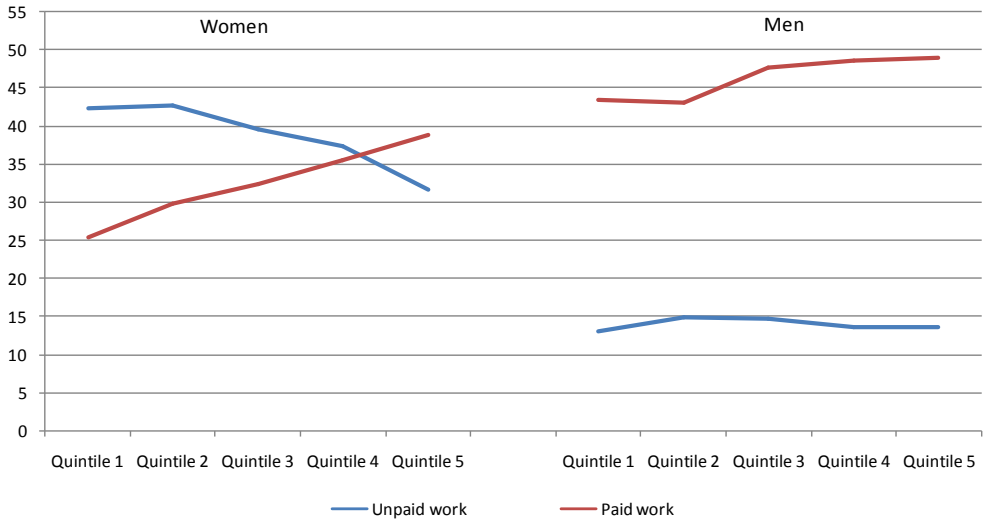
b. Colombia



c. Mexico



d. Peru



Source: Authors' elaboration based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.

A third variable to consider in the analysis of working hours by gender is household type. We consider five categories, based upon the relationship of each household member with the head of the household: single-parent household (single head of household and at least one child); two-parent household (head of household with his/her couple and at least one child); composite (at least one non-family member in the household, excluding domestic workers); extended household (at least one other family member in the household, besides couples and children); other households (single or two-person household without any children). Seemingly, women in all countries, no matter which type of household they are part of, are the ones that dedicate the most amount of time to unpaid work. In all four countries analyzed, the most unequal distribution of unpaid household work occurs in two-parent households: women spend, averaging all countries, 26 hours more than men on this type of work. Except for Colombia, the most equitable type of households in this sense is the composite household, whereas the gap between unpaid working hours for men and women is the smallest. Additionally, the minimal variation of men's dedicated time to unpaid household work holds for this comparison as well. Only in the case of Uruguay does the amount of hours vary by

more than 2 (while the distribution of unpaid working hours for women varies up to 9approximately 12 hours).

In Uruguay, women in two-parent households spend the most amount of hours on unpaid household activities. Here, they work, on average, 37 hours weekly. Men in these households, on the other hand, only spend 10 hours per week on these tasks. Where men seem to work the most hours on unpaid chores (15 hours per week) is in those households categorized as single-person or two-person household without children but this cannot be interpreted the same way as the other types of households since some of them are composed of only one person, so the comparison by gender is not valid. On the contrary, where men work the least amount of hours (9) is in the extended households. This might be so because there is a greater chance of there being more than one woman in the household which can take on these tasks.

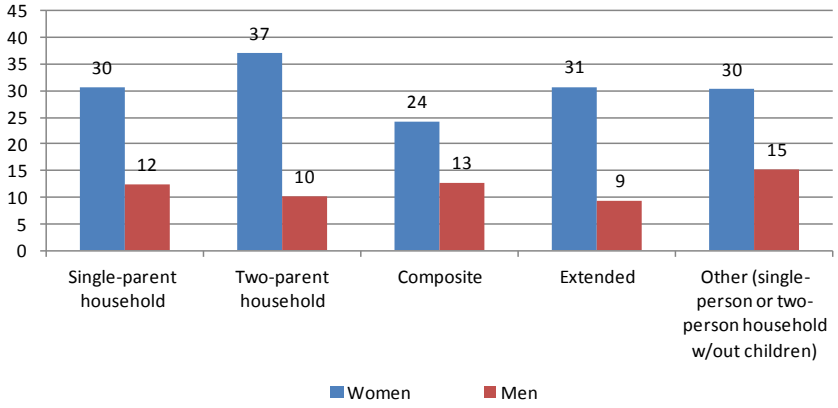
In Colombia it is also evident that two-parent households are where the hours dedicated to unpaid work are the most unevenly distributed. Here, women work 26 more hours per week than men. Women work the least amount of hours in single-person or two-person households without children. Again, this must be interpreted differently since some households in this category are composed of only one person or households without children, which means that the amount of hours needed for unpaid work is less. As mentioned above, the amount of time Colombian men spend on unpaid household work is between 6 and 7 hours, independently of what type of household they form part of.

The two types of household where Mexican women spend the most amount of time on unpaid activities are two-parent households (32 hours) and extended households (31 hours). In both these cases (and in the rest of the household types) men do not dedicate more than 8-9 hours to unpaid household work. Women in two-parent households, therefore, end up spending 25 more hours per week on unpaid tasks. In Mexico, it is also in composite homes where the gap of unpaid working hours is the smallest between men and women.

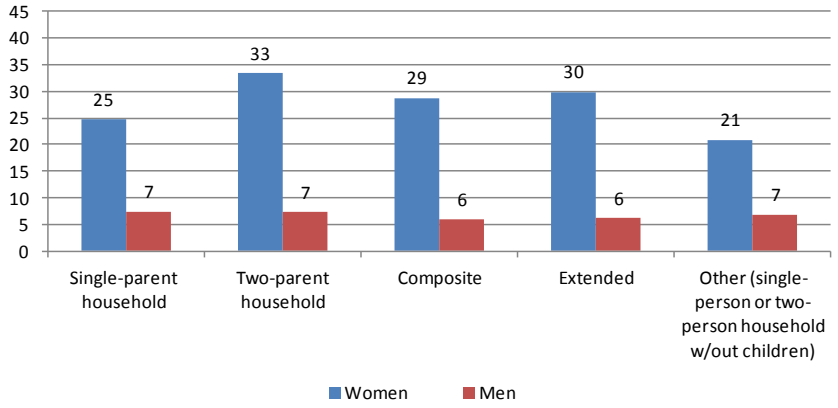
The Peruvian case follow a similar pattern: the most uneven distribution occurs in two-parent households, where women dedicate 42 hours to unpaid work and men only 14. In composite households, on the other hand, women work 12 hours less than in two-parent households, while the time spent by men remains the same (14 hours).

Figure 5. Distribution of unpaid household work per week, by gender and household type
(in hours)

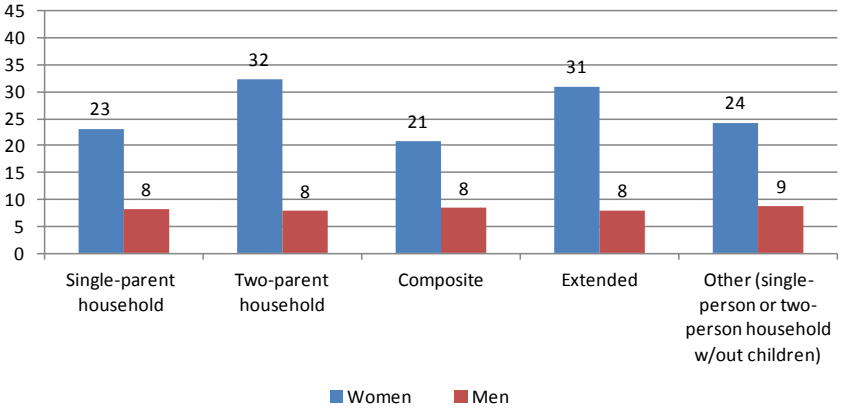
a. Uruguay



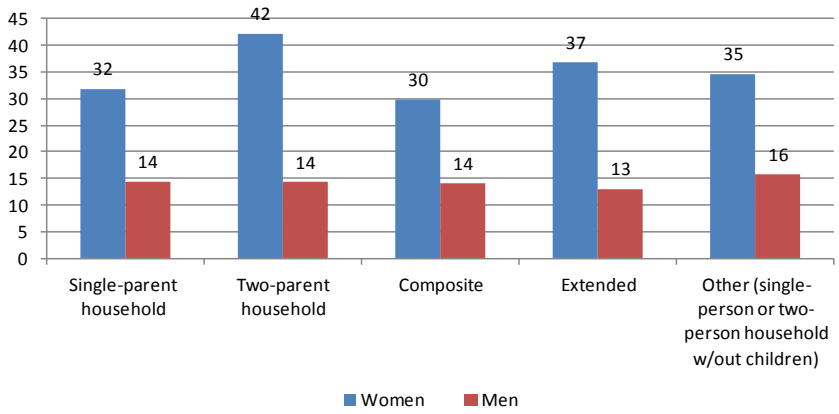
b. Colombia



c. Mexico



d. Peru



Source: Authors' elaboration based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.

To sum up: our descriptive analysis has shown that all four countries share common patterns in terms of the distribution of working hours. Undoubtedly, there are significant differences between men and women on how much and in which type of activities they spend their time on. This uneven distribution is seen through three main aspects: women spend approximately double the time on unpaid household tasks, they dedicate less time to paid work and, by the end of the day, when adding up both types of work, women end up working more hours than men. In all countries, there is little or no alteration in the amount of time men dedicate to unpaid household work. The habit of women being the responsible caretaker of household activities is consistent across the different age groups, across different income levels, and across different household types. In all countries, women who spend more time on unpaid activities are in their child-bearing period (early thirties). As the increase in unpaid work in this ages is not necessarily accompanied by a decrease in paid work, total working hours tend to reach the maximum for women in the thirties. As the level of income increases in a certain household, women spend less time on unpaid activities and dedicate more time to paid work. In all countries (although to different extent), the richest women overcome the general pattern of dedicating more time to unpaid work than to paid work. Finally, regarding household type, across all four countries studied, the most traditional, two-parent households appear to be the most unequal in terms of distributing working time between men and women. Here, women spend significantly more time on unpaid household activities than men.

7. Determinants of unpaid care work in Latin America

Our previous descriptive analysis has shed light on some common pattern in the distribution of unpaid work. In order to consider all factors jointly, and in an attempt to separate out the influence of each of them, we estimated econometric regressions where the dependent variable is time devoted to unpaid household work, expressed in weekly hours. Our independent variables include personal and household characteristics. We report tobit estimations in this section, and estimations from OLS regressions are presented in the annex, following the discussion in section 5.

Results for the estimations for all individuals in each country are summarized in table 1. The first striking fact is that results are very consistent across countries. In all countries, being a men decreases significantly the amount of time devoted to unpaid household work during a

week. After controlling for all other co-funding factors, the magnitude of the coefficient of sex is similar in the four countries. Being a worker also decreases significantly time devoted to unpaid household work, with higher effects in Colombia and Mexico.

In all countries, there is a positive association between age and time devoted to unpaid household work. The positive coefficients are higher for those aged 46-65 than for those aged 26-45 (the omitted group is 15-25 years old), indicating and increasing pattern with age. Years of schooling and household income (expressed in logarithms) show a similar relation with unpaid household work in all countries except in Peru, where both variables and their cuadratic expressions are not significant. In the rest of the countries, time devoted to unpaid household shows an inverted U pattern in relation to both years of schooling and household income, increasing up to a certain level and then decreasing.

The literature has also argued that it is women's economic dependence on men what determines differences in unpaid household time, and not gender per se. We included a variable reflecting individual's relative income, that is her/his personal income as a share of household income. This variable had a significant and negative effect in all countries, as expected, but the effect is small in magnitude.

Being the household head decreases the time devoted to unpaid household work, as expected given the well known association between this variable and time devoted to paid work. The exception is Uruguay, where the relationship is inverse, although only weakly significant. In relation to household type, biparental households (omitted category) are associated to higher time devoted to unpaid household work when compared to other types of household. The exception is Uruguay, where single parent households and other households (single adults and couples) do not show significant differences with biparental households.

The presence of extra adults in the household (apart from respondents) decreases time devoted to unpaid household work, and the effect is increasing with the number of adults. As expected, the presence of children aged 0-5 has a positive and significant effect on time devoted to unpaid household work when compared to individuals living with no children. The effect of children aged 6-12 is still positive and significant, although of smaller magnitude. In all cases, the magnitude of coefficients is similar for the four countries. On the contrary, the presence of children aged 13-18 is negatively associated with unpaid household work, probably reflecting their cooperation with household activities.

The effect of household appliances on time devoted to household work has been widely discussed in the literature (see Vanek, 1974; Gershuny and Robinson , 1988; Bittman et al, 2004, among others). For each country, we considered the effect of different appliances (those included in the respective surveys), on time devoted to unpaid household work. Our results do not seem conclusive. The most robust result seems to be the one corresponding to the washing machine, which displays a significant and negative coefficient in three of the four countries considered. The other results are contradictory between countries (blender, vaccum) or not significant when included (dryer, dish washer). The iron had a negative and significant effect in Peru,whereas the microwave had the same effect in the case of Mexico but was not significant in Uruguay.

Results based on OLS estimations, presented in table A.2, are similar except for appliances, where some differences are detected.

Table 4. Determinants of unpaid household work (hours per week). Tobit estimations

	Colombia	Mexico	Peru	Uruguay
Sex	-23.61	-21.20	-21.83	-21.04
	[(0.0632)]***	[(0.211)]***	[(0.411)]***	[(0.548)]***
Worker	-11.74	-13.79	-1.583	-4.431
	[(0.0698)]***	[(0.215)]***	[(0.497)]***	[(0.705)]***
26-45 years	8.189	10.38	9.092	14.64
	[(0.0734)]***	[(0.228)]***	[(0.463)]***	[(0.699)]***
46-65 years	8.299	12.48	11.20	18.32
	[(0.0892)]***	[(0.280)]***	[(0.598)]***	[(0.755)]***
Schooling	0.559	0.768	-0.0464	1.770
	[(0.0217)]***	[(0.0685)]***	[(0.207)]	[(0.269)]***
Sch. Cuad	-0.0300	-0.0458	-0.0141	-0.0827
	[(0.00119)]***	[(0.00356)]***	[(0.0108)]	[(0.0128)]***
Hh income	4.470	19.53	-0.432	14.86
	[(0.237)]***	[(1.218)]***	[(0.741)]	[(5.304)]***
Hh income cuad	-0.226	-1.213	-0.0129	-0.888
	[(0.00957)]***	[(0.0768)]***	[(0.0633)]	[(0.302)]***
Relative income	-0.0473	-0.0237	-0.0340	-0.0839
	[(0.000915)]***	[(0.00262)]***	[(0.00700)]***	[(0.00858)]***
Hh head	-1.051	-2.523	-3.633	1.390
	[(0.0765)]***	[(0.255)]***	[(0.551)]***	[(0.656)]**
Single parent	-3.941	-2.837	-4.389	-0.229
	[(0.108)]***	[(0.351)]***	[(0.739)]***	[(0.830)]
Composite	-4.290	-0.420	-2.215	-3.164
	[(0.117)]***	[(0.765)]	[(1.303)]*	[(1.450)]**
Extended	-2.824	-1.015	-1.521	-3.288
	[(0.0730)]***	[(0.227)]***	[(0.444)]***	[(0.684)]***
Other	-4.305	-3.410	-4.370	-1.442
	[(0.128)]***	[(0.411)]***	[(0.940)]***	[(0.878)]
One extra adult	-5.274	-3.445	-5.227	-1.113
	[(0.122)]***	[(0.449)]***	[(0.943)]***	[(0.932)]
More than 1 extra adult	-10.28	-7.647	-11.66	-4.115
	[(0.138)]***	[(0.494)]***	[(1.029)]***	[(1.112)]***
Children 0-5	10.01	8.199	7.755	8.772
	[(0.0653)]***	[(0.210)]***	[(0.397)]***	[(0.635)]***
Children 6-12	1.427	2.022	2.494	3.096
	[(0.0621)]***	[(0.199)]***	[(0.381)]***	[(0.601)]***
Children 13-18	-3.537	-2.730	-2.685	-2.706
	[(0.0630)]***	[(0.195)]***	[(0.384)]***	[(0.588)]***
Washing machine	-0.819	0.420	-1.655	-1.514
	[(0.0668)]***	[(0.214)]*	[(0.485)]***	[(0.595)]**
Blender	-0.714	0.554	-0.551	
	[(0.0766)]***	[(0.285)]*	[(0.465)]	
Vacuum	0.416	-0.941		
	[(0.127)]***	[(0.354)]***		
Micro		-0.748		-0.589
		[(0.203)]***		[(0.579)]
Iron			-1.966	

			[(0.478)]***	
Dryer				0.877
				[(0.922)]
Dish washer				-1.779
				[(1.315)]
Constant	17.88	-47.34	48.08	-40.67
	[(1.493)]***	[(4.812)]***	[(2.635)]***	[(23.21)]*
Sigma constant	19.26	21.70	17.25	19.32
	[(0.0221)]***	[(0.0688)]***	[(0.127)]***	[(0.172)]***
Observations	534,952	69,085	9,922	7,138

Source: Authors' estimation based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.

Given the importance and magnitude of the sex coefficient in the above estimations, we run all regressions for the universe of men and women separatedly in each country. Results are presented in table 5. In all cases, the negative effect of being a worker on time devoted to unpaid work is higher for women than for men, the time women devote to unpaid household work is more responsive to their adscription to labor market than in the case of men. The comparison of the coefficients reflecting the age pattern also indicate that time of unpaid work is much more responsive to the age cycle for women than for men. In the case of schooling and household income, for those countries where these effects are significant (the exception is Peru), again the behavior of women is more responsive to their variations, except in Mexico where coefficients are of similar magnitude. The negative effect of relative income is similar for men and women, except in Peru where it presents a positive effect for men.

When men are household heads, they devote more time to unpaid household work, whereas for women their position in the household is not significant in Colombia and Peru. Again, men's behavior is less responsive to household type than that of women, as reflected by the magnitude of the coefficients. On the contrary, the presence of one or more extra adults in the household exert a higher (negative) influence on time devoted by men to unpaid work. The variable reflecting one extra adult in the household even presents a positive effect for women in Uruguay and Mexico (although not significant in the latter).

With respect to children, the pattern is very clear. Their presence is associated with considerable more time of unpaid work for women than for men: the coefficient of the variable that reflects the presence of children aged 0 to 5 is between four and six times higher for women. Something similar happens with the coefficient reflecting the presence of children aged 6-12, which even loose significance for men in Colombia and Uruguay. On the contrary, the presence of children aged 13-18 seems to alleviate the burden of unpaid work more for women than for men. Finally, with respect to appliances, no clear pattern by sex is found. Again, results from OLS estimations are very similar, as presented in table A.3.

Table 5. Determinants of unpaid household work (hours per week). Men and women. Tobit estimations

	Colombia		Mexico		Peru		Uruguay	
VARIABLES	Women	Men	Women	Men	Women	Men	Women	Men
Worker	-12.27	-6.625	-14.06	-8.322	-4.819	4.028	-4.054	-2.621
	[(0.0920)]***	[(0.0939)]***	[(0.294)]***	[(0.277)]***	[(0.738)]***	[(0.554)]***	[(0.994)]***	[(0.837)]***
26-45 years	11.87	1.728	13.58	2.829	15.27	-0.638	19.30	4.627
	[(0.101)]***	[(0.0915)]***	[(0.317)]***	[(0.284)]***	[(0.730)]***	[(0.479)]	[(1.030)]***	[(0.795)]***
46-65 years	12.73	0.668	16.42	3.206	16.07	0.707	24.02	6.961
	[(0.122)]***	[(0.111)]***	[(0.390)]***	[(0.354)]***	[(0.934)]***	[(0.629)]	[(1.082)]***	[(0.895)]***
Schooling	0.738	0.430	0.835	0.852	0.474	-0.00703	2.195	0.960
	[(0.0309)]***	[(0.0250)]***	[(0.0970)]***	[(0.0815)]***	[(0.328)]	[(0.206)]	[(0.408)]***	[(0.286)]***
Sch. Cuad	-0.0478	-0.0105	-0.0593	-0.0349	-0.0512	0.00774	-0.103	-0.0374
	[(0.00170)]***	[(0.00136)]***	[(0.00515)]***	[(0.00411)]***	[(0.0174)]***	[(0.0105)]	[(0.0193)]***	[(0.0137)]***
Hh income	6.458	1.919	17.54	20.41	-0.0188	0.319	10.55	19.06
	[(0.321)]***	[(0.270)]***	[(1.747)]***	[(1.417)]***	[(1.209)]	[(0.709)]	[(8.119)]	[(5.585)]***
Hh income cuad	-0.329	-0.106	-1.193	-1.196	-0.128	-0.0147	-0.740	-1.067
	[(0.0130)]***	[(0.0109)]***	[(0.110)]***	[(0.0888)]***	[(0.104)]	[(0.0601)]	[(0.462)]	[(0.318)]***
Relative income	-0.0373	-0.0340	-0.0106	-0.0310	-0.0608	0.0127	-0.0906	-0.0543
	[(0.00119)]***	[(0.00125)]***	[(0.00353)]***	[(0.00343)]***	[(0.0126)]***	[(0.00634)]**	[(0.0120)]***	[(0.0103)]***
Hh head	0.0878	2.873	-1.069	2.983	0.418	2.435	3.798	6.286
	[(0.123)]	[(0.0967)]***	[(0.472)]**	[(0.308)]***	[(1.112)]	[(0.544)]***	[(1.118)]***	[(0.770)]***
Single parent	-5.654	0.381	-4.068	0.698	-7.606	1.408	-3.448	4.214
	[(0.155)]***	[(0.139)]***	[(0.528)]***	[(0.434)]	[(1.267)]***	[(0.738)]*	[(1.298)]***	[(0.947)]***
Composite	-6.914	-0.462	-5.532	3.189	-7.608	1.643	-8.656	6.290
	[(0.166)]***	[(0.138)]***	[(1.159)]***	[(0.830)]***	[(2.134)]***	[(1.235)]	[(2.095)]***	[(1.652)]***
Extended	-4.258	-0.767	-1.808	0.590	-2.838	0.422	-6.298	0.761
	[(0.104)]***	[(0.0892)]***	[(0.330)]***	[(0.268)]**	[(0.747)]***	[(0.426)]	[(1.014)]***	[(0.769)]
Other	-7.657	-2.542	-6.098	-1.147	-8.558	-2.335	-4.688	0.463
	[(0.179)]***	[(0.153)]***	[(0.587)]***	[(0.479)]**	[(1.606)]***	[(0.890)]***	[(1.319)]***	[(0.946)]
One extra adult	-1.355	-6.311	0.490	-4.966	-1.749	-4.861	3.788	-4.414
	[(0.174)]***	[(0.152)]***	[(0.656)]	[(0.550)]***	[(1.608)]	[(0.923)]***	[(1.438)]***	[(1.036)]***
More than 1 extra adult	-6.169	-10.09	-4.240	-7.211	-9.277	-6.943	0.557	-6.739
	[(0.191)]***	[(0.172)]***	[(0.710)]***	[(0.604)]***	[(1.723)]***	[(1.011)]***	[(1.681)]	[(1.225)]***
Children 0-5	14.58	3.877	11.58	2.937	12.78	2.022	13.58	2.414

	[(0.0906)]***	[(0.0793)]***	[(0.301)]***	[(0.246)]***	[(0.655)]***	[(0.379)]***	[(0.936)]***	[(0.704)]***
Children 6-12	2.492	0.0454	2.905	0.523	2.984	1.935	5.568	-0.360
	[(0.0869)]***	[(0.0742)]	[(0.287)]***	[(0.228)]**	[(0.630)]***	[(0.362)]***	[(0.903)]***	[(0.650)]
Children 13-18	-4.349	-2.013	-2.998	-1.836	-4.369	-0.180	-2.271	-2.647
	[(0.0872)]***	[(0.0760)]***	[(0.281)]***	[(0.224)]***	[(0.628)]***	[(0.367)]	[(0.876)]***	[(0.637)]***
Washing machine	-0.838	-0.217	0.295	0.943	-3.173	0.0409	-1.671	-1.029
	[(0.0926)]***	[(0.0800)]***	[(0.310)]	[(0.245)]***	[(0.790)]***	[(0.464)]	[(0.902)]*	[(0.631)]
Blender	0.0632	-0.399	0.512	0.953	-0.462	-0.520		
	[(0.110)]	[(0.0889)]***	[(0.420)]	[(0.322)]***	[(0.770)]	[(0.437)]		
Vacuum	-1.038	2.243	-1.335	-0.226				
	[(0.175)]***	[(0.150)]***	[(0.518)]***	[(0.396)]				
Microwave			-0.610	-0.613			-1.038	0.194
			[(0.293)]**	[(0.232)]***			[(0.867)]	[(0.622)]
Iron					-2.617	-1.533		
					[(0.795)]***	[(0.448)]***		
Dryer							1.571	-0.0371
							[(1.365)]	[(1.005)]
Dish washer							-2.455	-0.729
							[(1.973)]	[(1.406)]
Constant	1.307	5.905	-39.71	-77.69	45.36	11.83	-25.16	-76.52
	[(2.014)]	[(1.716)]***	[(6.888)]***	[(5.633)]***	[(4.297)]***	[(2.582)]***	[(35.58)]	[(24.37)]***
Sigma constant	20.53	14.93	23.39	16.59	20.15	11.47	21.39	13.97
	[(0.0285)]***	[(0.0309)]***	[(0.0926)]***	[(0.0889)]***	[(0.208)]***	[(0.120)]***	[(0.251)]***	[(0.191)]***
Observations	288,732	246,220	36,118	32,967	4,943	4,979	3,787	3,351

Source: Authors' estimation based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.

8. Concluding remarks

TO BE COMPLETED

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Annex

Table A.1. Questions about unpaid household work.

	Colombia 2010	Mexico 2010	Peru 2010 (Independent)	Uruguay 2007
Unpaid housework	Carry out household chores? Dressmaking, tailoring for household members?	How much time did you devote to household chores? How much time did you devote to general household maintenance or to the maintenance and repair of furniture, appliances and vehicles?	Preparing, cooking, heating up or serving breakfast, lunch and/or dinner? Dishwashing, cleaning up the cooking area. General householdcleaning. Others...	Cooking Cleaning Shopping Household maintenance and repairs Water and firewood collection Crop care and animal husbandry (o management and care of farm animals) Pet care
Unpaid direct care work to household members	Childcare? Care of sick and/or disabled persons?	How much time did you devote to care and attend children, the elderly or sick or disabled persons without receiving any pay?	Childcare Care of the sick Care of disabled persons	Childcare Care of others (not including children)

Source: Authors' elaboration based in Time-use surveys's questionnaires from Colombia, Mexico, Uruguay and Peru.

Table A.2. Determinants of unpaid household work (hours per week). OLS estimations

	Colombia	Mexico	Peru	Uruguay
Sex	-18.92	-16.31	-21.19	-18.94
	[(0.0501)]***	[(0.168)]***	[(0.393)]***	[(0.506)]***
Worker	-10.42	-12.05	-2.824	-4.585
	[(0.0564)]***	[(0.175)]***	[(0.476)]***	[(0.655)]***
26-45 years	7.465	9.305	9.393	13.51
	[(0.0583)]***	[(0.183)]***	[(0.444)]***	[(0.645)]***
46-65 years	7.741	11.17	11.47	16.94
	[(0.0709)]***	[(0.226)]***	[(0.573)]***	[(0.699)]***
Schooling	0.411	0.486	-0.0900	1.438
	[(0.0171)]***	[(0.0548)]***	[(0.198)]	[(0.248)]***
Sch. Cuad	-0.0223	-0.0334	-0.0105	-0.0694
	[(0.000934)]***	[(0.00285)]***	[(0.0104)]	[(0.0118)]***
Hh income	3.264	11.49	-0.239	13.58
	[(0.175)]***	[(0.949)]***	[(0.712)]	[(4.913)]***
Hh income cuad	-0.168	-0.729	-0.0364	-0.815
	[(0.00706)]***	[(0.0598)]***	[(0.0608)]	[(0.279)]***
Relative income	-0.0421	-0.0174	-0.0377	-0.0753
	[(0.000738)]***	[(0.00212)]***	[(0.00673)]***	[(0.00796)]***
Hh head	-1.333	-2.998	-3.610	0.193
	[(0.0608)]***	[(0.204)]***	[(0.529)]***	[(0.608)]
Single parent	-3.352	-2.450	-4.267	-0.353
	[(0.0863)]***	[(0.281)]***	[(0.709)]***	[(0.769)]
Composite	-3.406	-1.365	-1.922	-3.964
	[(0.0919)]***	[(0.615)]**	[(1.244)]	[(1.351)]***
Extended	-2.360	-0.892	-1.560	-3.259
	[(0.0579)]***	[(0.182)]***	[(0.426)]***	[(0.631)]***
Other	-4.345	-3.246	-4.347	-1.724
	[(0.102)]***	[(0.330)]***	[(0.904)]***	[(0.817)]**
One extra adult	-3.788	-2.073	-5.246	-1.281
	[(0.0988)]***	[(0.365)]***	[(0.907)]***	[(0.870)]
More than 1 extra adult	-7.696	-5.362	-11.35	-3.739
	[(0.111)]***	[(0.401)]***	[(0.990)]***	[(1.035)]***
Children 0-5	8.945	7.227	7.646	8.080
	[(0.0523)]***	[(0.170)]***	[(0.382)]***	[(0.589)]***
Children 6-12	1.385	1.712	2.512	3.017
	[(0.0495)]***	[(0.160)]***	[(0.365)]***	[(0.556)]***
Children 13-18	-3.105	-2.423	-2.716	-2.344
	[(0.0500)]***	[(0.156)]***	[(0.368)]***	[(0.543)]***
Washing machine	-0.525	0.336	-1.669	-1.488
	[(0.0532)]***	[(0.172)]*	[(0.466)]***	[(0.551)]***
Blender	-0.329	0.0143	-0.692	
	[(0.0611)]***	[(0.229)]	[(0.446)]	
Vacuum	-0.395	-0.657		
	[(0.100)]***	[(0.284)]**		
micro		-0.534		-0.484
		[(0.164)]***		[(0.537)]
Iron			-2.041	

			[(0.459)]***	
Dryer				0.696
				[(0.857)]
Dish washer				-1.520
				[(1.213)]
Constant	22.09	-13.59	48.80	-32.17
	[(1.104)]***	[(3.756)]***	[(2.531)]***	[(21.49)]
Observations	534,952	69,085	9,922	7,138
R-squared	0.420	0.356	0.432	0.359
Standard errors in brackets				
*** p<0.01, ** p<0.05, * p<0.1				

Source: Authors' estimation based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.

Table A.3. Determinants of unpaid household work (hours per week). Men and women. OLS estimations

	Colombia		Mexico		Peru		Uruguay	
VARIABLES	Women	Men	Women	Men	Women	Men	Women	Men
Worker	-11.95	-4.646	-13.67	-6.032	-5.484	2.142	-4.331	-2.691
	[(0.0863)]***	[(0.0578)]***	[(0.272)]***	[(0.182)]***	[(0.716)]***	[(0.518)]***	[(0.971)]***	[(0.725)]***
26-45 years	11.21	1.757	12.81	2.361	15.28	-0.0143	18.61	3.776
	[(0.0941)]***	[(0.0555)]***	[(0.293)]***	[(0.183)]***	[(0.709)]***	[(0.452)]	[(1.003)]***	[(0.684)]***
46-65 years	11.82	1.330	15.13	2.867	16.10	1.317	23.17	5.859
	[(0.114)]***	[(0.0674)]***	[(0.361)]***	[(0.230)]***	[(0.906)]***	[(0.596)]**	[(1.053)]***	[(0.774)]***
Schooling	0.612	0.310	0.685	0.440	0.452	-0.0572	2.053	0.629
	[(0.0289)]***	[(0.0151)]***	[(0.0897)]***	[(0.0519)]***	[(0.319)]	[(0.196)]	[(0.397)]***	[(0.245)]**
Sch. Cuad	-0.0409	-0.00626	-0.0512	-0.0183	-0.0487	0.0107	-0.0965	-0.0251
	[(0.00158)]***	[(0.000822)]***	[(0.00475)]***	[(0.00264)]***	[(0.0169)]***	[(0.0100)]	[(0.0188)]***	[(0.0118)]**
Hh income	5.208	1.614	13.93	9.149	0.158	0.418	10.41	16.45
	[(0.300)]***	[(0.151)]***	[(1.596)]***	[(0.869)]***	[(1.174)]	[(0.673)]	[(7.930)]	[(4.829)]***
Hh income cuad	-0.268	-0.0820	-0.944	-0.544	-0.143	-0.0309	-0.729	-0.919
	[(0.0121)]***	[(0.00612)]***	[(0.101)]***	[(0.0547)]***	[(0.101)]	[(0.0572)]	[(0.451)]	[(0.275)]***
Relative income	-0.0364	-0.0215	-0.00899	-0.0214	-0.0607	0.00949	-0.0875	-0.0413
	[(0.00111)]***	[(0.000764)]***	[(0.00327)]***	[(0.00223)]***	[(0.0123)]***	[(0.00604)]	[(0.0117)]***	[(0.00892)]***
Hh head	-0.127	1.966	-1.263	1.693	0.458	2.315	3.674	4.601
	[(0.116)]	[(0.0585)]***	[(0.437)]***	[(0.200)]***	[(1.080)]	[(0.516)]***	[(1.092)]***	[(0.665)]***
Single parent	-5.359	0.494	-3.715	0.503	-7.640	1.368	-3.602	3.306
	[(0.145)]***	[(0.0853)]***	[(0.487)]***	[(0.282)]*	[(1.230)]***	[(0.700)]*	[(1.267)]***	[(0.819)]***
Composite	-5.603	-0.346	-5.077	1.495	-7.560	1.895	-8.342	4.465
	[(0.154)]***	[(0.0827)]***	[(1.062)]***	[(0.550)]***	[(2.068)]***	[(1.170)]	[(2.035)]***	[(1.451)]***
Extended	-3.956	-0.260	-1.634	0.543	-2.953	0.395	-6.455	0.631
	[(0.0973)]***	[(0.0538)]***	[(0.305)]***	[(0.174)]***	[(0.724)]***	[(0.405)]	[(0.989)]***	[(0.659)]
Other	-7.825	-2.095	-6.032	-0.863	-8.550	-2.237	-4.894	0.397
	[(0.168)]***	[(0.0935)]***	[(0.544)]***	[(0.313)]***	[(1.561)]***	[(0.848)]***	[(1.289)]***	[(0.825)]
One extra adult	-1.337	-3.731	0.683	-2.592	-1.762	-4.790	3.715	-4.014
	[(0.163)]***	[(0.0951)]***	[(0.608)]	[(0.367)]***	[(1.563)]	[(0.882)]***	[(1.406)]***	[(0.911)]***
More than 1 extra adult	-5.907	-5.885	-3.489	-3.937	-8.976	-6.699	0.593	-5.665
	[(0.179)]***	[(0.107)]***	[(0.659)]***	[(0.401)]***	[(1.674)]***	[(0.965)]***	[(1.643)]	[(1.072)]***
Children 0-5	14.07	2.931	11.03	2.060	12.72	2.009	13.19	1.902
	[(0.0850)]***	[(0.0485)]***	[(0.279)]***	[(0.160)]***	[(0.636)]***	[(0.361)]***	[(0.914)]***	[(0.611)]***

Children 6-12	2.366	0.182	2.699	0.293	2.941	1.998	5.455	-0.334
	[(0.0814)]***	[(0.0451)]***	[(0.266)]***	[(0.148)]**	[(0.612)]***	[(0.344)]***	[(0.881)]***	[(0.562)]
Children 13-18	-4.277	-1.415	-3.033	-1.380	-4.371	-0.281	-2.273	-1.994
	[(0.0817)]***	[(0.0459)]***	[(0.260)]***	[(0.145)]***	[(0.609)]***	[(0.349)]	[(0.855)]***	[(0.549)]***
Washing machine	-0.648	0.0873	0.320	0.696	-3.083	-0.0671	-1.553	-1.070
	[(0.0868)]***	[(0.0486)]*	[(0.287)]	[(0.159)]***	[(0.767)]***	[(0.441)]	[(0.881)]*	[(0.546)]*
Blender	0.0718	0.0845	0.402	0.0526	-0.611	-0.656		
	[(0.103)]	[(0.0543)]	[(0.389)]	[(0.208)]	[(0.747)]	[(0.416)]		
Vacuum	-1.016	0.632	-0.989	-0.147				
	[(0.162)]***	[(0.0921)]***	[(0.477)]**	[(0.260)]				
micro			-0.500	-0.358			-0.882	0.148
			[(0.272)]*	[(0.151)]**			[(0.846)]	[(0.541)]
Iron					-2.653	-1.600		
					[(0.772)]***	[(0.426)]***		
Dryer							1.487	-0.163
							[(1.332)]	[(0.876)]
Dish washer							-2.198	-0.584
							[(1.919)]	[(1.214)]
Constant	8.536	4.753	-25.23	-26.44	45.54	13.82	-22.92	-61.56
	[(1.885)]***	[(0.964)]***	[(6.309)]***	[(3.443)]***	[(4.176)]***	[(2.451)]***	[(34.75)]	[(21.05)]***
Observations	288,732	246,220	36,118	32,967	4,943	4,979	3,787	3,351
R-squared	0.262	0.077	0.224	0.057	0.314	0.091	0.259	0.111

Standard errors in brackets

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

Source: Authors' estimation based in Time-use surveys from Colombia, Mexico, Uruguay and Peru.