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Gender Differences in Time Use

Allocating Time between the Market and the Household

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Abstract

Important progress toward gender equality has been made in the past decades, but inequalities linked to gender norms, stereotypes, and the unequal distribution of housework and childcare responsibilities persist. Lifetime events such as marriage and parenthood bring substantial changes in time use among women and men. This paper updates and reinforces the findings of previous studies by analyzing gender differences in the allocation of time among market work and unpaid domestic work. Results from the analysis of time use patterns in 19 countries of different income levels and from various regions suggest that women specialize in unpaid domestic and care work and men specialize in market work. The paper employs propensity score matching to assess the marriage and parenthood "penalty" on time use patterns over the lifecycle. The findings indicate that women of prime working age are the most penalized on a host of measures, including labor market participation, unpaid domestic work, and leisure time. Men are not necessarily penalized for, and sometimes benefit from, marriage or parenthood.

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Gender Differences in Time Use:

Allocating Time between the Market and the Household*

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1. Introduction

How women and men spend their time is one of the most important and least understood characteristics of people around the world. Data on the activities they do, the time they allocate to each activity and on who they were with at the time are not collected on a regular basis in most countries. However, such information could be effectively used to better understand the factors leading to gender inequalities in access to economic opportunities, well-being as well as the implications for policy making.

Time use studies are not new. They were first used in the early twentieth century to understand people's lifestyle based on their time use patterns. Back in the 1930s, feminist scholars inquired into time use and the need to measure the "invisible" unpaid work of men and women (Reid, 1934). Further, the integration of the gender division of labor and unpaid work into the analysis of economic development and policies has been one of the main contributions of feminist economics to the field (Boserup, 1970).

In terms of large-scale data collection, Canada and the United Kingdom conducted time surveys in the 1960s, and were followed by Norway, Japan, Finland and Austria in the 1970s and 1980s (Ironmonger, 1999). By the end of the 1990s, developing countries started carrying out time use surveys and the instruments acquired a new focus. Currently, these surveys are being used around the world to improve estimates of national accounts (Suh and Folbre, 2016) and complement information on work missed in labor market surveys. For example, a comparison of time use and labor force surveys for South Africa reveals that the former captures more of paid work that both men and women do than the latter (Floro and Komatsu, 2011). Moreover, while the data to assess poverty rates at the individual level are not yet available, time use surveys have provided information to study the concept of time poverty.[1] This allows adjusting the measurement of such concept from the household to the individual level to assess gender differences in paid and unpaid work (Floro and Srivastava, 2017). Results of this type of analysis have shown that women are more likely than men to be time poor (Gammage, 2010; Bardasi and Wodon, 2010) especially in rural areas (Arora, 2015).

Time use surveys have also been used to further understand individual decisions to work as well as decisions on how to allocate time to different activities. A growing body of evidence shows that across countries: (i) women specialize in housework and care activities, while men focus on market work (Apps, 2004; Berniell and Sánchez-Páramo, 2011; Ferrant et al., 2014; Campaña et al., 2015); (ii) women work more hours in total than men when productive activities such as market work, housework and care are considered altogether (Haddad et al., 1995; Ilahi, 1999; Berniell and Sánchez-Páramo, 2011); and (iii) lifecycle milestones such as marriage and parenthood are the

[1] The literature has defined the concept in different ways. According to Vickery (1977), time poverty refers to the notion that to stay above the poverty threshold, households need a minimum amount of time in addition to income. Goodin et al. (2008) define it as the deprivation of "discretionary" time.

important drivers of the gender gap in time use patterns (Apps and Rees, 2005; World Bank, 2011). Fewer studies, however, have studied gender differences in time use patterns across multiple countries, mainly because of the lack of comparable quality data—information that is crucial to guide both research and policy design.

This paper updates and reinforces the findings of various scholars and those reported by the 2012 World Development Report (WDR) by examining gender differences in time use patterns in 19 countries of different income levels and from various regions. We harmonize data from time use surveys and household surveys with time use modules collected between 2006 to 2014 to make them comparable. We focus on four aggregate categories: market or paid work, unpaid domestic work, personal care activities, and leisure, social and study activities. We answer four questions: what is the gender gap in time use patterns in countries across the various regions and income levels? How do time use patterns vary according to individual and family characteristics? How do time use patterns change over the lifecycle? How do they change in response to family formation? While some of these questions have been covered by previous literature, to our knowledge few studies analyze time use patterns at this level of detail and over the lifecycle for a broad sample of countries. We hypothesize that this might be explained by the lack of comparable data (Esquivel et al., 2007) and the intensive requirements of data harmonization.

Our findings indicate that in all the countries included in our sample women specialize in unpaid domestic work, while men specialize in market work. This reinforces the results obtained by previous research from developed and developing countries (Benería 2003; Benería et al. 2015). However, the degree of specialization varies widely across settings. Evidence has shown that the gender gap in unpaid work is observed in all regions but is largest in Middle Eastern countries, mainly because men undertake considerably less unpaid work than in other regions, but also because women perform more unpaid work than their counterparts (Ferrant et al. 2014). Women in South Africa spend on average, over 2 hours more per day on domestic and care activities, while men spend over an hour more on production work (Budlender et al. 2001; Charmes 2006). In fact, regardless of labor force status, the amount of time that South African men allocate to unpaid work tends to vary less than that of women (Floro and Komatsu, 2011). Considering productive activities altogether, women work more hours than men in most countries and consequently, end up having fewer hours for personal care and leisure activities.

When comparing our findings with the ones reported by studies analyzing earlier periods, we conclude that countries have made some progress over the last years, but gender differences in time use persist. This is consistent with findings from developed countries where the number of hours that men allocate to domestic and childcare work increased slightly in the last decades (Sayer, 2016; Sullivan, 2011). However, such small increases have not translated into a significant change in women's time use patterns. Furthermore, as women entered the labor force, feminist economists expected that there would be a complementary increase in men's engagement in

household chores, and that the time allocated to domestic activities would equalize (Oakley, 1985; Bergmann, 1986). Instead, the total workload for mothers has gone up (Craig and Mullan, 2009).

We find considerable heterogeneity in the allocation of time according to individual and household characteristics. Men's and women's time use tend to converge as education increases, although gender differences persist even for more educated people. Gender gaps in the amount of time devoted to the different types of activities widen when comparing the time use patterns of young adults (15-24 years of age) and individuals of prime working age (25-44 years of age). Similar to previous findings for both developed and developing countries (Patterson et al., 2004; Giddings et al., 2014; Dayıoğlu and Kırdar, 2010), men spend more hours in the market and less in unpaid domestic work in comparison to women, regardless of their marital status and age (Suh, 2016). Parenthood also represents important adjustments in time use: women reduce the number of hours allocated to market work and increase those for unpaid domestic activities, while the opposite occurs among men.

In most countries, gender differences in unpaid care and domestic work in rural areas are larger than in urban settings. Such gap has received a lot of attention in previous studies as the time allocated to chores such as water fetching, and wood collection is expected to affect the amount of time individuals can dedicate to school (Lihwa et al., 2015; Rogers, 2014) and to income-generation (DeGraff et al., 2017). For example, DeGraff et al. (2017) find that women, girls, and younger children in rural Tanzania bear the greatest part of the burden to meet basic needs for water and fuel wood. In Madagascar, women and girls allocate more time to water fetching than do men and boys (Boone et al., 2011). Similarly, large gender gaps in total work exist for all age groups but the oldest household members in rural China (Connelly and Maurer-Fazio, 2016; 2017). The time allocated to these tasks has been previously defined as indirect care work, which is work that supports the household, but it is not direct care provision (Folbre, 2006).

Men work longer hours in the market and spend less time on unpaid domestic activities than women in all stages of the lifecycle (Dayıoğlu and Kırdar, 2010; Anxo et al., 2011). In fact, parenthood is one of the key determinants of gender differences in time use for people of peak productive age. The presence of children in the household tends to be associated with longer paid work hours for men, but shorter paid work hours for women (Anxo et al. 2007; Connelly and Kimmel 2010). Further, the number and ages of children in a household affect time use in a different way (Folbre and Yoon, 2007a; 2007b). Women of prime productive age allocate less time to market work and more time to unpaid domestic activities in the presence of children, compared to women with no children, particularly when they have a partner. In contrast, men living in a household with children assign more hours to market work, but marriage or cohabitation does not make a difference in time use patterns for them. These patterns hold for a broad sample of developing (Anxo et al. 2007; Connelly and Kimmel 2010; Maurer-Fazio and Connelly, 2017) and developed countries (Anxo et al. 2011; Drobnič et al. 1999). This is an indication that the

experience of parenthood often implies a crystallization of gender roles all over the world (Lunderg and Rose, 1998).

Gender differences in time use across countries can be the reflection of gender norms and the policy environment (Gornick and Meyers, 2003). Regardless of the development level, traditional views about women and the labor market are associated with lower labor force participation and lower employment rates than men's (Fernández 2007; Burda et al., 2007; Nicodemo and Waldmann, 2009). At the same time, women who have limited access to productive inputs have lesser latitude on whether to go to work, how far to travel, and whether to invest in a business or not. As a result, they might end up allocating less time to market work and more time to housework (Quisumbing et al., 2004; Aidis et al., 2007; Muravyevy et al., 2009; World Bank, 2010; Hallward-Driemeier, 2011). In fact, women's ability to find a job in the labor market is strongly correlated with their burden of unpaid domestic work (Floro and Komatsu, 2011). One of the problems in studying division of paid labor among heterosexual couples, however, is that the effect of gender might be confounded with income. Since women tend to have lower incomes than men, it is hard to know whether they do more of the housework because of gender norms or because they have less bargaining power due to lower earnings than their spouses (Rothblum, 2017).

Time use patterns observed over the lifecycle and women's access to opportunities might also be explained by the characteristics of parental leave systems, as well as the availability, quality and affordability of childcare (Gornick and Meyers, 2003; Adnane et al., 2019). Evidence indicates that the provision of maternity leave and the availability of childcare at the workplace can narrow the gender differences in time allocated to market work (Apps and Rees, 2005). In Argentina, Brazil and Colombia, the provision of childcare subsidies increased mothers' participation in the labor market as well as hours worked (Attanasio and Vera-Hernandez, 2004; Berlinski and Galiani 2007; Berlinski et al., 2009; Attanasio et al., 2017).

Labor market regulations and the characteristics of income tax regimes also affect women's and men's time use decisions. While the reduction of dismissal costs has been associated with increases in the employment rate of young women and men (Kugler, 2004), stricter job security regulations have reduced women's employment rates relative to men, increasing unemployment and their chances of moving from wage employment into self-employment or informality with potential implications in the time allocated to market work (Montenegro and Pagés, 2004; Botero et al., 2004; Viollaz, 2018). Minimum wage increases, and collective bargaining processes have shown similar effects on female employment rates (Feliciano, 1998; Bertola et al., 2002; Botero et al., 2004; Arango and Pachon, 2004; Addison and Ozturk, 2010). The extension of social security benefits to other household members different from the worker contributing to the system may reduce the attachment to the labor market of the additional beneficiaries. Evidence for Argentina indicates that second earners of the household—usually women—are less likely to work in the formal sector when receiving social security benefits through the main income earner—usually men (Galiani and Weinschelbaum, 2012). The tax treatment of the family income might also

penalize wives and create disincentives to work for pay if the tax rate for the second earner, typically a woman, is set at a higher rate than it would be if she was a single filer (Apps and Rees, 2005; Grown and Valodia, 2010).

In the sections that follow, we describe the data, harmonization process, and methodology used for the analysis. Then, we draw upon time use data to construct harmonized measures of time allocation across productive and non-productive activities to answer the four research questions. We use data from 19 countries: Albania, Argentina, Bangladesh, Colombia, Ecuador, Ghana, Guatemala, Iraq, Mexico, Moldova, Mongolia, Pakistan, Peru, South Africa, Timor-Leste, Turkey, Uruguay, the United States, and the West Bank and Gaza. We then discuss the potential role of social norms, labor market regulations, and other factors in determining time use decisions. We conclude by summarizing the findings and discussing the main implications for research and policy making.

2. Data and methodology

Depending on the study, the collection of time use data may have the objective of sampling not only across the population, but also across hours of the day, days of the week, and seasons of the year. Some studies collect information on who the respondent was with during the activity, where the respondent was, and whether the respondent was carrying out another activity in addition to the primary task reported. Time use studies often collect information on respondents' demographic and socioeconomic characteristics.

The choice of method for measuring time use is generally determined by the analytical purpose of the study. Time use data can be collected by direct observation, by self-reporting or by interview. Each instrument and data collection mode has its advantages and disadvantages relative to the reliability of the data obtained, effect on response rate and cost (UNDESA, 2004).

The most widely used method for collecting time use data in large-scale surveys is the *time diary*. This approach enables respondents to report all activities undertaken over a specific period of time, usually one day, and the beginning and ending time for each activity. The information is usually reported in 10, 15 or 30-minute intervals or may be left open for the respondent to report. Studies are generally conducted for a random sample of households and they are sometimes further randomized across days of the week, so that each randomly selected respondent is assigned to a designated day. This method makes the entire sample of diaries representative across days of the week. Activities are then typically classified into broad groups and then into more specific groups. Time diaries are perceived to be cost-effective to implement and to provide accurate estimates of how people spend their time. The time diary method does have limitations. One of the drawbacks of this approach is 'over-kill', as it runs the risk that respondents will confuse between simultaneous activities (e.g. taking care of children while cooking). This method of data collection

could also be problematic when the literacy level of respondents is low. Yet, many researchers consider the diary to be the 'gold-standard' for collecting time use data.

Another method for collecting time use data in large-scale surveys is the *stylized questions* approach where respondents are asked to recall the amount of time they allocate or have allocated to a certain activity over a specific period. Stylized questions are believed to be the least expensive way to measure time use, mainly because they require fewer questions and less effort to implement than time diaries. However, evidence suggests that data collected with this method might have a degree of error. For instance, stylized questions can understate the time women spend on childcare because people may classify it as work or because it is reported only when it is done as a main activity (Craig, 2002). Respondents may also have a difficult time recalling what they did over the time period that the question references and they might overreport activities that are perceived as socially "good" or acceptable. Another drawback to stylized questions is that questions must be worded so that respondents understand the types of activities for which they are to report. Getting contextual information under this method, such as where and with whom the person was during each activity, can impact negatively on the response rate. This implies that activities need to be classified within the question.

Regardless of the instrument, self-reporting the amount of time allocated to the different activities is far from being objective. For example, the various types of activities that constitute housework are variable. "Cooking" can refer to anything from micro-waving food to a large dinner in which everything is made from scratch. "Doing the laundry" might or might not include putting the clothes away. At the same time, most time use studies focus only on primary activities, ignoring the fact that individuals often perform two or more tasks at the same time. This implies that the time allocated to activities such as childcare and housework which are also performed as secondary activities is underestimated and might not present an accurate description of time use (Floro and Miles, 2003; Suh, 2016).

This paper uses data for 19 countries, including 14 stand-alone time use surveys and 5 household surveys with time use modules collected between 2006 and 2014 (Appendix Table A1). Our sample includes 7 countries from the Latin America and the Caribbean region (Argentina, Colombia, Ecuador, Guatemala, Mexico, Peru and Uruguay), 3 countries from the Europe and Central Asia region (Albania, Moldova and Turkey), 2 countries from the East Asia and Pacific region (Mongolia and Timor-Leste), 2 countries from the Middle East and North Africa region (Iraq and West Bank and Gaza), 2 countries from South Asia (Bangladesh and Pakistan), two from Sub-Saharan Africa (Ghana and South Africa), and 1 from North America (USA).

Instruments and modes of data collection vary widely across countries. Data collection for 10 of the 14 stand-alone time use surveys is based on diaries, whereas the remaining 4 employ stylized questions. All the time use modules embedded in household surveys employ stylized questions. Depending on the country, the reference population ranges from 7 years and above (Guatemala)

to adults aged 18 years and older (Argentina). In 13 of the surveys the reference period is the previous day and the remaining 6 refer to the previous week. Only 5 of the instruments include information on secondary or simultaneous activities and 2 surveys ask about activities carried out in the presence of household children.

To allow for comparison across and within countries, we harmonize activities around four categories: market work, unpaid domestic work, personal care, and leisure, social and study activities. 'Market work' includes paid and unpaid work devoted to production of goods sold in the market, commuting to the workplace, and the time spent looking for work. 'Unpaid domestic work' includes productive activities for which markets could potentially exist, such as cooking, fetching water, cleaning, and care for children. 'Personal care' includes sleep, eating, and drinking, and other personal services such as hygiene, visits to the doctor, etc. Social activities include hobbies, games, recreation, sports, socializing, and so on.[2] We group the number of hours devoted to housework and childcare under the same category because at an earlier stage of this research we found that the latter was consistently underreported in all countries.[3]

In general, the time allocated to childcare tends to be underestimated because it is done in conjunction with other activities and may go underreported when only primary activities are recorded. Adding a secondary activity to record childcare time would provide a more reasonable estimate of the total amount of time devoted to this task, but only 5 out of the 19 countries in our sample include the information. Alternatively, time with children could be measured when surveys ask the question 'with whom' data, but only 2 of the surveys in our sample do so. Thus, for the purposes of harmonization, we focus on primary activities and report the number of hours allocated to unpaid domestic work, a broader category that includes housework and childcare. This is a limitation of our analysis, since childcare and housework (mostly unpaid and performed by women) are also performed as secondary activities (Floro and Miles, 2003; Folbre et al, 2005; Folbre and Yoon, 2007a; 2007b). Hence, the unpaid domestic and care work category in this paper represents a lower bound estimate.

Time allocations are expressed in hours per day. The gender gap is calculated as the difference between the average number of hours per day men and women spend in the different activities on a daily basis. Our sample includes men and women aged 15 to 64 years of age.[4] Following the approach in the 2012 WDR, activity episodes are assigned a zero if not performed by the individual. This implies that we use the same sample of individuals to calculate the amount of time

[2] Data on some specific activities are not available for a handful of countries: Argentina and Iraq do not include information on childcare activities, so unpaid domestic work only includes time allocated to household activities in these countries. Timor-Leste does not collect data on self-care and leisure, social and study activities. Argentina, Iraq and Mexico do not have information on time allocated to self-care.

[3] This finding is consistent with previous studies such as the 2012 WDR (World Bank, 2011).

[4] Argentina is an exception because the time use module was only applied to people aged 18 and above.

allocated to the different activities (World Bank, 2011).[5] We also harmonize individual and household characteristics across countries.[6] Education level is defined as (complete or incomplete) primary, secondary, and tertiary. Age groups are defined in the following categories: 15-24, 25-44 and 45-64 years of age. Marital status comprises three categories: married or living together, single or widowed, and separated or divorced. Children are defined as individuals below 15 years of age in all countries but Pakistan and South Africa where we could only identify children of 6 years of age and younger.

For the analysis of time use patterns over the life cycle, we define seven stages according to age and family formation variables. We distinguish between youth (15-19), individuals of prime working age (20-44) and mature adults (45-64). We then combine age groups with information on whether men and women have a partner of opposite sex in the same age group or not, and whether they have children at home.

3. What is the gender gap in time use patterns across countries?

Time use patterns differ widely among women and men. Women and men spend by far the largest amount of time on personal care activities (around 11 hours per day). Among women, unpaid domestic work is the second most important activity (5 hours per day), followed closely by leisure (4.7 hours per day) and market work is the activity to which they dedicate the least amount of time (2.3 hours per day). Among men, personal care activities are followed by leisure, social and study and market work (5 hours per day). Unpaid domestic work is the activity to which men assign the least amount of time (1.9 hours per day). Table 1 presents the average time allocation by type of activity and sex in each country and Figure 1 depicts gender differences by type of activity.

While the analysis of time allocated to productive activities—paid or unpaid work—reveals that men specialize in paid work and women in unpaid domestic activities, the degree of specialization varies widely across countries. On average men dedicate 2.7 more hours per day to market activities than women, but the gender gap ranges from 4.8 more hours of paid work for men in Iraq to 24 minutes in Ghana. Women, on the other hand, allocate 3.2 more hours per day to unpaid domestic work than men, but the difference ranges from approximately 5 more hours in Guatemala, Albania and Turkey to one hour per day in Timor-Leste and Mongolia.

The patterns we observe imply that in most countries, women work more hours than men when all work—paid and unpaid—is accounted for. On average, they spend nearly half an hour more per day than men in productive activities, but the difference increases to 1.1 hours when the sample is restricted to countries where women work more hours than men. Figure 2 shows the gender gap in time allocated to productive activities. The countries with the largest differences are Albania and Uruguay, where women spend 2 more hours per day on productive activities. In the United States,

[5] See Chapter 5 in the 2012 WDR (World Bank, 2013) and section 3 in this paper for a comparison between our calculations and those presented in the 2012 WDR.
[6] When this information is missing, the sample of countries is restricted to only those countries with available data.

Bangladesh, and Pakistan men allocate more time than women to productive activities, but the difference is less than 15 minutes per day. West Bank and Gaza, Iraq and Timor-Leste are the only countries where women work less than men and this is mainly explained by the large gap in the number of hours dedicated to paid work.

Compared to productive activities, the gender gap in time devoted to personal care and leisure, social and study is rather small across countries. On average, women allocate 12 more minutes per day to personal care activities than men, but there is no clear pattern across countries. For instance, whereas in Pakistan women spend one more hour per day in personal care activities than men, the opposite is true in Albania. Men, however, spend more time in leisure activities—about 36 more minutes per day—than women. The gender gap is largest in Ghana and Albania (2 hours per day), but Argentina, Ecuador, Mexico, Turkey, and Uruguay are close to gender parity in the amount of time allocated to leisure.

Iraq, Guatemala and Mexico have the most unequal distribution of time when considering activities altogether (Figure 3). In these countries, the difference between women and men—calculated as the absolute value of the average gender gap across activities—is on average 2.7 hours per day. In each activity, these countries are either close or above the average gender gap for the overall sample. In contrast, Mongolia, Moldova and the Unites States have the smallest average gender gaps—approximately 48 minutes per day. These countries are closer to gender parity in the different activities.

The cross-country heterogeneity that we observe in the degree of specialization among men and women can be explained by diverse factors. The tax treatment of the family often penalizes married women as second earner, leading to a decline in female labor force participation (Eissa and Hoynes, 2004; Apps and Rees, 2005). This is the case of some high-income countries such as the United States, where tax credits reduce married women's participation in the workforce and the decline more than offsets any rise in the participation of their husbands (Eissa and Hoynes, 2004). In contrast, policies that reduce the price of childcare services and raise female net wages can lead to an increase in female labor supply (Apps and Rees, 2004). Evidence for Argentina and Colombia shows that childcare subsidies increase women's labor force participation and working hours (Attanasio and Vera-Hernandez, 2004; Berlinski and Galiani 2007; Berlinski et al., 2009). Other factors explaining differences in specialization across countries include labor market regulations and their enforcement (Montenegro and Pagés, 2004; Botero et al., 2004; Viollaz, 2018), as well as gender differences in the access to productive inputs (Quisumbing et al., 2004; Aidis et al., 2007; Muravyevy et al., 2009; World Bank, 2010; Hallward-Driemeier, 2011). In Mexico and Colombia, the minimum wage legislation has a negative impact on women's employment (Feliciano, 1998; Arango and Pachon, 2004), while stricter job security regulations generate larger increases in unemployment for women compared to men for a group of countries including 11 of those included in our sample (Botero et al., 2004). Stricter enforcement of labor regulations in

Argentina leads to the reallocation of women from formal to informal wage employment (Viollaz, 2018).

Have gender gaps in time use narrowed over time?

To analyze the evolution of time use patters during the last years, we compare our results with those from the 2012 WDR (World Bank, 2011) for 10 countries: Argentina, Ghana, Guatemala, Iraq, Mexico, South Africa, Uruguay, USA, Timor-Leste and West Bank and Gaza.[7] We calculate changes in the gender gap in time allocated to market work, unpaid domestic work and care activities, and personal activities—including leisure. Survey instruments are different in some cases; thus, caution should be used when making comparisons. For example, while we use a time use module for Argentina and a time use survey for West Bank and Gaza, the 2012 WDR employs aggregate data for these two countries. Similarly, for Ghana we use a time use survey and the WDR employs a household survey module.

Progress in reducing gender gaps in time use has been uneven. Some countries have made small improvements in the last years, while differences persist or even widened in others. Figure 4 presents the change in gender gaps over time.[8] Panel A shows that the gender gap in time allocated to market work narrowed in 4 of the 10 countries (Ghana, Guatemala, USA and Timor-Leste); it increased in 5 countries (Argentina, Iraq, Mexico, South Africa and West Bank and Gaza), but the change was rather small in two of them (Argentina and South Africa); and in one country (Uruguay) the gender gap remained unchanged. With respect to the time allocated to unpaid domestic work, Panel B indicates that in 2 out of the 10 countries (Argentina and Uruguay) the gender gap increased (in absolute value); in 2 countries, the gender gap barely changed (Mexico and Guatemala); and in the remaining 6 countries the gender gap declined. Panel C shows that gender differences in time devoted to personal activities—including personal care and leisure, social and study—for the 8 countries with information. Over the last years, the gap increased in 4 countries (Guatemala, Mexico, USA and Uruguay) and declined in the remaining 4 countries (Argentina, Iraq, South Africa and West Bank and Gaza).

4. How do time use patterns vary according to individual and household characteristics?

To analyze gender differences in time use patterns according to individual and household characteristics, we focus on the average number of hours devoted to market work and unpaid domestic work.[9] Consistent with previous sections, the gender gap is calculated as the difference between the number of hours that men and women allocate to each activity.

[7] Time use patterns for these countries were analyzed in the 2012 WDR using previous rounds of surveys. The time difference between the survey data used in the WDR and those used in this study ranges between 4 and 12 years.
[8] In this exercise, the gender gaps corresponding to our study were calculated for the sample of men and women aged 18-65 to match the sample definition used in the 2012 WDR.
[9] Time use for self-care and leisure, social and study activities are not included in the analysis given that they do not present a clear pattern by gender.

Time Use by Education Level

In general, men allocate more time to market activities and less time to unpaid domestic chores than women at all levels of education (Table 2).[10] However, consistent with previous studies, Figure 5 shows that the gender gap diminishes with the level of education. Among individuals with primary or no education, men work on average 3.2 more hours in the market than women per day. The difference diminishes to 2.9 hours per day for those with secondary and 2.1 hours per day for those with tertiary education. This pattern is mainly explained by the fact that individuals with higher levels of education work more hours in the market and the increase in the number of paid work hours if greater for women than for men. Unpaid domestic work mirrors the pattern of market work, but with opposite sign. Women with primary or no education devote 3.5 more hours to this activity than men on a daily basis. The difference decreases to 3.1 hours per day among women and men with secondary education and to 2.5 hours for individuals with tertiary. In this case, higher educational attainment is associated with fewer hours of domestic work and the effect is also larger for women than for men.

Gender differences in time allocated to market work and unpaid domestic chores diminish with the educational level, buy they persist even for more educated people.[11] These dynamics are explained by the fact that women devote more time to the market and fewer hours to domestic work as they get more educated, but men do not take on more household-related responsibilities. Thus, greater financial power—as measured by an increased involvement in the market—does not translate in greater gender equality in the domestic sphere. Rather than sharing household responsibilities with their partners, women are most likely outsourcing housework or drawing on family networks for support.

Time Use by Age Groups

The analysis that follows focuses on three generations of potential productive workers within the household: young adults (15-24), women and men of prime working age who tend to specialize in market work (25-44), and mature adults (45-65) who tend to specialize in unpaid work and perform fewer hours of productive work than individuals in the other age groups. We construct these age groups based on the different roles that women and men play in most countries. Young adults are often between the ages of leaving compulsory education and entering the labor market. Prime age adults tend to be actively engaged in the labor market, but also assume family responsibilities such as raising children or caring for elderly relatives.

The traditional division of labor persists even among elderly women and men. Mature adults are often less attached to the labor market than their younger counterparts and are also likely to take care for other family members. While they devote similar amounts of time to personal care, women

[10] Moldova and Uruguay are not included in the analysis as we could not define the educational level of our sample of interest.

[11] These findings are consistent with previous analysis of time use by men and women (World Bank, 2011).

dedicate considerably more time than men to household chores. The exact opposite is true for paid work (Posel and Grapsa, 2017).

Overall, prime working age women and men work the greatest number of daily hours. Table 3 shows that both men and women in this age group spend more time on market activities than their younger and older counterparts (Pakistan is an exception). This pattern is consistent with higher employment rates for individuals in the 25-44 age group compared to those of individuals in the younger cohorts (Appendix Table A2).

These findings suggest that time use is both gendered and age differentiated. In most countries, we observe an inverted u-shaped relationship between the gender gap in time allocated to market work (men's time minus women's time) and age. The amount of time that young men devote to paid work is 1.7 hours greater than the time allocated by young women. Similarly, the gender gap in among prime working age men and women time is 3.4 hours per day, while that for mature adults is 2.7 hours per day. The steep increase in the gender gap when moving from young adulthood to childbearing and peak productive years is explained by a larger increase in the number of working hours for men compared to that for women.

The relationship between the gender gap in time allocated to unpaid domestic work and age resembles a u-shape pattern. The number of hours allocated to this activity increases as men and women move from youth to prime working age and then decreases with maturity (men's time minus women's time). These changes are more marked among women and the gender differential is higher for those of prime working age (Panel B of Figure 6). Young women's unpaid domestic work is 2.3 hours greater than that of young men's, while the difference increases to 3.9 hours per day among prime working age individuals and decreases again to 2.7 more hours for mature adults.

Men and women of prime working age work more hours in total—in the market or at home—and allocate less time to leisure and personal care than any other age group. These patterns are closely related to lifetime events such as family formation, including marriage and parenthood. Similarly, women of all ages specialize in domestic chores and men specialize in market work, but the degree of specialization varies across age groups. For example, young men allocate fewer hours to market work than their mature adult counterparts and the same if true among women when it comes to unpaid domestic chores.

Time Use by Marital Status

In the analysis that follows, we break down the sample according to sex and three categories of marital status: single or widow/widowed, married or cohabiting, and separated or divorced.[12] The choice of categories was carefully determined based on the classification used in the 19 countries.

[12] The West Bank and Gaza survey only distinguishes between married and not married people. Not married people are included in the single/widowed category.

Women specialize on unpaid domestic work and men on market work regardless their marital status. Married women tend to allocate more time to household chores than their single or widowed and separated or divorced counterparts, while married men work more hours in the market than men in others marital status categories. Table 4 indicates that these results hold for women and men in most countries, with some exceptions worth noting. For example, married men in Ghana and Mongolia devote nearly the same amount of time to unpaid and paid work. The same pattern is observed among single or widowed men in Moldova. Mexico, West Bank and Gaza and the United States are also exceptions, where single or widowed women dedicate more time to the market than to unpaid domestic work. This is also the case among separated or divorced women in Bangladesh, Colombia, Guatemala, Mongolia, Timor-Leste, and the United States.

Among married or cohabiting individuals, men spend on average 3.5 more hours per day to market work than women—the largest gender gap across categories of marital status. This pattern holds across countries and it is as high as 6 hours in the case in Iraq (Panel A of Figure 7). Uruguay is an exception, as married women work on average half an hour more than married men per day. Widower and single men spend 1.3 more hours than their female counterparts in market work. The gender gap is larger in Bangladesh and Pakistan (2.8 more hours of market work for men), while there is virtually no difference in Ghana and Mongolia. The magnitude of the gender gap among divorced or separated people is 1.1 hours per day. Albania, Ghana and Mongolia are exceptions where women in this marital status category appear to do more paid work than men.

Married women and men devote more time to unpaid domestic activities than their counterparts in other marital status categories. However, Table 4 shows that the change of marital status has a greater effect on women's time use than on men's, in particular when focusing on the change from single to married status. These patterns might reflect the fact that married individuals are more likely to have children at home and that such effect is being captured by the dramatic increase in unpaid domestic and care work.

Since women tend to bear a heavier burden of childcare responsibilities, the gender gap in unpaid domestic work is largest—in absolute value—among married individuals. Married women assign on average 3.9 more hours than men to unpaid work, compared to 1.8 more hours among single or widowed, and 2.4 more hours among divorced or separated. This suggests that for women, having a partner of opposite sex and similar age at home is associated with greater involvement in unpaid work and less attachment to the labor market.

Time use and the presence of children at home

The results above indicate that marriage and age have important effects on time allocation, particularly for women. One of the factors behind this is family formation. The analysis that follows look at gender differences in time allocation based on the presence of children at home.

We define children as individuals under the age of 15 in all countries but South Africa and Pakistan, where we could only identify children of 6 years of age or younger.[13]

A vast amount of literature describes a strong negative correlation between the presence of children in the household and mothers' participation in the labor market. In contrast, less is known about the effects of parenthood on male labor market outcomes. Our results indicate that the presence of children at home reduces women's participation in paid work but impels men towards it. Table 5 shows that this holds for all countries, but Albania, where the presence of children is associated with an increase in the amount of time that women allocate to paid work. In contrast, men who have children at home work on average half an hour more in the market than those who do not. Thus, the gender gap in daily hours of market work is larger among people with children (Panel A of Figure 8): on average, men devote 3.2 more hours than women to paid work in the presence of children, compared to a difference of 2.2 more hours among people without children.

Another consequence of the presence of children in the household is the divergence in unpaid domestic time of mothers and fathers. Women with children dedicate on average 5.7 hours per day to unpaid work, compared to 4 hours for their female counterparts without children. The corresponding figures for men with and without children are 2 hours and 1.7 hours, respectively. This implies that the gender gap in time allocated to this activity is always larger (in absolute value) among people with children (Panel B of Figure 8). On average, women allocate 3.7 more hours than men to unpaid work in the presence of children, whereas the difference among those without children diminishes to 2.3 hours per day. This is explained by the fact that parenthood has a big effect on women's time allocation, but very little effect on that of men.

The presence of children at home brings about major changes in women's and men's time allocation, leading to the crystallization of gender roles. Women reduce the amount of time devoted to market work while increasing the number of hours devoted to unpaid domestic tasks. Men, on the other hand, increase the number of hours allocated to market activities and to unpaid domestic work, but the latter is smaller than the change experienced by women (Lundberg and Rose, 1998).

Time use by geographic area

In this sub-section, we analyze gender differences in the time use patterns of women and men according to their geographic location. The analysis excludes countries with no information on geographic area and countries with surveys carried out in urban areas only. These countries are Argentina, Colombia, Mexico, Moldova, Timor-Leste, Uruguay and the United States.

People living in urban areas tend to work longer hours in the market than their counterparts in rural areas. Urban women dedicate on average 2.2 hours per day to market work, compared to 1.6 hours per day for rural women. The figures for men are 5.4 and 4.5 hours per day, respectively. However,

[13] Bangladesh and Moldova are not included in the analysis as we could not identify the presence of children in the household.

this pattern is not consistent across countries and rural women and men in Albania, Guatemala, Turkey, and West Bank and Gaza assign slightly more time to market work (Table 6). At the same time, Panel A of Figure 9 shows that the gender gap in the amount of time devoted to paid work is slightly wider in urban areas. On average, men work 3.1 more hours than women per day, compared to a difference of 2.9 hours per day in rural settings.

In contrast, the amount of time that individuals devote to unpaid domestic work is larger in rural settings. On average, urban women spend 4.8 hours per day in this activity, compared to 6.1 hours per day for rural women. Men, on the other hand, spend 1.4 and 2.5 hours of unpaid domestic work in urban and rural areas, respectively. This could be explained by a higher substitutability between market activities and domestic work in rural areas, since household production can be used directly for own final use. This result is consistent with the patterns of longer hours of market work in urban areas for both women and men. Women in rural areas spend 3.6 more hours than men in unpaid domestic work, compared to 3.5 hours per day in urban areas. Overall, rural residence increases the number of hours devoted to unpaid work and explains women's low participation in the paid labor force in countries such as India (Rao, 2017) and Turkey (Kongar and Memis, 2017).

5. Time Use over the Lifecycle

For this analysis, we use a household typology that reflects transitions though the lifecycle based on age and parenthood. While the data constitute cross-sections rather than a panel, the information can be analyzed to see how activity patterns change with age and lifetime events such as household formation.[14] We distinguish between seven stages: (i) youth (15-19 years of age); (ii) men (women) of childbearing age (20-44 years) without children, living in a household where no other women (men) of childbearing age are present; (iii) men (women) of childbearing age (20-44) with children, living in a household where no other women (men) of childbearing age are present; (iv) men (women) of childbearing age (20-44) without children, living in a household where at least one woman (man) of childbearing age is present; (v) men (women) of childbearing age (20-44) with children, living in a household where at least one woman (man) of childbearing age is present; (vi) mature men (women) (45-64), living without children in the household; and (vii) mature men (women) (45-64), living with children in the household. As previously mentioned, children are defined as 14 years of age or less, except for South Africa and Pakistan where we define children as 6 years of age or less.

Youth is the stage of the life cycle where both men and women work fewer hours in the market. Young men dedicate on average 1.9 hours per day to paid work compared to 0.8 hours for women (Panel A of Figure 10). Men's time devoted to this activity follows and inverted u-shape pattern, that is, men's time allocated to the market peaks in cohabitation and when transitioning into

[14] Nationally representative time use surveys rarely follow individuals over time.

fatherhood (6.2 hours per day) and declines afterwards. Women's time patterns are the exact opposite, almost resembling a u-shape pattern. The number of working hours peaks at 20-44 years of age for women living without a partner and without children (3.3 hours per day) and drops with the transition to parenthood (2.2. hours per day).

The gender gap in hours dedicated to paid work at key stages of the lifecycle is a reflection of the male breadwinner role that predominates across countries. The largest gender gap (3.9 hours per day) is observed among individuals of prime working age who have a partner of opposite sex and children at home. Table 7 shows that the difference is as large as 5-6 hours per day in Iraq, Pakistan, and West Bank and Gaza, which is not surprising given existing gender norms and specific barriers to women's participation such as asymmetries in parental leave policies.[15] The gender gap is narrower (1.8 hours per day) at the stage where women and men do not have a partner of opposite sex and do not have children. This is mainly explained by the fact that women engage in market work the largest number of hours before they become mothers or get married. During mature adulthood, the gender gap is on average 3.2 hours in the presence of children and it decreases to 2.5 hours for those who do not have any children.

Youth is also the stage where women and men devote the least amount of time to unpaid domestic work and childcare. Young women dedicate on average 3.1 hours per day, compared to 1.8 hours among young men (Panel B of Figure 10). Women's involvement in unpaid domestic work and childcare rapidly increases with the presence of children. Mothers who do not have a male partner spend 2.1 hours more in unpaid work than women without a partner and without children. Mothers with a partner allocate 2.5 more hours than women with a partner and who do not have children. In fact, women's time allocated to this activity peaks at the stage of the life-cycle where women have a male partner and children at home (6.6 hours per day). Women's unpaid domestic work time diminishes for mature women with children (5.3 hours per day) and decreases further during the empty-nest stage (4.5 hours per day).

Men's unpaid domestic work over the lifecycle is relatively flat across stages of the lifecycle. However, compared to men without children parenthood is associated with slightly higher number of hours of unpaid domestic work. Unlike women's time use patterns, men's unpaid domestic work reaches a "peak" during mature adulthood (2.1 hours per day). In fact, the largest increase observed over a man's lifecycle is 36 minutes at most.

The transition into parenthood intensifies the gendered patterns of time use across countries. This is mainly explained by the fact that women spend considerably more time than men in unpaid domestic work, especially in the presence of children. Men's time allocated to this activity is relatively flat over the lifecycle. The gender gap narrows at later stages of the lifecycle not

[15] The law does not mandate paid or unpaid paternity leave in these countries.

necessarily because of changes in men's time use patterns, but because of the drastic change in women's time use in the absence of children.

How do time use patterns change in response to family formation?

In order to assess the causal effect of marriage and the presence of children at home, we use the approach to program evaluation by Hirano, Imbens and Ridder (2003). We implement a propensity score matching (PSM) to compare the effect of marriage/cohabitation and having children at home on the time use patterns of six groups: (i) female and male youth (15-19 years old), (ii) women and men of prime working age (20-44 years of age), and (iii) mature women and men (45-64 years of age). We implement PSM separately for each of them.

To estimate the effect of marriage and having children on time use patterns, we calculate propensity scores using a logit function and the reweighted regression approach proposed by Hirano, Imbens and Ridder (2003) Marriage takes the value 1 when a woman or man is married or cohabitates with a partner, while having children takes the value 1 when there is at least one child under 14 years old at home. Control variables include indicator variables for age groups, educational level, children at home (when estimating the effect of marriage), marital status (when estimating the effect of having children), occupation status, location, and country fixed effects.

Evidence has shown that marriage is positively associated with participation in the labor market for men, and negatively associated with labor force participation for women. Our results indicate that marriage poses slightly higher penalties on the amount of time that women of prime working age dedicate to market work and personal care on a daily basis, compared with the effects for younger and older women. Table 8 shows the effect of marriage on the number of hours allocated to the different activities for each of the six groups described above. Marriage or cohabitation is associated with a reduction of nearly 20 minutes in the amount of time that men allocate to market work and personal care. In contrast, the effect of marriage or cohabitation on the time dedicated to unpaid domestic work and leisure is significantly higher among young women. For this age group, marriage is associated with an increase of 2.9 hours in the amount of daily work dedicated to household activities and childcare, which appears to be compensated by a large decline in the amount of leisure time (2.3 hours).

Marriage is associated with half an hour increase in the amount of time that men of prime working age dedicate to market work. Unpaid domestic work also increases with marriage for men in this age group, but the effect is considerably smaller than that for women. Similarly, marriage has a greater effect on the amount of time that young men dedicate to leisure, compared to other age groups, but the reduction of 49 minutes per day is smaller than that experienced by young women with similar characteristics (2.2 hours per day). For mature women and men, the marriage penalty on time use is smaller compared to that for younger counterparts.

Women of prime working age who have children at home face higher penalties on the time dedicated to all four activities, compared with the effects for younger and older women. The effects for all age groups, however, are smaller than those associated with marriage (Table 9). The presence of children is associated with a reduction of 11 minutes of market work, 23 minutes of personal care, and 36 minutes of leisure per day. At the same time, women in this age group see an increase of 1.6 hours of unpaid domestic work associated with having children at home. For mature women, the effect of children on the amount of time dedicated to the different activities is nearly half of that observed among women of prime working age.

Compared to women, the presence of children at home does not make a big difference in the way men allocate their time. Among men of prime productive age and mature men, unpaid domestic work increases by 11 minutes per day and leisure diminishes by 10 minutes, but the effect on market work and personal care is not significant. In contrast, the reduction of leisure time among young men is nearly twice as much as that experienced by their older counterparts (19 minutes per day) in the presence of children, but there is no effect on unpaid domestic work.

6. Discussion

In this paper, we contributed to the discussion on gender equality and development by analyzing men's and women's time use patterns in 19 countries using recent time use data. Our analysis confirms and adds nuances to the findings of other scholars and those of the 2012 WDR. We focused on the allocation of time to four different activities: market or paid work, unpaid domestic work, self-care, and leisure, social and study activities.

First, we analyzed the average number of hours that men and women allocate to each activity on a daily basis. Our results showed that women specialize in unpaid domestic work and men specialize in market work, but the intensity varies widely across countries. Considering productive activities altogether, women work more hours than men in most countries and consequently, end up having less available time for leisure. When comparing our findings with earlier estimates of time use, we concluded that progress has been made, but marked differences persist. The gender gap in time allocated to market work diminished in 4 of 10 countries; the difference in unpaid domestic work hours declined in 6 of 10 countries; and the gap in personal activities and leisure narrowed in 3 of 7 countries with data.

Second, time use patterns based on individual and household characteristics are highly heterogenous. Men's and women's time allocation tend to converge as education increases, but differences persist even for the most educated. Gender gaps in all activities widen when comparing the time patterns of young women and men with those of individuals of prime working age. In the transition to adulthood, women allocate more time to unpaid domestic work than men, whereas men work longer hours in the market. Regardless of their marital status, men devote more time

than women to the market and less to the household. Married women dedicate fewer hours to market work and more time to unpaid domestic work than their counterparts in any other marital status category. The presence of children in the household brings about important adjustments in time use for men and women. Women reduce the amount of time allocated to market work and increase unpaid work hours, while the opposite occurs among men. Geographic location also affects time use decisions, but there is no clear pattern across countries.

Third, we analyzed changes in time use patterns over the lifecycle, by defining seven stages according to age and family formation. Mothers of prime working age allocate fewer hours to market work and more time to unpaid domestic activities than women without children, and especially so if living with a male partner. In contrast, men assign more hours to market work if they have children, but on average, the presence of a female partner does not make a difference in time use decisions. Overall, the gender gap in the number of hours allocated to market work and unpaid domestic activities persists throughout the lifecycle.

The magnitude and persistence of the gender gaps in time use patterns that we reported in the study are, to some extent, a reflection of entrenched social norms. Irrespective of the region or income level, men assign more time to market work and women allocate more time to unpaid domestic activities. Nevertheless, the cross-country heterogeneity in the intensity of work among men and women can also be explained by other factors that determine women's access to opportunities during the different phases of their working lives. This includes parental leave systems and the availability and cost of childcare services, the characteristics of income tax regimes, labor market regulations, and the differential access to productive inputs by men and women (Adnane el at., 2019).

The actual distribution of responsibilities within households also reinforces gender differences in time use. Women are more likely to work fewer hours in paid jobs compared to men and willing to accept lower quality jobs because of the costs associated with entering the labor market. For instance, a fixed time schedule or full-time job may require adjustments in the distribution of household activities and for women with children, it may represent costs such as sending children to day care. A low-quality job in the informal sector or self-employment often provide working flexibility that formal employment may not offer, thus facilitating labor market entry and exit.

More importantly, gender differences in time use can be a driving force of gender gaps in access to economic opportunities and, ultimately, a constraint for development. Evidence has shown that breaking out of this trap requires targeted policies to lift the constraints on women's time, increase their access to productive assets and correct market and institutional failures.

References

Abhilasha, S. and M. S. Floro. (2017). "The Dual Problem of Unemployment and Time Poverty in South Africa: Understanding Their Linkages." In: Connelly R., Kongar E. (eds) Gender and Time Use in a Global Context. Palgrave Macmillan, New York.

Addison, J.T. and O.D. Ozturk. (2010). "Minimum Wages, Labor Market Institutions, and Female Employment and Unemployment: A Cross-Country Analysis." IZA Discussion Paper 5162, Institute for the Study of Labor, Bonn.

Adnane, S.; M.T. Alemayehu; D.G. Alkastalani; N. Almodovar; N. Arekapudi; S. Batshon; J. Braunmiller; C. Corminales De Oliver; M. Elefante; D. Heliotis; A. Islam; G. Joseph; A, Hammoud; P. Hutin; V, Khaitina; G. Kuoh; N. Mazoni; M. Nezam; A. Sakhonchik; I. Santagostino; K. Schulz; A. Sinha; P. Tavares; G. Tsvetanova. 2019. *Women, Business and the Law 2019: A Decade of Reform* (English). Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/101301551208346052/Women-Business-and-the-Law-2019-A-Decade-of-Reform.

Aidis, R., F. Welter, D. Smallbone, and N. Isakova. (2007). "Female Entrepreneurship in Transition Economies: The Case of Lithuania and Ukraine." *Feminist Economics* 13(2), pp.157-183.

Anxo, D., L. Flood, L. Mencarini, A. Pailhé, A. Solaz, and M. L. Tanturri. (2007). "Time allocation between work and family over the life-cycle: A comparative gender analysis of Italy, France, Sweden and the United States." http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1049381. Accessed 10 June 2019.

Anxo, D., L. Flood, L. Mancarini, A. Pailhé, A. Solaz, and M.L. Tanturri. (2011) "Gender Differences in Time Use over the Life Course in France, Italy, Sweden, and the US." *Feminist Economics*, 17(3), pp. 159-195.

Apps, P. (2004). "Gender, Time Use, ands Models of the Household." Policy Research Working Paper Series 3233, The World Bank.

Apps, P., and R. Rees. (2005). "Gender, Time Use, and Public Policy over the Life-cycle." *Oxford Review of Economic Policy*, 21(3), pp. 439-461.

Arango, C. and A. Pachón. (2004). "Minimum Wages in Colombia: Holding the Middle with a Bite on the Poor." *Borradores de Economía* Serie 280, Banco de la República de Colombia, Bogotá.

Arora, D. (2015). "Gender Differences in Time-Poverty in Rural Mozambique." *Review of Social Economy*, 73(2), pp. 196–221.

Attanasio, O., and M. Vera-Hernández. (2004). "Medium- and Long-Run Effects of Nutrition and Child Care: Evaluation of a Community Nursery Programme in Rural Colombia." Working Paper Series, Institute for Fiscal Studies, London.

Attanasio, O., R. Paes de Barro, P. Carneiro, D. Evans, L. Lima, P. Olinto, and N. Schady. (2017). "Impact of Free Availability of Public Childcare on Labour Supply and Child Development in Brazil." Impact Evaluation Report 58. International Initiative for Impact Evaluation.

Bardasi, E. and Q. Wodon. (2010). "Working Long Hours and Having No Choice: Time Poverty in Guinea." *Feminist Economics*, 16(3), pp. 45–78.

Beneria, L. (2003). "Economic Rationality and Globalization: A Feminist Perspective." In Marianne A. Ferber and Julie A. Nelson (Eds.), *Feminist Economics Today: Beyond Economic Man* (pp. 115–133). Chicago: The University of Chicago Press.

Benería, L., G. Berik, and M. Floro (2015). *Gender, Development and Globalization: Economics as if All People Mattered*. London and New York: Routledge.

Bergmann, B. (1986). *The Economic Emergence of Women*. New York: Basic Books, Inc.

Berlinski, S., and S. Galiani. (2007). "The Effect of a Large Expansion of Pre-Primary School Facilities on Preschool Attendance and Maternal Employment." *Labour Economics*, 14 (3), pp. 665–680.

Berlinski, S., S. Galiani, and P.J. McEwan. (2009). "Preschool and Maternal Labor Market Outcomes: Evidence from a Regression Discontinuity Design." *Economic Development and Cultural Change*, 59(2), pp. 313–344.

Berniell, M.I., and C. Sánchez-Páramo. (2011). "Overview of Time Use Data Used for the Analysis of Gender Differences in Time Use Patterns." Background paper for the WDR 2012.

Bertola, G., F.D. Blau and L.M. Kahn. (2002). "Labor Market Institutions and Demographic Employment Patterns." Working Paper Series 9403, National Bureau of Economic Research, Cambridge, MA.

Boone, C., P. Glick, and D. E. Sahn. (2011). "Household Water Supply Choice and Time Allocated to Water Collection: Evidence from Madagascar." *Journal of Development Studies*, 47(12), pp. 1826–1850.

Botero, J., S. Djankov, R. La Porta, F. Lopez-de-Silanes and A. Shleifer. (2004). "The Regulation of Labor." *Quarterly Journal of Economics*, 119(4), pp. 1339–1382.

Boserup, E. (1970). *Woman's Role in Economic Development.* London: Allen and Unwin.

Budlender, D., N. Chonokoane, and Y. Mpetsheni. (2001). *A survey of time use. How South African women and men spend their time.* Resource Document. Pretoria: Statistics South Africa.

Burda, M., D. Hamermesh, P. Weil. (2007). "Total Work, Gender and Social Norms." Working Paper Series 13000, National Bureau of Economic Research, Cambridge, MA.

Campaña, J.C., J.I. Gimenez-Nadal, and J.A. Molina. (2015). "Gender Differences in the Distribution of Total Work-Time of Latin-American Families: The Importance of Social Norms." IZA Discussion Paper 8933, Institute for the Study of Labor, Bonn

Cascio, E. (2006). "Public Preschool and Maternal Labor Supply: Evidence from the Introduction of Kindergartens into American Public Schools." Working Paper Series 12179, National Bureau of Economic Research, Cambridge, MA.

Charmes, J. (2006). "A Review of Empirical Evidence on Time Use in South Africa from UN-sponsored Surveys." In Mark Blackden and Quentin Wodon (Eds.), *Gender, time use, and poverty in Sub-Saharan Africa* (pp. 39–72). Washington, DC: The World Bank.

Connelly, R., and J. Kimmel. (2010). *The Time Use of Mothers in the United States at the Beginning of the 21st Century*. Kalamazoo, MI: W.E. Upjohn Institute.

Craig, L. and K. Mullan (2010). "Parenthood, Gender and Work-Family Time in USA, Australia, Italy, France and Denmark." *Journal of Marriage and Family* 72(5), pp. 1344–1361.

Craig, L., and K. Mullan (2009). "The Policeman and The Part-Time Sales Assistant: Household Labour Supply, Family Time and Subjective Time Pressure in Australia, 1997–2006." *Journal of Comparative Family Studies*, 40(4), pp. 545–560.

Dayioglu, M.; K., M. Kirdar. (2010). "Determinants of and Trends in Labor Force Participation of Women in Turkey (English). Welfare and Social Policy Analytical Work Program; Working Paper No. 5. World Bank, Washington DC: World Bank. http://documents.worldbank.org/curated/en/466591468316462301/Determinants-of-and-trends-in-labor-force-participation-of-women-in-Turkey.

DeGraff D.S., Levison D., Dungumaro E.W. (2017). "Environmental Chores, Household Time Use, and Gender in Rural Tanzania." In: Connelly R., Kongar E. (eds) *Gender and Time Use in a Global Context*. Palgrave Macmillan, New York.

Drobnič, S., H-P. Blossfeld, and G. Rohwer (1999). "Dynamics of Women's Employment Patterns over The Family Life Course: A Comparison of the United States and Germany." *Journal of Marriage and the Family*, 61(1), pp. 133–146.

Eissaa, N., and H.W. Hoynes. (2004). "Taxes and The Labor Market Participation of Married Couples: The Earned Income Tax Credit." *Journal of Public Economics*, 88, pp. 1931–1958.

Esquivel, V., D. Budlender, N. Folbre, and I. Hirway. (2007). "Explorations: Time-use Surveys in the South." *Feminist Economics*, 14(3), pp. 107-152.

Feliciano, Z. (1998). "Does the Minimum Wage Affect Employment in Mexico?" *Eastern Economic Journal*, 24(2), pp. 165–180.

Fernandez, R. (2007). "Women, work and culture." *Journal of European Economic Association*, 5(2), pp. 305-333.

Ferrant, G., L.M Pesando, and K. Nowacka. (2014). "Unpaid Care Work: The Missing Link in the Analysis of Gender Gaps in Labour Outcomes". OECD Development Centre.

Floro, M. S., and M. Miles (2003). Time Use, Work and Overlapping Activities: Evidence from Australia. *Cambridge Journal of Economics*, 27, pp. 881–904.

Floro, M. S, and H. Komatsu. (2011). "Gender and Work in South Africa: What Can Time-Use Data Reveal?". *Feminist Economics*, 17(4): 33–66.

Folbre, N. (2006). "Measuring Care: Gender, Empowerment, and the Care Economy." *Journal of Population Economics*, 7(2), pp. 183–199.

Folbre, N., and J. Yoon (2007a). "What Is Child Care? Lessons from Time-use Surveys of Major English-speaking Countries." *Review of Economics of the Household*, 5, 223–248.

Folbre, N. and J. Yoon. (2007b). "The Value of Unpaid Child Care in the U.S. in 2003." In *How Do We Spend Our Time? Recent Evidence from the American Time-Use Survey*, J. Kimmel. Kalamazoo (ed.), Michigan: W. E. Upjohn Institute for Employment Research.

Folbre, N., J. Yoon, K. Finnoff, and A. Sidle Fuligni. (2005). "By What Measure? Family Time Devoted to Children in the United States." *Demography* 42(2), pp. 373–390.

Foster, G., and L.S. Stratton. (2017). "Do Significant Labor Market Events Change Who Does the Chores? Paid Work, Housework and Power in Mixed-Gender Australian Households." IZA Discussion Paper 10831.

Galiani, S. and F. Weinschelbaum (2012). "Modeling Informality Formally: Households and Firms." *Economic Inquiry*, 50(3), pp. 821-838.

Gammage, S. (2010). "Time Pressed and Time Poor: Unpaid Household Work in Guatemala." *Feminist Economics*, 16(3), pp. 79–112.

Giddings, L., J. M. Nunley, A. Schneebaum, and J. Zietz. (2014). "Birth Cohort and The Specialization Gap between Same-Sex and Different-Sex Couples." *Demography*, 51(2), pp. 509–534.

Gornick, J. and M. Meyers (2003). *Families that Work: Policies for Reconciling Parenthood and Employment.* New York: Russell Sage.

Hallward-Driemeier, M. (2011). *Enterprising Women: Expanding Opportunities in Africa*. World Bank, Washington, DC.

Havnes, T., and M. Mogstad. (2011). "Money for Nothing? Universal Child Care and Maternal Employment." *Journal of Public Economics*, 95(11-12), pp. 1455-1465.

Hill, J., V. K. Märtinson, M. Ferris, and R. Zenger Baker. (2004). "Beyond The Mommy Track: The Influence of New-Concept Part-Time Work for Professional Women on Work and Family." *Journal of Family and Economic Issues*, 25(1), pp. 121–136.

Ilahi, N. (1999). "Gender and the Allocation of Adult Time: Evidence from the Peru LSMS Panel Data." Policy Research Working Paper Series 2744, World Bank, Washington, DC.

Ironmonger, D. (1999). "An Overview of Time Use Surveys." International Seminar on Time Use Studies, Center for Development Alternatives, Ahmedabad, India.

Kandiyoti, D. (1988). "Bargaining and Patriarchy". *Gender and Society*, 2(3), pp. 274-290.

Kongar E., and E. Memiş. (2017). "Gendered Patterns of Time Use over the Life Cycle in Turkey." In: Connelly R., Kongar E. (eds) Gender and Time Use in a Global Context. Palgrave Macmillan, New York.

Lihwa, F., C. Johnstone, M. Thomas, and B. Krause. (2015). "How Near is Your School? Informing NGO Programming Through Children's Perceptions of Distance." Manuscript.

Lundberg, S., and R. Pollak. (1996). "Bargaining and Distribution in Marriage." *Journal of Economic Perspectives*, 10(4), pp. 139-158.

Lundberg, S., and E. Rose. (1998). "The Determinants of Specialization within Marriage." Working Paper 48, University of Washington.

Maurer-Fazio M., Connelly R. (2017). "How Do Caregiving Responsibilities Shape the Time Use of Women and Men in Rural China.?" In: Connelly R., Kongar E. (eds) *Gender and Time Use in a Global Context*. Palgrave Macmillan, New York.

Connelly, Rachel, and Margaret Maurer-Fazio (2016). Left Behind, at Risk, and Vulnerable Elders in Rural China. *Chinese Economic Review*, 37, pp. 140–153.

Montenegro, C., and C. Pagés. (2004). "Who Benefits from Labor Market Regulations? Chile 1960-1998." In J.J. Heckman and C. Pagés (eds.) *Law and Employment: Lessons from Latin America and the Caribbean*. University of Chicago Press

Muravyev, A., D. Schäfer, and O. Talavera. (2009). "Entrepreneurs' Gender and Financial Constraints: Evidence from International Data." *Journal of Comparative Economics*, 37(2), pp. 270–286.

Nicodemo, C., and R. Waldmann. (2009). "Child-Care and Participation in the Labor Market for Married Women in Mediterranean Countries." IZA Discussion Paper Series 3983, Institute for the Study of Labor, Bonn.

Oakley (1985). *The Sociology of Housework*. Cambridge: Basil Blackwell.

Patterson, C. J., E. L. Sutfin, and M. Fulcher. (2004). "Division of Labor among Lesbian and Heterosexual Parenting Couples: Correlates of Specialized Versus Shared Patterns." *Journal of Adult Development*, 11, pp. 179–189.

Posel, D. and E. Grapsa. (2017). "Gender Divisions in the Real Time of the Elderly in South Africa." In: Connelly R., Kongar E. (eds.) *Gender and Time Use in a Global Context*. Palgrave Macmillan, New York.

Quisumbing, A., R. J., P. Estudillo, and K. Otsuka. (2004). *Land and Schooling: Transferring Wealth across Generations*. The Johns Hopkins University Press.

Ranchhod, V., and M. Wittenberg. (2016). "The Social Pension and Time Allocation in Poor South African Households." In Timothy Besley (Ed.), *Contemporary Issues in Development Economics* (pp. 91–111). Hampshire, England: Palgrave Macmillan.

Rao S. (2017). "Women and the Urban Economy in India: Insights from the Data on Migration." In: Connelly R., Kongar E. (eds) *Gender and Time Use in a Global Context*. Palgrave Macmillan, New York.

Reid, M. G. (1934). *Economics of Household Production*. New York: John Wiley and Sons, Inc.

Rogers, Martha (2014). "Forest Access and Human Capital Accumulation." In *Environment and Development: Essays on the Link between Household Welfare and the Environment in Developing Countries*, Ph.D. Dissertation, University of Minnesota.

Rothblum E.D. (2017). "Division of Workforce and Domestic Labor Among Same-Sex Couples." In: Connelly R., Kongar E. (eds) *Gender and Time Use in a Global Context*. Palgrave Macmillan, New York.

Sayer, L. (2016). "Trends in women's and men's time use, 1965–2012: Back to the future?" In S. M. McHale, V. King, J. Van Hook, and A. Booth (eds.), *Gender and Couple Relationships* (pp. 43–77). Geneva, Switzerland: Springer International Publishing.

Suh, J. (2016). "Measuring the "Sandwich": Care for Children and Adults in the American Time Use Survey 2003-2012." *Journal of Family and Economic Issues*, 37: 197–211.

Suh, J. and N. Folbre. (2016). "Valuing Unpaid Child Care in the U.S.: A Prototype Satellite Account Using the American Time Use Survey." *Review of Income and Wealth*, 62(4), pp. 668-684.

Sullivan, O. (2011). "An end to gender display through the performance of housework? A Review and Reassessment of The Quantitative Literature Using Insights from The Qualitative Literature." *Journal of Family Theory and Review*, 3(1), pp. 1–13.

Vickery, C. (1977). "The Time-Poor: A New Look at Poverty." *Journal of Human Resources*, 12(1), pp. 27–48.

Viollaz, M. (2018). “Enforcement of Labor Market Regulations: Heterogenous Compliance and Adjustment Across Gender.” *IZA Journal of Labor Policy*, 7:2.

World Bank. (2010). *Women’s Economic Opportunities in the Formal Private Sector in Latin America and the Caribbean: A Focus on Entrepreneurship*. The World Bank.

World Bank. (2011). *World Development Report 2012: Gender Equality and Development*. World Bank.

Table 1. Mean hours per day, by sex and type of activity

	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	2.05	5.50	11.31	5.07	4.50	0.61	12.02	6.86
Argentina	2.61	3.97	n.a.	0.03	5.18	1.29	n.a.	0.03
Bangladesh	1.67	5.69	14.23	2.65	6.18	1.40	13.36	3.06
Colombia	3.01	4.25	10.18	6.66	5.64	1.17	9.91	7.15
Ecuador	2.72	5.61	9.76	4.53	5.66	1.37	9.50	4.63
Ghana	2.67	5.80	12.46	4.27	3.05	3.89	11.97	6.13
Guatemala	2.64	6.70	10.97	2.48	6.76	1.14	11.05	3.13
Iraq	0.57	4.53	n.a.	6.11	5.43	1.40	n.a.	6.47
Mexico	3.17	5.87	n.a.	13.33	6.60	1.68	n.a.	13.18
Moldova	2.91	4.67	10.91	4.25	3.63	2.98	11.08	5.33
Mongolia	2.90	6.41	11.49	3.31	3.50	5.41	11.55	3.98
Pakistan	0.61	6.32	13.48	3.55	4.41	2.53	12.47	4.56
West Bank and Gaza	0.98	2.97	11.23	6.22	5.41	0.42	11.27	6.51
Peru	3.20	5.69	9.77	4.80	6.38	2.16	9.54	5.44
South Africa	2.58	4.36	12.41	4.89	4.23	2.16	12.31	5.84
Timor	1.16	2.24	n.a.	n.a.	2.73	1.26	n.a.	n.a.
Turkey	0.93	5.20	10.94	5.17	3.78	0.48	10.80	5.31
Uruguay	4.27	6.81	9.43	2.30	6.68	2.39	9.18	2.17
USA	3.44	3.27	10.78	5.56	4.87	2.09	10.35	6.17

Source: Authors' elaboration based on survey data.
Notes: Women and men aged 15 to 64. In Argentina, the starting age is 18.

Table 2. Mean hours per day by educational level, type of activity and sex

	Primary level							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	1.89	6.02	11.31	4.71	4.52	0.59	12.03	6.84
Argentina	2.03	4.45	n.a.	0.02	5.12	1.24	n.a.	0.01
Bangladesh	1.81	5.97	14.61	2.02	6.70	1.50	13.58	2.22
Colombia	2.43	5.47	10.20	5.86	6.45	1.25	9.98	5.94
Ecuador	2.47	6.23	9.84	3.51	5.86	1.46	9.57	3.73
Ghana	2.36	5.98	12.61	4.22	1.77	5.04	12.51	5.41
Guatemala	2.37	7.48	11.16	1.77	7.34	1.17	11.26	2.26
Iraq	0.32	4.89	n.a.	5.62	6.33	1.43	n.a.	5.44
Mexico	2.38	6.47	n.a.	11.83	6.74	1.59	n.a.	11.69
Moldova	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mongolia	0.91	8.13	11.56	3.39	1.46	7.29	11.65	3.90
Pakistan	0.58	6.81	13.57	3.00	4.33	3.39	12.65	3.60
West Bank and Gaza	0.97	1.74	11.74	6.05	5.56	0.38	11.65	6.00
Peru	3.08	6.91	10.00	3.23	6.86	2.49	9.97	3.89
South Africa	2.20	4.48	13.21	4.32	3.58	2.12	13.49	5.38
Timor	1.09	2.68	n.a.	n.a.	3.44	1.30	n.a.	n.a.
Turkey	0.91	5.89	10.84	4.96	4.23	0.52	10.82	5.09
Uruguay	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
USA	2.72	4.85	10.75	4.15	5.11	2.38	10.16	6.14

Table 2 (cont.)

	Secondary level							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	1.99	5.29	11.27	5.40	4.66	0.67	12.06	6.59
Argentina	2.46	4.26	n.a.	0.03	5.41	1.29	n.a.	0.02
Bangladesh	1.42	5.19	13.56	3.78	5.37	1.26	13.13	4.23
Colombia	3.25	4.74	10.15	5.93	6.39	1.12	9.86	6.45
Ecuador	2.51	5.47	9.74	4.95	5.55	1.27	9.50	4.95
Ghana	2.95	5.16	12.40	4.81	3.11	3.45	11.95	6.64
Guatemala	2.96	5.38	10.59	3.95	5.74	1.06	10.78	4.56
Iraq	1.38	4.78	n.a.	5.34	6.77	1.51	n.a.	5.28
Mexico	3.21	5.88	n.a.	13.72	6.54	1.68	n.a.	13.54
Moldova	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mongolia	3.38	5.99	11.45	3.37	4.63	4.23	11.44	4.16
Pakistan	0.54	5.06	13.25	5.11	4.33	1.65	12.27	5.71
West Bank and Gaza	0.71	3.05	11.17	6.60	5.32	0.38	11.16	6.81
Peru	2.81	5.54	9.77	5.39	6.28	2.09	9.57	5.60
South Africa	2.36	4.44	12.30	5.13	4.14	2.20	12.09	6.08
Timor	0.91	2.42	n.a.	n.a.	3.20	1.17	n.a.	n.a.
Turkey	1.04	4.25	11.09	5.45	3.99	0.40	10.61	5.10
Uruguay	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
USA	2.52	3.10	10.99	6.59	4.04	2.03	10.65	6.83

	Tertiary level							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	3.94	3.27	11.35	5.42	5.02	0.59	11.68	6.71
Argentina	3.21	3.27	n.a.	0.04	4.81	1.33	n.a.	0.05
Bangladesh	2.50	5.30	13.11	3.05	6.41	1.20	11.58	4.78
Colombia	4.49	3.43	10.01	6.14	6.15	1.34	9.69	6.78
Ecuador	3.79	4.42	9.63	5.96	5.43	1.42	9.34	6.08
Ghana	4.49	3.99	10.96	5.63	6.05	1.37	10.55	7.01
Guatemala	4.49	3.64	10.51	3.99	6.46	1.27	10.38	4.00
Iraq	2.68	4.17	n.a.	5.43	6.36	1.59	n.a.	5.95
Mexico	4.44	4.79	n.a.	14.65	6.58	1.81	n.a.	14.12
Moldova	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mongolia	4.77	4.77	11.48	3.07	6.49	2.55	11.54	3.73
Pakistan	1.78	4.62	13.07	4.51	5.53	1.01	12.19	5.26
West Bank and Gaza	1.70	3.86	10.93	5.35	5.52	0.57	11.18	6.20
Peru	4.05	4.49	9.50	5.66	6.23	2.05	9.18	6.24
South Africa	4.70	3.59	11.53	4.48	6.03	1.91	11.43	5.26
Timor	1.43	1.80	n.a.	n.a.	2.02	1.05	n.a.	n.a.
Turkey	1.01	3.50	10.93	4.83	2.80	0.76	10.79	5.27
Uruguay	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
USA	4.07	3.33	10.64	4.92	5.54	2.13	10.12	5.64

Source: Authors' elaboration based on survey data.

Notes: Women and men aged 15 to 64. In Argentina, the starting age is 18.

Table 3. Mean hours per day, by age group, type of activity and sex

	15-24							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	0.72	4.05	11.86	7.31	2.11	0.38	12.38	9.11
Argentina	1.35	2.61	n.a.	0.02	3.33	0.91	n.a.	0.02
Bangladesh	1.42	4.90	14.09	4.62	4.71	1.05	12.87	5.35
Colombia	1.81	2.97	10.75	8.46	3.23	0.98	10.36	9.41
Ecuador	1.41	3.57	10.00	7.16	3.12	0.94	9.74	7.21
Ghana	1.74	4.82	12.39	6.00	1.56	3.00	11.82	8.51
Guatemala	2.09	5.78	11.23	3.57	5.35	0.94	11.24	4.52
Iraq	0.22	3.86	n.a.	7.42	3.40	1.14	n.a.	8.57
Mexico	2.17	4.07	n.a.	16.55	4.22	1.43	n.a.	16.12
Moldova	0.54	2.75	11.72	7.81	1.06	2.29	11.61	7.85
Mongolia	1.73	5.15	11.72	5.60	2.04	4.40	11.66	6.33
Pakistan	0.72	5.38	13.43	4.45	3.42	2.00	12.47	6.08
West Bank and Gaza	0.67	2.43	11.27	7.87	3.99	0.14	11.18	8.35
Peru	2.04	4.11	10.11	7.36	3.81	1.79	9.83	8.06
South Africa	1.20	3.92	12.46	6.67	1.83	2.12	12.29	8.12
Timor	0.46	2.12	n.a.	n.a.	1.07	1.26	n.a.	n.a.
Turkey	0.95	3.89	11.30	5.96	2.59	0.31	11.05	6.57
Uruguay	1.81	3.48	10.21	4.27	3.32	1.23	9.98	3.74
USA	2.12	1.64	11.41	7.75	2.90	1.07	10.94	8.50

	25-44							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	2.59	6.36	10.89	4.07	5.50	0.61	11.81	6.06
Argentina	2.98	4.40	n.a.	0.03	5.86	1.33	n.a.	0.02
Bangladesh	1.84	6.44	13.75	1.93	7.10	1.52	13.18	2.19
Colombia	3.76	4.59	9.98	5.78	6.82	1.18	9.69	6.20
Ecuador	3.33	6.96	9.69	3.59	7.03	1.55	9.39	3.67
Ghana	3.14	6.66	12.15	3.45	3.97	4.20	11.68	5.27
Guatemala	3.03	7.68	10.62	1.82	7.81	1.31	10.80	2.28
Iraq	0.75	4.99	n.a.	5.19	7.18	1.41	n.a.	4.98
Mexico	3.80	7.21	n.a.	12.26	7.96	1.89	n.a.	12.13
Moldova	3.26	5.39	10.78	3.28	4.56	2.85	10.98	4.61
Mongolia	3.37	6.89	11.27	2.54	4.13	5.87	11.42	3.06
Pakistan	0.59	7.78	12.86	2.74	5.54	2.65	12.19	3.59
West Bank and Gaza	1.06	4.24	10.81	5.37	6.12	0.60	11.06	5.88
Peru	3.64	6.65	9.65	3.60	7.53	2.28	9.46	4.34
South Africa	3.36	4.70	12.16	3.99	5.72	2.11	12.06	4.69
Timor	1.26	2.71	n.a.	n.a.	3.68	1.40	n.a.	n.a.
Turkey	0.99	5.98	10.70	4.48	4.73	0.49	10.56	4.26
Uruguay	5.34	8.30	9.31	1.88	8.54	2.93	8.90	1.69
USA	3.85	3.90	10.67	4.50	5.80	2.27	10.14	5.22

Table 3 (cont.)

	45-64							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	2.47	5.58	11.42	4.49	5.44	0.81	11.94	5.79
Argentina	2.79	4.13	n.a.	0.04	5.33	1.48	n.a.	0.03
Bangladesh	1.62	5.04	15.33	1.99	6.17	1.54	14.06	2.23
Colombia	3.00	4.84	9.98	6.37	6.20	1.33	9.82	6.40
Ecuador	3.09	5.63	9.63	3.33	6.47	1.59	9.40	3.18
Ghana	2.84	5.18	13.24	3.81	3.19	4.41	12.68	4.80
Guatemala	2.83	6.33	11.21	1.98	7.26	1.19	11.18	2.27
Iraq	0.80	4.73	n.a.	5.77	5.41	1.88	n.a.	5.73
Mexico	3.12	5.45	n.a.	12.06	6.94	1.61	n.a.	11.79
Moldova	3.74	4.81	10.65	3.49	4.51	3.61	10.80	4.28
Mongolia	2.99	6.53	11.69	2.87	3.58	5.43	11.70	3.69
Pakistan	0.48	5.04	14.86	3.58	4.10	3.12	12.92	3.85
West Bank and Gaza	1.21	0.58	12.22	5.88	5.12	0.23	12.07	5.91
Peru	3.78	5.85	9.59	3.95	7.39	2.38	9.32	4.29
South Africa	2.86	4.27	12.83	4.31	4.77	2.38	12.87	4.78
Timor	1.93	1.63	n.a.	n.a.	3.67	1.01	n.a.	n.a.
Turkey	0.78	5.06	11.03	5.70	3.07	0.63	11.01	6.16
Uruguay	4.74	7.17	9.11	1.61	7.16	2.58	8.94	1.63
USA	3.71	3.47	10.56	5.49	5.00	2.47	10.25	5.87

Source: Authors' elaboration based on survey data.
Notes: Women and men aged 15 to 64. In Argentina, the starting age is 18.

Table 4. Mean hours per day, by marital status, type of activity and sex

	Married/Living together							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	2.34	6.58	11.00	4.00	5.79	0.74	11.75	5.70
Argentina	2.49	4.74	n.a.	0.03	6.00	1.40	n.a.	0.03
Bangladesh	1.63	6.32	14.29	2.06	6.79	1.51	13.55	2.15
Colombia	2.70	5.43	10.07	5.89	6.87	1.22	9.65	6.03
Ecuador	2.57	7.14	9.71	3.56	7.02	1.52	9.39	3.36
Ghana	2.74	6.90	12.37	3.34	3.65	4.68	11.94	4.81
Guatemala	2.14	8.35	10.82	1.75	7.78	1.32	10.87	2.16
Iraq	0.56	4.99	n.a.	5.27	6.80	1.56	n.a.	5.06
Mexico	2.68	7.43	n.a.	12.32	7.74	1.79	n.a.	11.89
Moldova	3.43	5.53	10.63	3.12	4.81	3.39	10.78	4.11
Mongolia	2.99	7.12	11.34	2.61	4.02	5.73	11.46	3.21
Pakistan	0.48	7.30	13.29	2.89	4.99	2.94	12.41	3.64
West Bank and Gaza	0.93	3.69	11.07	5.64	6.01	0.54	11.28	5.78
Peru	2.98	7.08	9.70	3.66	7.72	2.35	9.38	4.04
South Africa	2.95	4.83	12.33	4.09	5.97	2.18	12.19	4.47
Timor	1.10	2.63	n.a.	n.a.	3.90	1.32	n.a.	n.a.
Turkey	0.81	6.14	10.75	4.77	4.20	0.55	10.71	4.89
Uruguay	6.19	8.49	8.72	1.49	5.60	3.25	8.35	1.91
USA	3.51	4.13	10.58	4.82	5.79	2.57	10.11	5.06

Table 4 (cont.)

	Single/Widow							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	1.48	3.43	11.92	7.14	2.64	0.42	12.38	8.53
Argentina	3.78	3.84	n.a.	0.03	5.54	1.72	n.a.	0.03
Bangladesh	1.68	3.32	14.03	4.94	4.52	1.10	12.82	5.56
Colombia	2.90	2.65	10.46	8.15	3.89	1.03	10.26	8.77
Ecuador	2.57	3.15	9.86	6.37	3.61	1.07	9.68	6.55
Ghana	2.39	4.14	12.46	5.94	2.29	2.88	11.89	7.91
Guatemala	3.29	4.55	11.17	3.44	5.31	0.89	11.29	4.50
Iraq	0.57	3.76	n.a.	7.56	3.39	1.15	n.a.	8.56
Mexico	3.50	3.11	n.a.	15.63	4.56	1.45	n.a.	15.52
Moldova	1.80	3.22	11.41	6.33	2.11	2.42	11.47	6.92
Mongolia	2.42	5.10	11.79	4.85	2.35	4.76	11.72	5.66
Pakistan	0.87	4.43	13.84	4.83	3.62	1.96	12.53	5.86
West Bank and Gaza	1.15	0.28	11.84	8.39	3.79	0.09	11.25	8.48
Peru	3.10	3.69	9.93	6.83	4.54	1.84	9.77	7.37
South Africa	3.45	4.05	12.56	4.25	4.16	2.22	12.68	5.30
Timor	1.20	1.72	n.a.	n.a.	1.38	1.19	n.a.	n.a.
Turkey	1.13	3.04	11.37	6.18	2.89	0.32	10.96	6.22
Uruguay	2.91	3.34	9.89	3.83	4.08	1.34	9.80	3.29
USA	3.05	2.15	11.13	6.73	3.79	1.38	10.67	7.59

	Divorced/Separated							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	3.23	4.85	11.42	4.50	1.51	0.41	13.48	8.60
Argentina	2.51	2.61	n.a.	0.03	3.69	1.04	n.a.	0.02
Bangladesh	4.37	4.02	13.16	2.44	5.13	1.27	14.69	2.91
Colombia	4.34	3.90	9.91	5.83	6.39	1.61	9.89	6.21
Ecuador	4.09	5.48	9.71	3.56	6.63	2.09	9.42	3.79
Ghana	3.49	4.70	13.29	3.79	2.58	3.34	13.36	5.83
Guatemala	5.03	4.61	10.44	2.58	5.31	1.64	11.86	4.54
Iraq	0.99	4.38	n.a.	5.54	5.47	1.37	n.a.	6.38
Mexico	5.15	5.44	n.a.	11.91	7.14	1.95	n.a.	12.23
Moldova	3.78	4.24	10.87	3.75	4.07	3.09	10.94	4.80
Mongolia	5.03	4.91	11.61	2.70	3.86	4.82	11.96	3.88
Pakistan	0.52	6.63	14.37	2.35	3.94	2.61	14.26	3.17
West Bank and Gaza	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Peru	5.01	5.30	9.56	3.60	7.49	2.88	9.29	4.42
South Africa	2.20	3.96	12.46	5.63	3.04	2.15	12.38	6.80
Timor	2.73	1.94	n.a.	n.a.	3.06	1.32	n.a.	n.a.
Turkey	1.94	4.08	11.22	4.75	3.53	0.78	11.24	4.99
Uruguay	6.20	6.79	9.11	1.72	7.33	3.22	8.91	1.90
USA	4.32	3.01	10.57	5.14	4.52	2.48	10.35	6.16

Source: Authors' elaboration based on survey data.

Notes: Women and men aged 15 to 64. In Argentina, the starting age is 18. West Bank and Gaza survey only distinguishes between married and not married people.

Table 5. Mean hours per day, by the presence of children at home, type of activity and sex

	Without Children at Home							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	1.96	5.59	11.34	5.05	4.31	0.65	12.04	6.96
Argentina	2.94	3.08	n.a.	0.04	4.68	1.27	n.a.	0.03
Bangladesh	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Colombia	3.16	3.65	10.27	7.32	5.32	1.18	9.98	7.52
Ecuador	2.95	3.94	9.76	5.00	5.22	1.27	9.51	5.02
Ghana	3.07	4.12	12.99	4.86	3.46	3.23	11.97	6.36
Guatemala	2.67	6.75	10.88	2.61	6.75	1.27	10.94	3.17
Iraq	1.03	4.51	n.a.	6.90	4.74	1.48	n.a.	7.21
Mexico	3.54	3.75	n.a.	13.84	6.01	1.43	n.a.	13.75
Moldova	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mongolia	2.96	5.69	11.72	3.78	3.18	5.12	11.59	4.58
Pakistan	0.53	5.98	13.99	3.44	4.63	2.96	12.63	3.76
West Bank and Gaza	1.34	0.20	12.30	6.65	4.77	0.07	11.53	7.09
Peru	3.74	4.19	9.77	5.71	5.98	1.91	9.55	6.13
South Africa	3.58	3.86	12.72	3.93	6.20	2.16	11.95	4.15
Timor	1.65	1.61	n.a.	n.a.	2.97	1.06	n.a.	n.a.
Turkey	0.93	4.21	11.19	5.74	3.02	0.50	10.91	6.02
Uruguay	4.62	5.16	9.43	2.49	6.25	1.93	9.26	2.33
USA	3.74	2.62	10.88	5.96	4.64	1.86	10.41	6.63

	With Children at Home							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	2.30	5.26	11.23	5.13	5.07	0.47	11.93	6.53
Argentina	2.36	4.63	n.a.	0.03	5.61	1.31	n.a.	0.02
Bangladesh	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Colombia	2.93	4.62	10.12	6.25	5.89	1.17	9.86	6.85
Ecuador	2.61	6.39	9.76	4.31	5.91	1.43	9.50	4.41
Ghana	2.54	6.33	12.29	4.07	2.83	4.26	11.97	6.00
Guatemala	2.62	6.65	11.06	2.36	6.76	1.01	11.15	3.09
Iraq	0.49	4.54	n.a.	5.97	5.54	1.38	n.a.	6.35
Mexico	2.96	7.08	n.a.	13.04	7.00	1.85	n.a.	12.79
Moldova	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mongolia	2.87	6.77	11.37	3.07	3.69	5.59	11.53	3.63
Pakistan	0.47	8.65	12.49	2.36	5.41	3.04	12.14	3.40
West Bank and Gaza	0.85	3.92	10.86	6.07	5.58	0.52	11.20	6.35
Peru	2.99	6.31	9.77	4.43	6.59	2.28	9.54	5.10
South Africa	2.43	5.55	12.16	4.00	5.79	2.23	12.03	4.67
Timor	1.05	2.38	n.a.	n.a.	2.68	1.30	n.a.	n.a.
Turkey	0.92	5.71	10.81	4.89	4.19	0.47	10.74	4.93
Uruguay	3.91	8.50	9.44	2.11	7.19	2.93	9.08	1.98
USA	2.98	4.28	10.62	4.93	5.30	2.55	10.25	5.30

Source: Authors' elaboration based on survey data.

Notes: Women and men aged 15 to 64. In Argentina, the starting age is 18. Children defined as 14 years of age or less except for Pakistan and South Africa where they are defined as 6 years of age or less.

Table 6. Mean hours per day, by geographic area, type of activity and sex

	Urban							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	1.99	4.77	11.32	5.86	4.45	0.49	11.95	7.08
Argentina	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Bangladesh	2.12	5.08	13.52	3.24	6.66	1.04	12.91	3.38
Colombia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ecuador	2.86	5.24	9.70	4.83	5.71	1.27	9.44	4.94
Ghana	3.31	4.82	12.20	4.97	3.94	2.52	11.58	7.09
Guatemala	3.36	6.03	10.52	3.03	6.68	1.14	10.63	3.69
Iraq	0.57	4.53	n.a.	6.25	5.43	1.33	n.a.	6.58
Mexico	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Moldova	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mongolia	3.85	4.79	11.70	3.83	5.27	2.87	11.60	4.67
Pakistan	0.70	5.31	13.61	4.35	6.05	0.72	12.19	5.03
West Bank and Gaza	0.95	3.00	11.20	6.21	5.33	0.43	11.27	6.57
Peru	3.45	5.31	9.60	5.18	6.52	1.96	9.37	5.77
South Africa	2.83	4.20	12.22	5.03	4.60	2.17	12.03	5.79
Timor	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Turkey	0.65	5.00	11.08	5.37	3.75	0.42	10.79	5.15
Uruguay	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
USA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

	Rural							
	Women				Men			
	Market work	Unpaid domestic work	Personal care	Leisure, social and study	Market work	Unpaid domestic work	Personal care	Leisure, social and study
Albania	2.13	6.32	11.30	4.18	4.54	0.71	12.07	6.66
Argentina	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Bangladesh	1.61	5.77	14.33	2.57	6.12	1.45	13.42	3.01
Colombia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Ecuador	2.41	6.37	9.89	3.91	5.56	1.57	9.63	4.02
Ghana	1.88	7.00	12.78	3.40	2.07	5.41	12.40	5.06
Guatemala	1.85	7.44	11.47	1.88	6.84	1.15	11.49	2.54
Iraq	0.57	4.55	n.a.	5.77	5.43	1.57	n.a.	6.22
Mexico	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Moldova	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mongolia	1.41	8.85	11.17	2.50	1.32	8.14	11.50	3.13
Pakistan	0.56	6.91	13.41	3.08	3.36	3.69	12.64	4.26
West Bank and Gaza	1.15	2.64	11.24	6.26	6.19	0.29	11.17	5.95
Peru	2.36	7.01	10.37	3.48	5.89	2.83	10.11	4.34
South Africa	2.12	4.65	12.75	4.63	3.47	2.15	12.88	5.95
Timor	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Turkey	1.41	5.55	10.70	4.83	3.84	0.59	10.80	5.60
Uruguay	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
USA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Authors' elaboration based on survey data.

Notes: Women and men aged 15 to 64. In Argentina, the starting age is 18.

Table 7. Mean hours per day over the life cycle, by type of activity and sex

	Market work													
	Women							Men						
	Young (15-19)	Adult (20-44) alone in the hhld		Adult (20-44) both in the hhld		Adult and senior adults (45-64)		Young (15-19)	Adult (20-44) alone in the hhld		Adult (20-44) both in the hhld		Adult and senior adults (45-64)	
		With children	Without children	With children	Without children	With children	Without children		With children	Without children	With children	Without children	With children	Without children
Albania	0.24	2.85	2.07	2.82	1.88	2.50	2.47	1.36	6.72	3.45	6.16	4.79	5.64	5.38
Argentina	0.69	2.94	3.17	2.27	3.44	2.60	2.89	1.93	4.51	4.36	6.04	5.12	5.69	5.08
Bangladesh	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Colombia	0.93	3.93	4.18	3.03	3.86	2.90	3.07	1.82	5.93	5.60	6.82	6.00	6.40	6.03
Ecuador	0.72	3.81	4.16	2.59	3.54	3.09	3.10	1.73	6.00	5.35	6.99	5.98	6.77	6.18
Ghana	1.52	2.91	3.42	2.61	3.99	2.79	2.92	0.93	3.02	3.79	3.54	4.45	2.98	3.54
Guatemala	1.79	3.67	4.02	2.48	2.56	2.78	2.86	4.24	7.58	6.77	7.74	7.52	7.63	6.95
Iraq	0.15	0.71	1.32	0.54	1.15	0.65	1.20	2.27	5.79	5.13	6.67	5.72	5.60	4.56
Mexico	1.31	4.23	4.84	2.96	4.39	2.97	3.23	2.64	6.98	6.49	8.00	6.82	7.24	6.71
Moldova	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mongolia	0.76	4.28	3.55	2.83	3.54	3.06	2.93	0.85	4.34	3.43	4.13	3.83	3.70	3.50
Pakistan	0.67	0.46	0.56	0.45	0.54	0.74	0.52	2.56	5.68	4.75	5.64	5.75	4.51	4.28
WB and Gaza	0.42	1.09	2.10	0.89	1.42	1.09	1.27	2.79	5.93	5.48	6.11	5.23	5.41	4.62
Peru	1.12	4.23	4.75	2.87	4.38	3.65	3.91	2.23	6.30	6.51	7.38	6.02	7.61	7.11
South Africa	0.51	2.53	4.19	2.51	2.95	2.49	3.76	0.77	5.30	6.10	6.57	6.99	5.40	5.74
Timor	0.33	1.52	1.93	0.91	1.50	1.82	2.14	0.58	1.95	2.71	3.35	3.06	3.50	4.25
Turkey	0.95	1.39	1.41	0.74	1.24	0.89	0.71	2.59	5.34	3.91	4.82	4.17	3.60	2.62
Uruguay	0.52	4.91	5.77	4.51	5.64	4.47	4.82	1.62	7.14	6.57	8.92	7.80	7.92	6.83
USA	1.16	3.66	3.89	3.02	4.70	3.20	3.81	1.18	6.20	5.06	6.00	5.42	5.62	4.83

Table 7 (cont.)

	Unpaid domestic work													
	Women							Men						
	Young (15-19)	Adult (20-44) alone in the hhld		Adult (20-44) both in the hhld		Adult and senior adults (45-64)		Young (15-19)	Adult (20-44) alone in the hhld		Adult (20-44) both in the hhld		Adult and senior adults (45-64)	
		With children	Without children	With children	Without children	With children	Without children		With children	Without children	With children	Without children	With children	Without children
Albania	3.34	4.62	4.66	6.64	6.69	5.39	5.60	0.23	0.08	0.46	0.45	0.72	0.65	0.85
Argentina	2.14	4.34	2.27	4.89	2.59	4.83	3.78	0.81	1.36	1.17	1.30	1.11	1.46	1.49
Bangladesh	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Colombia	2.47	4.30	2.58	5.14	3.36	5.11	4.64	0.96	1.15	1.17	1.19	0.93	1.25	1.39
Ecuador	2.60	6.15	3.01	7.73	3.41	6.31	5.09	0.90	1.49	1.22	1.55	0.94	1.57	1.61
Ghana	4.03	6.25	3.78	7.63	4.44	5.69	4.41	2.80	2.95	3.29	4.75	2.55	4.85	3.66
Guatemala	4.62	6.47	5.32	8.11	8.16	6.82	5.98	0.88	1.00	1.22	1.08	1.38	1.07	1.29
Iraq	3.49	4.93	4.21	4.85	4.50	4.61	5.02	1.11	1.17	1.33	1.36	1.37	1.87	1.94
Mexico	3.06	6.69	2.77	8.41	3.38	6.44	4.77	1.41	1.83	1.57	1.98	1.24	1.76	1.48
Moldova	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mongolia	4.52	5.64	4.52	7.50	5.37	6.49	6.56	4.05	5.15	5.74	5.90	4.63	5.40	5.44
Pakistan	4.48	8.84	6.72	8.76	6.46	6.81	5.47	1.84	3.13	3.48	2.94	2.28	3.46	3.16
WB and Gaza	1.02	2.80	0.12	4.90	0.05	1.08	0.32	0.08	0.51	0.11	0.63	0.04	0.33	0.07
Peru	3.56	5.88	2.97	7.25	3.74	6.28	5.42	1.84	2.40	1.80	2.32	1.60	2.39	2.37
South Africa	3.30	5.46	3.49	5.78	4.43	4.84	3.86	1.95	2.35	2.25	2.01	1.89	2.27	1.95
Timor	1.86	2.32	1.77	2.85	1.78	1.73	1.43	1.28	1.16	1.24	1.43	1.03	1.07	0.82
Turkey	3.89	5.49	3.44	6.81	4.59	4.94	5.13	0.31	0.46	0.43	0.51	0.43	0.51	0.73
Uruguay	2.70	8.50	2.99	10.15	4.27	8.87	6.64	1.18	2.78	1.76	3.37	1.73	3.10	2.35
USA	1.11	4.03	1.99	5.04	2.24	4.65	3.23	1.08	2.61	1.22	2.81	1.77	2.85	2.36

Source: Authors' elaboration based on survey data.

Notes: Women and men aged 15 to 64. In Argentina, the starting age is 18.

Table 8. Penalty of marriage or cohabitation on time use variables

	Women			Men		
	15-19	20-44	45-64	15-19	20-44	45-64
Market work	-0.151	-0.388	-0.315	0.809	0.485	0.403
	[0.0332]***	[0.0238]***	[0.0367]***	[0.120]***	[0.0487]***	[0.0911]***
Observations	19,338	111,582	31,461	18,607	98,553	28,238
R-squared	0.534	0.545	0.535	0.584	0.227	0.212
Unpaid domestic work	2.928	1.831	0.778	0.200	0.322	-0.548
	[0.0792]***	[0.0470]***	[0.0534]***	[0.0667]***	[0.0309]***	[0.0741]***
Observations	19,319	111,387	31,440	18,559	97,600	28,068
R-squared	0.231	0.252	0.222	0.125	0.119	0.188
Personal care	-0.211	-0.406	-0.234	-0.251	-0.129	-0.214
	[0.0564]***	[0.0521]***	[0.0538]***	[0.113]**	[0.0364]***	[0.0720]***
Observations	13,750	77,031	21,955	13,405	65,083	19,695
R-squared	0.373	0.499	0.442	0.382	0.522	0.384
Leisure, social and study	-2.299	-0.510	-0.155	-0.815	-0.394	0.0467
	[0.0684]***	[0.0310]***	[0.0451]***	[0.126]***	[0.0396]***	[0.0595]
Observations	19,337	111,542	31,440	18,606	98,540	28,230
R-squared	0.656	0.584	0.637	0.660	0.574	0.542

Notes: Penalty on time use variables obtained from a propensity score reweighted regression (Hirano, Imbens and Ridder, 2003) where the treatment variable is an indicator of being married/living together. Explanatory variables include indicator variables for age groups, educational level, children at home, activity condition, area, and country fixed effects.

Robust standard errors in brackets. *** significant at 1%; ** significant at 5%; * significant at 10%.

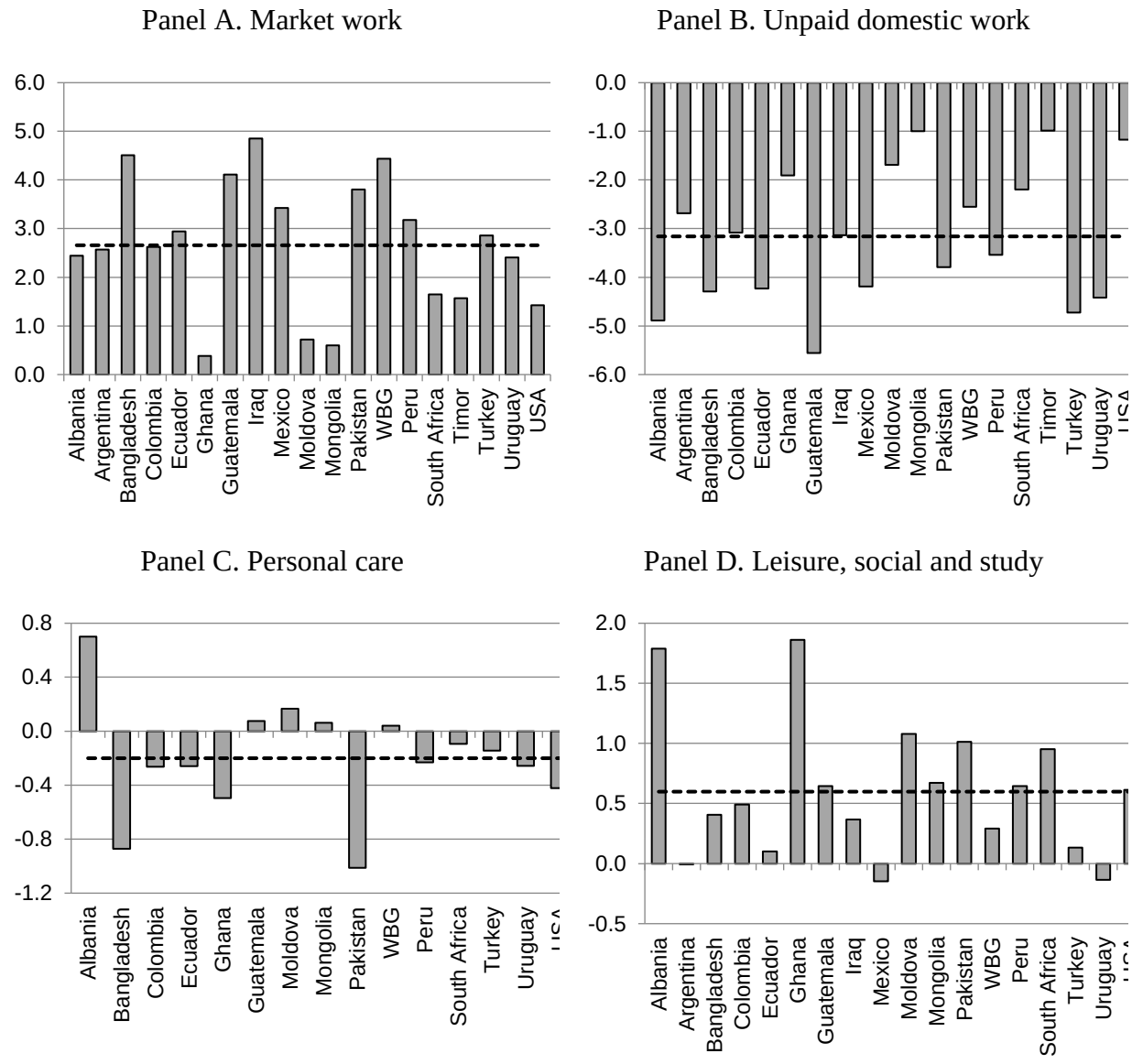
Table 9. Penalty of having children at home on time use variables

	Women			Men		
	15-19	20-44	45-64	15-19	20-44	45-64
Market work	0.0211	-0.186	-0.0915	0.163	-0.0171	-0.0188
	[0.0342]	[0.0234]***	[0.0336]***	[0.0480]***	[0.0372]	[0.0500]
Observations	19,677	111,582	31,461	18,940	98,553	28,238
R-squared	0.534	0.540	0.511	0.591	0.280	0.274
Unpaid domestic work	0.463	1.568	0.758	-0.0361	0.196	0.193
	[0.0509]***	[0.0277]***	[0.0383]***	[0.0285]	[0.0212]***	[0.0285]***
Observations	19,658	111,387	31,440	18,892	97,600	28,068
R-squared	0.290	0.310	0.191	0.122	0.111	0.142
Personal care	-0.0837	-0.382	-0.153	-0.00496	-0.0269	0.0403
	[0.0594]	[0.0237]***	[0.0314]***	[0.0399]	[0.0242]	[0.0330]
Observations	14,089	77,031	21,955	13,738	65,083	19,695
R-squared	0.382	0.528	0.346	0.387	0.598	0.523
Leisure, social and study	-0.524	-0.600	-0.280	-0.314	-0.158	-0.162
	[0.0666]***	[0.0250]***	[0.0312]***	[0.0575]***	[0.0271]***	[0.0383]***
Observations	19,676	111,542	31,440	18,939	98,540	28,230
R-squared	0.679	0.635	0.633	0.672	0.604	0.596

Note: Penalty on time use variables obtained from a propensity score reweighted regression (Hirano, Imbens and Ridder, 2003) where the treatment variable is an indicator of having children under 14 years of age at home. Explanatory variables include indicator variables for age groups, educational level, marital status, activity condition, area, and country fixed effects. Bangladesh and Moldova excluded from estimating sample (they do not have information in children at home).

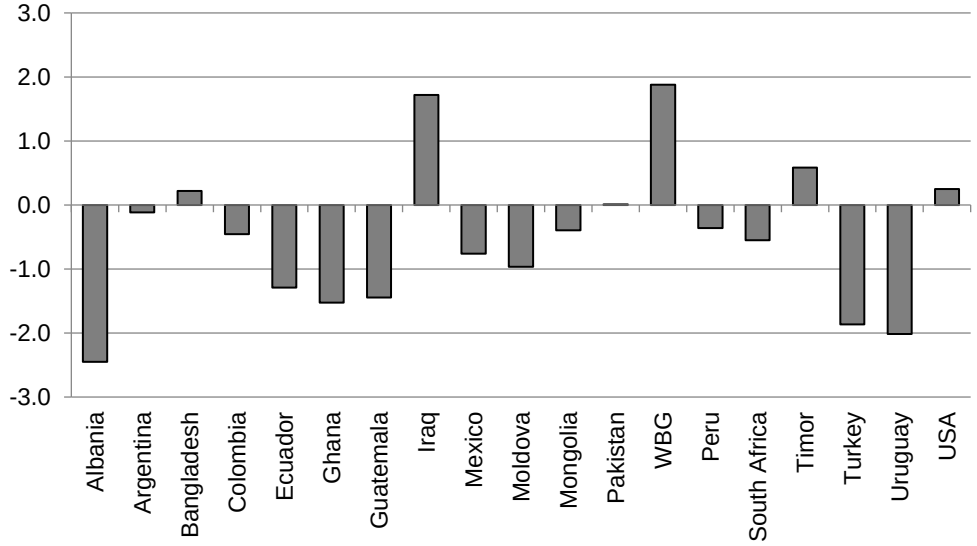
Robust standard errors in brackets. *** significant at 1%; ** significant at 5%; * significant at 10%.

Figure 1. Gender gap in time use by activity (men minus women). Hours per day



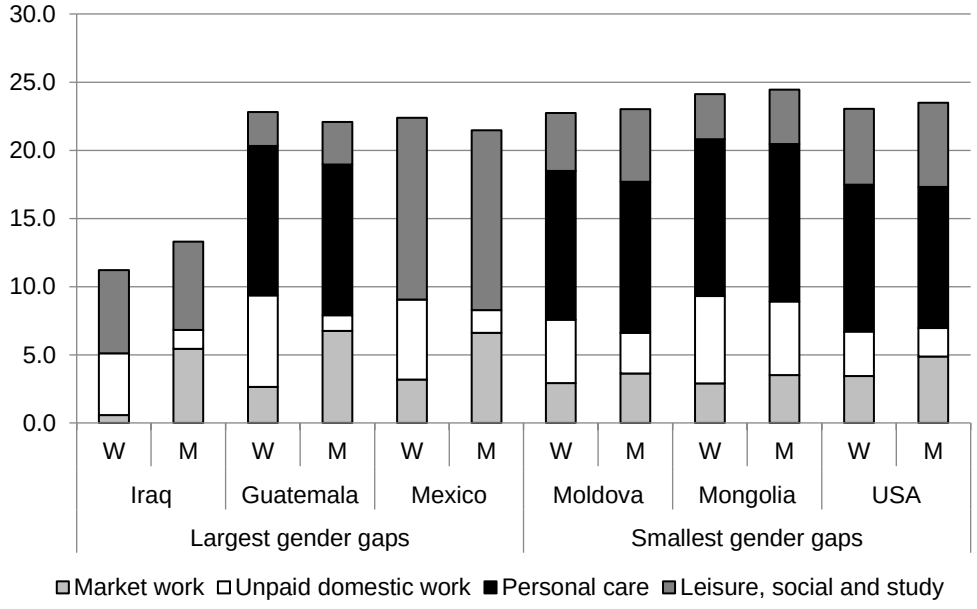
Source: Authors' elaboration based on survey data.
Notes: The dashed line in each panel represents the average gender gap (hours per day) for each activity across countries.

Figure 2. Gender gap in time allocated to paid and unpaid work (men minus women). Hours per day



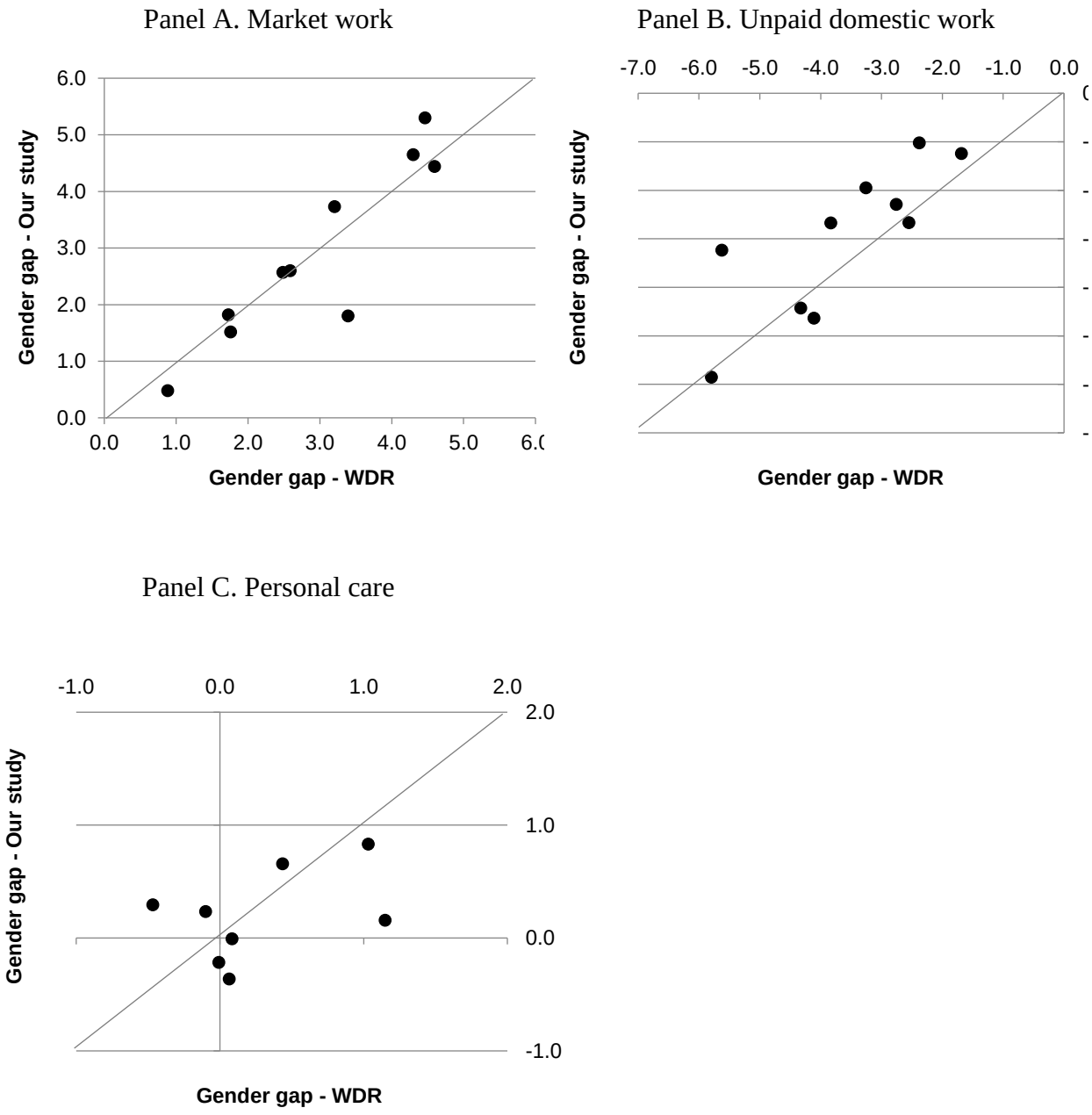
Source: Authors' elaboration based on survey data.
Notes: Paid and unpaid work include market work, housework and childcare.

Figure 3. Time allocation by activity in countries with largest and smallest gender gaps. Hours per day.



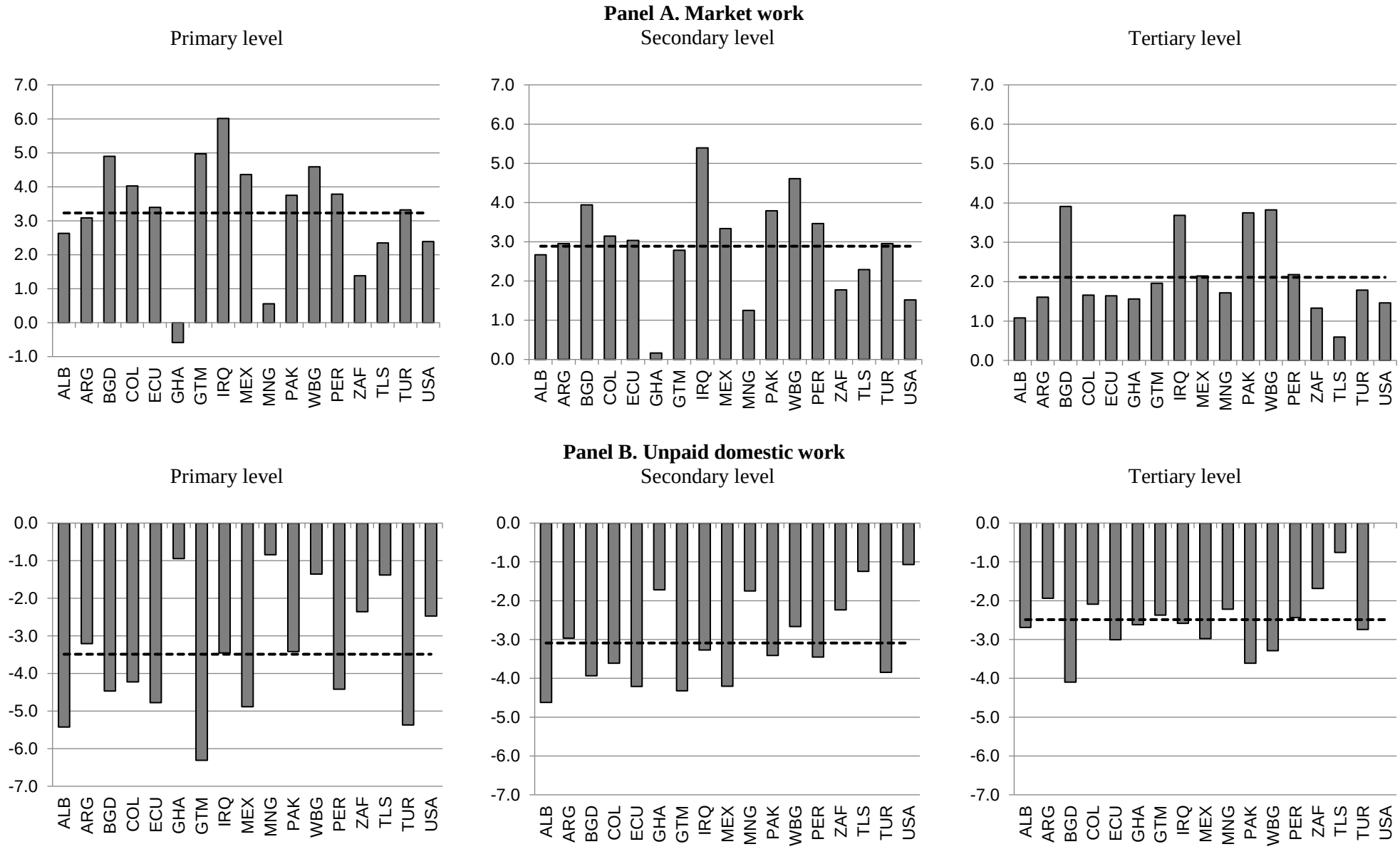
Source: Authors' elaboration based on survey data.

Figure 4. Change in gender gaps in time use over time (men minus women). Hours per day



Source: Authors' elaboration based on survey data.
Notes: Gender gaps corresponding to our study were calculated for the sample of men and women aged 18-65 in order to match the sample definition used in the 2012 WDR. The time difference between the surveys used in the 2012 WDR and our study in years is of 4 years for Ghana, 5 years for Guatemala, Iraq, Mexico and Timor-Leste, 6 for Uruguay, 8 years for Argentina, 10 years for South Africa and USA, and 12 years for West Bank and Gaza.

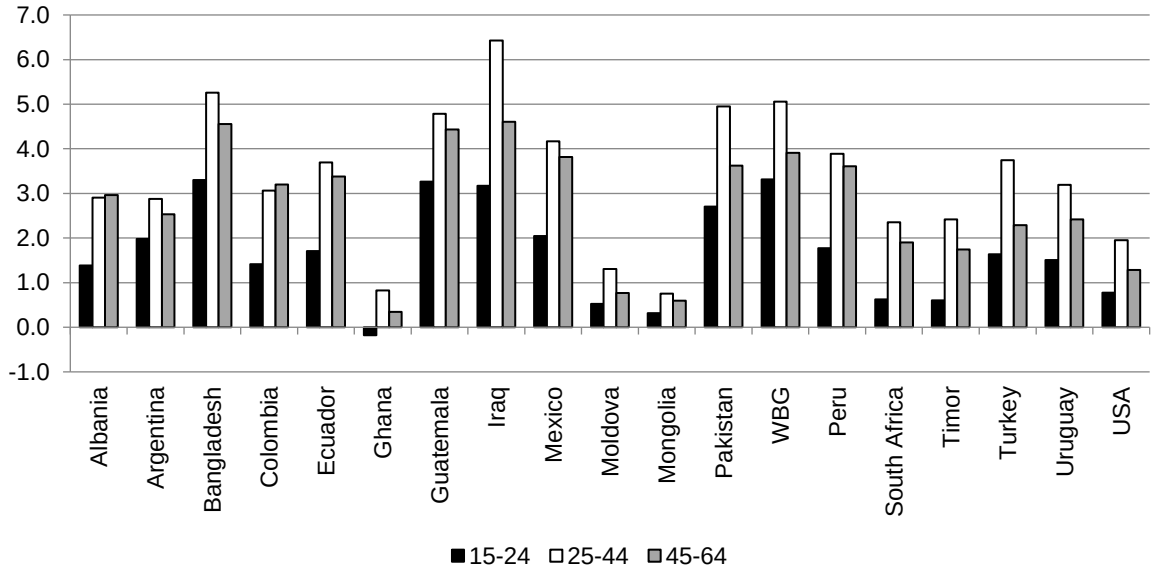
Figure 5. Gender gap in time use, by educational level, type of activity and sex (men minus women). Hours per day



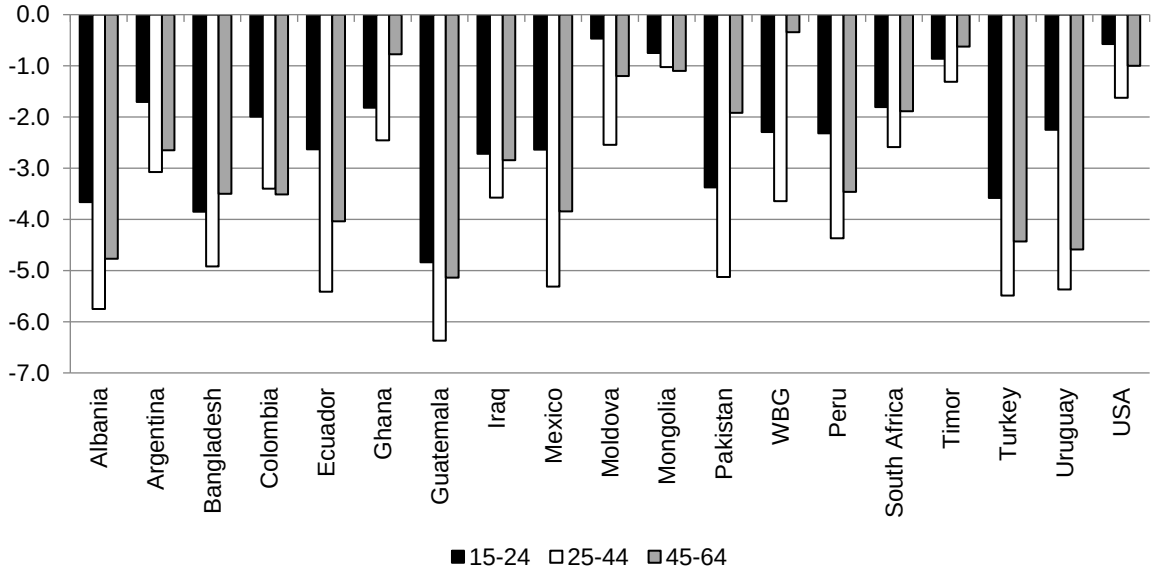
Source: Authors' elaboration based on survey data.
Notes: The dash-line in each panel represents the average gender gap by activity and educational level across countries.

Figure 6. Gender gap by age group and type of activity (men minus women). Hours per day

Panel A. Market work



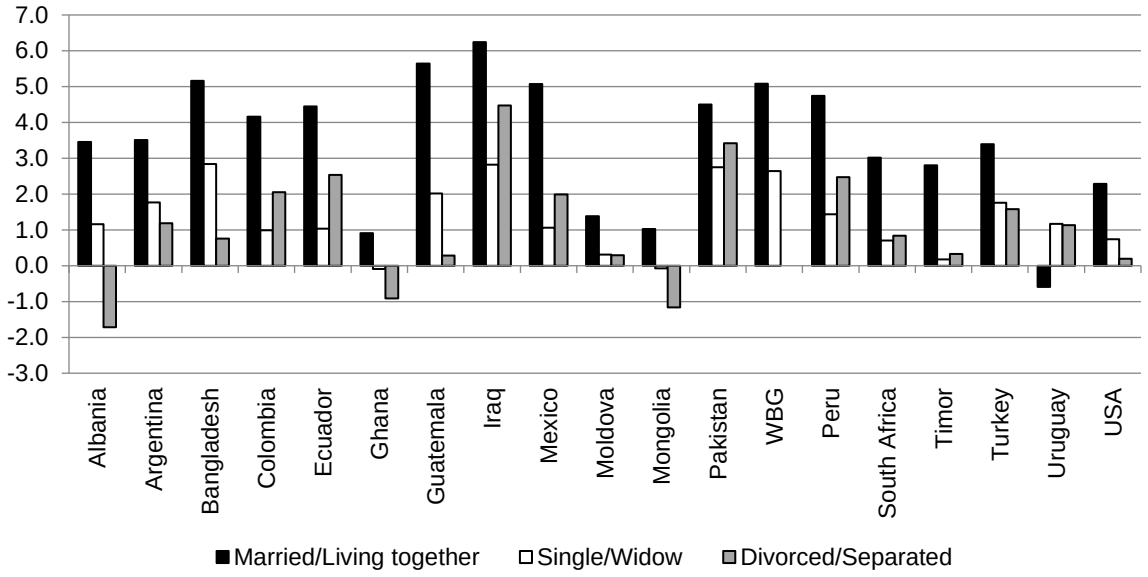
Panel B. Unpaid domestic work



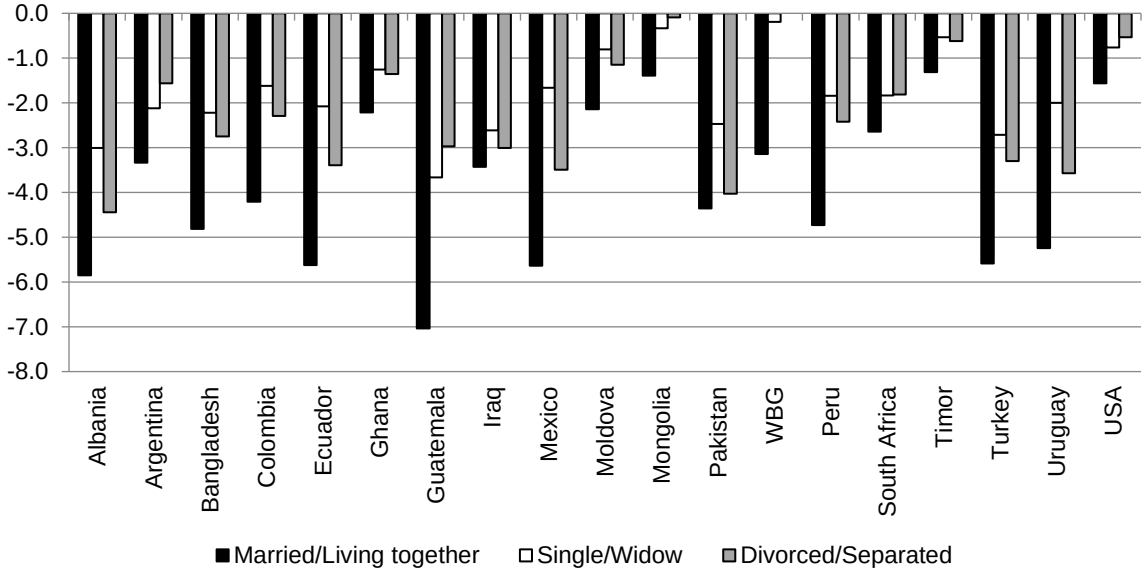
Source: Authors' elaboration based on survey data.

Figure 7. Gender gap by marital status and type of activity (men minus women). Hours per day

Panel A. Market work



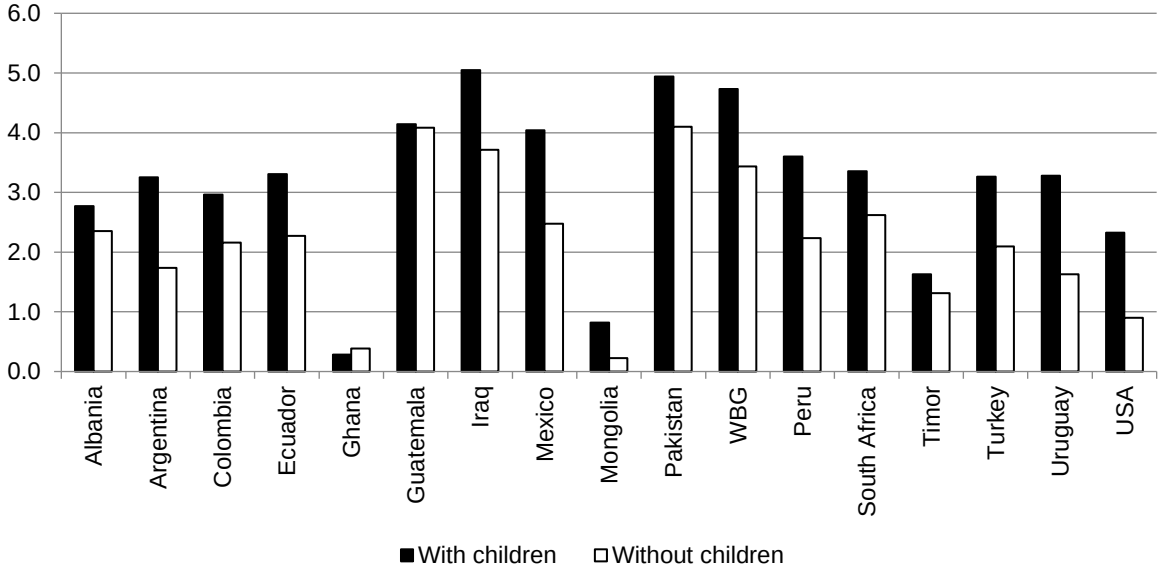
Panel B. Unpaid domestic work



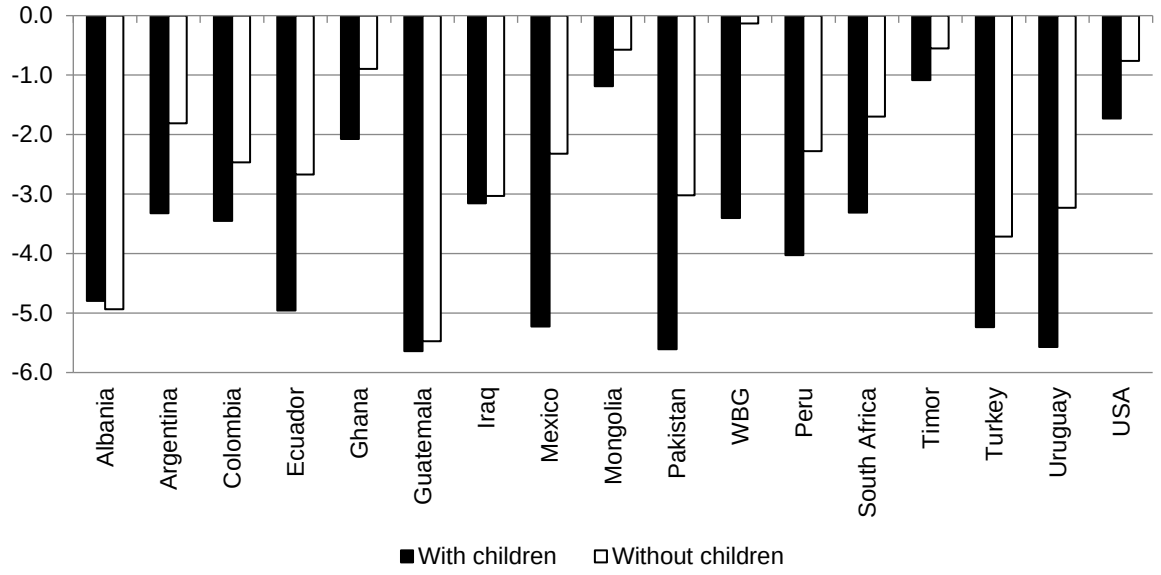
Source: Authors' elaboration based on survey data.
Notes: West Bank and Gaza survey only distinguishes between married and not married people.

Figure 8. Gender gap by presence of children and type of activity (men minus women). Hours per day

Panel A. Market work



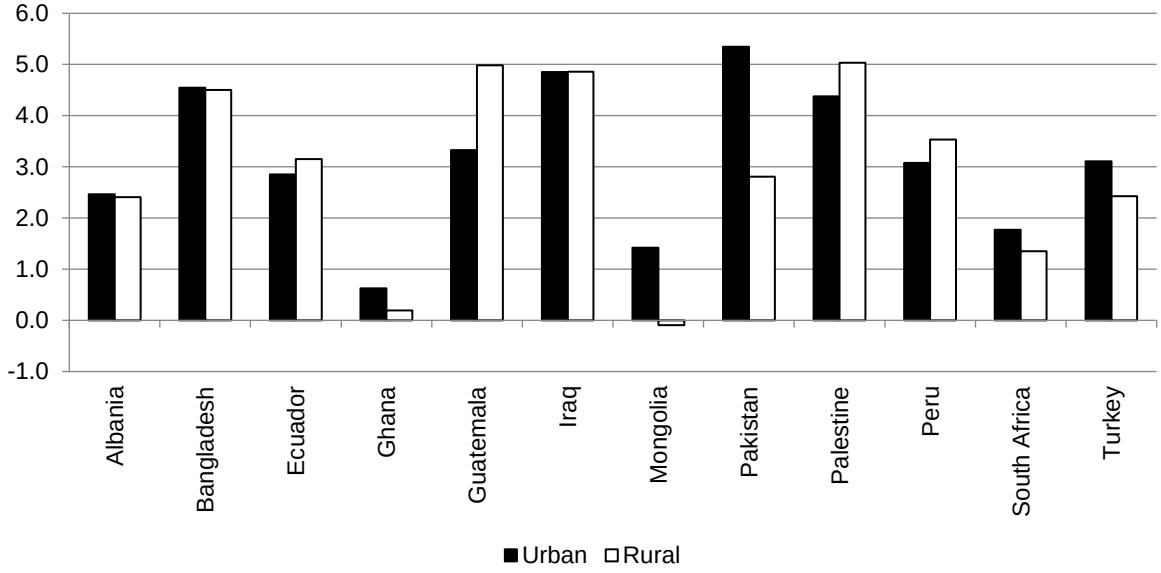
Panel B. Unpaid domestic work



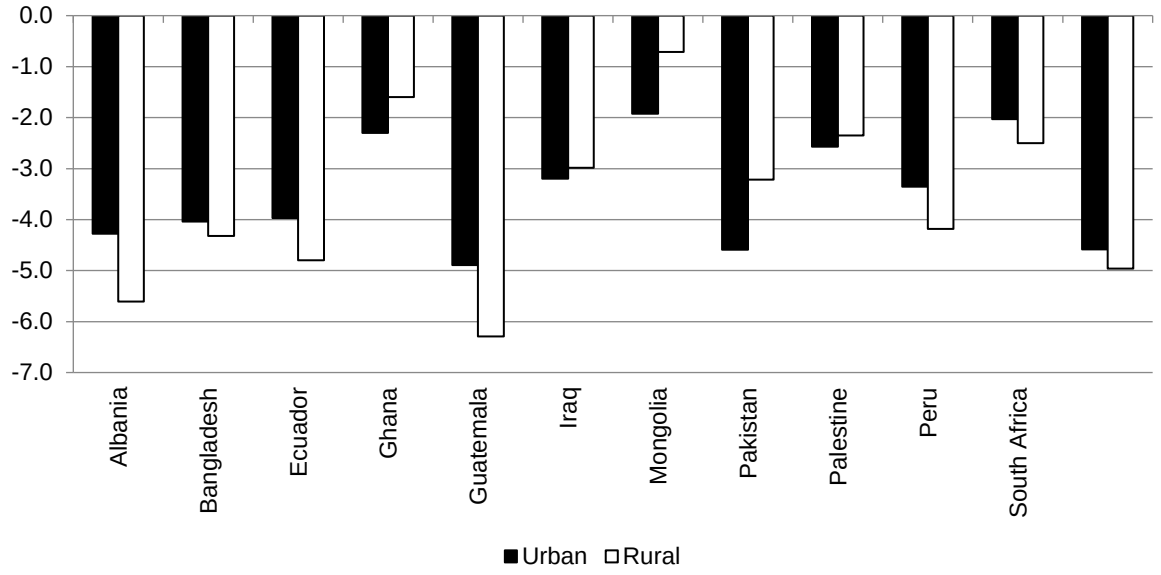
Source: Authors' elaboration based on survey data.
Notes: Children defined as 14 years of age or less except for Pakistan and South Africa where they are defined as 6 years of age or less.

Figure 9. Gender gap by geographic area and type of activity (men minus women). Hours per day

Panel A. Market work



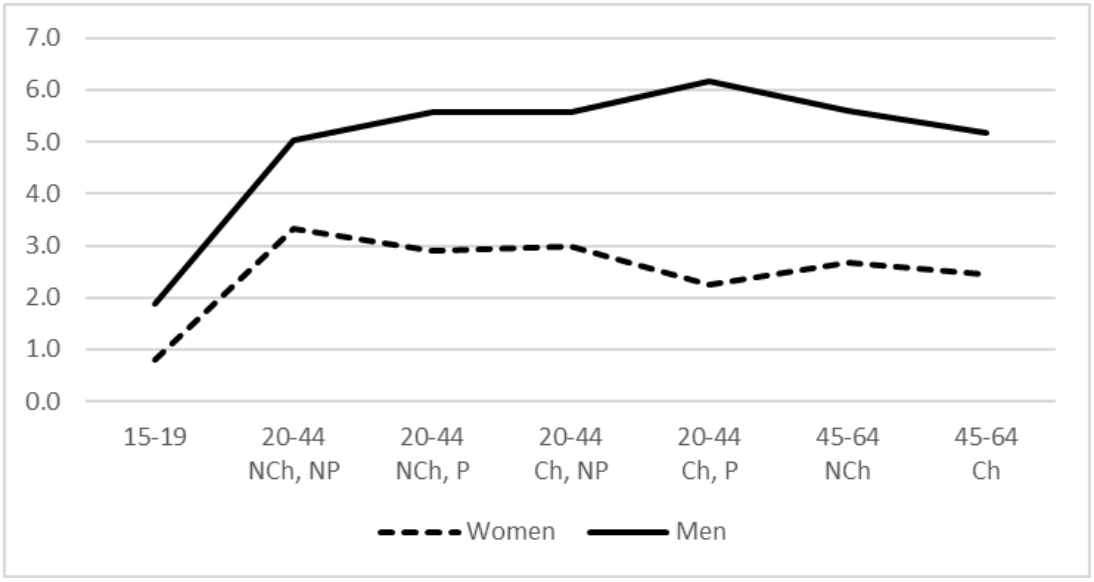
Panel B. Unpaid domestic work



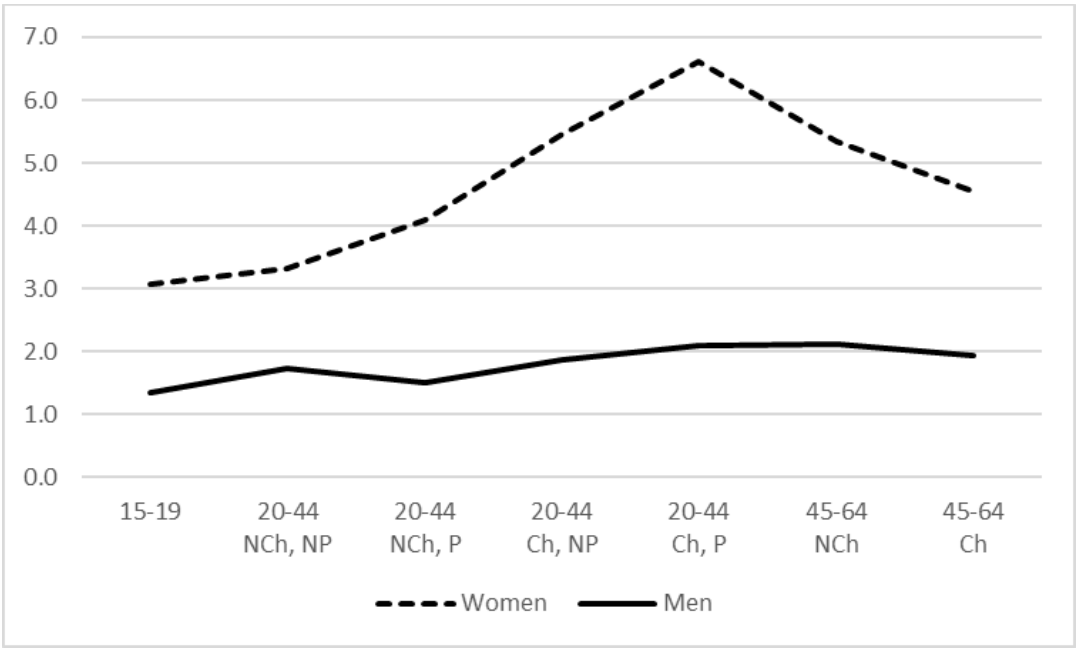
Source: Authors' elaboration based on survey data.

Figure 10. Time use over the lifecycle. Cross-country averages. Hours per day.

Panel A. Market work

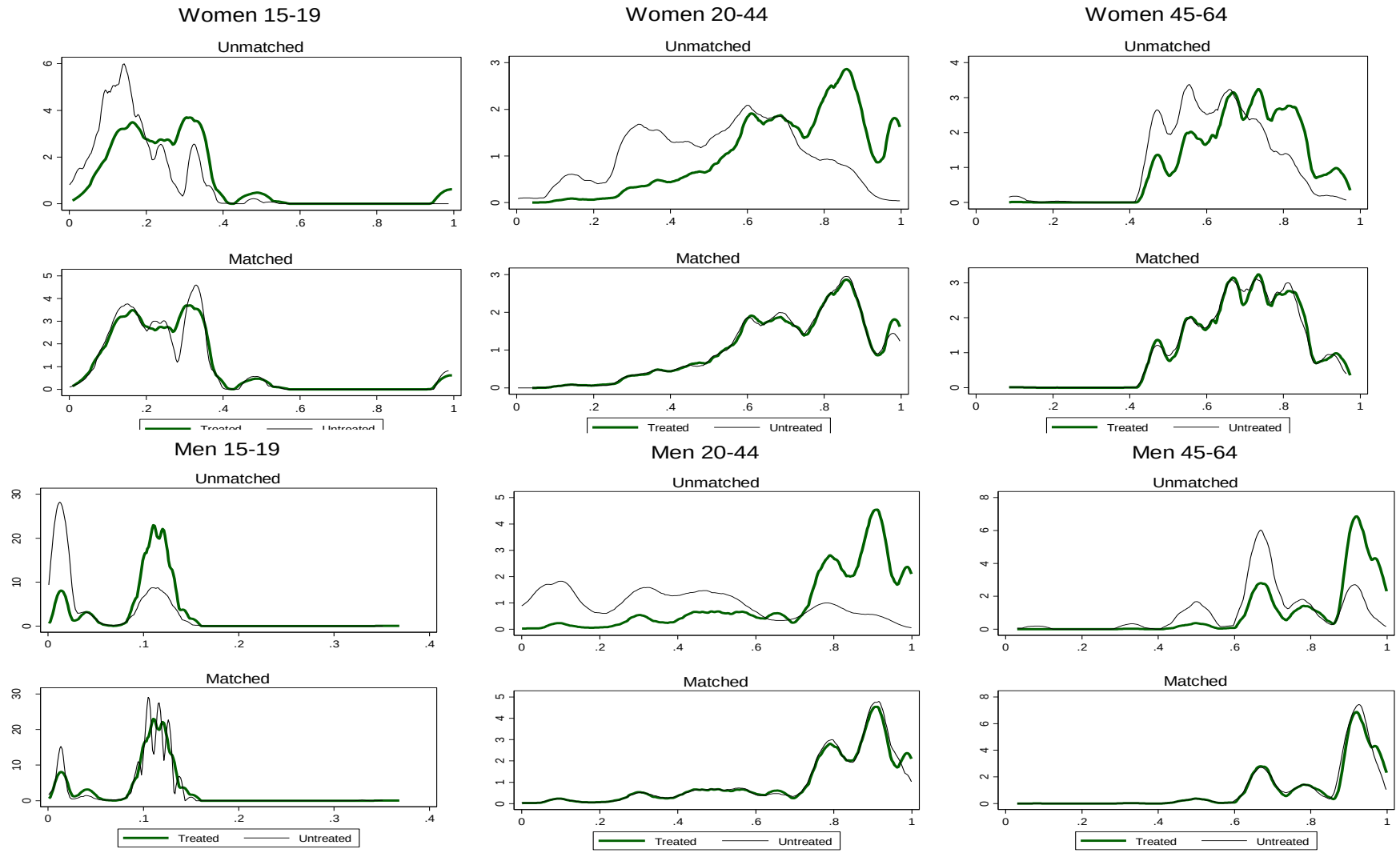


Panel B. Unpaid domestic work



Source: Authors' elaboration based on survey data.
Notes: Ch indicates having children at home; NCh indicates not having children at home; P indicates having a partner of the opposite sex and of similar age; NP indicates not having a partner of the opposite sex and of similar age.

Figure 11. Penalty of marriage on time use variables. Balancing of covariates. Unmatched and matched samples.



Note: Treated=Being married/cohabiting; Untreated=Divorced, separated, single

Figure 12. Penalty of having children at home on time use variables. Balancing of covariates. Unmatched and matched sample

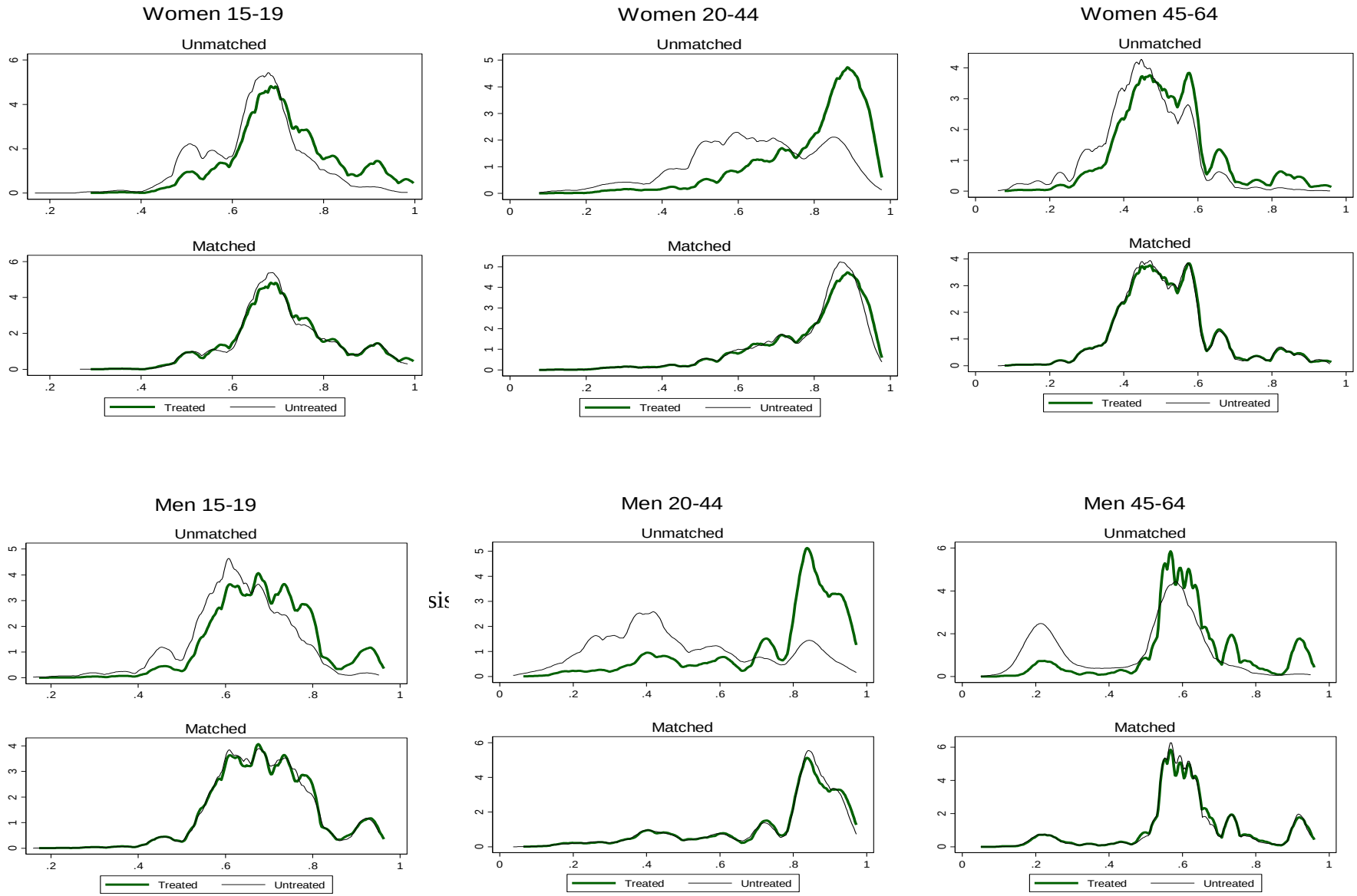


Table A1. Surveys included in the analysis

Country	Year	Coverage	Survey type	Instrument		Reference population	Sample size	Reference period
				Stylized	Diary			
Albania	2010-2011	National	Time use		✓	10+	2,250 HH	Daily
Argentina	2013	National - urban	Module in HH survey	✓		18+	65,352 individuals	Daily
Colombia	2012	National, 5 urban regions, and 4 rural regions	Time use	✓		10+	44,236 HH; 151,099 indiv	Daily
Ecuador	2012	National, urban and rural	Time use	✓		12+	22,968 HH	Weekly
Ghana	2009	National	Time use		✓	10+	4,193 HH (9,297 individuals)	Daily (1 hour)
Guatemala	2011	National	Module in HH survey	✓		7+	14,337 HH	Daily
Iraq	2012	National	Module in HH survey	✓		10+	25,146 HH	Previous week
Mexico	2014	National	Time use	✓		12+	17,000 HH	Weekly
Moldova	2011-2012	National	Time use		✓	10+	15,600 HH	Daily (10 mins)
Mongolia	2011	National	Time Use		✓	12+	4,000 HH	Previous week
Pakistan	2007	National	Time Use		✓	10+	19,600 HH	Daily (30 mins)
Peru	2010	National, urban and rural	Time use	✓		12+	4,580 HH	Weekly
South Africa	2010	National	Time use		✓	10+	14,553 indiv	Daily (30 mins)
Timor-Leste	2007	National	HH survey	✓		8+	8,355 individuals	Weekly
Turkey	2006	National, urban and rural	Time Use		✓	15+	5,070 HH (11,815 indiv)	Daily
United States	2013	National	Time use		✓	15+	26,400 HH	Daily (time reported by diarist)
Uruguay	2013	Urban	Module in HH survey	✓		14+	3,391 HH (7,447 individuals)	Daily
West Bank and Gaza	2012-2013	Formal and informal hh, rural/urban, refugees	Time use		✓	10+	5,903 HH	Daily, 30 mins between 10 PM and 6 AM; 10 mins between 6 AM and 10 PM

Source: Authors' elaboration.

Table A2. Labor force participation rate and Employment rate by gender and age groups

	LFP rate				Employment rate			
	All	15-24	25-44	45-64	All	15-24	25-44	45-64
Women								
Albania	47.73	21.68	62.59	50.18	39.07	12.40	51.97	0.45
Argentina	58.97	41.72	67.43	56.59	53.79	30.67	62.75	0.54
Bangladesh	19.58	13.46	23.29	18.68	19.28	12.76	23.03	0.19
Colombia	41.60	26.44	52.69	39.11	39.22	22.81	49.90	0.38
Ecuador	45.13	24.96	54.75	51.02	43.57	22.82	52.79	0.51
Ghana	11.78	15.56	9.57	14.02	9.42	9.19	8.02	0.13
Guatemala	36.80	28.05	42.91	39.55	33.36	24.19	39.25	0.37
Iraq	13.85	7.39	17.82	16.17	11.38	4.31	14.82	0.16
Mexico	49.54	35.85	58.64	48.18	48.84	34.54	57.97	0.48
Moldova	67.08	32.10	70.10	76.80	67.08	32.10	70.10	0.77
Mongolia	55.49	24.99	69.60	64.66	48.34	18.42	61.24	0.59
Pakistan	22.14	19.65	24.45	21.95	20.64	17.76	23.11	0.21
West Bank an	19.22	8.69	24.16	22.51	15.21	4.47	19.05	0.22
Peru	n.a.	n.a.	n.a.	n.a.	51.74	34.46	59.47	0.58
South Africa	44.89	21.94	60.06	45.41	36.28	12.85	48.81	0.43
Timor	34.21	24.32	32.79	49.95	27.77	15.26	26.43	0.47
Turkey	26.95	25.14	31.38	20.24	25.27	22.16	29.58	0.20
Uruguay	68.10	43.95	81.61	67.72	61.75	31.99	74.29	0.66
USA	71.95	63.73	78.54	69.68	64.83	48.83	72.21	0.66
Men								
Albania	77.71	46.85	93.24	86.70	67.26	30.23	83.65	0.81
Argentina	87.20	67.75	94.89	87.99	82.80	57.79	91.42	0.86
Bangladesh	86.24	62.19	95.70	94.16	85.64	61.28	94.97	0.94
Colombia	77.33	47.89	91.39	84.64	71.85	41.01	85.84	0.81
Ecuador	79.55	49.04	95.31	90.61	77.86	46.39	93.99	0.89
Ghana	29.77	21.95	32.72	28.90	21.96	12.27	24.45	0.23
Guatemala	84.05	66.96	95.82	92.13	80.48	62.51	92.47	0.90
Iraq	77.86	58.03	95.82	75.93	70.14	46.28	89.64	0.73
Mexico	86.20	64.51	97.50	90.82	84.36	62.16	95.97	0.89
Moldova	74.30	47.68	81.60	80.03	74.30	47.68	81.60	0.80
Mongolia	66.70	31.90	87.14	73.17	57.55	23.26	75.99	0.67
Pakistan	83.27	66.15	95.54	89.29	81.92	63.95	94.48	0.89
West Bank an	84.40	57.32	97.64	80.13	76.79	48.15	89.51	0.76
Peru	n.a.	n.a.	n.a.	n.a.	80.82	56.26	92.29	0.90
South Africa	59.23	27.15	79.53	65.78	51.13	18.99	70.12	0.61
Timor	69.86	35.27	90.54	87.87	58.46	23.85	76.37	0.81
Turkey	79.15	56.24	97.31	65.44	73.74	46.53	92.17	0.64
Uruguay	84.21	58.55	97.58	86.56	80.22	49.61	94.42	0.85
USA	80.95	64.33	91.84	79.07	74.79	51.79	86.92	0.75

Source: Authors' elaboration based on World Development Indicators (2017).