FREDERICK S. PARDEE CENTER FOR INTERNATIONAL FUTURES
JOSEF KORBEL SCHOOL OF INTERNATIONAL STUDIES
UNIVERSITY of DENVER

UN WOMEN

FORECASTING TIME SPENT IN UNPAID CARE AND DOMESTIC WORK

TECHNICAL BRIEF

By: Taylor Hanna, Collin Meisel, Jonathan Moyer (Frederick S. Pardee Center for International Futures)
and Ginette Azcona, Antra Bhatt and Sara Duerto Valero (UN Women)
Research Assistance: Asha Meagher

INTRODUCTION

Globally, women and girls today have better educational opportunities, health outcomes, and political representation than ever before. But for many, those advances have not translated into a proportionate improvement in economic opportunity or agency over their lives (Ferrant et al., 2014; Heintz, 2018). One reason for that lagging progress in women achieving equal status in society is that they are still expected to shoulder a disproportionate share of unpaid care and domestic work responsibilities (Ferrant et al., 2014).

In countries across the globe, the unequal division of domestic work and childcare have kept women, especially those with dependent children at home, out of paid work, resulting in women's labor force participation rates lagging behind despite improvements in education (Azcona et al., 2020; Heintz, 2018). Moreover, in some contexts, women have joined the labor force in greater numbers but are still tasked with devoting nearly as much time to domestic and care work (Sevilla-Sanz et al., 2010). So even those women working full time in the market return home to a "second shift" of care work (Hochschild & Machung, 2012). In both cases, an unequal gender gap in the unpaid care work performed by household members leaves women working longer hours and with less economic agency.

Understanding more about the time spent and the gender gap in unpaid care and domestic work is an important component of understanding persistent gender inequality. This Technical Brief details the process of adding a measure of unpaid care work to the International Futures (IFs) integrated modeling platform in order to estimate and forecast time spent on unpaid care and domestic work globally by women and men. It begins with a review of relevant literature, data sources, and data challenges. It then presents the results of a regression analysis designed to identify relationships between unpaid care and domestic work and other variables for the purpose of identifying driver variables and relationships which are then implemented in the International Futures model. Finally, the brief explores current estimations and forecasts of unpaid care and domestic work to 2050.

Among the key findings is the estimation that at the current trajectory, the gap between the time spent by women and men on unpaid care will narrow slightly, but by 2050, women globally will still be spending 9.5 per cent more time or 2.3 more hours per day on unpaid care work than men. Investments in care policies, services, jobs and infrastructure are required to recognize, reduce and redistribute unpaid care and domestic work (UN Women, 2023).

LITERATURE

The ILO, following definitions set by the 19th International Conference of Labour Statisticians (ICLS) in 2013 and the International Classification of Activities for Time Use Statistics (ICATUS) in 2016, defines unpaid care work as "non-remunerated work carried out to sustain the well-being, health and maintenance of other individuals in a household or the community, and it includes both direct and indirect care (i.e. routine housework)" (ILO, 2018, p. 40). This includes the own-use provision of services (including household management, preparing meals, and childcare), though excludes own-use production of goods (e.g., collecting wood and fetching water). However, some discrepancies still remain in data sources, which may not differentiate between activities that are included or excluded per that definition (ILO, 2018).

The data suggest that, while time spent varies considerably from country to country, the vast majority of unpaid care and domestic work – more than three quarters – is performed by

women (ILO, 2018). Overall, men spend more time in paid, market work while women spend more time on unpaid domestic and care work (Anxo et al., 2011; Campaña et al., 2015; Ferrant et al., 2014; Folbre, 1996; García Román & Gracia, 2022). And many studies show that, when accounting for unpaid care work, women tend to work more hours of "total work" (combining market and non-market work) than men (Burda et al., 2013; Folbre, 1996; ILO, 2018). While in some high-income countries, hours of total work are roughly equal (Burda et al., 2013), the gender gap in both total work and unpaid care work varies significantly by country (Anxo et al., 2011; Burda et al., 2013; García Román & Gracia, 2022).

Within-country differences exist as well. The unpaid care work burden, and especially the burden placed on women and girls, is significantly higher in rural areas (Charmes, 2019b; ILO, 2018; Rubiano-Matulevich & Viollaz, 2019). Without access to the same basic infrastructure, time and labor-saving devices, and processed food as in urban areas, rural women and girls devote significant amounts of time to both own-use good production (collecting water and firewood) as well as indirect care work (Boone et al., 2011; DeGraff et al., 2017; WHO & UNICEF, 2017).

Age is a significant factor in time spent on unpaid care work. Many studies find an inverse-U relationship where adults (women especially) spend the most time on unpaid care work in prime working age (Amarante & Rossel, 2018; García Román & Gracia, 2022; ILO, 2018; Krantz-Kent, 2009; Rubiano-Matulevich & Viollaz, 2019). However, in a handful of countries, the time spent by older women is nearly equivalent to or even greater than that of prime working-age women (ILO, 2018). Household composition is also a major factor. The amount of time spent on unpaid care work and the gender gap in time spent is especially high in the presence of young children, especially those between 0 and 5 years old (Amarante & Rossel, 2018; Campaña et al., 2015; Charmes, 2019a; ILO, 2018; Rubiano-Matulevich & Viollaz, 2019).

Social norms factor highly into expectations around the gender gap in care work. Countries with more egalitarian social norms and policies can reduce the gender gap (Anxo et al., 2011; Campaña et al., 2015; Ferrant et al., 2014), while strongly-entrenched traditional norms or cultural contexts, like discrimination against women in social institutions (Ferrant et al., 2014) and in countries with strong religious cultures, like culturally Catholic countries, (Burda et al., 2013), can widen the gap.

Increases in education are associated with a reduction in time spent in unpaid care work for both men and women as well as a reduction of the gender gap in unpaid care work (Rubiano-Matulevich & Viollaz, 2019). However, even as women's educational attainment matches that of men, the gender gap in unpaid care has not closed.

The persistent gender gap in unpaid care work is problematic as it has direct implications on women's lives and economic opportunities. It is the main reason given by women for why they are not in the labor force (ILO, 2018). Both the absolute magnitude of unpaid care work done by women and the gender gap in that work are associated with lower rates of female labor force participation (Ferrant et al., 2014). And it is associated with keeping women in vulnerable jobs, part-time jobs, and jobs below women's skill levels, and can be linked to gender gap in wages (Ferrant et al., 2014).

DATA

Historical cross-country data come from the United Nations Statistics Division (UNSD) and the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women)'s global indicators series *Proportion of time spent on unpaid domestic and care work* (SDG indicator 5.4.1). The variable is coded as the percentage of time spent out of a 24-hour day, for males and females, based on national figures which are derived from time use surveys. Data were extracted from the UN SDG Indicator Database (UN, 2023).

The dataset includes data for 89 countries, less than half (47 percent) of the 188 countries represented in the IFs model. Data are available from as early as 2000 and as recent as 2020, but most countries have data for no more than three years in that span. Thus, the lack of time series data is a considerable challenge for analysis and forecasting this variable.

Another data challenge is inherent to the measure and sources used. There are two primary types of surveys used to measure time use: time diaries and stylized questions. Time diaries typically provide a fuller and more accurate picture of time use throughout the day. Stylized question surveys ask respondents to estimate the amount of time they spent on a particular activity in the past. For example, survey respondents may be asked how much time they spent on childcare over a period of time. These surveys require fewer questions and can be done in conjunction with broad large-scale household surveys. However, they may be subject to recall bias, as respondents may not accurately remember the time spent on activities, or social desirability bias, where respondents overestimate the amount of time spent on doing activities perceived as 'good' (Rubiano-Matulevich & Viollaz, 2019).

Both survey types often fail to account for simultaneous work or overlapping activities. Child care is often performed as a secondary activity, and women are more likely than men to perform various activities simultaneously (Floro & Miles, 2003). Failure to account for secondary and overlapping activities is likely to underestimate the amount of time spent on unpaid care and domestic work, especially by women (Floro & Miles, 2003; Folbre & Yoon, 2007).

Finally, cross-country comparisons of time use data should be approached with caution due to survey inconsistencies, including differing survey formats, inconsistent wording and classification, and differences in sampling methodology (Folbre & Yoon, 2007; Rubiano-Matulevich & Viollaz, 2019).

MODELLING TIME SPENT IN UNPAID CARE

International Futures

The International Futures (IFs) tool is an open-source integrated assessment modeling platform that allows for historical data analysis and scenario analysis for 188 countries. IFs represents integrated relationships across 12 core systems: agriculture, demographics, economics, education, energy, environment, finance, governance, health, infrastructure, international politics, and technology. All systems and modules within IFs are connected dynamically so that changes in one system lead to changes across all others. More information about IFs is available at https://pardee-wiki.du.edu/ and in Hughes (2019).

For this project, we created a new variable in IFs: Time Spent in Unpaid Care Work (UNPAIDLABOR), Male and Female. The variable is initialized using the UNSD and UN Women data series described in the previous section. If no data is available for a country, a value is initialized using the relationships described below, in the Drivers section.

Once initialized, the forecasts of unpaid care work are driven endogenously by variables within IFs, which themselves are integrated within the broader model.

Drivers of unpaid care work

Based on a review of the literature and consultation with experts, as well as consideration of available variables in the IFs model, we assessed a number of different variables as potential drivers of the forecast of time spent in unpaid care for men and women.

Potential driver variables were limited by historical data availability, availability in IFs, and the variable's forecast drivers in the IFs model. This excludes many policy-oriented potential drivers of care, such as investments in childcare and eldercare.

The following variables were included in this exploratory phase of the analysis:

- Education, average years for male, female, and total
- Female labor force participation rate
- Gender Development Index (GDI) and Gender Inequalities Index (GII) as proxies for broader systemic gender biases on social division of labor
- Gross domestic product at purchasing power parity
- Household consumption as a percent of GDP
- Household size
- Life expectancy
- Median age of the population
- Median age of the population, squared
- Rural population as a percent of total
- Total fertility rate
- Youth population size and dependency ratio

Drivers were assessed in different combinations and formulations. See Tables 1 and 2 for a non-exhaustive selection of regression results.

TABLE 1: Male regression results

Dependent variable: Male unpaid labor (% of day)							
VARIABLES	(1) Original	(2) Alt 1	(3) Alt 2	(4) Alt 3	(5) Alt 4	(6) Alt 5	(7) Alt 6
Gender Inequality Index		-9.330***		-7.917**	-8.007**	-8.560***	-8.665***
		(3.224)		(3.345)	(3.497)	(1.764)	(1.314)
Median age		0.494**	0.770***	0.678**	0.684**		
		(0.248)	(0.254)	(0.262)	(0.266)		
Median age, squared		-0.00841**	-0.0101**	-0.0109**	-0.0110**		
		(0.00424)	(0.00428)	(0.00433)	(0.00439)		
Total fertility rate	-0.738**						
	(0.321)						
Gender Development Index	21.90***						
	(6.949)						
Labor force participation rate, females			0.0526***	0.0557***	0.0561***	0.0452***	0.0454***
			(0.0155)	(0.0169)	(0.0174)	(0.0167)	(0.0165)

GDP per capita, PPP					-2.28e-06	1.41e-06	
					(1.55e-05)	(1.43e-05)	
Constant	-11.91	3.692	-8.783**	-2.831	-2.877	7.751***	7.810***
	(7.192)	(4.159)	(3.693)	(4.944)	(4.940)	(1.208)	(1.050)
Observations	101	171	177	171	171	171	171
R-squared	0.243	0.238	0.240	0.283	0.283	0.248	0.248

TABLE 2: Female regression results

Dependent variable: Female unpaid labor (% of day)							
VARIABLES	(1) Original	(2) Alt 1	(3) Alt 2	(4) Alt 3	(5) Alt 4	(6) Alt 5	(7) Alt 6
GDP per capita, PPP	-6.66e-05***				-6.69e-05***	-6.90e-05***	
	(1.43e-05)				(9.86e-06)	(9.06e-06)	
Median age	0.976**	0.943**	0.685**	0.508	0.665*		
	(0.376)	(0.390)	(0.310)	(0.359)	(0.346)		
Median age, squared	-0.0158***	-0.0175***	-0.0126**	-0.0117**	-0.0133**		
	(0.00591)	(0.00606)	(0.00512)	(0.00548)	(0.00535)		
Gender Inequality Index		-2.944		-6.272	-8.913**	-3.276*	1.882
		(4.377)		(4.226)	(3.623)	(1.695)	(1.748)
Labor force participation rate, females			-0.124***	-0.131***	-0.120***	-0.125***	-0.132***
			(0.0204)	(0.0241)	(0.0243)	(0.0231)	(0.0230)
Constant	5.430	7.583	16.00***	22.94***	21.59***	27.12***	24.26***
	(5.599)	(6.905)	(4.430)	(7.170)	(6.478)	(1.349)	(1.395)
Observations	177	171	177	171	171	171	171
R-squared	0.129	0.072	0.216	0.217	0.279	0.233	0.165

For all regressions, the R-squared is not strong. This is not surprising, given both the highly limited data availability and the complexity of a measure like time spent on unpaid care work. The time spent on unpaid care work for men and women is likely driven by a number of complex and interrelated contextual factors, including cultural and social norms, for which there are not strong quantitative datasets that could be incorporated into a global model like IFs.

For both male and female forecasts, the Median Age and Median Age squared drivers were significant in nearly all regressions, reflecting the inverse-U relationship found in the literature. Women and men spend more hours on unpaid care work in prime working age, and at a population level, the time spent by both men and women in unpaid care work is associated with the country's demographic makeup.

Female labor force participation rates were significant in regressions for both men and women, but with opposite effect. A 1 percent increase in the female labor participation rate is associated with just over a 1/10th of a percent decrease in average unpaid labor hours for women: as women enter the labor force, they spend somewhat less time on unpaid care work. On the other hand, the same 1 percent increase in the female labor participation rate is associated with a 1/20th of a percent increase in average unpaid labor hours from men, reflecting a partial shift of care toward men.

Across most formulations, the GII, at least in combination with other variables, had the opposite sign – higher levels of gender inequality were associated with fewer hours of women's unpaid domestic care work. This could be due to a number of reasons, including a small sample size due to limited data and the existence of an unmeasured confounding variable.

We opted for a formulation where unpaid care work for both men and women **is driven by median age, median age squared, and female labor force participation rates**. Thus,

the forecasts presented in this paper only reflect projections of unpaid care and domestic work based on expected trajectories of female labour force participation and demographic characteristics. A number of other difficult to measure variables such as gender norms, as discussed above, are not taken into account. Slow changes in such characteristics may lead to an increase in gender gaps in unpaid care and domestic work, which is beyond the scope of the estimates and projections presented in this paper.

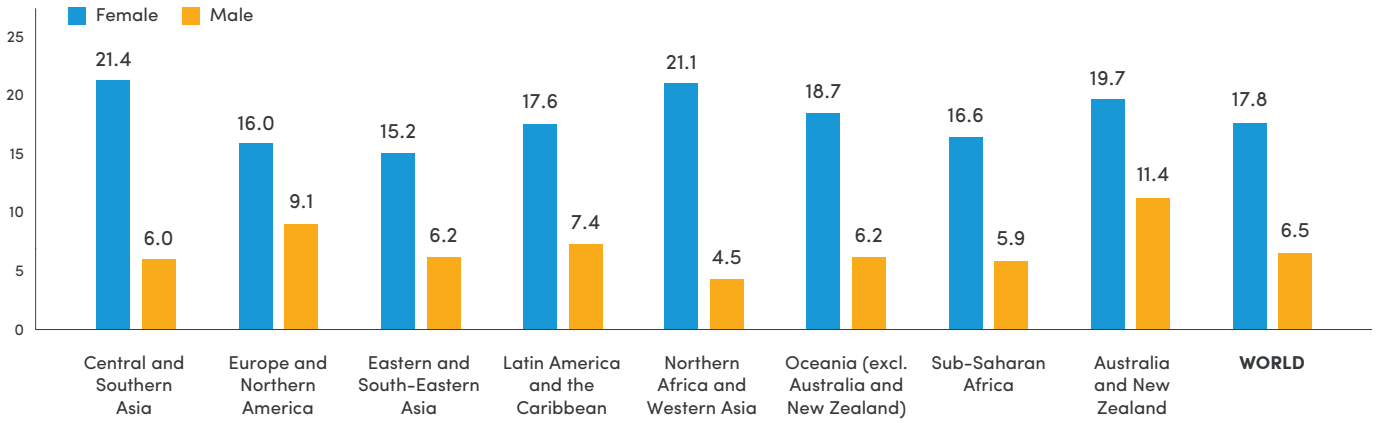
ESTIMATES AND FORECASTS OF UNPAID CARE WORK

We estimate that, globally, adult individuals spend just over 12 percent of their day, or 2.9 hours, on unpaid care and domestic work in 2023. However, this time is not distributed evenly. Men spend an average of 6.5 percent of their day (or about 1.6 hours) on unpaid care work and women an average of nearly 18 percent (4.3 hours). In other words, women spend nearly three times (2.8) as much of their day on unpaid care work as men.

Total time spent and the gender gap vary across regions. Women and girls spend the lowest percentage of their day on unpaid care and domestic work in Eastern and South-Eastern Asia and in Europe and Northern America at 15.2 and 16 per cent respectively or 3.6 and 3.8 hours respectively, while the highest unpaid care burden is found in Central and Southern Asia and Northern Africa and Western Asia (21.4 and 21.1 per cent respectively or 5 hours daily). The greatest gender gaps, too, are found in Northern Africa and Western Asia and Central and Southern Asia, where women spend 4.0 and 3.7 more hours on unpaid care work than men, respectively. In Latin America and the Caribbean, women and girls spend 4.2 hours to men's 1.8, and in sub-Saharan Africa, women spend 4.0 hours to men's 1.4.

FIGURE 1

Average Time spent in unpaid care and domestic work, percent of a 24-hour day by region and sex, 2023



Source: UN Women and the Pardee Center for International Futures using IFs v. 7.97.

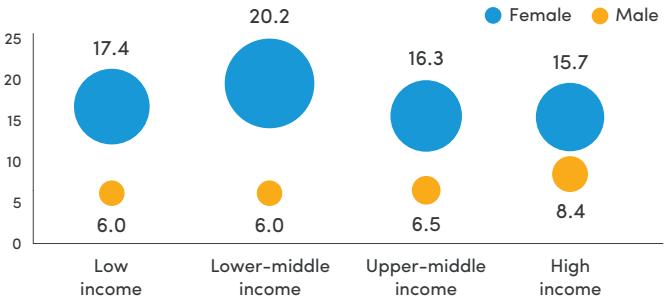
Time spent varies across income levels as well. Low and middle income countries (LMICs) have the greatest gender gap in time spent on unpaid care and domestic work, with women and girls spending 3.4 hours more than men on average. High-income countries (HICs) have the lowest gender gap and a relatively high amount of time spent in unpaid care and domestic work by men, 2.0 hours compared to women's 3.8 hours per day.

At a country level, estimates for male time spent in unpaid care and domestic work in 2023 range from 1.4 percent (0.3 hours) in Cambodia to 13.8 percent (3.3 hours) in Bolivia, while estimates for female time spent range from 4.9 percent (1.2 hours) in Colombia to 28.8 percent (6.9 hours) in Mexico.

Today, women in all countries spend more time on unpaid care and domestic work than men, with the greatest gender

FIGURE 2

Time spent in unpaid care and domestic work, percent of a 24-hour day by World Bank Income Classifications and sex, 2023



Source: UN Women and the Pardee Center for International Futures using IFs v. 7.97.

gap found in Yemen (a difference of 20.2 percentage points or 4.8 hours) and the smallest in Colombia (1.7 percentage points or 0.4 hours).

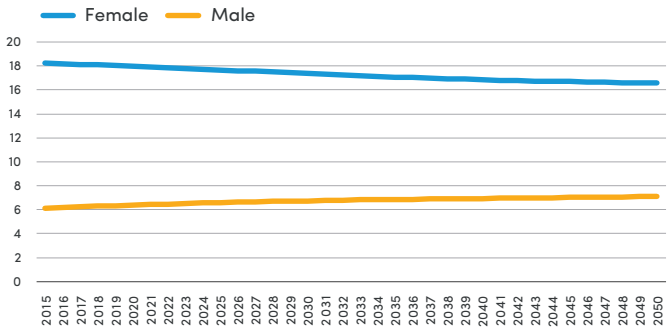
Again, it is important to approach cross-country comparisons of these data with extra caution, due to differences in survey methodologies and many surveys likely underestimating time spent due to simultaneous activities such as cooking and childcare.

UNPAID CARE WORK ALONG THE CURRENT PATH

At the current trajectory, the forecasts based on the International Futures Model show that the gap between time spent by men and women will close slightly, but by 2050 women globally will still be spending 9.5 percentage points more time, or 2.3 more hours per day on unpaid care and domestic work than men.

FIGURE 3

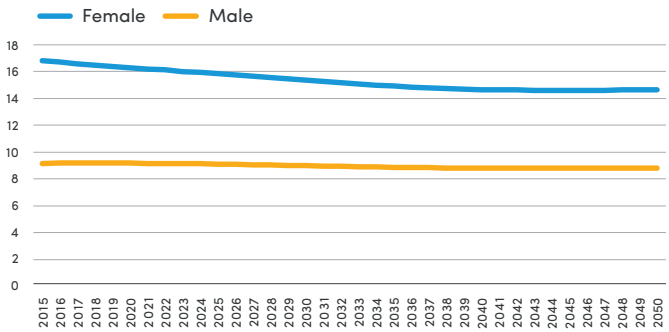
Time spent in unpaid care work by sex, percent of 24-hour day, global average, 2015-2050



Source: UN Women and the Pardee Center for International Futures using IFs v.7.97.

FIGURE 4

Time spent in unpaid care work by sex, percent of 24-hour day, Europe and Northern America, 2015-2050

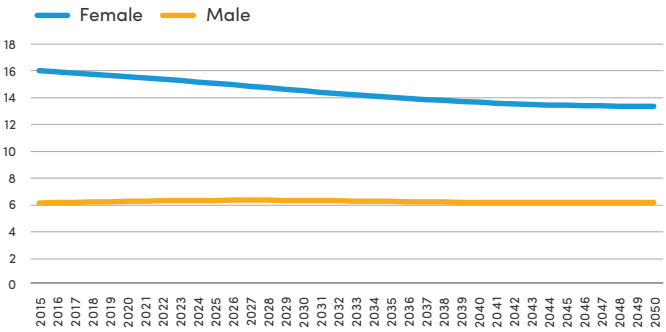


Source: UN Women and the Pardee Center for International Futures using IFs v.7.97.

The gender gap is projected to shrink slightly across all regions, but due to different dynamics. In Europe and Northern America (Figure 4), the population is aging, and, with fewer young children, there is a slightly lowered demand for unpaid care of young children. See Figure 4. Here, the time spent by women reduces by 0.3 hours between 2023 and 2050, and the time spent by men is roughly the same, falling by less than 0.1 hours. A similar dynamic is evident in Eastern and South-Eastern Asia (Figure 5) where time spent by men changes little through the horizon, but the time spent by women is projected to fall by more than 0.4 hours.

FIGURE 5

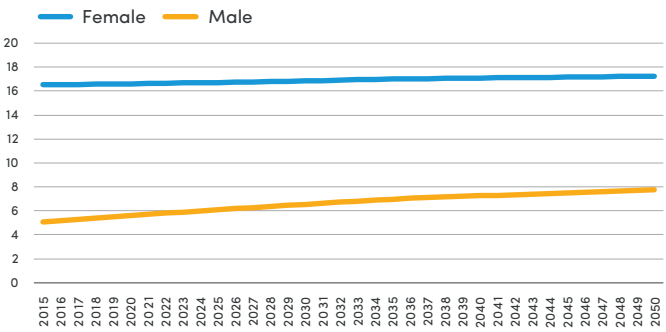
Time spent in unpaid care work by sex, percent of 24-hour day, Eastern and South-eastern Asia, 2015-2050



Source: UN Women and the Pardee Center for International Futures using IFs v.7.97.

FIGURE 6

Time spent in unpaid care work by sex, percent of 24-hour day, Sub-Saharan Africa, 2015-2050



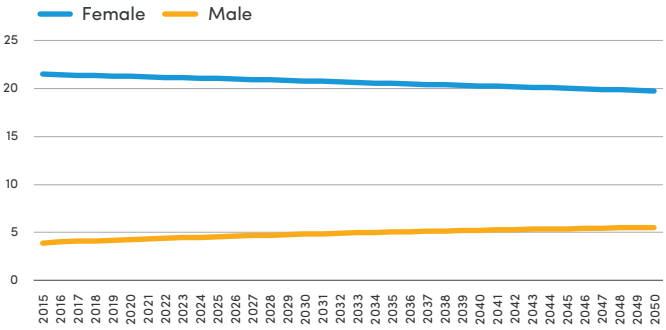
Source: UN Women and the Pardee Center for International Futures using IFs v.7.97.

However, in Sub-Saharan Africa the reduction of the gender gap is not due to a reduction in women's hours but an increase in men's. Women's time also increases over the time horizon, from 16.6 percent of their day in 2023 to 17.2 percent in 2050, while the time spent by men increases from an estimated 5.9 percent of their day in 2023 to 7.8 percent of their day in 2050. The IFs Current Path does not project a significant increase in

women's labor force participation on the region; at nearly 65 percent it is well above the global average (49 percent) and that of the other regions in this analysis. Moreover, Sub-Saharan Africa is and is projected to have a young demography, resulting in relatively higher unpaid care responsibilities and considerable time spent in care work by women and men. However, as highlighted above, even as men's unpaid care work time increases in this specific region, the gender gap globally is expected to remain sizeable at over 9.5 percentage points of the day, or 2.3 hours by 2030.

FIGURE 7

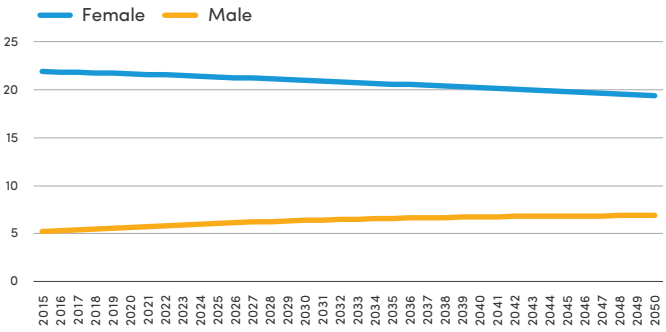
Time spent in unpaid care work by sex, percent of 24-hour day, Northern Africa and Western Asia, 2015-2050



Source: UN Women and the Pardee Center for International Futures using IFs v.7.97.

FIGURE 8

Time spent in unpaid care work by sex, percent of 24-hour day, Central and Southern Asia, 2015-2050

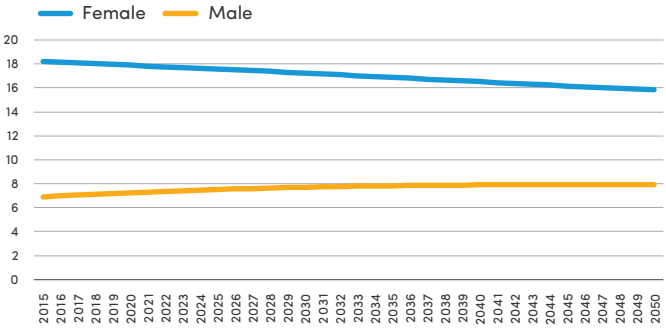


Source: UN Women and the Pardee Center for International Futures using IFs v.7.97.

In all other regions, the gap closes to varying degrees as time spent by both men and women converge between 2023 and 2050. In Northern Africa and Western Asia, the gap is projected to close from 4 hours to 3.4 (Figure 7), in Central and Southern Asia from 3.8 to 3 hours (Figure 8), in Latin America and the Caribbean from 2.5 to 1.9 hours (Figure 9), in Oceania (excluding Australia and New Zealand) from 3 to 2.7 hours (Figure 10) and in Australia and New Zealand from 2 to 1.8 hours.

FIGURE 9

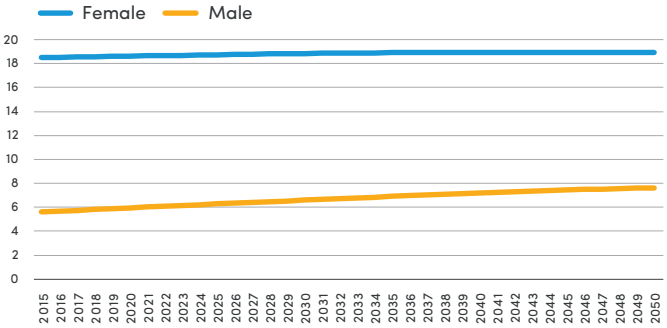
Time spent in unpaid care work by sex, percent of 24-hour day, Latin America and the Caribbean, 2015-2050



Source: UN Women and the Pardee Center for International Futures using IFs v.7.97.

FIGURE 10

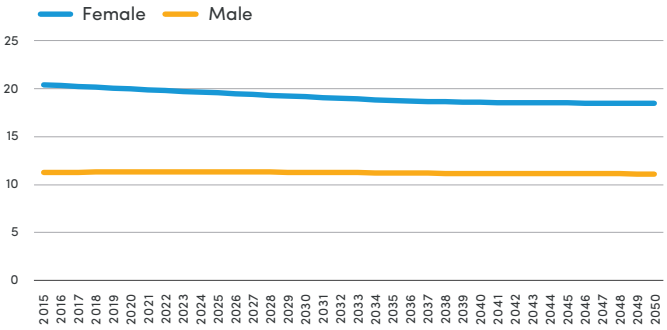
Time spent in unpaid care work by sex, percent of 24-hour day, Oceania (excluding Australia and New Zealand), 2015-2050



Source: UN Women and the Pardee Center for International Futures using IFs v.7.97.

FIGURE 11

Time spent in unpaid care work by sex, percent of 24-hour day, Australia and New Zealand, 2015-2050



Source: UN Women and the Pardee Center for International Futures using IFs v.7.97.

In the IFs *Current Path*, the time spent by men is forecast to increase by just 13 minutes between 2022 and 2100, the end of the model time horizon. Time spent by women is projected to fall more rapidly, reducing by 39 minutes in the same period, but leaving a remaining gap still of nearly two hours (1 hour and 53 minutes) at the end of the century. This is not out of line with an ILO (2018) estimate that the gender gap in unpaid care work will not close for over 200 years. While there is a great deal of uncertainty surrounding the future of unpaid care work, it will clearly take transformative policy action to reduce the gender gap in the coming decades.

CONCLUDING REMARKS

This technical brief presents forecasts of the time spent in unpaid care work by sex across different income groups and regions. These forecasts are projections based on an expected current path of development, but they should not be seen as definitive forecasts or a limitation to the potential future. Policy measures, such as improving the provision of childcare services and other institutions that can support the care function in society, could have a significant impact on the future of unpaid care work. Likewise, a slow change in discriminatory gender norms can also adversely affect the division of unpaid care and domestic work in the household. Countries that invest in affordable, quality childcare and eldercare services may close the gender gap in time spent faster than what is projected here.

It is important to acknowledge the limitations inherent to these estimations and forecasts. First, as described in the Data section, the data that we have are subject to serious limitations and, due to potentially differing questions and methodologies, may not be exactly comparable. Second, the availability of the data is highly limited. Data exist for less than 5 percent of country-years in IFs from 2000-2020, limiting our ability to establish a strong relationship with driving variables. Moreover, the data only date back to 2000, meaning long-term forecasts should be seen as highly uncertain.

This brief details the addition of a new variable measuring the time spent by men and women in unpaid care work to the IFs modeling platform. This has resulted in:

1. Incorporation of data from UNSD and UN Women on unpaid care work into the IFs system;
2. Estimation of values for countries where data are not available;
3. A forecast of the time spent in unpaid care work by men and women, driven by changes in demographic and gender dynamics.

Currently, this variable does not have forward linkages to drive changes in the IFs model. Future work pertaining to this question could build those forward linkages and explore the potential effects of policies to reduce the hours or the gender gap in unpaid care work.

ANNEX TABLES

TABLE 1: Estimates and projections of proportion of time spent in unpaid care and domestic work in a 24-hour day, by region and sex, 2015-2050

Region	Year	Female	Male
World	2015	18.25	6.14
World	2016	18.2	6.19
World	2017	18.14	6.25
World	2018	18.08	6.30
World	2019	18.03	6.35
World	2020	17.97	6.40
World	2021	17.91	6.44
World	2022	17.85	6.48
World	2023	17.79	6.52
World	2024	17.73	6.56
World	2025	17.67	6.60
World	2026	17.61	6.63
World	2027	17.55	6.66
World	2028	17.49	6.69
World	2029	17.43	6.72
World	2030	17.37	6.75
World	2031	17.3	6.77
World	2032	17.24	6.79
World	2033	17.19	6.82
World	2034	17.13	6.84
World	2035	17.08	6.86
World	2036	17.03	6.88
World	2037	16.98	6.89
World	2038	16.93	6.91
World	2039	16.89	6.93
World	2040	16.85	6.94
World	2041	16.81	6.96
World	2042	16.78	6.97
World	2043	16.74	6.99
World	2044	16.71	7.00
World	2045	16.69	7.02
World	2046	16.66	7.04
World	2047	16.64	7.06
World	2048	16.62	7.07
World	2049	16.6	7.09
World	2050	16.58	7.11
Australia and New Zealand	2015	20.38	11.26
Australia and New Zealand	2016	20.31	11.28
Australia and New Zealand	2017	20.22	11.29
Australia and New Zealand	2018	20.14	11.31
Australia and New Zealand	2019	20.05	11.32
Australia and New Zealand	2020	19.97	11.33
Australia and New Zealand	2021	19.88	11.34
Australia and New Zealand	2022	19.79	11.34
Australia and New Zealand	2023	19.71	11.35
Australia and New Zealand	2024	19.63	11.34
Australia and New Zealand	2025	19.55	11.34
Australia and New Zealand	2026	19.47	11.33
Australia and New Zealand	2027	19.39	11.33
Australia and New Zealand	2028	19.31	11.32
Australia and New Zealand	2029	19.23	11.3
Australia and New Zealand	2030	19.15	11.29
Australia and New Zealand	2031	19.07	11.28
Australia and New Zealand	2032	18.99	11.26

Australia and New Zealand	2033	18.91	11.25
Australia and New Zealand	2034	18.83	11.23
Australia and New Zealand	2035	18.77	11.22
Australia and New Zealand	2036	18.71	11.2
Australia and New Zealand	2037	18.66	11.19
Australia and New Zealand	2038	18.62	11.18
Australia and New Zealand	2039	18.59	11.17
Australia and New Zealand	2040	18.57	11.16
Australia and New Zealand	2041	18.55	11.16
Australia and New Zealand	2042	18.53	11.16
Australia and New Zealand	2043	18.52	11.16
Australia and New Zealand	2044	18.51	11.16
Australia and New Zealand	2045	18.51	11.16
Australia and New Zealand	2046	18.5	11.16
Australia and New Zealand	2047	18.49	11.15
Australia and New Zealand	2048	18.48	11.14
Australia and New Zealand	2049	18.47	11.13
Australia and New Zealand	2050	18.45	11.11
Oceania (excl. Australia and New Zealand)	2015	18.5	5.61
Oceania (excl. Australia and New Zealand)	2016	18.53	5.684
Oceania (excl. Australia and New Zealand)	2017	18.55	5.757
Oceania (excl. Australia and New Zealand)	2018	18.58	5.829
Oceania (excl. Australia and New Zealand)	2019	18.6	5.9
Oceania (excl. Australia and New Zealand)	2020	18.62	5.968
Oceania (excl. Australia and New Zealand)	2021	18.65	6.034
Oceania (excl. Australia and New Zealand)	2022	18.67	6.1
Oceania (excl. Australia and New Zealand)	2023	18.69	6.164
Oceania (excl. Australia and New Zealand)	2024	18.71	6.228
Oceania (excl. Australia and New Zealand)	2025	18.73	6.291
Oceania (excl. Australia and New Zealand)	2026	18.76	6.354
Oceania (excl. Australia and New Zealand)	2027	18.78	6.417
Oceania (excl. Australia and New Zealand)	2028	18.8	6.479
Oceania (excl. Australia and New Zealand)	2029	18.82	6.542
Oceania (excl. Australia and New Zealand)	2030	18.84	6.604
Oceania (excl. Australia and New Zealand)	2031	18.85	6.667
Oceania (excl. Australia and New Zealand)	2032	18.87	6.729
Oceania (excl. Australia and New Zealand)	2033	18.89	6.791
Oceania (excl. Australia and New Zealand)	2034	18.9	6.852
Oceania (excl. Australia and New Zealand)	2035	18.91	6.914
Oceania (excl. Australia and New Zealand)	2036	18.93	6.975
Oceania (excl. Australia and New Zealand)	2037	18.94	7.035
Oceania (excl. Australia and New Zealand)	2038	18.94	7.095
Oceania (excl. Australia and New Zealand)	2039	18.95	7.155
Oceania (excl. Australia and New Zealand)	2040	18.95	7.212
Oceania (excl. Australia and New Zealand)	2041	18.95	7.267
Oceania (excl. Australia and New Zealand)	2042	18.95	7.321

Oceania (excl. Australia and New Zealand)	2043	18.95	7.373
Oceania (excl. Australia and New Zealand)	2044	18.95	7.423
Oceania (excl. Australia and New Zealand)	2045	18.94	7.46
Oceania (excl. Australia and New Zealand)	2046	18.94	7.497
Oceania (excl. Australia and New Zealand)	2047	18.94	7.534
Oceania (excl. Australia and New Zealand)	2048	18.93	7.571
Oceania (excl. Australia and New Zealand)	2049	18.92	7.606
Oceania (excl. Australia and New Zealand)	2050	18.91	7.643
Central and Southern Asia	2015	21.86	5.264
Central and Southern Asia	2016	21.81	5.365
Central and Southern Asia	2017	21.76	5.463
Central and Southern Asia	2018	21.71	5.558
Central and Southern Asia	2019	21.66	5.648
Central and Southern Asia	2020	21.6	5.735
Central and Southern Asia	2021	21.55	5.817
Central and Southern Asia	2022	21.49	5.895
Central and Southern Asia	2023	21.43	5.97
Central and Southern Asia	2024	21.36	6.042
Central and Southern Asia	2025	21.3	6.111
Central and Southern Asia	2026	21.23	6.177
Central and Southern Asia	2027	21.16	6.24
Central and Southern Asia	2028	21.09	6.3
Central and Southern Asia	2029	21.02	6.357
Central and Southern Asia	2030	20.94	6.41
Central and Southern Asia	2031	20.87	6.461
Central and Southern Asia	2032	20.79	6.508
Central and Southern Asia	2033	20.71	6.552
Central and Southern Asia	2034	20.64	6.594
Central and Southern Asia	2035	20.56	6.633
Central and Southern Asia	2036	20.48	6.669
Central and Southern Asia	2037	20.4	6.703
Central and Southern Asia	2038	20.31	6.734
Central and Southern Asia	2039	20.23	6.762
Central and Southern Asia	2040	20.15	6.788
Central and Southern Asia	2041	20.06	6.811
Central and Southern Asia	2042	19.98	6.833
Central and Southern Asia	2043	19.9	6.852
Central and Southern Asia	2044	19.81	6.868
Central and Southern Asia	2045	19.73	6.882
Central and Southern Asia	2046	19.65	6.894
Central and Southern Asia	2047	19.56	6.904
Central and Southern Asia	2048	19.48	6.912
Central and Southern Asia	2049	19.4	6.919
Central and Southern Asia	2050	19.32	6.925
Europe and Northern America	2015	16.81	9.165
Europe and Northern America	2016	16.7	9.172

Europe and Northern America	2017	16.6	9.175
Europe and Northern America	2018	16.49	9.176
Europe and Northern America	2019	16.4	9.174
Europe and Northern America	2020	16.3	9.17
Europe and Northern America	2021	16.21	9.163
Europe and Northern America	2022	16.12	9.153
Europe and Northern America	2023	16.02	9.14
Europe and Northern America	2024	15.93	9.124
Europe and Northern America	2025	15.83	9.106
Europe and Northern America	2026	15.74	9.087
Europe and Northern America	2027	15.64	9.066
Europe and Northern America	2028	15.55	9.043
Europe and Northern America	2029	15.46	9.02
Europe and Northern America	2030	15.36	8.995
Europe and Northern America	2031	15.27	8.971
Europe and Northern America	2032	15.17	8.947
Europe and Northern America	2033	15.08	8.923
Europe and Northern America	2034	15	8.9
Europe and Northern America	2035	14.92	8.877
Europe and Northern America	2036	14.85	8.857
Europe and Northern America	2037	14.78	8.84
Europe and Northern America	2038	14.73	8.825
Europe and Northern America	2039	14.69	8.813
Europe and Northern America	2040	14.67	8.805
Europe and Northern America	2041	14.65	8.799
Europe and Northern America	2042	14.63	8.794
Europe and Northern America	2043	14.62	8.791
Europe and Northern America	2044	14.62	8.789
Europe and Northern America	2045	14.62	8.788
Europe and Northern America	2046	14.62	8.788
Europe and Northern America	2047	14.62	8.788
Europe and Northern America	2048	14.63	8.789
Europe and Northern America	2049	14.64	8.79
Europe and Northern America	2050	14.65	8.79
Eastern and South-Eastern Asia	2015	15.93	6.053
Eastern and South-Eastern Asia	2016	15.85	6.084
Eastern and South-Eastern Asia	2017	15.77	6.111
Eastern and South-Eastern Asia	2018	15.68	6.135
Eastern and South-Eastern Asia	2019	15.59	6.158
Eastern and South-Eastern Asia	2020	15.5	6.179
Eastern and South-Eastern Asia	2021	15.4	6.198
Eastern and South-Eastern Asia	2022	15.31	6.215
Eastern and South-Eastern Asia	2023	15.2	6.231
Eastern and South-Eastern Asia	2024	15.1	6.243
Eastern and South-Eastern Asia	2025	15	6.253
Eastern and South-Eastern Asia	2026	14.89	6.259

Eastern and South-Eastern Asia	2027	14.78	6.262
Eastern and South-Eastern Asia	2028	14.67	6.261
Eastern and South-Eastern Asia	2029	14.56	6.257
Eastern and South-Eastern Asia	2030	14.45	6.249
Eastern and South-Eastern Asia	2031	14.34	6.239
Eastern and South-Eastern Asia	2032	14.23	6.225
Eastern and South-Eastern Asia	2033	14.13	6.21
Eastern and South-Eastern Asia	2034	14.03	6.193
Eastern and South-Eastern Asia	2035	13.94	6.177
Eastern and South-Eastern Asia	2036	13.85	6.161
Eastern and South-Eastern Asia	2037	13.78	6.146
Eastern and South-Eastern Asia	2038	13.71	6.132
Eastern and South-Eastern Asia	2039	13.64	6.121
Eastern and South-Eastern Asia	2040	13.58	6.113
Eastern and South-Eastern Asia	2041	13.52	6.107
Eastern and South-Eastern Asia	2042	13.46	6.104
Eastern and South-Eastern Asia	2043	13.41	6.104
Eastern and South-Eastern Asia	2044	13.37	6.105
Eastern and South-Eastern Asia	2045	13.35	6.107
Eastern and South-Eastern Asia	2046	13.33	6.11
Eastern and South-Eastern Asia	2047	13.31	6.112
Eastern and South-Eastern Asia	2048	13.3	6.114
Eastern and South-Eastern Asia	2049	13.3	6.115
Eastern and South-Eastern Asia	2050	13.3	6.114
Northern Africa and Western Asia	2015	21.5	3.926
Northern Africa and Western Asia	2016	21.43	4.01
Northern Africa and Western Asia	2017	21.38	4.081
Northern Africa and Western Asia	2018	21.34	4.149
Northern Africa and Western Asia	2019	21.29	4.215
Northern Africa and Western Asia	2020	21.25	4.28
Northern Africa and Western Asia	2021	21.21	4.342
Northern Africa and Western Asia	2022	21.16	4.402
Northern Africa and Western Asia	2023	21.12	4.46
Northern Africa and Western Asia	2024	21.08	4.518
Northern Africa and Western Asia	2025	21.03	4.573
Northern Africa and Western Asia	2026	20.98	4.627
Northern Africa and Western Asia	2027	20.93	4.679
Northern Africa and Western Asia	2028	20.88	4.73
Northern Africa and Western Asia	2029	20.83	4.779
Northern Africa and Western Asia	2030	20.78	4.826
Northern Africa and Western Asia	2031	20.73	4.873
Northern Africa and Western Asia	2032	20.67	4.918
Northern Africa and Western Asia	2033	20.62	4.963
Northern Africa and Western Asia	2034	20.57	5.006
Northern Africa and Western Asia	2035	20.52	5.049
Northern Africa and Western Asia	2036	20.47	5.091

Northern Africa and Western Asia	2037	20.42	5.133
Northern Africa and Western Asia	2038	20.37	5.174
Northern Africa and Western Asia	2039	20.32	5.214
Northern Africa and Western Asia	2040	20.27	5.249
Northern Africa and Western Asia	2041	20.22	5.282
Northern Africa and Western Asia	2042	20.17	5.314
Northern Africa and Western Asia	2043	20.12	5.345
Northern Africa and Western Asia	2044	20.07	5.372
Northern Africa and Western Asia	2045	20.02	5.4
Northern Africa and Western Asia	2046	19.96	5.427
Northern Africa and Western Asia	2047	19.91	5.453
Northern Africa and Western Asia	2048	19.85	5.479
Northern Africa and Western Asia	2049	19.79	5.503
Northern Africa and Western Asia	2050	19.73	5.528
Sub-Saharan Africa	2015	16.48	5.079
Sub-Saharan Africa	2016	16.49	5.193
Sub-Saharan Africa	2017	16.51	5.302
Sub-Saharan Africa	2018	16.52	5.409
Sub-Saharan Africa	2019	16.54	5.514
Sub-Saharan Africa	2020	16.56	5.616
Sub-Saharan Africa	2021	16.58	5.716
Sub-Saharan Africa	2022	16.6	5.814
Sub-Saharan Africa	2023	16.63	5.911
Sub-Saharan Africa	2024	16.65	6.006
Sub-Saharan Africa	2025	16.67	6.1
Sub-Saharan Africa	2026	16.7	6.194
Sub-Saharan Africa	2027	16.73	6.286
Sub-Saharan Africa	2028	16.75	6.377
Sub-Saharan Africa	2029	16.78	6.467
Sub-Saharan Africa	2030	16.81	6.556
Sub-Saharan Africa	2031	16.84	6.643
Sub-Saharan Africa	2032	16.87	6.728
Sub-Saharan Africa	2033	16.9	6.812
Sub-Saharan Africa	2034	16.93	6.894
Sub-Saharan Africa	2035	16.95	6.973
Sub-Saharan Africa	2036	16.98	7.045
Sub-Saharan Africa	2037	17	7.111
Sub-Saharan Africa	2038	17.02	7.171
Sub-Saharan Africa	2039	17.03	7.217
Sub-Saharan Africa	2040	17.04	7.262
Sub-Saharan Africa	2041	17.06	7.304
Sub-Saharan Africa	2042	17.07	7.347
Sub-Saharan Africa	2043	17.09	7.393
Sub-Saharan Africa	2044	17.1	7.441
Sub-Saharan Africa	2045	17.12	7.492
Sub-Saharan Africa	2046	17.14	7.545
Sub-Saharan Africa	2047	17.16	7.6
Sub-Saharan Africa	2048	17.18	7.658
Sub-Saharan Africa	2049	17.2	7.717
Sub-Saharan Africa	2050	17.21	7.777
Latin America and the Caribbean	2015	18.16	6.868
Latin America and the Caribbean	2016	18.09	6.944
Latin America and the Caribbean	2017	18.03	7.015
Latin America and the Caribbean	2018	17.96	7.084
Latin America and the Caribbean	2019	17.89	7.15
Latin America and the Caribbean	2020	17.83	7.212
Latin America and the Caribbean	2021	17.76	7.27
Latin America and the Caribbean	2022	17.7	7.327
Latin America and the Caribbean	2023	17.64	7.38

Latin America and the Caribbean	2024	17.57	7.432
Latin America and the Caribbean	2025	17.51	7.479
Latin America and the Caribbean	2026	17.44	7.524
Latin America and the Caribbean	2027	17.38	7.565
Latin America and the Caribbean	2028	17.31	7.602
Latin America and the Caribbean	2029	17.24	7.637
Latin America and the Caribbean	2030	17.17	7.669
Latin America and the Caribbean	2031	17.1	7.698
Latin America and the Caribbean	2032	17.03	7.724
Latin America and the Caribbean	2033	16.96	7.749
Latin America and the Caribbean	2034	16.88	7.771
Latin America and the Caribbean	2035	16.81	7.791
Latin America and the Caribbean	2036	16.74	7.809
Latin America and the Caribbean	2037	16.67	7.825
Latin America and the Caribbean	2038	16.6	7.839
Latin America and the Caribbean	2039	16.53	7.851
Latin America and the Caribbean	2040	16.45	7.862
Latin America and the Caribbean	2041	16.38	7.87
Latin America and the Caribbean	2042	16.31	7.877
Latin America and the Caribbean	2043	16.24	7.883
Latin America and the Caribbean	2044	16.17	7.886
Latin America and the Caribbean	2045	16.1	7.888
Latin America and the Caribbean	2046	16.03	7.889
Latin America and the Caribbean	2047	15.97	7.888
Latin America and the Caribbean	2048	15.9	7.886
Latin America and the Caribbean	2049	15.83	7.883
Latin America and the Caribbean	2050	15.76	7.878

Table 2: Proportion of time spent in unpaid care and domestic work in a 24-hour day, by country, females, select years

Country/Region	2023	2030	2050
Afghanistan	21.6	21.6	21.3
Albania	20.8	19.9	15.4
Algeria	21.2	20.9	19.6
Angola	14.9	15.2	15.8
Argentina	22.7	22.0	20.2
Armenia	20.8	19.8	17.7
Australia	20.1	19.5	18.8
Austria	18.5	17.8	16.0
Azerbaijan	25.2	24.8	24.0
Bahamas	16.0	15.6	14.2
Bahrain	18.7	17.6	16.4
Bangladesh	20.9	20.4	18.3
Barbados	15.5	15.1	14.1
Belarus	18.5	17.6	18.0
Belgium	15.4	15.0	14.5
Belize	18.9	18.6	17.4
Benin	16.1	16.4	17.1
Bhutan	14.6	14.2	12.9
Bolivia	22.9	22.5	20.9
Bosnia and Herzegovina	17.1	16.0	13.5

Botswana	16.9	16.8	16.5
Brazil	11.1	10.7	9.6
Brunei Darussalam	17.4	16.9	15.9
Bulgaria	17.3	16.4	16.0
Burkina Faso	16.8	16.8	17.1
Burundi	14.3	14.7	15.6
Cabo Verde	18.5	18.2	16.7
Cambodia	12.4	12.3	11.6
Cameroon	15.8	15.9	16.4
Canada	14.2	14.0	13.6
Central African Republic	15.1	15.2	15.1
Chad	15.8	15.9	16.1
Chile	21.2	20.1	18.0
China	14.6	13.6	12.3
Colombia	4.9	4.7	4.2
Comoros	20.1	20.0	20.0
Congo	17.1	17.4	18.0
Congo; Dem. Republic of the	15.8	16.1	16.7
Costa Rica	21.2	20.4	17.9
Cote D'Ivoire	18.3	18.3	18.4
Croatia	15.4	14.6	13.2
Cuba	19.8	19.1	16.6
Cyprus	16.2	15.1	13.3
Czech Republic	15.2	14.2	14.3
Denmark	15.0	15.1	14.4
Djibouti	18.6	18.4	17.8
Dominican Republic	16.4	16.0	14.5
Ecuador	19.3	18.8	17.0
Egypt	22.0	21.7	20.7
El Salvador	19.9	19.3	17.1
Equatorial Guinea	17.8	17.6	17.8
Eritrea	15.4	15.5	15.5
Estonia	16.6	15.6	14.4
Eswatini	21.2	21.0	20.1
Ethiopia	19.4	19.5	19.7
Fiji	14.9	14.6	13.7

Finland	14.9	14.6	14.3
France	15.2	15.0	14.8
Gabon	19.4	19.2	19.1
Gambia	17.8	17.9	18.1
Georgia	16.3	15.6	15.0
Germany	16.2	15.9	14.6
Ghana	15.5	15.6	15.9
Greece	16.4	14.9	13.6
Grenada	17.6	17.1	16.1
Guatemala	17.7	17.5	16.4
Guinea	16.8	17.1	17.6
Guinea Bissau	16.1	16.2	16.5
Guyana	19.7	19.4	17.7
Haiti	17.4	17.3	17.0
Honduras	17.2	17.0	15.7
Hong Kong	10.3	9.8	8.4
Hungary	16.0	15.2	14.3
Iceland	14.7	14.4	13.3
India	22.2	21.6	19.8
Indonesia	18.5	18.0	16.6
Iran	20.2	19.4	18.0
Iraq	24.0	23.9	23.3
Ireland	19.5	18.9	18.2
Israel	17.6	17.4	16.7
Italy	18.3	17.0	16.0
Jamaica	17.5	16.8	14.0
Japan	13.4	12.0	11.3
Jordan	23.1	22.8	21.4
Kazakhstan	18.7	18.6	18.1
Kenya	16.1	16.5	16.8
Kiribati	17.9	18.0	18.0
Korea; Dem. People's Republic	14.7	14.4	13.8
Korea; Republic of	13.1	11.8	8.8
Kosovo	16.1	15.4	14.3
Kuwait	17.4	16.3	16.1
Kyrgyzstan	16.6	16.4	15.9

Lao People's Dem. Republic	13.8	13.9	13.5
Latvia	17.0	16.2	16.1
Lebanon	21.6	20.3	18.8
Lesotho	15.3	15.2	14.9
Liberia	6.3	6.4	6.6
Libya	20.7	20.3	18.8
Lithuania	16.8	16.4	15.2
Luxembourg	14.0	13.5	12.8
Macedonia; North	14.6	13.8	11.9
Madagascar	14.5	14.8	15.2
Malawi	8.7	8.9	9.2
Malaysia	18.5	17.9	16.4
Maldives	19.0	18.1	16.1
Mali	16.1	16.2	16.5
Malta	17.5	16.1	11.8
Mauritania	20.7	20.6	20.3
Mauritius	17.9	17.2	14.4
Mexico	28.8	28.0	25.4
Micronesia	17.8	17.6	16.7
Moldova; Republic of	20.0	19.4	19.3
Mongolia	17.3	17.3	16.9
Montenegro	17.4	16.9	15.7
Morocco	20.4	19.9	18.2
Mozambique	14.9	15.2	15.9
Myanmar	18.4	17.9	16.5
Namibia	17.9	17.9	18.0
Nepal	15.3	15.3	14.6
Netherlands	14.0	13.7	12.8
New Zealand	17.6	17.3	16.3
Nicaragua	18.8	18.5	17.0
Niger	16.1	16.1	16.2
Nigeria	18.2	18.4	18.8
Norway	14.9	14.7	14.3
Oman	18.1	17.3	16.8
Pakistan	19.8	19.6	19.0
Palestine	20.1	20.0	19.4

Panama	17.5	17.2	15.8
Papua New Guinea	19.4	19.6	19.7
Paraguay	14.3	14.0	13.0
Peru	23.0	22.5	20.6
Philippines	18.8	18.6	17.4
Poland	17.0	15.5	12.7
Portugal	16.1	14.8	13.9
Puerto Rico	15.6	14.5	13.6
Qatar	7.6	6.8	4.7
Romania	17.6	16.6	15.7
Russian Federation	17.8	16.9	17.3
Rwanda	14.5	14.9	15.2
Sahrawi Arab Dem Rep	17.4	17.6	17.8
Samoa	20.6	20.5	20.1
Sao Tome and Principe	19.1	19.1	18.8
Saudi Arabia	21.9	21.4	20.1
Senegal	19.9	19.9	19.8
Serbia	18.1	17.1	15.5
Seychelles	18.0	17.3	16.1
Sierra Leone	17.7	18.0	18.4
Singapore	14.4	13.3	10.2
Slovakia	15.9	14.7	12.9
Slovenia	19.2	17.8	17.4
Solomon Islands	14.5	14.7	15.3
Somalia	20.9	20.9	20.7
South Africa	15.3	15.1	14.4
Spain	16.9	15.1	14.0
Sri Lanka	20.0	19.3	17.4
St. Lucia	17.0	16.2	13.5
St. Vincent and the Grenadines	17.9	17.3	15.9
Sudan	20.8	20.6	20.3
Sudan South	15.8	16.1	16.7
Suriname	20.0	19.7	18.4
Sweden	16.0	15.8	15.5
Switzerland	16.0	15.4	14.8
Syrian Arab Republic	22.9	22.8	21.6

Taiwan	15.7	14.2	10.2
Tajikistan	20.9	20.8	20.2
Tanzania	16.6	16.9	17.7
Thailand	11.1	10.5	8.8
Timor-Leste	17.1	17.1	17.0
Togo	15.3	15.6	16.1
Tonga	19.0	18.8	18.1
Trinidad and Tobago	17.5	16.7	15.6
Tunisia	21.2	20.6	19.0
Turkey	18.6	17.9	16.1
Turkmenistan	18.6	18.4	17.4
Uganda	15.0	15.3	15.9
Ukraine	16.5	15.4	14.9

United Arab Emirates	17.5	15.5	6.5
United Kingdom	12.3	11.9	11.6
United States of America	15.4	15.1	14.3
Uruguay	19.1	18.5	16.7
Uzbekistan	18.5	18.1	17.0
Vanuatu	16.8	16.7	16.7
Venezuela; Bolivarian Republic	18.8	18.5	17.4
Viet Nam	15.7	15.3	14.7
Yemen	23.6	23.5	23.0
Zambia	15.4	15.6	16.2
Zimbabwe	14.6	14.7	15.1

Table 3: Proportion of time spent in unpaid care and domestic work in a 24-hour day, by country, males, select years

Country/Region	2023	2030	2050
Afghanistan	3.3	4.0	5.6
Albania	3.5	3.5	3.1
Algeria	4.1	4.4	4.8
Angola	5.8	6.3	7.3
Argentina	9.7	10.1	10.3
Armenia	4.5	4.5	4.4
Australia	11.5	11.4	11.3
Austria	10.1	9.8	9.0
Azerbaijan	9.3	9.4	9.1
Bahamas	9.4	9.5	9.1
Bahrain	8.2	8.4	8.0
Bangladesh	6.8	7.4	8.0
Barbados	9.0	8.8	8.2
Belarus	9.5	9.3	9.4
Belgium	10.1	10.0	9.7
Belize	7.3	7.9	8.8
Benin	6.1	6.6	7.9
Bhutan	6.7	7.1	7.1
Bolivia	13.8	15.0	16.7
Bosnia and Herzegovina	7.5	7.2	6.4

Botswana	7.7	8.2	9.2
Brazil	5.4	5.5	5.3
Brunei Darussalam	8.8	9.0	8.7
Bulgaria	9.1	8.8	8.5
Burkina Faso	5.4	6.1	7.6
Burundi	5.9	6.8	8.2
Cabo Verde	7.8	8.4	8.7
Cambodia	1.4	1.4	1.5
Cameroon	5.2	5.7	6.7
Canada	9.5	9.4	9.2
Central African Republic	5.5	6.3	7.2
Chad	5.0	5.7	6.7
Chile	10.1	10.2	9.8
China	5.9	5.8	5.3
Colombia	3.1	3.2	3.2
Comoros	5.2	5.7	6.9
Congo	5.8	6.4	7.5
Congo; Dem. Republic of the	5.3	5.9	7.2
Costa Rica	8.9	9.0	8.7
Cote D'Ivoire	5.2	6.0	7.5
Croatia	7.9	7.7	7.0

Cuba	12.5	12.2	11.3
Cyprus	8.9	8.7	7.7
Czech Republic	8.3	8.1	8.1
Denmark	11.2	11.2	10.8
Djibouti	7.1	7.7	8.6
Dominican Republic	4.2	4.5	4.7
Ecuador	5.2	5.6	5.8
Egypt	2.7	2.9	3.5
El Salvador	8.1	8.8	9.2
Equatorial Guinea	6.2	6.3	7.0
Eritrea	6.8	7.6	8.9
Estonia	10.8	10.6	9.9
Eswatini	5.1	5.9	7.6
Ethiopia	7.9	8.7	10.3
Fiji	5.6	5.9	6.7
Finland	10.3	10.1	10.0
France	9.5	9.4	9.3
Gabon	6.0	6.4	7.6
Gambia	5.0	5.9	7.3
Georgia	9.1	9.1	9.1
Germany	10.5	10.3	9.7
Ghana	5.0	5.5	6.4
Greece	6.7	6.4	5.7
Grenada	8.7	8.9	9.0
Guatemala	2.9	3.3	3.9
Guinea	5.8	6.3	7.5
Guinea Bissau	6.2	6.8	8.1
Guyana	7.1	7.8	8.5
Haiti	7.5	8.1	8.9
Honduras	5.1	5.7	6.4
Hong Kong	3.3	3.2	2.8
Hungary	7.8	7.7	7.4
Iceland	9.7	9.5	9.0
India	6.4	6.9	7.5
Indonesia	8.2	8.5	8.8
Iran	5.8	6.0	6.1
Iraq	5.4	6.4	8.6
Ireland	9.1	9.1	8.8

Israel	8.5	8.7	9.0
Italy	8.0	7.6	7.2
Jamaica	8.7	8.9	8.1
Japan	3.0	2.8	2.7
Jordan	5.2	5.8	7.1
Kazakhstan	6.5	6.5	6.7
Kenya	6.8	7.5	8.9
Kiribati	6.8	7.2	8.5
Korea; Dem. People's Republic	9.9	9.9	9.8
Korea; Republic of	3.5	3.2	2.4
Kosovo	9.1	9.1	9.0
Kuwait	8.6	8.5	8.0
Kyrgyzstan	10.4	10.7	12.3
Lao People's Dem. Republic	11.1	11.8	12.7
Latvia	8.9	8.7	8.6
Lebanon	7.0	7.3	7.2
Lesotho	6.7	7.2	8.5
Liberia	3.0	3.3	3.8
Libya	6.8	7.3	8.0
Lithuania	8.5	8.3	7.6
Luxembourg	7.1	7.0	6.7
Macedonia; North	5.5	5.4	5.1
Madagascar	7.3	7.9	8.9
Malawi	1.5	1.8	2.1
Malaysia	6.5	6.8	6.9
Maldives	8.1	8.5	8.3
Mali	5.1	5.9	7.5
Malta	6.9	6.7	5.3
Mauritania	4.2	5.0	6.6
Mauritius	4.9	4.9	4.5
Mexico	10.7	11.3	11.8
Micronesia	7.5	8.1	9.1
Moldova; Republic of	11.2	11.1	11.0
Mongolia	6.8	6.9	7.4
Montenegro	8.4	8.3	8.0
Morocco	3.3	3.5	3.8

Mozambique	6.3	6.9	8.3
Myanmar	8.2	8.6	8.9
Namibia	6.7	7.1	8.4
Nepal	8.6	9.2	9.9
Netherlands	9.1	9.0	8.6
New Zealand	10.6	10.6	10.3
Nicaragua	7.4	8.0	8.8
Niger	4.8	5.6	7.2
Nigeria	5.0	5.7	6.8
Norway	12.3	12.1	11.8
Oman	8.5	8.8	8.9
Pakistan	2.3	2.6	3.2
Palestine	3.9	4.6	6.2
Panama	8.1	8.4	8.8
Papua New Guinea	6.1	6.6	7.6
Paraguay	4.8	5.1	5.6
Peru	9.6	10.0	10.1
Philippines	7.2	7.8	8.8
Poland	9.7	9.3	7.9
Portugal	9.8	9.2	8.3
Puerto Rico	6.5	6.2	5.9
Qatar	2.4	2.3	1.7
Romania	9.2	9.1	8.7
Russian Federation	8.1	8.0	8.2
Rwanda	7.5	8.1	9.5
Sahrawi Arab Dem Rep	6.0	7.0	8.3
Samoa	5.1	5.8	7.2
Sao Tome and Principe	5.1	6.0	7.7
Saudi Arabia	6.8	7.1	7.4
Senegal	4.6	5.4	7.2
Serbia	8.6	8.5	7.9
Seychelles	8.6	8.7	8.7
Sierra Leone	5.9	6.5	7.6
Singapore	8.8	8.2	6.5
Slovakia	8.4	8.2	7.3
Slovenia	10.8	10.2	9.7
Solomon Islands	7.2	7.6	8.8

Somalia	2.8	3.5	5.1
South Africa	7.1	7.4	7.9
Spain	8.2	7.6	6.7
Sri Lanka	7.7	7.9	8.0
St. Lucia	9.0	9.0	8.2
St. Vincent and the Grenadines	8.6	8.8	8.9
Sudan	4.4	5.0	6.5
Sudan South	6.1	6.7	7.5
Suriname	7.4	7.7	8.3
Sweden	12.7	12.6	12.3
Switzerland	10.7	10.4	10.0
Syrian Arab Republic	4.4	5.6	7.0
Taiwan	8.2	7.7	5.5
Tajikistan	5.5	6.0	7.5
Tanzania	4.8	5.3	6.4
Thailand	3.7	3.6	3.2
Timor-Leste	6.9	7.7	8.8
Togo	6.8	7.4	8.5
Tonga	6.3	7.1	8.4
Trinidad and Tobago	8.6	8.6	8.4
Tunisia	2.9	3.0	3.1
Turkey	4.0	4.2	4.2
Turkmenistan	7.6	7.9	8.8
Uganda	9.8	11.1	13.6
Ukraine	8.3	8.1	7.9
United Arab Emirates	8.7	8.6	3.5
United Kingdom	7.0	7.0	6.9
United States of America	9.8	9.8	9.7
Uruguay	8.6	8.7	8.6
Uzbekistan	7.9	8.3	8.9
Vanuatu	6.4	6.9	8.4
Venezuela; Bolivarian Republic	7.9	8.2	8.8
Viet Nam	9.5	9.6	9.3
Yemen	3.4	4.1	5.7
Zambia	6.0	6.7	8.0
Zimbabwe	6.8	7.6	9.2

REFERENCES

Amarante, V., & Rossel, C. (2018). Unfolding Patterns of Unpaid Household Work in Latin America. *Feminist Economics*, *24*(1), 1–34. https://doi.org/10.1080/13545701.2017.1344776

Anxo, D., Mencarini, L., Pailhé, A., Solaz, A., Tanturri, M. L., & Flood, L. (2011). Gender Differences in Time Use over the Life Course in France, Italy, Sweden, and the US. *Feminist Economics*, *17*(3), 159–195. https://doi.org/10.1080/13545701.2011.582822

Azcona, G., Bhatt, A., Cole, W., Gammarano, R., & Kapsos, S. (2020). *The Impact of Marriage and Children on Labour Market Participation: Spotlight on Goal 8* (Spotlight on the SDGs No. 3; Spotlight on the SDGs, Vol. 3). UN Women and International Labour Organization. https://doi.org/10.18356/88f157a4-en

Boone, C., Glick, P., & Sahn, D. E. (2011). Household Water Supply Choice and Time Allocated to Water Collection: Evidence from Madagascar. *The Journal of Development Studies*, *47*(12), 1826–1850. https://doi.org/10.1080/00220388.2011.579394

Burda, M., Hamermesh, D. S., & Weil, P. (2013). Total work and gender: Facts and possible explanations. *Journal of Population Economics*, *26*(1), 239–261. https://doi.org/10.1007/s00148-012-0408-x

Campaña, J., Giménez-Nadal, J. I., & Molina, J. A. (2015). *Gender Differences in the Distribution of Total Work-Time of Latin-American Families: The Importance of Social Norms* (SSRN Scholarly Paper No. 2589775). https://papers.ssrn.com/abstract=2589775

Charmes, J. (2019a). *How Women and Men Spend Their Time across the World and How It Is Changing over Time* [Invited paper for the panel session on Women's Initiative and Development over the Course of Civilization, 2019 Beijing Forum.].

Charmes, J. (2019b). *The unpaid care work and the labour market. An analysis of time use data based on the latest World Compilation of Time-use Surveys*. International Labour Organization. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---gender/documents/publication/wcms_732791.pdf

DeGraff, D. S., Levison, D., & Dungumaro, E. W. (2017). Environmental Chores, Household Time Use, and Gender in Rural Tanzania. In R. Connelly & E. Kongar (Eds.), *Gender and Time Use in a Global Context: The Economics of Employment and Unpaid Labor* (pp. 407–434). Palgrave Macmillan US. https://doi.org/10.1057/978-1-137-56837-3_16

Ferrant, G., Pesando, L. M., & Nowacka, K. (2014). *Unpaid Care Work: The missing link in the analysis of gender gaps in labour outcomes*. OECD Development Centre.

Floro, M. S., & Miles, M. (2003). Time use, work and overlapping activities: Evidence from Australia. *Cambridge Journal of Economics*, *27*(6), 881–904. https://doi.org/10.1093/cje/27.6.881

Folbre, N. (1996). Engendering economics: New perspectives on women, work, and demographic change. In M. Bruno & B. Pleskovic (Eds.), *Annual World Bank Conference on Development Economics 1995* (pp. 127–153). World Bank Publications.

Folbre, N., & Yoon, J. (2007). What is child care? Lessons from time-use surveys of major English-speaking countries. *Review of Economics of the Household*, *5*(3), 223–248. https://doi.org/10.1007/s11150-007-9012-3

García Román, J., & Gracia, P. (2022). Gender differences in time use across age groups: A study of ten industrialized countries, 2005–2015. *PLoS ONE*, *17*(3), e0264411. https://doi.org/10.1371/journal.pone.0264411

Heintz, J. (2018). *Stalled progress: Recent research on why labor markets are failing women*. https://idl-bnc-idrc.dspacedirect.org/handle/10625/57259

Hochschild, A., & Machung, A. (2012). *The Second Shift: Working Families and the Revolution at Home*. Penguin.

Hughes, B. B. (2019). *Exploring and understanding international futures: Building a global model system*. Elsevier.

ILO. (2018). *Care work and care jobs for the future of decent work*. International Labour Organization. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_633135.pdf

Krantz-Kent, R. (2009). Measuring time spent in unpaid household work: Results from the American Time Use Survey. *Monthly Labor Review: MLR*, *132*(7), 46–59.

Rubiano-Matulevich, E., & Viollaz, M. (2019). *Gender Differences in Time Use: Allocating Time between the Market and the Household* [Working Paper]. World Bank. https://doi.org/10.1596/1813-9450-8981

Sevilla-Sanz, A., Gimenez-Nadal, J. I., & Fernández, C. (2010). Gender Roles and the Division of Unpaid Work in Spanish Households. *Feminist Economics*, *16*(4), 137–184. https://doi.org/10.1080/13545701.2010.531197

UN. 2023. SDG Global Database. Accessible at: https://unstats.un.org/sdgs/dataportal

WHO & UNICEF. (2017). *Progress on drinking-water, sanitation and hygiene: 2017 update and SDG baselines*. World Health Organization & United Nations Children's Fund. https://www.who.int/publications-detail-redirect/9789241512893