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ANÁLISIS COMPARATIVO DEL USO DEL TIEMPO EN CHILE SEGÚN LA ENCUESTA NACIONAL DE USO DE TIEMPO 2015 Y 2023

POR

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The data related to ENUT 2015 and 2023 are publicly available on the website of the National Institute of Statistics (INE).

Descriptive and econometric analyses were conducted using open-access statistical software.

Resumen

Este estudio analiza comparativamente los cambios en el uso del tiempo en la población chilena, a partir de los datos de la Encuesta Nacional de Uso del Tiempo (ENUT) de los años 2015 y 2023. Mediante un enfoque mixto que combina análisis cualitativo, descriptivo y econométrico, se identifican patrones diferenciados en la distribución del tiempo según sexo, edad, nivel educacional, ingreso y ubicación geográfica.

El estudio se enmarca en un contexto nacional atravesado por transformaciones sociales, económicas y culturales de gran escala. Las movilizaciones sociales de 2019, la pandemia de COVID-19 y la implementación de políticas como el teletrabajo y el incipiente Plan Nacional de Cuidados han alterado las dinámicas cotidianas de millones de personas.

Entre los hallazgos más relevantes destaca la persistencia de brechas de género en el trabajo doméstico y de cuidados, la caída en la participación de personas mayores en múltiples esferas de la vida social, y el aumento del tiempo dedicado al transporte en regiones fuera de la capital. Además, se identifica un perfil emergente de mujeres jóvenes con alta inserción laboral y educativa, que también cargan con tareas reproductivas sin una redistribución proporcional, lo que evidencia una intensificación de la doble jornada.

Para entender cómo las personas deciden distribuir su presupuesto semanal de tiempo entre distintas actividades, se realizó un análisis econométrico que permitió identificar perfiles temporales diferenciados y sus transformaciones entre 2015 y 2023, aportando evidencia empírica para el diseño de políticas públicas más justas y con enfoque de equidad de género.

Asimismo, se identifican oportunidades de mejora en las propias ENUT, particularmente en la comparabilidad metodológica, la periodicidad de aplicación y la integración con otras fuentes de datos.

En conjunto, los resultados refuerzan la urgencia de un Sistema Nacional de Cuidados efectivo y de gran alcance, la incorporación del tiempo como variable en políticas laborales y urbanas, y el fortalecimiento del derecho al ocio como dimensión del bienestar.

Abstract

This study offers a comparative analysis of changes in time-use among the Chilean population, based on data from the National Time Use Survey (ENUT) for the years 2015 and 2023. Using a mixed-methods approach that combines qualitative, descriptive, and econometric analysis, the study identifies differentiated patterns in time distribution by sex, age, educational level, income, and geographic location.

The study is framed within a national context marked by large-scale social, economic, and cultural transformations. The 2019 social uprisings, the COVID-19 pandemic, and the implementation of policies such as telework and the emerging National Care Plan have significantly altered the daily dynamics of millions of people.

Key findings include the persistence of gender gaps in domestic and caregiving work, the decline in participation of older adults in multiple areas of social life, and the increase in commuting time in regions outside the capital. In addition, an emerging profile is identified: young women with high levels of labor market and educational participation who also carry reproductive responsibilities, without a proportional redistribution, revealing an intensification of the double burden.

To understand how individuals allocate their weekly time budget across different activities, an econometric analysis was conducted. This allowed the identification of distinct temporal profiles and their transformations between 2015 and 2023, providing empirical evidence to support the design of more equitable and gender-sensitive public policies.

The study also highlights areas for improvement in the ENUT itself, particularly in methodological comparability, survey frequency, and integration with other data sources.

Taken together, the results reinforce the urgency of implementing an effective and far-reaching National Care System, incorporating time as a variable in labor and urban policies, and strengthening the right to leisure as a dimension of well-being.

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1. Introduction

Time is a universal, finite, and irreplaceable resource. Unlike other resources such as income or material goods, it cannot be accumulated or transferred. Although everyone has the same number of hours each day, the way time is used reflects deep social inequalities. In contemporary societies, time-use analysis has become a key tool for understanding social, economic, and gender dynamics. How people organize their daily activities reveals both opportunities and constraints. For this reason, it offers a privileged lens to observe persistent inequalities, often hidden from traditional statistics, and to analyze key dynamics related to well-being, autonomy, and quality of life (Folbre, 2009; ECLAC, 2021).

In Latin America, the interest in measuring and valuing time-use has gained increasing importance in recent years, particularly within gender equality policies and the recognition of unpaid work. Several countries have implemented surveys to quantify the time dedicated to various activities. In this context, Chile was relatively late in developing systematic time-use statistics (ECLAC, 2021; Durán, 2012).

In Chile, institutional efforts to understand time-use materialized in 2015 with the implementation of the National Time Use Survey (ENUT), conducted by the National Institute of Statistics (INE). For the first time, the survey provided representative data on the activities carried out daily by men and women, including paid work, domestic tasks, caregiving, studying, leisure, transportation, and rest. Since then, ENUT has become a key input for the design of public policies aimed at promoting shared responsibility for care and gender equality (INE, 2017).

The second ENUT, conducted in 2023, introduced major methodological innovations that allow for a more accurate representation of the complexities of everyday life. Notable improvements include the recording of simultaneous activities, a detailed breakdown of caregiving, and updated categories to reflect emerging phenomena such as telework, e-commerce, and the digitalization of services. These improvements enable a more sophisticated comparison between the two periods and offer a valuable opportunity to assess whether structural changes have occurred in how Chileans organize their time (INE, 2025).

The availability of these two datasets provides a valuable opportunity to study how time allocation has evolved in a context of accelerated social change. In recent years, Chile has undergone several key transformations: the COVID-19 pandemic, the 2019 social uprisings, the expansion of

remote work, and growing public debate around caregiving. These shifts have altered time dynamics at home and in the workplace, with different impacts by gender, socioeconomic status, and stage of the life course (ECLAC, 2021).

1.1 Motivation

Time is a key dimension for understanding social and gender inequalities. However, it still does not occupy a central place in public policy design, despite its relevance for interpreting dynamics of well-being and equity.

Comparing the first two editions of the ENUT provides an opportunity to examine how time allocation patterns have changed in Chilean society during a period marked by major social, economic, and cultural transformations. In particular, the advance of digitalization has introduced new forms of work and consumption that directly affect the organization of everyday time. For instance, e-commerce sales grew from US\$2.48 billion in 2015 to US\$10.98 billion in 2023, affecting the time spent shopping and traveling (Biblioteca del Congreso Nacional, 2023). Another key milestone was Law No. 21.220, enacted in 2020, which formalized remote work and telecommuting (Congreso Nacional de Chile, 2020).

At the institutional level, unpaid work has gained visibility through the National Care Plan, which aims to recognize its economic and social value. However, a considerable gap remains between symbolic recognition and the effective implementation of shared responsibility policies.

This research seeks to contribute to a deeper understanding of time-use as an expression of structural inequalities in the Chilean context. Through a comparative and econometric analysis of ENUT 2015 and 2023 data, the study aims to generate empirical evidence to support the design of fairer and more context-sensitive public policies.

1.2 Objectives

This study aims to contribute to the understanding of time distribution in Chilean society. Based on the availability of two comparable editions of the National Time Use Survey, the following objectives are proposed.

1.2.1 General objective

Analyze changes in time-use among the Chilean population by comparing data from the first and second editions of the National Time Use Survey (ENUT).

1.2.2 Specific objectives

- i. Conduct a descriptive analysis of the 2015 and 2023 ENUT results to identify the main differences in time allocation within the Chilean population.
- ii. Analyze changes over time in the hours devoted to domestic tasks, paid work, and leisure, comparing the 2015 and 2023 ENUT data.
- iii. Apply econometric tools to identify the socioeconomic factors that explain shifts in time distribution across the two surveys.
- iv. Examine the policy implications of the findings from the comparison between the 2015 and 2023 ENUT, particularly in relation to work, caregiving, and gender equity.

1.3 Structure of the Undergraduate Thesis

This Undergraduate Thesis is organized into five chapters:

- Chapter 1: Introduction. Presents the research problem, its social and academic relevance, the general and specific objectives of the study, and the motivations behind its development.
- Chapter 2: Conceptual framework and literature review. Explores the concept of time from an interdisciplinary perspective, delves into the study of unpaid work and its social distribution, and reviews national and international background on time-use surveys.
- Chapter 3: Methodology. Describes the comparison between the 2015 and 2023 ENUT surveys, the data processing and harmonization procedures, the descriptive analysis conducted, and the econometric approach based on a multiple discrete-continuous model.
- Chapter 4: Results. Presents the findings from the descriptive and econometric analysis, with a focus on differences by gender, educational level, age, income, and geographic location. Data from 2015 and 2023 are compared to identify changes in time organization.
- Chapter 5: Conclusions. Interprets the results based on the theoretical framework and reviewed literature, and reflects on their implications for public policy, especially in areas such as labor, caregiving, and gender equity. The main limitations of the study and future research directions are also discussed.

2. Conceptual framework and literature review

This chapter presents the conceptual framework that underpins the analysis of time-use as a key dimension in understanding social inequalities. It establishes a theoretical foundation for interpreting how time is distributed between paid and unpaid activities, drawing on perspectives from sociology and economics. In particular, it reviews core concepts such as care work, the social organization of time, and the economics of time.

The second part of the chapter provides a literature review on time-use surveys, both internationally and within Chile. It examines their main methodological features and historical development. This review helps contextualize the data used in this research and highlights its analytical potential.

2.1 Time, its distribution, and unpaid work

The concept of time varies depending on the disciplinary lens through which it is approached. In classical physics, time is defined as an objective, linear, and measurable quantity. In contrast, the social sciences understand it as a cultural and historical construct, deeply connected to social structure, power relations, and material conditions (Adam, 1990). From this perspective, the distribution of time is not solely the result of individual decisions, but is shaped by social norms, gender, class, age, and family roles.

Contemporary social theory suggests that modern societies are undergoing a process of social acceleration, where the pace of life intensifies and available time is perceived as increasingly scarce (Rosa, 2013). This sense of urgency is not evenly distributed: women bear a heavier overall workload, which restricts their time for leisure, rest, and social participation (ECLAC, 2021; UN Women, 2020).

The economic analysis of time was formally developed through Becker's time allocation model, which proposes that households maximize utility by distributing their time across paid work, domestic work, and leisure, under dual constraints of income and time availability. This approach introduced the concept of household production, recognizing that households not only consume goods but also produce them (Becker, 1965).

Later, minimum time constraints were added to the model to better reflect the real-life experience of households (DeSerpa, 1971). Feminist economists have pointed out that these models

overlook power relations and gender roles, often rendering unpaid care work invisible (Durán, 2012; Folbre, 2009, 2022).

Unpaid work includes tasks such as cooking, cleaning, caring for children or elderly people, accompanying others in errands, and engaging in community work. Although these activities do not generate income, they sustain the economy and household well-being. Regional studies estimate that if unpaid work were monetized, its value could represent between 20% and 25% of GDP in Latin America (ECLAC, 2021; Charmes, 2019).

Since the 2000s, international organizations such as the ILO, ECLAC, and UN Women have promoted the “3R” framework: recognize, reduce, and redistribute care work. This agenda seeks to make its value visible, reduce its disproportionate burden, and encourage its fair distribution among the state, the market, the community, and households (ILO, 2018; UN Women, 2020).

Within this framework, the concept of time poverty has also been introduced, referring to the lack of sufficient time for rest, self-care, or social participation. This form of deprivation negatively affects well-being, economic autonomy, and mental health, especially among women (Vickery, 1977; Kahneman & Krueger, 2006).

In Chile, a functional model has been proposed that distinguishes among three categories: contracted time (paid work), committed time (unpaid work and caregiving), and free time (personal choice activities). Empirical evidence shows that women adjust their free time in response to increased domestic demands, unlike men, who tend to keep their leisure time constant (Jara-Díaz & Candia, 2017). Recent studies have also estimated economic values for each time category using microeconomic models and multiple discrete-continuous choice models (Jara-Díaz & Candia, 2020).

Moreover, the way time is distributed between productive and recreational activities depends not only on individual preferences but also on institutional and cultural conditions that define which activities are socially recognized. Analysis shows that weekly data better captures leisure and transportation dynamics than models based only on reference days (Jara-Díaz & Rosales-Salas, 2015).

In this area, the MDCEV model (Multiple Discrete Continuous Extreme Value) stands out. It allows for simultaneous modeling of the decision to engage in an activity and the amount of time allocated to it (Bhat, 2008). This approach has been applied in studies demonstrating that women's

leisure time is systematically undervalued compared to men's, both in monetary terms and in contributions to well-being (Schmid, 2019; Astroza et al., 2018).

The COVID-19 pandemic further deepened these gaps. During lockdowns, the amount of time spent on unpaid care work increased significantly and was distributed highly unequally (UN Women, 2020). Women took on most additional tasks related to remote education, household cleaning, and caring for ill family members, while men's time-use patterns remained largely unchanged. This external shock revealed the fragility of existing care arrangements and the lack of effective shared responsibility mechanisms.

2.2 Time-use surveys in Chile and around the world

Time-use surveys are key instruments for quantifying and characterizing how people allocate their time across daily activities. They make it possible to reveal unpaid and caregiving work, estimate the total workload, identify inequalities based on gender, age, and socioeconomic level, and generate evidence to inform public policy in areas such as health, transportation, shared responsibility, and social security (UNDP, 2015; ECLAC, 2021; INE, 2025).

These surveys have been developed using different methodologies. Some rely on retrospective approaches, others use time diaries, and some are included as modules within household or multipurpose surveys (UNDP, 2015). While there is no single standard for implementation, international organizations have promoted harmonization efforts to ensure cross-country comparability. A notable reference is the International Classification of Activities for Time Use Statistics (ICATUS, 2016), developed by the United Nations. It groups activities into fifteen broad categories and distinguishes between work included in and excluded from the System of National Accounts (ICATUS, 2016). In parallel, Eurostat has promoted the HETUS (Harmonised European Time Use Surveys) framework since the 1990s, which standardizes instruments, periodicity, and coding across EU countries (Tchipeva, Miceli & Ninka, 2021).

Europe has been a pioneer in implementing time-use surveys under comparable standards. Countries such as Germany, France, Italy, Spain, Sweden, and Finland have conducted regular surveys using the HETUS framework, enabling longitudinal analyses and disaggregation by sex, age, occupation, and household type (Eurostat, 2020). These surveys typically rely on 24-hour time diaries completed by individuals aged 10 or 12 and older, using standardized coding for both primary and secondary activities (Tchipeva, Miceli & Ninka, 2021).

In the United States, the American Time Use Survey (ATUS) has been conducted annually since 2003, based on telephone interviews that reconstruct a typical day. Although it does not include simultaneous activities, its high frequency allows for the tracking of long-term trends. Data show that women spend more than twice as much time as men on unpaid work, particularly childcare and domestic tasks (UN Women, 2020). Canada, meanwhile, has included time-use modules in its national surveys every five years, using 24-hour diaries (UN Women, 2020).

In Oceania, both Australia and New Zealand have conducted comprehensive time-use surveys. Australia's most recent survey was carried out in 2016 with a representative sample and a structure similar to HETUS. New Zealand last conducted its survey in 2013. In Asia, Japan and South Korea have implemented time-use surveys since the 1990s, although less frequently (ILO, 2018). In Africa, countries such as Ghana, South Africa, Malawi, and Guinea have included time-use modules in national surveys or MICS (Multiple Indicator Cluster Surveys), providing basic information on domestic work and caregiving in resource-constrained settings (ILO, 2018).

In Latin America and the Caribbean, significant progress has been made in implementing time-use surveys, driven by ECLAC, UN Women, and national statistical offices. Since 2015, countries such as Mexico, Colombia, Ecuador, Uruguay, Brazil, the Dominican Republic, and Chile have conducted at least one time-use survey. These instruments typically use activity diaries, adopt a gender perspective, and align with ICATUS (Aguirre & Ferrari, 2014; ECLAC, 2021). In several cases, the results have supported the creation of satellite accounts for unpaid work and allowed for the estimation of its economic contribution to GDP (Charmes, 2019). Many of these surveys have also included complementary modules on commuting, simultaneous activities, ICT use, and satisfaction with time distribution (ECLAC, 2021).

Chile conducted its first National Time Use Survey (ENUT) in 2015, using a nationally representative sample of individuals aged 12 and older. The instrument was based on a 24-hour diary and allowed for classification of activities in categories compatible with ICATUS. The results revealed significant gender gaps; for instance, women reported spending an average of 5.9 hours per day on unpaid work, compared to 2.7 hours for men (INE, 2016).

The second edition of ENUT was released in 2023 and incorporated methodological improvements, new variables such as caregiving-related travel, and finer territorial disaggregation. The results confirm the persistence of inequality: women continue to spend more time on domestic

tasks and have less leisure time (INE, 2025). The 2023 ENUT also included modules on volunteer work and support to other households, capturing forms of community labor that are often invisible (INE, 2025).

Both versions of ENUT have been recognized for their technical quality and have supported the design of public policies focused on shared responsibility, the recognition of care work, and subjective well-being (ECLAC, 2021; INE, 2025). They have also been used as empirical foundations for econometric estimations of the value of time assigned to various activities, especially in studies applying discrete choice models (Jara-Díaz & Candia, 2017; Astroza et al., 2018).

2.3 Definitions according to ENUT Chile

The National Time Use Surveys in Chile operate under standardized definitions of different forms of work, based on the International Classification of Activities for Time Use Statistics (ICATUS). These definitions distinguish between activities included in the System of National Accounts (SNA) and those that, although not remunerated or counted in GDP, generate economic and social value for households and the community (INE, 2016; INE, 2024).

According to the National Institute of Statistics (INE), three broad categories of work are defined:

- **Paid work:** Includes all activities carried out in exchange for monetary or in-kind compensation, such as formal employment, self-employment, occasional work, or informal income-generating activities. This is the only type of work included in the SNA.
- **Unpaid work for own household use:** Covers unpaid activities aimed at maintaining the household and its members. It includes domestic tasks (cooking, cleaning, laundry), household management (shopping, errands), caregiving for children, older adults, or sick individuals, and support for household members in educational or work-related activities. This type of work is not recorded in the SNA, but can be valued through satellite accounts.
- **Unpaid work for other households, the community, or organizations:** Includes volunteer activities, assistance to individuals from other households (without pay), and participation in social, religious, or neighborhood organizations. Although socially useful, this form of work is also excluded from the SNA.

These definitions enable consistent and comparable measurement of time-use, particularly in relation to gender inequalities. The 2023 ENUT explicitly incorporates a social co-responsibility approach to caregiving, introducing indicators that highlight the contribution of unpaid work to overall well-being and the functioning of the economic system (INE, 2024).

Within the framework of this research, these categories are fundamental for constructing the variables used in the analysis, distinguishing between time allocated to paid work, unpaid work, and other time-use activities.

3. Methodology

This chapter outlines the methodological approach used to address the main objective of this research: to comparatively analyze time distribution in Chile based on the 2015 and 2023 editions of the ENUT. Three analytical strategies are combined:

- A qualitative, document-based analysis focused on methodological differences between the two versions of the survey.
- A descriptive analysis of participation and time spent by activity type, according to relevant sociodemographic variables.
- An econometric analysis based on a multiple discrete-continuous model, which allows for simultaneous estimation of both the decision to engage in an activity and the amount of time devoted to it.

3.1 Qualitative comparative analysis of the surveys

This study relies primarily on microdata from the National Time Use Survey (ENUT), conducted by the National Institute of Statistics (INE) in 2015 and 2023. Both surveys were designed to characterize time organization among the Chilean population, distinguishing between paid, unpaid, personal, and leisure activities.

The 2015 ENUT was carried out between September and December of that year using a probabilistic, stratified, two-stage, and clustered sampling design. The sample was representative at the national, regional, and sex levels. The instrument included household, dwelling, and individual questionnaires, as well as a time-use diary with ten-minute intervals over a reference day. Activities were coded using a classification derived from ICATUS 2005 (INE, 2016).

The 2023 ENUT, conducted between August and December 2023, maintained the same target population, individuals aged 12 and older living in private households, and used a probabilistic, stratified, two-stage sampling design, with national and regional representativeness. While retaining the general structure of the previous instrument, it adopted an activity coding system primarily based on CAUTAL (ECLAC, 2016), with complementary references to ICATUS 2016. It also improved contextual variables such as location, mobility, company, and use of technology (INE, 2025).

Both surveys are fundamental tools for studying time-use in Chile, as they allow for the identification of gender gaps, structural inequalities, and participation patterns in daily activities. The methodological differences between the two editions were carefully considered during the data harmonization process, which is described in the following section.

3.2 Data processing and harmonization

Since the 2015 and 2023 ENUT surveys were conducted at different points in time, using different classifications, formats, and levels of disaggregation, a rigorous data harmonization process was necessary. This section describes how the datasets used in this study were prepared, including the characteristics of the original databases, the criteria used for grouping activities, the construction of explanatory variables, and the conditions required to ensure comparability across both periods.

3.2.1 Original databases

The original versions of ENUT 2015 and ENUT 2023 were downloaded from the website of the National Institute of Statistics (INE). Both surveys are organized in modules that include questionnaires on housing, households, individuals, and time-use diaries. The data used in this study come from individual records of daily activities and sociodemographic variables from the individual questionnaires.

ENUT 2015 coded activities using a national typology based on ICATUS 2005, whereas ENUT 2023 applied a coding system adapted from CAUTAL, with some elements from ICATUS 2016. There are also differences in the number of contextual variables available, such as caregiving details, the presence of simultaneous activities, and transportation modes.

3.2.2 Harmonized databases

To facilitate comparative analysis, this study used harmonized versions of the 2015 and 2023 ENUT surveys, developed under FONDECYT Project 1221724 (Reyes-Polanco, 2023, 2025). These databases underwent a rigorous cleaning process, which included removing observations with unjustified missing values, outliers, or inconsistencies, as well as particular cases such as illness, strikes, or vacations (Vallejo, 2022; Morales, 2021). One of the main methodological challenges was the presence of overreporting or underreporting of time, which prevented the total daily time from summing exactly 24 hours. To correct this inconsistency, a proportional scaling procedure was applied: reported times for paid work and sleep were kept fixed, while the remaining activities were adjusted proportionally until reaching exactly 24 hours (Jara-Díaz & Candia, 2020; Vallejo, 2022).

This adjustment was complemented by the construction of a standard seven-day week composed of five weekdays, one Saturday, and one Sunday (Jara-Díaz & Rosales-Salas, 2015; Astroza et al., 2018). Since the ENUT collects time-use information for only one weekend day per respondent, the unobserved day was imputed using a “twin” approach, in which sociodemographically similar individuals were paired through a linear programming model (Munizaga et al., 2011). The matching process considered variables such as gender, age, educational level, region, income quintile, and weekly hours of paid work (Morales, 2021), allowing for the reconstruction of a complete weekly time-use pattern for each individual.

The harmonized dataset was imported into the R statistical environment for further processing. From these harmonized versions, new variables were created, activities were grouped, and the input dataset for the econometric model was constructed.

Specifically, for the year 2015, hours spent on job searching were added to the paid work category. Additionally, to clearly distinguish between rest, relaxation, or leisure time spent at home, the leisure variable was divided into leisure at home and leisure outside the home. It was assumed that activities such as reading, drawing, playing a musical instrument, among others, take place within the home.

3.2.3 Activity classification

Based on the activity diaries, all reported actions were classified into eight broad categories:

1. Paid work
2. Domestic work
3. Care work
4. Study
5. Transportation
6. Volunteering
7. Leisure out of home
8. Time at home

This classification was built using a correspondence table between the codes used in ENUT 2015 (ICATUS 2005) and ENUT 2023 (CAUTAL and adapted ICATUS 2016). The objective was to maximize comparability without losing analytical detail. The “Time at home” category includes time

that all individuals, without exception, devote to activities carried out at home: sleeping, eating, personal hygiene and self-care, and relaxing at home, among others.

3.2.4 Explanatory variables

Equivalent variables were constructed for both surveys to characterize each individual and their context. The variables considered in this study are:

1. Sex: binary (1 = female, 0 = male)
2. Age: categorized in life-cycle stages: 12–24 years, 25–44 years, 45–65 years, and 66 years or older
3. Educational level: categorical (none, primary, secondary, technical, university)
4. Household income: recoded into approximate quintile-based brackets
5. Presence of children under 12: binary
6. Type of area: binary (1 = Metropolitan Region, 0 = other regions)
7. Year of observation: binary (1 = 2023, 0 = 2015)

These variables allow for an assessment of how individual and household characteristics influence time organization.

3.2.5 Conditions for comparability

Since methodological differences between the two surveys required additional adjustments to avoid comparative bias, the following criteria were applied:

- Simultaneous activities: As only the 2023 ENUT includes this variable, only the primary activity was considered for both surveys.
- Caregiving: In 2023, caregiving is disaggregated into several subcategories; for comparison purposes, all were grouped into a single category consistent with the 2015 coding.
- Transportation: Only the blocks classified as transportation were used, excluding details on purpose or mode of travel, which are only available in the 2023 survey.
- Educational level and income: These were recoded to ensure equivalent definitions and grouped into five levels (none, primary, secondary, technical, university) and income brackets by quintile.

These decisions aim to ensure that the differences observed in the analysis reflect actual changes in how people organize their time, rather than methodological artifacts.

3.3 Descriptive analysis

The objective of the descriptive analysis is to comparatively explore time distribution across different population groups using data from the 2015 and 2023 ENUT surveys. For this purpose, visualizations were developed and weekly averages of hours devoted to each activity category were calculated.

The analysis universe includes all individuals aged 12 and older living in private households, in both urban and rural areas of the country, as defined by the National Institute of Statistics (INE) in both survey editions. The analysis was limited to individuals retained in the harmonized dataset. Analyses were conducted on both the full sample and specific subgroups, and in some cases, only on individuals who actually engaged in a given activity (e.g., only those who performed paid work or volunteered), as applicable.

Comparisons were organized into three main blocks:

- General comparison by sex and year.
- Activity-based analysis, disaggregated by sex.
- Subgroup analysis by age group (12–24, 25–44, 45–65, 66+), educational level (none, primary, secondary, technical, university), income quintile (per capita autonomous income), macrozone (Metropolitan Region vs. rest of the country), and presence of children in the household.

Calculations were based on the total weekly time reported per person for each activity, that is, the sum across all seven days of the week. No expansion factors were applied, so the results are not nationally representative and should be interpreted as comparative descriptions between subgroups in the harmonized dataset.

Data processing and analysis were conducted primarily in R, with spreadsheet software used for preliminary preparation tasks. The visualizations include bar charts, participation estimates by activity, and time load analysis, allowing for the identification of relevant differences between 2015 and 2023, as well as across the various subgroups analyzed.

3.4 Econometric analysis

Econometric analysis involves applying statistical methods to economic and social data in order to estimate relationships between variables, test hypotheses, and generate predictions (Wooldridge, 2016). In the context of time-use, this approach allows us to examine how different

individual, social, and contextual characteristics influence people's decisions regarding which activities they engage in and how much time they allocate to them. While descriptive analysis identifies aggregate patterns, econometrics enables the quantification of the specific effects of variables such as sex, educational level, or geographic location, and allows us to assess whether these effects have changed over time.

For this study, a multiple discrete-continuous extreme value (MDCEV) model with a reference good was estimated. This approach, originally developed within the framework of indirect utility theory (Bhat, 2008), has been previously applied to the Chilean context (Astroza et al., 2018). This type of model is well suited to represent the allocation of finite resources, such as time, across multiple possible uses, allowing for the simultaneous modeling of the decision to participate in an activity (extensive margin) and the amount of time spent on it (intensive margin).

In the version applied in this study, the satiation parameter α was fixed at 1, while the translation parameters γ_k were estimated freely. The model assumes that individuals allocate their time in order to maximize total utility, subject to a weekly time budget constraint of 168 hours. The indirect utility function is defined as:

$$\max_t U(t) = \sum_{k=1}^{K-1} \ln(t_k + \gamma_k) + \psi_k \cdot t_k \quad (1)$$

s.a.

$$\sum_{k=1}^K t_k = T \quad (2)$$

Where:

- t_k is the time allocated to activity k ,
- γ_k is a translation parameter that reflects basic needs or non-discretionary time-use,
- ψ_k represents the constant marginal utility of the reference good (outside good), denoted by k , which in this study includes activities such as passive rest or unstructured leisure,
- $T = 168$ is the total number of hours available per week.

In this study, the reference good includes activities such as sleeping, eating, personal hygiene, and unstructured leisure at home. It is modeled with a baseline utility of zero, unit cost, and fixed parameters $\gamma = 1$ and $\alpha = 1$, consistent with the functional form required by the Apollo package (Hess & Palma, 2025).

The systematic utility of each alternative was specified as a linear function of sociodemographic covariates, along with a binary indicator for the year of observation and its interactions. This formulation allows for assessing whether the effects associated with certain characteristics have changed significantly between 2015 and 2023. The functional specification is as follows:

$$V_k = \delta_k + \beta_X \cdot X + \beta_X^{2023} \cdot X \cdot I_{2023} \quad (3)$$

Where:

- V_k represents the systematic utility of alternative k ,
- δ_k is an alternative-specific constant (not applied to the outside good),
- X denotes a covariate such as sex, age, educational level, etc.,
- β_X is the estimated effect of X in the year 2015,
- β_X^{2023} represents the change in that effect in the year 2023,
- I_{2023} is a binary variable that takes the value 1 for observations from 2023 and 0 for those from 2015.

As an example, consider the case in which the covariate X corresponds to sex (coded as 1 for women and 0 for men). If the estimated coefficient for X is $\beta_1 = -0.8$ and its interaction with the year indicator is $\beta_1^{2023} = 0.4$, it implies that in 2015 being a woman reduced the utility associated with that activity by 0.8 units. In 2023, the total effect is -0.4, indicating a reduction in the gender gap.

This structure makes it possible to model systematic differences in individuals' sociodemographic profiles and how these differences relate to time allocation across activities. Moreover, by incorporating interaction terms with the year 2023, it enables a direct comparison between the two periods observed in the National Time Use Survey (ENUT). The model parameters are obtained through maximum likelihood estimation, which identifies the set of coefficients that maximize the probability of observing the data given the specified utility function.

4. Results

This chapter presents the results obtained from the three analyses conducted. The first section highlights the main differences between the 2015 and 2023 editions of the ENUT. The second presents the results of the descriptive analysis, and the third reports the findings from the econometric model.

4.1 Results of the qualitative comparative analysis of ENUT 2015 and 2023

This section aims to qualitatively compare the key methodological aspects of the first and second editions of the ENUT. This comparison helps identify potential sources of variation between the two measurements and more clearly define the scope of the results presented in the following sections. The analysis is structured around five dimensions: statistical design, data collection, data processing, variable structure, and available outputs.

4.1.1 Statistical design

Both editions of the ENUT were designed as probabilistic surveys with national urban coverage and regional representativeness by sex. However, they differ significantly in terms of sampling frame, definition of the target population, sampling units, and sample size.

In the 2015 ENUT, the target population included individuals aged 12 and older residing in occupied private dwellings in urban areas across 113 municipalities nationwide. The sampling frame was based on the 2002 Master Housing Frame from the national census, updated with administrative data and census cartography. The design was probabilistic, stratified, and two-stage. The primary sampling unit was the cluster, and the secondary unit was the household. The effective sample size reached 17,201 dwellings, with a target sample of 15,978 and an oversample rate of 7.6% (INE, 2017a).

In contrast, the 2023 ENUT fully updated its sampling frame using the 2020 Master Housing Frame, constructed based on the 2017 Census. The target population remained defined as individuals aged 12 and older who usually reside in private dwellings in urban areas, but coverage extended to 112 municipalities. The sampling design maintained the probabilistic, stratified, and two-stage structure, with the Primary Sampling Units (PSUs) in the first stage and occupied private dwellings in the second. The target sample size was 15,549 dwellings, with a substantial oversample of 41.1%, totaling 26,316 selected dwellings (INE, 2025a).

In both surveys, the units of observation were individuals living in the selected households, although different definitions were used for the unit of analysis. In the 2015 ENUT, separate datasets were used at the household, person, and activity levels, whereas in the 2023 ENUT, a single integrated dataset was used at the person level, with specific identifiers for households and dwellings (INE, 2025b).

These methodological differences, particularly in the sampling frame, the updated census base, and the magnitude of the oversample, may affect the comparability of results, especially for regional domains or specific subgroups.

4.1.2 Data collecting

The 2015 and 2023 ENUT surveys both relied on in-person data collection strategies, but with notable differences in the instruments used, the reference periods considered, and the complementary interview modalities.

In the 2015 ENUT, data collection was conducted through face-to-face interviews using paper questionnaires (PAPI), with no digital assistance. Two instruments were applied: the Household Questionnaire, administered to a qualified informant aged 18 or older, and the Time Use Questionnaire, administered to all household members aged 12 and older who were able to respond on their own. The survey used a single reference day for recording activities, randomly assigned to a weekday or weekend, and no deferred interviews were allowed (INE, 2017b).

In contrast, the 2023 ENUT maintained face-to-face interviews as the primary method (PAPI), but incorporated digital tools and backup methods, including computer-assisted personal interviews (CAPI). This edition also used two separate questionnaires depending on the respondent: one for the household, completed by the qualified informant, and another for individuals aged 12 and older. However, unlike the previous version, a more flexible system for assigning reference days was implemented, covering both weekdays and weekends. Multiple reference periods were recorded depending on the survey module: the previous week, the previous month, or the last four weeks, depending on the type of information collected (INE, 2025c; INE, 2025a).

A major innovation in 2023 was the introduction of new field validation measures and digital monitoring of fieldwork, aimed at improving data quality and reducing the risk of operational errors. Additionally, a specific section for simultaneous activities was added, allowing for the registration of more than one activity at a time, something that was not considered in the 2015 edition (INE, 2025d).

These differences in data collection, in field logistics, instruments, and reference periods, represent important considerations when comparing the two datasets, especially in interpreting daily totals and activity coverage.

4.1.3 Data processing

Data processing in the 2015 and 2023 ENUT surveys included editing, validation, coding, imputation, and the construction of derived variables. While both versions followed rigorous procedures, the second survey introduced substantial improvements in standardization and documentation.

In the 2015 ENUT, editing and validation were performed after data collection, with no real-time control mechanisms. Activity coding was done manually using a nationally adapted version of the ICATUS classification. No imputations were applied for missing values in key variables, and missing data were recorded using special codes. The construction of aggregate variables followed a hierarchical structure (section, division, specific activity), but the published documentation did not include a detailed variable dictionary (INE, 2017c; INE, 2017d).

In contrast, the 2023 ENUT incorporated major improvements in both quality control and process transparency. Field validations and automated consistency checks were implemented. For handling missing values, imputation techniques such as the hot-deck method and regression-based statistical models were used, which helped reduce the effective nonresponse rate (INE, 2025a). In addition, a comprehensive variable dictionary was published, including detailed metadata such as definitions, types, formats, response categories, and units of measurement (INE, 2025e).

The database structure was also simplified in the 2023 version. Whereas ENUT 2015 provided separate files for households, individuals, and activities, ENUT 2023 consolidated all information into a single person-level database, including household and dwelling identifiers. This simplification made analysis easier and reduced the risk of errors in file linking (INE, 2025d).

These improvements in editing, imputation, and documentation make the 2023 ENUT a more methodologically robust version, particularly in terms of variable traceability, internal consistency, and replicability of analysis.

4.1.4 Variables and structures

The variables collected in both editions of the ENUT are structured around three main axes: work in an occupation, unpaid work, and personal activities. However, the 2023 ENUT introduced important changes in both activity classification and the inclusion of new analytical dimensions, such as gender, simultaneity, and satisfaction with time-use.

In terms of classification systems, both surveys relied on the System of National Accounts (SNA) framework and international classification standards. The 2015 ENUT adapted the ICATUS classifier and applied a national version of activity categories, without explicitly aligning with the Classification of Time Use Activities for Latin America and the Caribbean (CAUTAL). In contrast, the 2023 ENUT formally adopted CAUTAL, published by ECLAC in 2016, as its primary standard, allowing for greater regional comparability (INE, 2025a).

In the 2015 ENUT, activities were organized into a hierarchical structure composed of sections, major divisions, and divisions. The survey did not include variables on simultaneous activities or subjective measures. Key variables mainly covered the type of activity, its duration, and the time of day, along with basic sociodemographic and employment data. The classification of unpaid work followed the general production boundary of the SNA, distinguishing between domestic work, caregiving, and other forms of unpaid production (INE, 2017f).

The 2023 ENUT builds on this structure and introduces new variables and indicators (INE, 2025b). Major changes include the incorporation of:

- A simultaneity module, which identifies activities performed in parallel
- Questions on gender identity and sexual orientation, asked of individuals aged 5 and older and 15 and older, respectively
- Questions on satisfaction with time-use, aimed at assessing subjective well-being
- A care and support module, which gathers information on access to and need for care services for dependent populations

Additionally, income variables in the 2023 ENUT were treated using statistical imputation methods (hot-deck and regression models), improving the quality of economic data linked to time-use (INE, 2025c).

The variable structure in the second survey also features a higher degree of standardization, supported by a complete variable dictionary with definitions, formats, and coded classifications, something that was not available in the earlier version (INE, 2025e).

Overall, the 2023 ENUT expands and refines the variable structure compared to 2015, enabling more detailed analyses on gender, simultaneity, and satisfaction, as well as greater methodological consistency in data processing.

4.1.5 Published outputs and metadata

Both the 2015 and 2023 editions of the ENUT made a set of statistical products and supporting documentation available to the public. However, there are significant differences in the level of systematization, detail, and accessibility of the published materials.

For the 2015 ENUT, the National Institute of Statistics (INE) disseminated results through thematic analysis documents and regional summary reports, as well as disaggregated datasets at three levels (household, individual, and activity). Complementary documentation included a user manual, the applied questionnaires, and a glossary with key conceptual definitions. However, the available metadata were limited, and no detailed variable dictionary was published with coding structures or data types (INE, 2017d).

In contrast, the 2023 ENUT made an explicit effort to strengthen methodological transparency and traceability. Alongside the integrated dataset available in CSV, R, and Stata formats, INE published a full database user manual, a complete variable dictionary, a comprehensive methodological report, a methodological summary sheet, questionnaires, a glossary, a technical supplement, and result reports. These resources provide detailed insights into variable construction logic, imputation procedures, file structure, and validation processes (INE, 2025d; INE, 2025e). Additionally, the 2023 ENUT improved the presentation of statistical results through more robust reports, disaggregated indicators by sex and region, and a stronger focus on gender gap analysis, enhancing its usability for public institutions, academic researchers, and civil society organizations (INE, 2025f).

4.2 Results of the descriptive analysis

This section presents the findings from the national-level characterization of time-use, comparing the results from the 2015 and 2023 ENUT editions. For this purpose, harmonized

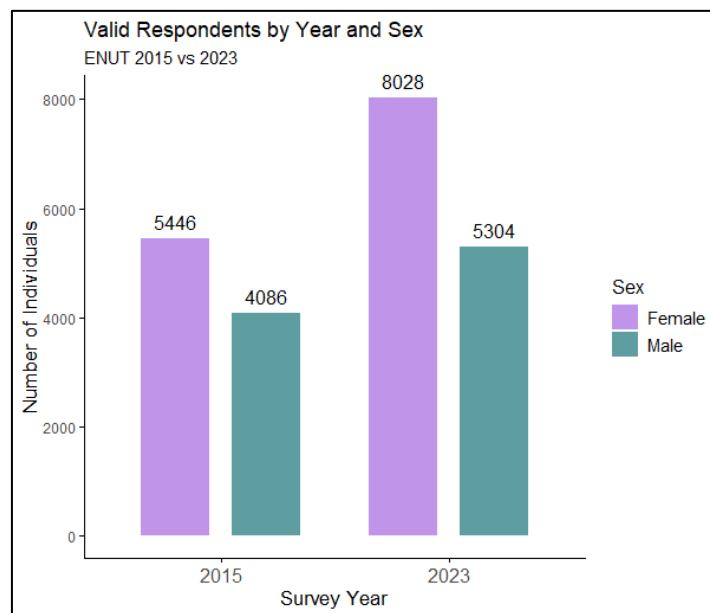
microdata from both surveys were used, with a weekly time horizon and activities grouped into nine main categories: paid work, unpaid domestic work, unpaid caregiving, study, leisure and free time, volunteering, personal care, meals, and sleep.

In total, 9,532 valid cases were analyzed for ENUT 2015 and 13,332 for ENUT 2023. In both years, the sample shows a female overrepresentation, particularly in 2023, where 60.2% of respondents were women (see Table 4.2). While this difference may partly reflect the country's population structure, according to the 2017 Census, 51.1% of Chile's population was female and 48.9% male (INE, 2017), the magnitude of the overrepresentation in ENUT 2023 suggests a higher relative participation of women in the sample, which should be taken into account when interpreting sex-disaggregated results.

Table 4. 1: Number of valid respondents by sex and survey year

Sex	Valid Respondents	Valid Respondents	Δ_{VR}
	2015	2023	
Female	5.446	8.028	+2.582
Male	4.086	5.304	+1.218
Total	9.532	13.332	+3.800

Figure 4. 1: Number of valid respondents by survey year and sex.

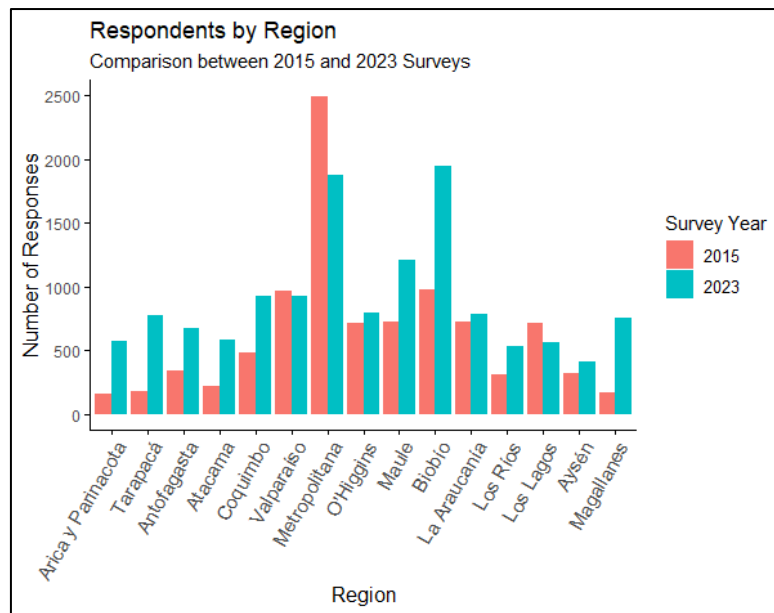


The regional distribution of responses also shows relevant differences between the two years (see Figure 4.2). Overall, there was an increase in the total number of responses in several regions, including O'Higgins, Maule, La Araucanía, and Biobío. However, in other regions, the number of valid responses decreased: this was the case for Valparaíso, where the change was slight, and especially for the Metropolitan Region, which showed a significant drop in the number of cases. A decrease was also observed in the Los Lagos Region. In the case of Biobío, the increase may be partly explained by an administrative change between the two years: in 2015, the Ñuble Region did not yet exist as a separate unit, whereas in 2023, responses from Ñuble were grouped under Biobío, affecting the total count reported for that region.

Table 4. 2: Number of valid respondents by region and survey year.

Region	Valid Respondents	Valid Respondents	Δ_{VR}
	2015	2023	
Arica y Parinacota	164	576	+412
Tarapacá	185	775	+590
Antofagasta	347	673	+326
Atacama	222	589	+367
Coquimbo	481	927	+446
Valparaíso	968	923	-45
Metropolitana	2.492	1.872	-620
O'Higgins	716	799	+83
Maule	727	1.209	+482
Ñuble	-	667	+667
Biobío	982	1.280	+298
La Araucanía	727	787	+60
Los Ríos	310	532	+222
Los Lagos	719	559	-160
Aysén	322	411	+89
Magallanes	170	753	+583
Total	9.532	13.332	+3.800

Figure 4. 2: Valid respondents by region and survey year



In the charts and tables presented below, time is expressed in average weekly hours and, depending on the analysis, may refer to:

- The entire surveyed population, including those who did not engage in a given activity (e.g., average weekly hours of paid work including inactive individuals or retirees);
- Only those who performed the activity, in which case the conditional average excludes zero values and better reflects the intensity of time dedicated by those who actually engage in the activity.

Descriptive comparisons are made by sex, age group, income quintile, macrozone, and other relevant variables. These comparisons allow for the exploration of inequality patterns and potential shifts in time distribution between 2015 and 2023.

4.2.2 General comparison by sex and year

The comparative analysis of time-use by sex reveals persistent patterns of gender inequality between 2015 and 2023, with some notable variations in both intensity and participation depending on the type of activity.

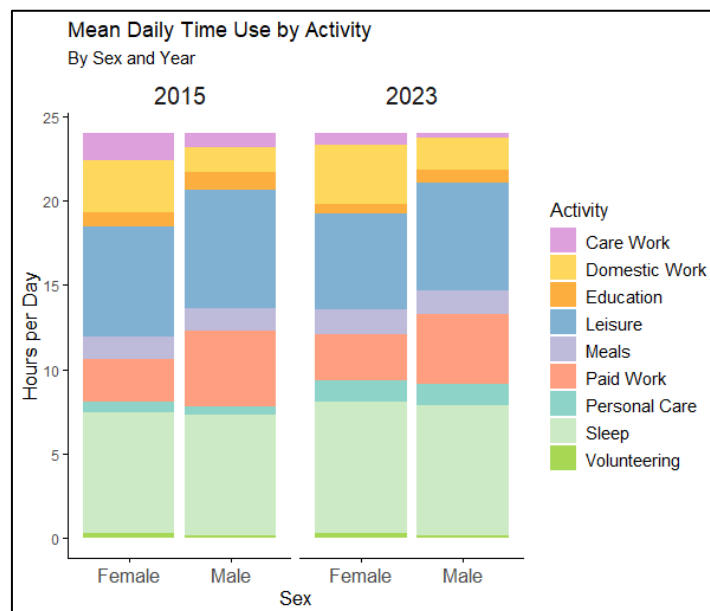
The following section presents a graphical visualization of the results, along with their interpretation. Associated tables with estimated time differences between 2015 and 2023 are included in Annex 2.

4.2.2.1 Mean daily time distribution

The analysis of average daily time distribution reveals that, despite some changes between 2015 and 2023, significant differences between men and women persist. Women devote more time to unpaid work activities, such as domestic tasks and caregiving, while men spend more hours on paid work and leisure. This pattern remains consistent in both years, although a slight convergence is observed in 2023: women marginally increased the time dedicated to paid work, while men allocated slightly more time to domestic tasks.

Most of the day continues to be occupied by personal care and sleep, with little variation across sexes and years. However, the unequal distribution of the remaining time reflects the persistence of traditional gender roles, which limit equitable access to leisure, education, and employment. This context reinforces the need for public policies aimed at promoting shared responsibility, particularly in the realm of caregiving.

Figure 4. 3: Mean daily time-use by sex and year (main activity categories)



4.2.2.2 Paid work

Men dedicate more time to paid work in both years. In 2015, they averaged 27 hours and 47 minutes per week, compared to 15 hours and 21 minutes for women. By 2023, this average decreased to 24 hours and 25 minutes for men, while women remained almost constant at 15 hours and 16 minutes.

When focusing only on individuals who engage in this activity, the gap widens: in 2023, 90.1% of men reported engaging in paid work, with an average of 32 hours and 21 minutes per week, compared to 84.5% of women, who averaged 22 hours and 25 minutes.

Figure 4. 4: Weekly time in paid work (entire sample vs participants), by sex and year

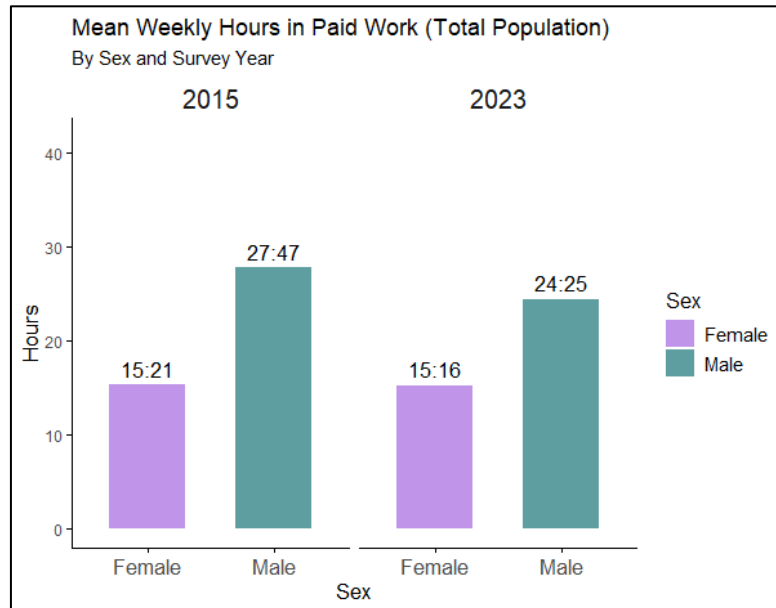
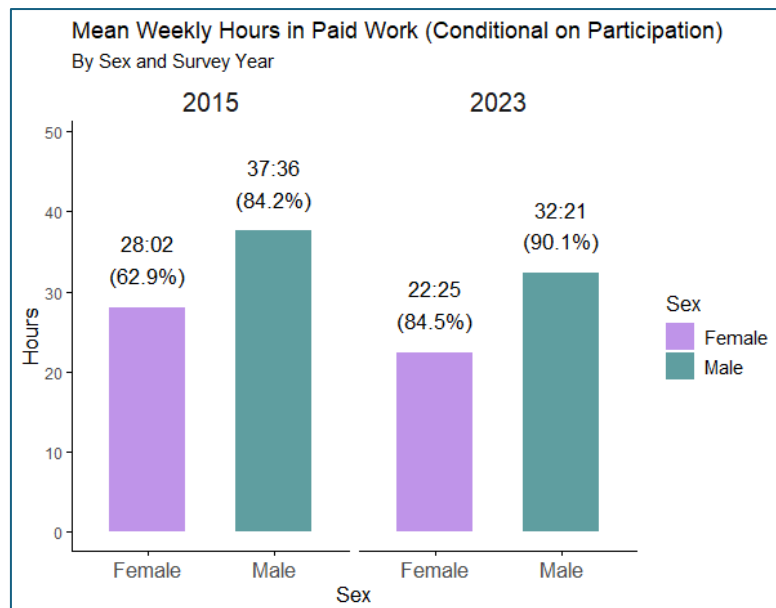


Figure 4. 5: Weekly time in paid work, considering participation, by sex and year

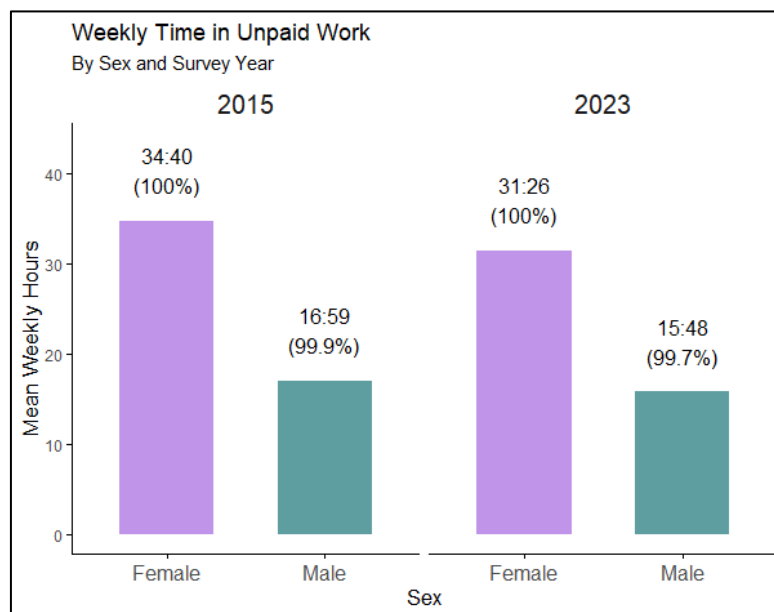


4.2.2.3 Unpaid work

Gaps in unpaid work, which includes domestic tasks and caregiving, are even more pronounced. In 2023, women devoted 31 hours and 26 minutes per week to these tasks, while men spent only 15 hours and 48 minutes.

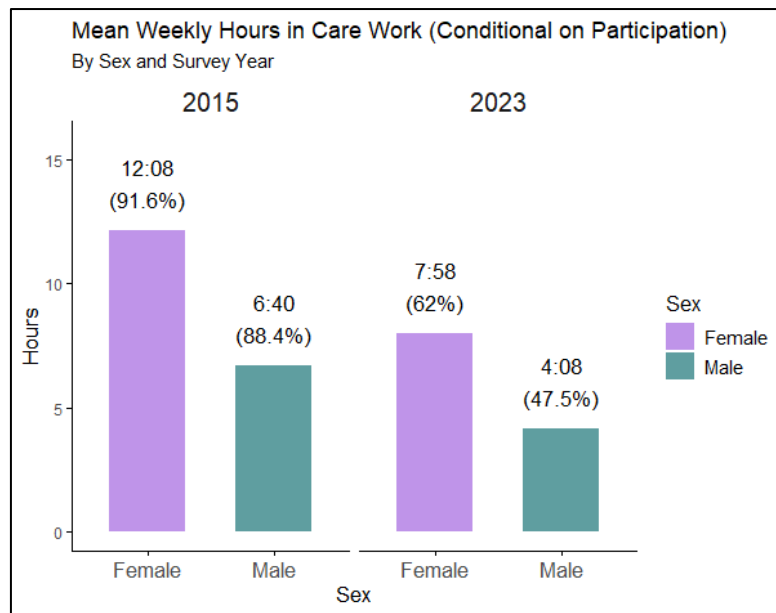
Even among those who participate in these activities, the disparity remains: although both sexes report participation rates close to 100%, women spend nearly twice as much time on domestic work (24 hours and 25 minutes vs. 13 hours).

Figure 4. 6: Weekly time in domestic work and care work, by sex and year



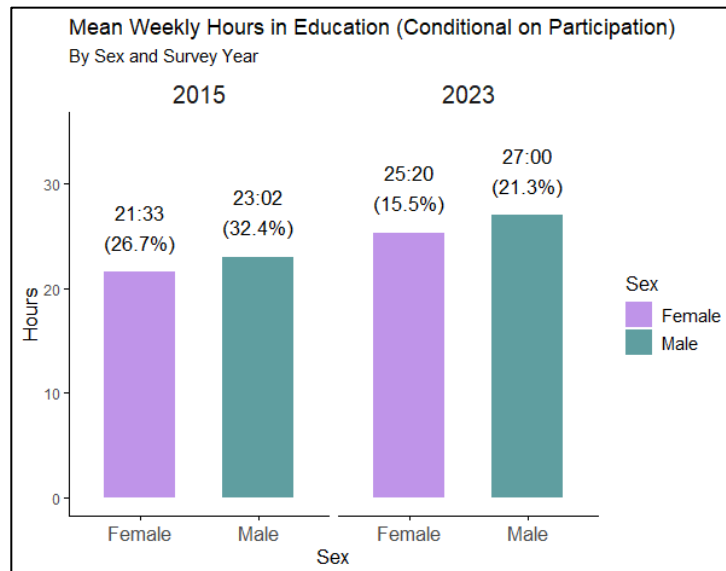
In unpaid caregiving work, gaps in both participation and time commitment are particularly stark. In 2023, only 47.5% of men reported performing these tasks, averaging 4 hours and 8 minutes per week. In contrast, 62% of women participated, with an average of 7 hours and 58 minutes. Although participation rates declined for both sexes compared to 2015, the drop was more pronounced among men, both in terms of participation and time spent.

Figure 4. 7: Weekly time in care work, by sex and year



4.2.2.4 Other activities

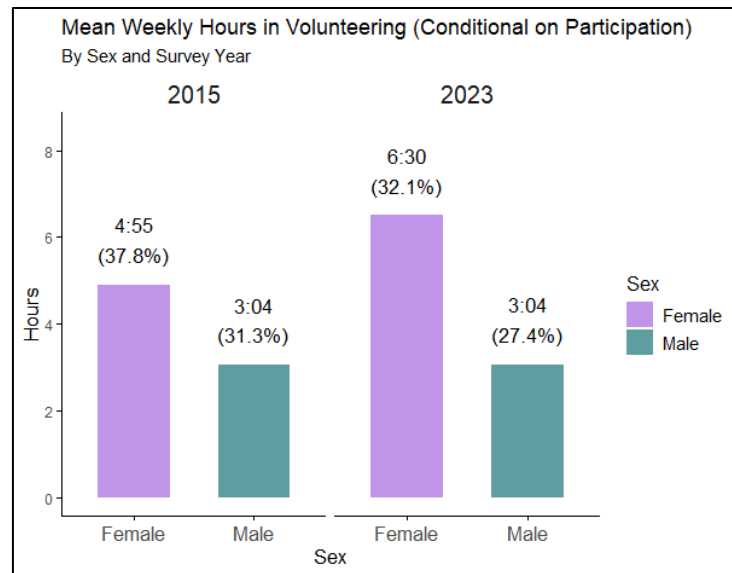
Figure 4. 8: Weekly time in education, by sex and year



In education, men consistently show higher participation in both years. In 2023, 21.3% of men reported studying, compared to 15.5% of women. Among those who do engage in this activity, men dedicate an average of 27 hours per week, while women spend 25 hours and 20 minutes.

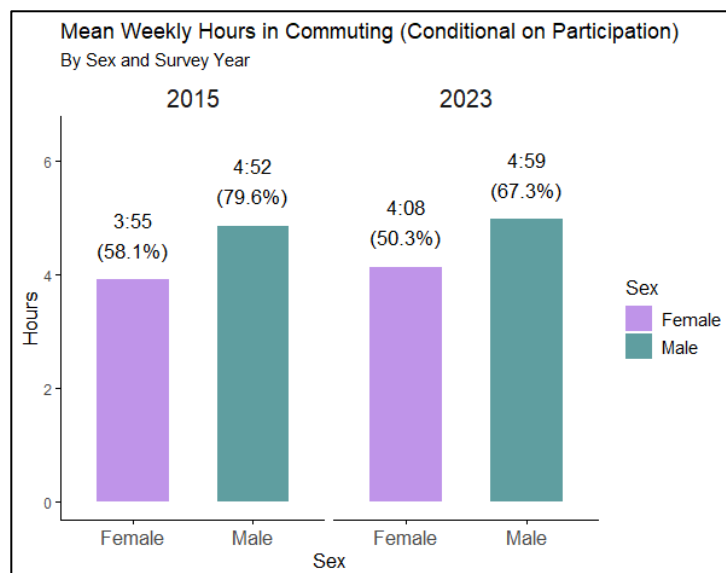
Volunteering, a less common activity, shows the opposite pattern: in 2023, women not only participated more (32.1% vs. 27.4%), but also dedicated more time (6 hours and 30 minutes vs. 3 hours and 4 minutes).

Figure 4. 9: Weekly time in volunteering, by sex and year



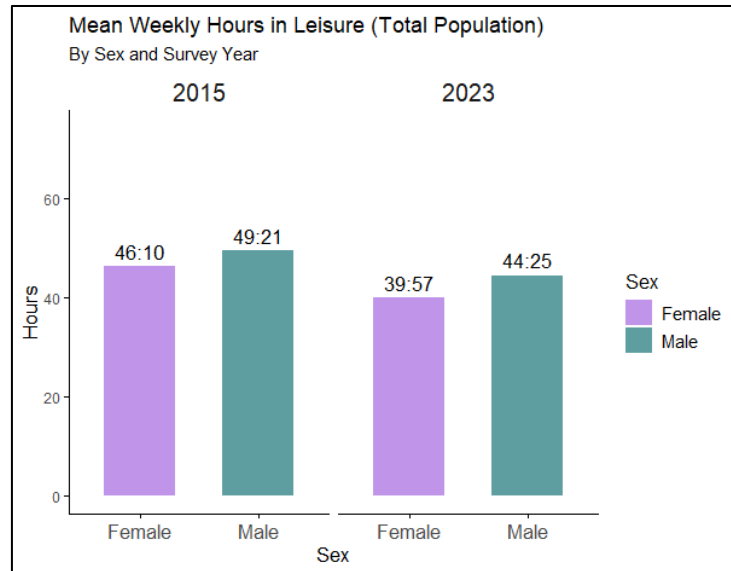
In transportation (commuting), men continue to show higher participation rates, 67.3% compared to 50.3% for women in 2023, and also dedicate more time, averaging 4 hours and 59 minutes per week versus 4 hours and 8 minutes for women.

Figure 4. 10: Weekly time in commuting, by sex and year



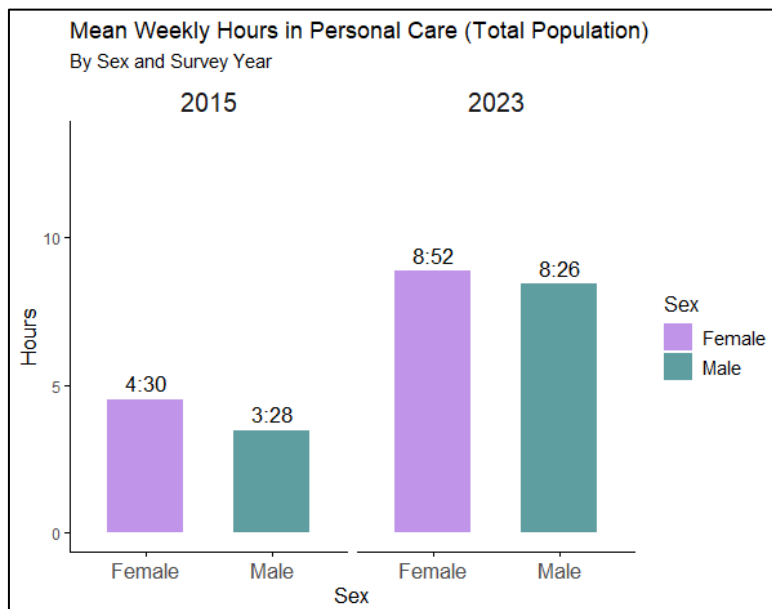
In leisure, both sexes reduced their weekly leisure hours between 2015 and 2023, but the decline was more pronounced among women, from 46 hours and 10 minutes to 39 hours and 57 minutes, widening the gap with men, who averaged 44 hours and 25 minutes in 2023.

Figure 4. 11: Weekly time in leisure, by sex and year



In personal care, sleep, and meals, the differences between sexes are relatively minor. However, both men and women show a significant increase in time spent on personal care and sleep, which may reflect a growing awareness of well-being and self-care.

Figure 4. 12: Weekly time in personal care, by sex and year



4.2.3 Subgroup analysis

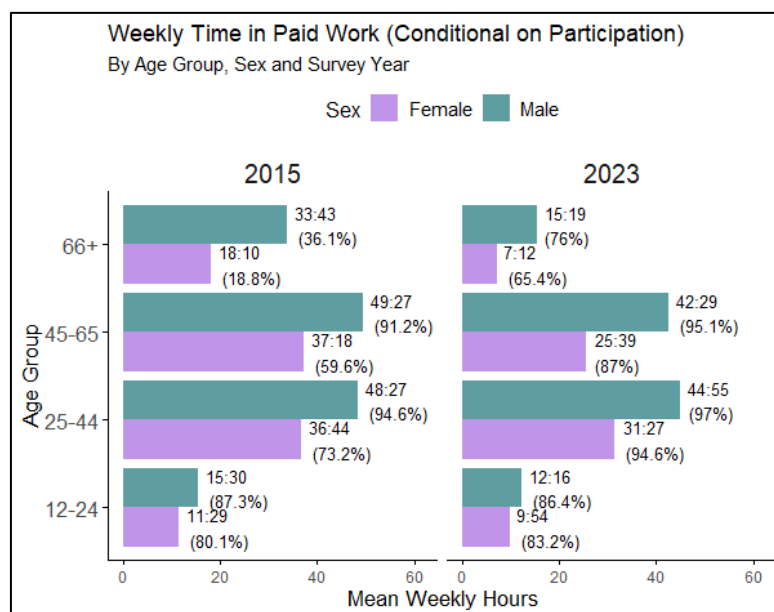
This section examines time-use across sociodemographic subgroups (age, education, geographic area, among others) for the years 2015 and 2023, considering both the average weekly time dedicated to various activities and the proportion of individuals engaging in them. Key results are presented for paid work, unpaid work, leisure, and transportation (by geographic area), with the full breakdown for other activities available in Annex 3.

4.2.3.1 By age group

The analysis of time-use by age group reveals distinct generational patterns, both in the distribution of time and in gender gaps. Overall, individuals aged 25 to 44 bear the highest total workload (paid and unpaid), while those at the extremes of the age spectrum (12–24 and 66+) tend to spend more time on personal care, leisure, or education.

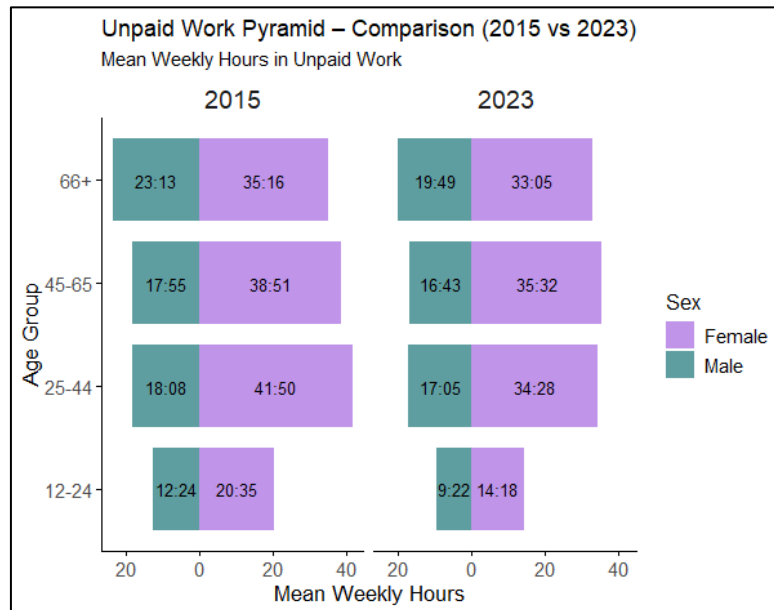
In the case of paid work, time dedicated to this activity increases with age, peaking in the 45–65 age group, and then drops sharply. In 2023, men aged 45 to 65 who participated in paid work reported an average of 42 hours and 29 minutes per week, compared to 25 hours and 39 minutes for women in the same group. Although female participation has increased compared to 2015, the gap in hours worked persists across all age groups.

Figure 4. 13: Weekly time in paid work by age group, sex and year (participants only)



In unpaid work, women dedicate more time than men across all age groups, with the greatest intensity observed among those aged 25 to 44. In 2023, women in this group reported an average of 34 hours and 28 minutes per week, compared to 17 hours and 5 minutes for men. This difference is closely linked to a life-cycle stage in which many women simultaneously face both work and caregiving responsibilities.

Figure 4. 14: Weekly time in unpaid work by age group, sex and year



In domestic work, participation rates are close to 100% across all age groups, but women again devote twice as much time as men. In 2023, women aged 25–44 reported 23 hours and 6 minutes per week on domestic tasks, compared to 12 hours and 42 minutes for men in the same group. Older adults (66+) also show high levels of engagement in domestic work, likely due to their role as family support or the absence of paid employment.

Caregiving shows a heavy burden among individuals aged 25 to 44, particularly for women. In 2023, women in this group devoted an average of 12 hours and 4 minutes per week to caregiving, compared to 5 hours and 45 minutes for men. While male participation in caregiving has increased among younger groups, the gap remains significant.

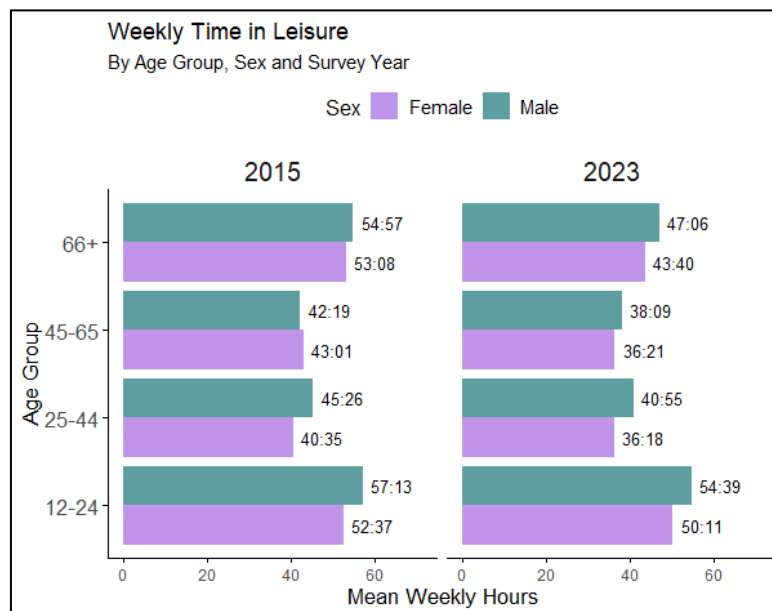
Education is concentrated in the 12–24 age group. In 2023, 69.2% of men and 69.4% of women in this group reported engaging in educational activities. Among participants, average weekly hours exceeded 31 for both sexes. Participation drops sharply after age 25, although a non-negligible presence remains in middle-aged groups, likely due to continuing education.

Volunteering shows stable participation rates across age groups, but average hours increase with age. In 2023, women aged 45–65 who volunteered reported over 8 hours per week, significantly more than their male counterparts (3 hours and 30 minutes).

Physiological and personal care activities, such as sleep, exhibit more homogeneous patterns. Young people (12–24) and older adults (66+) are those who dedicate the most time to sleep: in 2023, both groups exceeded 55 hours per week. Personal care, meanwhile, expanded across all age groups, often doubling the levels observed in 2015.

Finally, leisure time decreased across all age groups between 2015 and 2023, particularly among women. For example, among those aged 12 to 24, weekly leisure declined from 52 hours and 37 minutes to 50 hours and 11 minutes for women, and from 57 hours and 13 minutes to 54 hours and 39 minutes for men. This decline was even more pronounced in the middle age groups (25–44 and 45–65), likely linked to increasing workloads and caregiving responsibilities.

Figure 4. 15: Weekly time in leisure by age group, sex and year

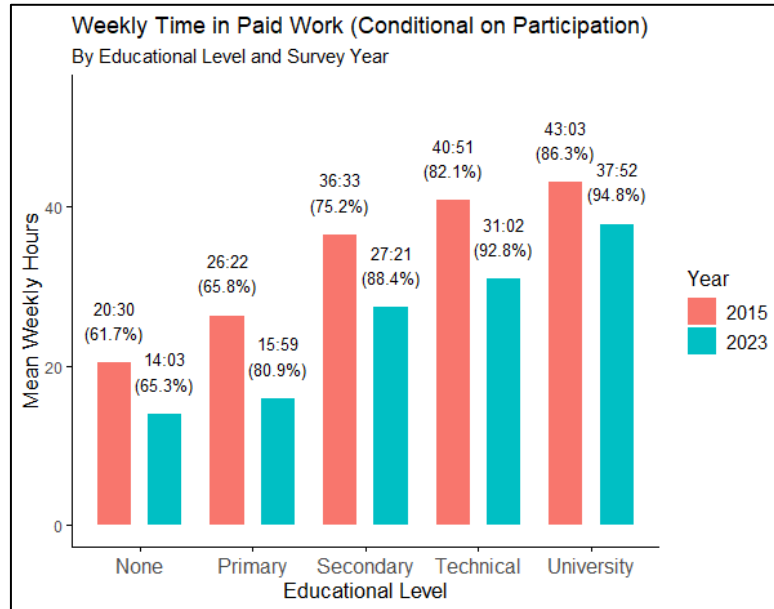


4.2.3.2 By educational level

An analysis of time-use by individuals' educational attainment reveals a clear pattern in relation to paid work: the higher the level of education, the greater the average number of hours worked per week and the higher the participation rate. In 2023, individuals with a university education devoted an average of 37 hours and 52 minutes per week to paid work, with a participation rate of

94.8%. In contrast, among those with no formal education, average weekly work hours dropped to 14 hours and 3 minutes, with a participation rate of 65.3%.

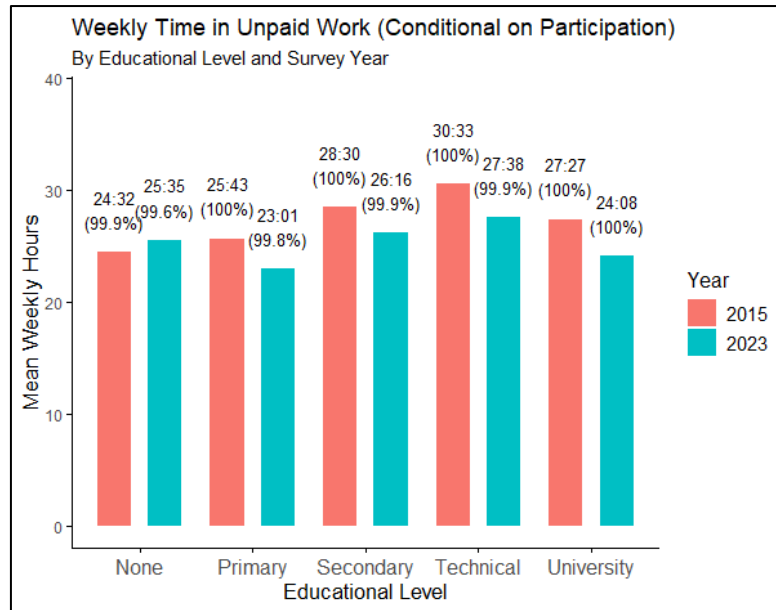
Figure 4. 16: Weekly time in paid work by educational level and year (participants only)



Regarding both the workload and participation rates in domestic activities, near-universal participation (close to 100%) is observed across all educational levels in both years. However, individuals with no formal education show a higher time burden in this area, exceeding 22 hours per week in 2023, compared to an average of 18 hours among those with a university education, across various types of work and spheres of daily life.

In the case of caregiving, participation rates are also high, especially among those with technical (95.6% in 2015) and secondary (91.3% in 2015) education. In 2015, the hours devoted to this activity increased with educational attainment, reaching an average of 11 hours and 37 minutes per week for individuals with a university education. In 2023, both time spent and participation rates declined across all groups, with the drop being most pronounced among those with lower levels of education.

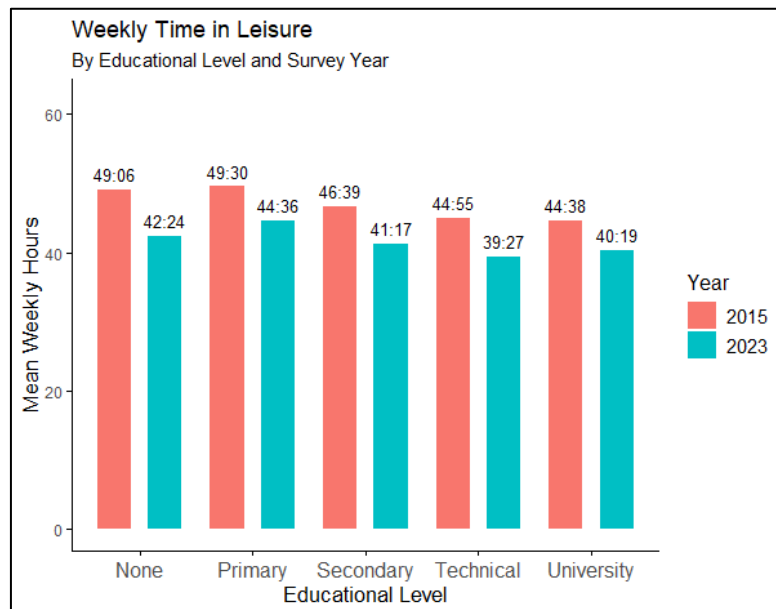
Figure 4. 17: Weekly time in unpaid work by educational level and year



In formal education, individuals with no formal schooling reported the highest time burden in 2023, averaging more than 36 hours per week, while those with technical and university education reported 20 and 8 hours, respectively.

Time allocated to leisure and meals showed a slight decrease between 2015 and 2023 across all education levels, although it remained higher among individuals without formal education.

Figure 4. 18: Weekly time in leisure by educational level and year



In activities related to personal care and sleep, differences by educational level are notable. In general, individuals with lower educational attainment tend to spend more time sleeping and on personal care, with this gap becoming more pronounced in 2023. For example, those with no formal education reported nearly 63 hours of sleep and 11 hours and 51 minutes of personal care per week, whereas individuals with a university education reported 49 hours and 36 minutes of sleep and 7 hours and 20 minutes for personal care.

Finally, in the case of volunteering, participation is generally low but shows a slight decrease as educational level increases. In 2023, individuals with no formal education participated an average of 7 hours and 19 minutes per week, while those with a university education did so for only 3 hours and 6 minutes.

4.2.3.2 By geographic area

When comparing by geographic area, the differences in time distribution between men and women are consistent across the country. In both the Metropolitan Region and other regions, women concentrate more time on unpaid work (domestic and caregiving), while men dedicate more time to paid work, leisure, and commuting. These patterns persist in both 2015 and 2023, with only minor variations in the number of hours spent.

Figure 4. 19: Weekly time in paid work by sex and zone (Metropolitan vs other), by year and sex

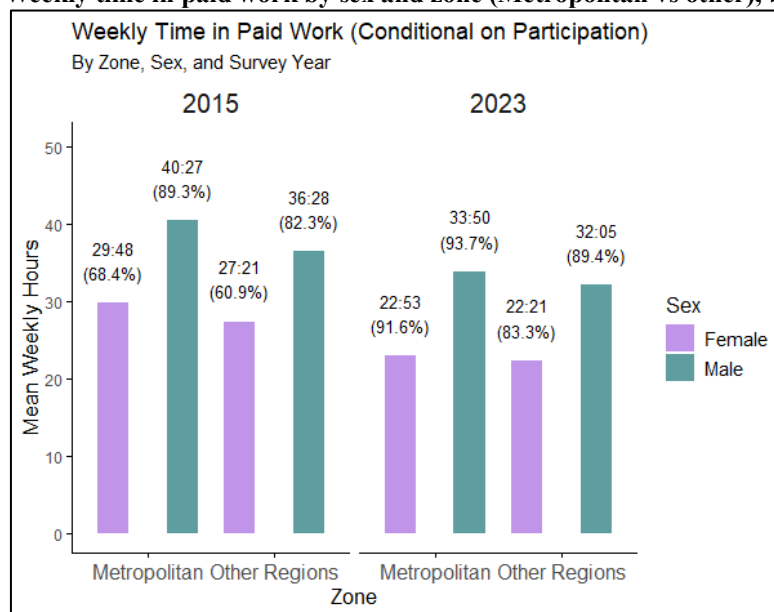


Figure 4. 20: Weekly time in unpaid work by sex and zone (Metropolitan vs other)

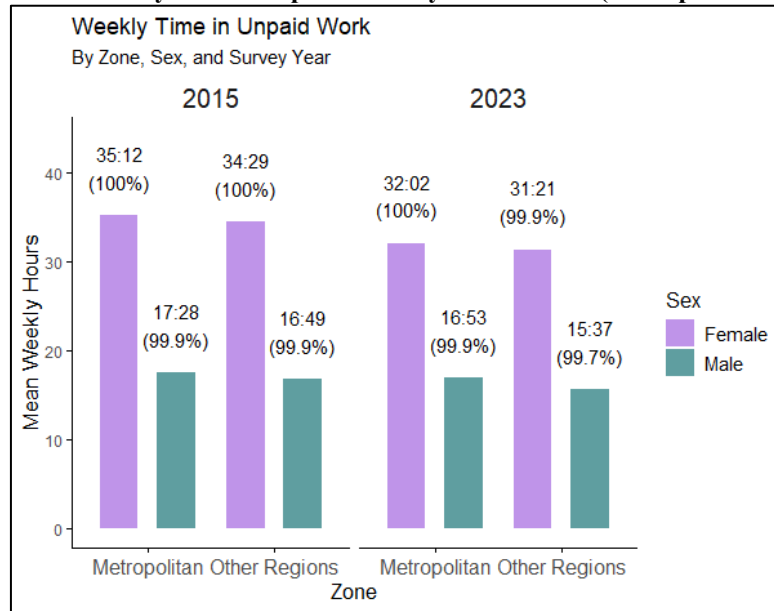
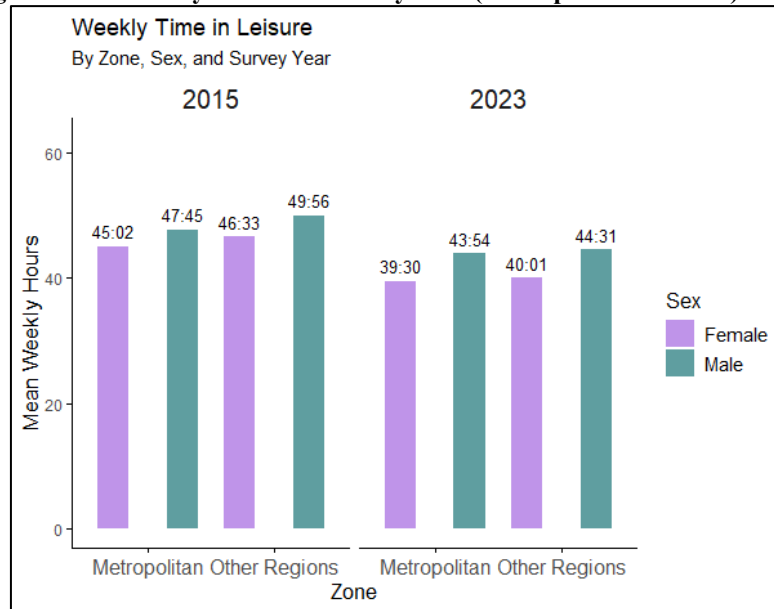


Figure 4. 21: Weekly time in leisure by zone (Metropolitan vs other) and sex

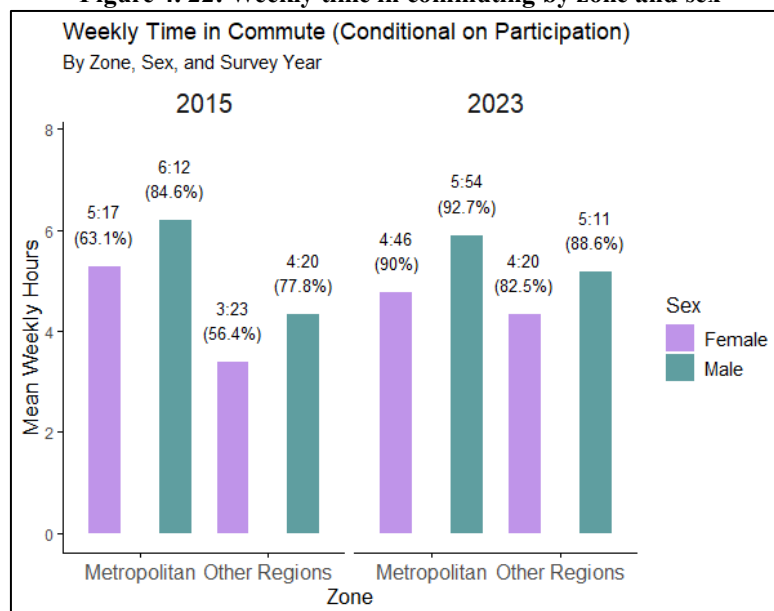


A partial exception to this stability is found in the commuting category, where divergent trends by geographic area are observed. In the Metropolitan Region, both men and women reduced their average weekly commuting time between 2015 and 2023. In contrast, in the rest of the country, time spent on this activity increased for both sexes. This resulted in a territorial convergence in commuting burden: in 2015, residents of the Metropolitan Region reported nearly two more hours of weekly commuting than those living in other regions, while by 2023 that difference had narrowed to less than

one hour. This trend may be linked to changes in urban mobility dynamics, access to services, or post-pandemic shifts in the labor market.

Additionally, participation in commuting activities increased across all groups without exception. Among women, the increase was particularly significant: in the Metropolitan Region, participation rose from 63.1% in 2015 to 90.0% in 2023; and in other regions, from 56.4% to 82.5%. Among men, participation also expanded, from 84.6% to 92.7% in the Metropolitan Region, and from 77.8% to 88.6% in the rest of the country. This suggests greater engagement in work, education, or community activities, particularly among women and residents outside the capital region.

Figure 4. 22: Weekly time in commuting by zone and sex



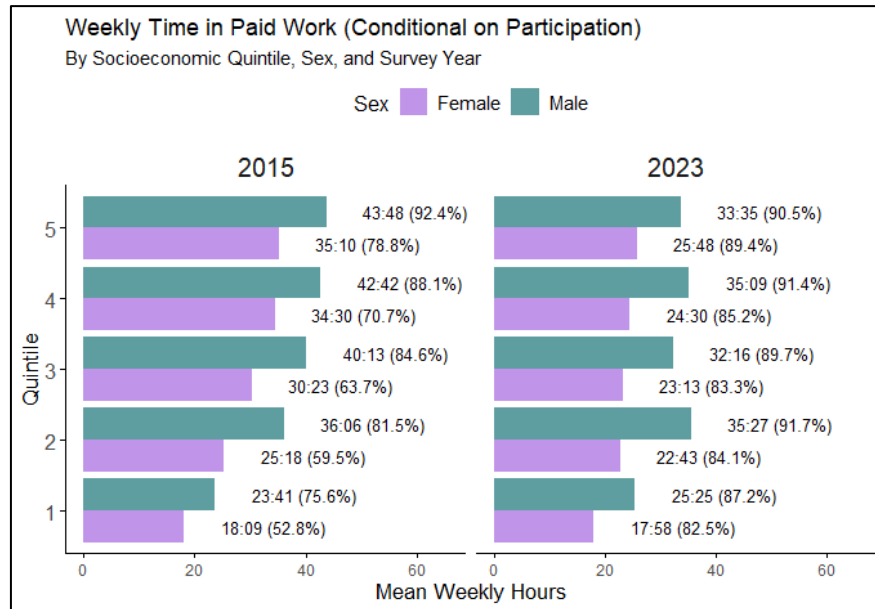
Although some territorial variations exist, the data show that place of residence is not a determining factor in gender inequalities in time-use. The gaps between men and women remain virtually unchanged across the country, reinforcing the idea that the observed differences are driven more by structural gender factors than by specific territorial conditions.

4.2.3.3 By income quintile

Gender inequalities in time-use persist across socioeconomic quintiles. As income increases, time devoted to paid work rises, while unpaid work, especially among men, tends to decrease. Between 2015 and 2023, total time spent on paid work declined, particularly in the higher quintiles,

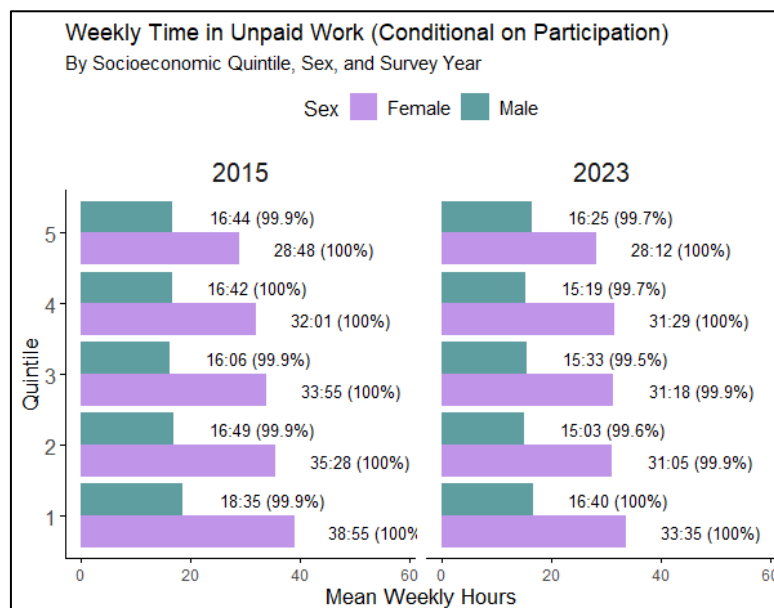
although female participation increased across all income levels. Despite this, the gap in hours worked remains.

Figure 4. 23: Weekly time in paid work by quintile and sex, 2015 and 2023



Women continue to bear a greater burden of domestic and caregiving work, particularly in the lower income quintiles. Between 2015 and 2023, time spent on domestic work increased for both men and women, while time dedicated to caregiving declined, accompanied by a general drop in male participation.

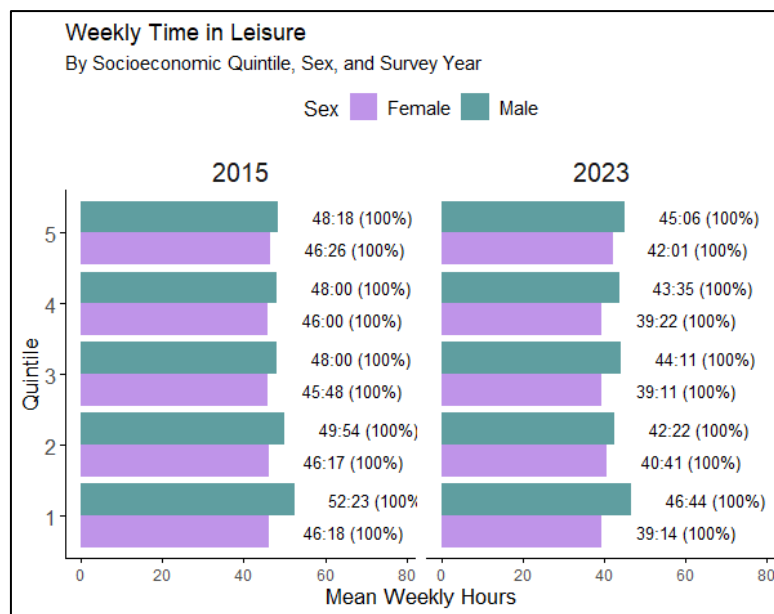
Figure 4. 24: Weekly time in unpaid work by quintile and sex, 2015 and 2023



In education, average time by income quintile shows an inverse relationship with socioeconomic level, particularly among women, who in 2023 devoted less weekly time than men across all quintiles. Unlike in 2015, average time spent on education increased significantly across all quintiles for both men and women.

In leisure, the gender gap narrowed slightly but remained: men continued to devote more time than women in every quintile. This difference, combined with the gaps in unpaid work, suggests an unequal distribution of free time.

Figure 4. 25: Weekly time in leisure by quintile and sex, 2015 and 2023



Finally, in activities such as eating, sleeping, and personal care, time-use tends to be relatively similar across quintiles and between sexes. However, slight increases were observed in 2023 across all categories, particularly in hours devoted to sleep and personal care.

4.3 Results of the econometric analysis

This section presents the results obtained from estimating the MDCEV model, which incorporates interactions between sociodemographic variables and the reference year in order to capture changes in time allocation between 2015 and 2023. The aim is to identify how different profiles of individuals, based on sex, age, educational level, income quintile, and geographic location, allocate their time across various daily activities, and how this allocation has evolved over the period analyzed. The results are interpreted based on the estimated marginal utilities, which allow for comparisons between social groups and help reveal persistent or emerging gaps.

Table 4. 3: Results of the MDCEV model

Variable	Housework		Work		Education		Care		Transport		Volunteering		Leisure Out	
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015/	2015	2015
	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023	2023
Gender (base: male)														
Female	0.843	7.021	-0.558	-4.016	-	-	0.797	3.785	-0.727	-4.495	0.385	4.974	-0.424	-5.775
	0.040	14.952	-	-	-	-	-0.450	-7.510	0.507	8.811	-0.161	-11.936	0.111	10.913
Age range (base: 12-24 years old)														
25-44 years old	0.036	7.053	0.750	8.521	-0.926	-5.535	0.644	6.385	-	-	0.015	5.392	-0.097	-5.244
	0.182	17.578	0.662	10.540	-0.961	-6.77	-	-	0.516	6.014	-	-	0.339	15.969
45-65 years old	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	1.013	9.688	-3.199	-6.192	-0.579	-6.537	0.097	7.658	0.038	7.344	-	-
66+ years old	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-0.971	-5.489	-4.460	-4.827	-1.379	-3.998	-0.892	-7.059	-0.583	-5.862	-	-
Education level (base: none)														
Primary	0.009	3.149/	0.144	2.500	0.179	3.124	-0.156	-2.058	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Secondary	0.204	3.145	0.772	2.895	-0.171	-2.99	0.328	1.997	-	-	0.252	6.790	-	-
	0.095	18.589	-0.316	-10.345	-	-	-0.794	-8.917	-	-	-0.246	-15.195	-	-

Technical	0.327 -	3.282 -	0.988 -0.412	3.217 -6.103	-1.345 0.249	-2.987 5.947	0.517 -0.783	2.089 -6.466	- -	- -	0.457 -0.413	7.541 -11.571	- -	- -
University	0.288 -	3.617 -	0.864 -	2.942 -	-0.238 -	-3.434 -	0.371 -0.829	2.278 -5.898	- -	- -	0.247 -	10.333 -	0.069 0.228	19.399 18.363
Quintile (base: 1)														
2	-0.049 -	-17.729	0.771 -0.569	4.051 -7.673	- -	- -	- -0.316	- -6.134	- 0.226	- 6.528	- -	- -	- -	- -
3	-0.017 -	-12.704 -	0.954 -0.728	4.301 -9.610	- -	- -	-0.081 -0.138	-7.524 -11.831	- 0.226	- 6.528	-0.084 -	-14.816 -	- -	- -
4	-0.021 -	-14.092 -	0.995 -0.645	4.717 -9.557	-0.435 1.125	-9.962 8.199	-0.429 -0.300	-9.52 /9.366	- 0.270	- 6.397	- -0.019	- -16.527	- -	- -
5	-0.111 -	-12.587 -	0.938 -0.618	4.872 -8.479	-0.073 1.120	-5.848 4.351	-0.781 0.670	-9.278 8.257	- 0.274	- 6.473	- -0.086	- -11.884	0.111 -	10.628 -
Zone (base: Other regions)														
Metropolita n Region	- 0.076	- 30.811	0.112 -	15.962 -	0.131 -	11.060 -	0.419 -0.401	12.418 -13.153	0.339 -0.217	5.468 -6.624	-0.107 0.283	-11.816 18.350	- -	- -

4.3.1 Time allocation to paid work

In 2015, the estimated model confirms significant gender-based segmentation in access to paid work. Women exhibited lower marginal utility than men, even when controlling for age, educational level, and income quintile. This gap not only persisted in 2023 but widened: the interaction coefficient between being a woman and the year 2023 is negative and highly significant, indicating a worsening of gender inequality in the labor sphere.

By age, individuals between 25 and 44 already showed a higher propensity to engage in paid work in 2015, a trend that intensified in 2023. This effect was also observed among those aged 45 to 65 in the more recent period. In contrast, people over 66 experienced a significant decline in the marginal utility associated with paid work, reinforcing the importance of the life cycle as an explanatory factor and suggesting a deepening gap between the youngest and oldest groups.

Regarding education, in 2015, positive coefficients were observed for all levels above primary education, reflecting a greater propensity for paid work among more educated individuals. However, in 2023, the interaction coefficients were negative for those with secondary and technical education, suggesting a relative deterioration in their labor opportunities. Meanwhile, individuals with university education maintained a positive and stable utility, indicating increasing stratification within higher education levels.

In terms of income, quintiles 2 through 5 showed increasing and positive coefficients in 2015, reflecting a direct correlation between socioeconomic status and labor participation. In 2023, however, interaction coefficients were negative across all of these quintiles, suggesting a contraction or redistribution of paid work time among higher-income groups, possibly linked to remote work, reduced working hours, or shifting occupational patterns.

Living in the Metropolitan Region is consistently associated with higher marginal utility for paid work, with no significant changes between years. This may be attributed to the higher concentration of job opportunities and the more formalized production structure in urban centers.

Notable combinations:

- Women aged 25 to 44 with technical or secondary education show significantly lower marginal utility in 2023, pointing to a profile of precarization marked by a double disadvantage in gender and education.

- Men in quintile 5 aged 45 to 65 maintain high utility, suggesting a core of stable formal employment among high-income sectors.
- Young women in lower income quintiles show no significant improvement in paid work utility between 2015 and 2023, reflecting persistent class and gender segmentation.

4.3.2 Time allocation to care work

The analysis of time dedicated to unpaid caregiving confirms the strong feminization of this activity in both 2015 and 2023. In the baseline year, being a woman was associated with significantly higher marginal utility in this category, reflecting the unequal distribution of caregiving responsibilities. However, the negative interaction coefficient in 2023 indicates a decrease in this utility among women, suggesting slight convergence between genders. This effect should be interpreted with caution, as it may result from both a decline in female participation and a marginal increase among men, without necessarily implying an equitable redistribution of the caregiving burden.

By age, individuals aged 25 to 44 exhibited the highest marginal utility for caregiving in 2015, consistent with their predominant role in raising children and supporting dependent individuals. In 2023, marginal utility dropped significantly among those aged 45–65 and 66+, possibly due to changes in family arrangements, health status, or access to support services.

Regarding educational level, in 2015 individuals with secondary, technical, and university education showed higher utility in this category compared to those with only primary education. However, in 2023, all higher educational levels showed negative and significant interaction coefficients, suggesting a relative decline in their participation. This pattern may reflect an increasing outsourcing of caregiving in these segments, through private services or internal family redistribution.

In terms of income, the 2015 results show lower marginal utility for caregiving among higher income quintiles. However, in 2023, quintiles 4 and 5 displayed positive and statistically significant interaction coefficients, which may indicate a cultural shift in family involvement or greater time availability under lower economic pressure.

At the territorial level, an inversion in the direction of the effect is observed. While in 2015 living in the Metropolitan Region was positively associated with caregiving, this coefficient turned

negative in 2023. This change may be linked to greater professionalization of caregiving in urban areas or reduced available time in households facing more demanding work conditions.

Notable combinations:

- Women with higher education in 2023 showed a significant decline in marginal utility for caregiving, suggesting increasing tension between professional and caregiving responsibilities.
- Men in income quintiles 4 and 5 showed an increase in utility for caregiving in 2023, possibly reflecting an emerging redistribution of caregiving tasks in groups historically less involved.
- Individuals aged 66 and older, regardless of sociodemographic profile, reduced their time dedicated to caregiving in 2023, suggesting new forms of aging or growing reliance on external or institutional support networks.

4.3.3 Time allocation to domestic work

Unpaid domestic work remains a highly gender-segregated activity. The model confirms that in both years, being a woman is associated with significantly higher marginal utility in this category. Unlike caregiving, where some signs of convergence are observed, gender gaps in domestic work not only persist but slightly intensify in 2023, as indicated by the positive interaction coefficient between being a woman and that year. This result reinforces the notion that the domestic workload continues to fall disproportionately on women, even in contexts of greater female participation in the labor market.

From a life-cycle perspective, individuals aged 25 to 44 exhibit the highest marginal utility associated with domestic work, with an additional increase in 2023. This group tends to take on household consolidation responsibilities, which may explain their greater involvement. Older age groups were excluded from the model due to the lack of statistically significant effects, suggesting lower internal variability in those cohorts.

Regarding education, the model shows that individuals with technical or university education display higher levels of marginal utility for this activity in both 2015 and 2023. Although this pattern may seem counterintuitive, it could reflect higher household standards for organization, hygiene, or nutrition among more educated groups, resulting in more time spent on domestic tasks.

In contrast, the income variable shows an inverse pattern. The negative coefficients observed for quintiles 2 through 5 indicate that the higher the socioeconomic level, the lower the marginal utility

associated with domestic work. This effect is especially pronounced in the top quintile, suggesting a greater outsourcing of domestic tasks through paid services or the use of home technologies.

In territorial terms, the only significant effect corresponds to the interaction between residing in the Metropolitan Region and the year 2023, with a positive coefficient. This indicates an increase in the marginal utility of domestic work in the capital during the post-pandemic period. A possible explanation is the expansion of telework and increased time spent at home in an urban context where family support networks tend to be more limited.

Notable combinations:

- Women aged 25 to 44 with technical or university education showed significantly higher marginal utility in 2023, suggesting a growing intensification of the double burden in this group.
- Men in higher income quintiles consistently showed low marginal utility in this category, reinforcing class-based segmentation in the organization of domestic work.
- An increase in the marginal utility of domestic work was observed in the Metropolitan Region in 2023, possibly linked to changes in work and household dynamics following the pandemic.

4.3.4 Time allocation to education

Time allocation to educational activities shows an inverse relationship with age, consistent with the life course. Compared to the reference group (under 25 years old), individuals aged 25 to 44 already exhibited lower marginal utility in 2015, a trend that became more pronounced in 2023. This pattern is even more marked among those aged 45 to 65 and especially in the 66+ group, whose negative coefficients in 2023 reflect only marginal participation in educational activities. These results confirm that education continues to be concentrated primarily among younger people, with no clear evidence of a significant expansion in continuing education or programs for older adults.

From an educational attainment perspective, the patterns are more heterogeneous. In 2015, individuals with only primary education showed positive coefficients, possibly reflecting efforts toward basic skills acquisition or literacy. In contrast, those with secondary, technical, or university education showed negative coefficients, indicating lower propensity to engage in educational activities. However, in 2023, a significant shift is observed for the group with technical education, whose interaction coefficient is positive and statistically significant. This result suggests greater

involvement in job training or professional retraining programs, potentially driven by new post-pandemic labor market demands.

With respect to income, in 2015, individuals in quintiles 4 and 5 showed lower marginal utility for education, likely due to more stable employment trajectories and less need for additional training. However, in 2023, both groups displayed positive and significant interaction coefficients, indicating increased participation in educational activities. This shift may be linked to cultural capital differentiation or growing demands for professional upskilling, especially through graduate programs or online learning.

At the territorial level, residing in the Metropolitan Region is associated with higher marginal utility for education in both years, consistent with the greater availability of in-person and online educational offerings in that area. No significant interactions with the year were found, suggesting this territorial advantage has remained stable over time.

Finally, the model does not detect significant effects related to sex, indicating that, once other variables are controlled, there are no systematic differences between men and women in time allocated to educational activities.

Notable combinations:

- Individuals with technical education showed a significant increase in marginal utility for education in 2023, possibly as a result of professional reskilling processes.
- Income quintiles 4 and 5 exhibited greater propensity to participate in educational activities in 2023, potentially reflecting an increased emphasis on educational capital in times of uncertainty.
- Individuals aged 66 and over displayed very low levels of participation, highlighting persistent barriers to accessing lifelong learning opportunities.

4.3.5 Time allocation to commuting

The MDCEV model results reveal meaningful changes in the sociodemographic profiles associated with time allocation to transportation. In terms of gender, in 2015, women had a negative and statistically significant coefficient, indicating lower marginal utility for transportation compared to men. However, in 2023, this difference tends to narrow: the corresponding interaction is positive and statistically significant, suggesting a relative increase in time spent by women on this activity.

This convergence may be linked to greater female involvement in out-of-home activities such as paid work, education, or caregiving for others.

Age also shows distinct patterns. In 2023, individuals aged 25 to 44 experienced a substantial increase in marginal utility for transportation, consistent with this life stage's intense work and family demands. The 45 to 65 age group also recorded an increase, although less pronounced. In contrast, people aged 66 and over showed a significant decline in this category, possibly due to reduced mobility, retirement, or the substitution of in-person activities with digital alternatives.

Income emerged as a highly discriminating factor. In 2023, all higher-income quintiles showed positive coefficients, with a rising gradient as socioeconomic level increased. This pattern suggests that individuals with higher incomes tend to travel more, whether for work, recreational purposes, or responsibilities dispersed across geographic areas. This finding contrasts with traditional evidence linking longer commute times to more vulnerable populations and may reflect new time-use dynamics among upper-income groups, such as travel to second homes or participation in activities across multiple municipalities.

The territorial component also showed transformations. In 2015, residing in the Metropolitan Region was associated with higher marginal utility for transportation, consistent with the spatial concentration of activities in Greater Santiago. However, in 2023, this association partially reversed: the corresponding interaction is negative and statistically significant, indicating a relative reduction in commuting time in this area. This shift may be related to the expansion of remote work, improvements in transportation infrastructure (such as the extension of the Santiago Metro), or a broader availability of neighborhood-level services in the post-pandemic context.

Notable combinations:

- Women aged 25 to 44 show a significant increase in marginal utility for transportation in 2023, likely due to greater labor market participation and expanded responsibilities outside the home.
- High-income individuals living outside the Metropolitan Region show a notable increase in commuting time, possibly indicating new forms of territorial segmentation in time-use.
- People aged 66 and older, across the country, significantly reduce their time spent on transportation, raising concerns about their effective access to services, support networks, and public spaces.

4.3.6 Time allocation to volunteering

Although it represents a small share of total time-use, participation in volunteering activities offers valuable insights into civic engagement and the social fabric. The MDCEV model results reveal substantial changes between 2015 and 2023, both in the sociodemographic profiles involved and in the territorial dimension.

From a gender perspective, in 2015, women showed significantly higher marginal utility in this category, suggesting a greater propensity or opportunity to participate. However, in 2023, this pattern reverses: the interaction between being a woman and the year shows a negative and statistically significant coefficient, indicating a relative decline in female participation. This may be due to increased unpaid workload and the differentiated effects of the pandemic on women, particularly in contexts with limited support networks.

Regarding age, individuals aged 25 to 44 already showed a positive propensity to volunteer in 2015. In 2023, a new positive and significant effect emerges among those aged 45 to 65, suggesting a generational reconfiguration of community engagement. This shift indicates that young and middle-aged adults, especially women, are playing a more active role in local networks and social initiatives. In contrast, people aged 66 and older showed a significant reduction in this category, possibly due to health-related restrictions, heightened risk perception, or the weakening of institutional networks in which they previously participated.

Educational level shows important variation across the two years. In 2015, individuals with secondary, technical, and university education exhibited positive coefficients, confirming the link between cultural capital and volunteering. However, in 2023, these groups experienced a significant decline, especially those with secondary and technical education. This shift may reflect a reduction in available time among more qualified individuals or a transition toward less formal types of participation, such as digital activism or informal community actions.

From a socioeconomic standpoint, in 2023, higher income quintiles show negative and statistically significant interaction coefficients, contrasting with their more active participation in 2015. This decline may reflect a reallocation of time toward other forms of social engagement, such as donations, professional networks, or union representation, or a contraction of free time due to new work demands.

Territorially, relevant changes are observed. In 2015, residing in the Metropolitan Region was negatively associated with marginal utility for volunteering, likely due to higher opportunity costs or lower density of community networks. In 2023, this trend reverses: the interaction coefficient is positive and significant, suggesting a revival of urban participation, possibly driven by community organizing experiences during the pandemic or by municipal policies promoting volunteering.

Notable combinations:

- Women from middle and upper-income sectors, who concentrated volunteering participation in 2015, show a significant decline in 2023, likely due to an intensification of reproductive responsibilities.
- Urban residents aged 45 to 65 show an increased propensity for volunteering, which may reflect a new phase of civic activism or a search for community connection.
- Older adults with higher education reduce their time spent on volunteering in 2023, potentially due to residual effects of the pandemic or a gradual process of institutional disengagement.

4.3.7 Time allocation to out of home leisure

The category of out-of-home leisure allows for the analysis of participation patterns in recreational, cultural, and social activities, many of which take place in public or shared spaces. This dimension of time-use gained particular relevance in the post-pandemic period, in a context of growing concern for subjective well-being, mental health, and the right to recreation.

From a gender perspective, in 2015, women exhibited significantly lower marginal utility than men in this category, reflecting more limited participation in recreational spaces outside the home. However, in 2023, the interaction between being a woman and that year is positive and statistically significant, indicating a growing appropriation of these spaces by women. This shift may reflect increased autonomy or serve as a compensatory strategy in response to the sustained increase in both productive and reproductive workloads.

By age, the 25 to 44 age group stands out for its transformation: in 2015, this group showed a relatively low propensity for out-of-home leisure, whereas in 2023 the interaction coefficient is positive and significant. This result suggests a reconfiguration in time management among this segment, likely linked to the reactivation of in-person activities, a stronger need for social reconnection, or an internal renegotiation of leisure time within the household.

Regarding education, individuals with university education already showed positive marginal utility in this category in 2015. In 2023, this effect becomes stronger, with a high and statistically significant interaction coefficient. This pattern may be associated with a greater appreciation for structured leisure, increased access to cultural resources, or better time management capabilities in this group.

In terms of income, the model identifies significant effects only in the top quintile, which already showed higher engagement in out-of-home leisure in 2015. The absence of significant interactions in 2023 suggests stability in this pattern rather than change, indicating continued privilege in access rather than convergence.

Notable combinations:

- Women aged 25 to 44 with university education show a significant increase in marginal utility for out-of-home leisure in 2023, possibly signaling a cultural shift toward recognizing personal time as a dimension of well-being.
- High-income men with equivalent educational backgrounds show no significant increases, suggesting stabilization rather than transformation.
- Women previously excluded from this category are increasingly participating, possibly in response to a growing need for rest, autonomy, or social validation.

4.3.8 Summary of relevant profiles and emerging patterns

The MDCEV model enables the identification of differentiated sociodemographic profiles in time allocation, capturing not only individual effects but also their interaction and evolution between 2015 and 2023. These results reveal specific temporal trajectories shaped by sex, age, educational level, income, and geographic location.

- Time overload among middle- and upper-income women

Women aged 25 to 44 with secondary or university education and belonging to income quintiles 3 through 5 exhibit intensive time allocation across multiple domains: paid work, domestic tasks, caregiving, and transportation. This profile reflects a sustained time overload, with no effective redistribution of unpaid work. The increase in out-of-home leisure may signal greater autonomy, but also a compensatory strategy in response to multiple simultaneous demands.

- Consolidation of men's productive time

Men aged 25 to 44 with technical or university education and in higher income quintiles maintain a strong focus on paid work, with no major changes in 2023. Their low participation in caregiving, domestic work, and volunteering suggests continuity in a productivity-centered specialization, with no significant progress in shared responsibilities or community engagement.

- Retreat among older adults

Older adults (66+), especially women with lower education and income levels, show negative coefficients across most activities. This group is largely excluded from categories such as education, volunteering, leisure, and transportation, indicating growing marginalization from active social time. No positive effects in 2023 suggest reintegration after the pandemic.

- Transformations in high-income groups

Quintile 5 maintains its leading role in paid work and out-of-home leisure but shows declines in reproductive tasks, volunteering, and continuing education. Disaggregated by sex, women in this group increase their participation in paid work and leisure, while men maintain stable patterns without taking on new responsibilities. This reinforces temporal segmentation along class and gender lines.

- Hybrid profiles and territorial reorganization

New combinations are emerging that challenge traditional patterns, for example, young university-educated women with high dedication to work, transportation, and leisure, without a corresponding decrease in unpaid tasks. This profile reflects an intensive and multidimensional logic of time-use. At the territorial level, early signs of decentralization are observed: in 2023, marginal utility for activities such as caregiving and volunteering declined in the Metropolitan Region, possibly indicating a more balanced redistribution of social time across the national territory.

4.4 Implications for public policy

The econometric analysis reveals that time-use decisions are shaped by complex interactions among sociodemographic factors, not just individual variables like gender or age. This has key implications for equity-focused public policy across paid work, caregiving, mobility, leisure, and social cohesion.

- Paid work: Persistent gender gaps, especially among low-income and less-educated women, call for stronger female employment policies, such as formal job subsidies, tax incentives for family-friendly companies, and targeted training programs.
- Caregiving: The unequal distribution of unpaid care reinforces the need for a universal National Care System, with measures like caregiver registries, gender-equitable parental leave, and access to social protection.
- Domestic work: Time overload among urban and educated women highlights the need for accessible household technology, gender-sensitive telework regulations, and temporal equity in urban planning.
- Mobility: Territorial shifts in commuting time require inclusive public transport planning, with improved connectivity in rural and peri-urban areas.
- Leisure: The rise in out-of-home leisure among urban, educated women suggests an opportunity to invest in free, safe, gender-sensitive recreational infrastructure and promote leisure as a right linked to well-being.
- Volunteering: Declines among older and technically educated individuals point to the need for renewed support for civic engagement, especially among youth.
- Overall, the findings emphasize the importance of designing time-sensitive policies that address intersecting structural conditions, not just general categories. This requires updating regulatory frameworks to incorporate time as a key dimension of social equity.

5. Conclusions

This study demonstrates that the organization of time in Chile continues to reflect structural inequalities that affect men and women in different ways. A comparison of the 2015 and 2023 ENUT surveys reveals that, although there are signs of change in certain areas, deep gaps remain in the distribution of unpaid care and domestic work, access to free time, and participation in paid employment. These inequalities are evident not only in the amount of time dedicated to each activity, but also in the way different sociodemographic combinations shape specific temporal trajectories.

Grounded in the theoretical framework used, the findings reinforce key arguments from the economics of time, in that time allocation decisions are shaped by social structures not merely individual preferences. In particular, the existence of “time poverty” is confirmed among middle- and upper-income women, who face an intensification of total workload by combining employment, caregiving, domestic work, and longer commuting times. This pattern aligns with the concept of overload and the persistence of the sexual division of labor, even in contexts where women's labor market participation is high.

The econometric analysis using the MDCEV model made it possible to jointly model participation and time intensity across multiple activities, revealing sociodemographic profiles with distinct patterns. Notable findings include the growing exclusion of older adults, the expansion of commuting time in regions outside the capital, and the emergence of hybrid profiles among young, urban, highly educated women who juggle multiple roles, without this resulting in an effective redistribution of unpaid work. The notion of subjective well-being appears closely linked to certain uses of time, such as out-of-home leisure, whose unequal appropriation has important implications for autonomy and quality of life.

At the level of public policy, the results highlight the urgent need to implement a National Care System with a shared responsibility perspective, as well as to integrate the temporal dimension into the design of labor, urban, and transportation policies. Time can no longer be treated as a neutral variable: its distribution reflects and reproduces material, symbolic, and territorial inequalities.

The study also identifies opportunities for improvement in measurement instruments. Although ENUT 2023 introduced important methodological advances, challenges remain regarding comparability, survey frequency, and integration with other statistical sources. These limitations constrain the country's ability to continuously and accurately monitor changes in time-use.

Among the study's main limitations is the use of a harmonized dataset without expansion factors, which prevents nationally representative inferences. Additionally, the cross-sectional nature of the data limits analysis of individual or household trajectories over time. While the econometric model is robust, it relies on specific assumptions about marginal utility and satiation that may not fully capture the complexity of temporal behavior.

Looking ahead, it is essential to move toward more frequent and longitudinal time-use surveys that allows to observe not just what people do, but how their time-use decisions evolve over time. This also requires more precise and standardized measurement of simultaneous activities, along with greater integration with administrative and employment data to contextualize time-use in terms of material living conditions. A particularly promising line of work involves integrating multiple discrete-continuous choice models with indicators of subjective well-being, to value time not only as a scarce resource but also as a qualitative dimension of well-being. Likewise, it would be relevant to explore time-use among populations typically invisible to surveys, such as non-binary individuals, migrants, or platform workers, whose daily dynamics are not adequately captured by current instruments.

Taken together, this study reaffirms the importance of considering time as a strategic dimension in the analysis of social inequalities, and as a central axis in the formulation of public policies aimed at equity and social justice.

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Annex

Annex 1: Example of simultaneous activities module




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MÓDULO SIM: SIMULTANEIDAD

SECCIÓN 1 SIMULTANEIDAD EN ACTIVIDADES DE TRABAJO DE CUIDADOS Y DOMÉSTICO NO REMUNERADO

Lea: Ocasionalmente, las personas realizan más de una actividad al mismo tiempo. Por ejemplo, lavar la ropa mientras cocinan. A continuación, le preguntaré por un par de actividades y si usted las realizó en conjunto con otras el [DÍA DE SEMANA] y el [DÍA DE FIN DE SEMANA].

ACTIVIDADES		Solo si TC4=1 en [DÍA SEMANA]	Solo si TC4=1 en [DÍA FIN DE SEMANA]
		[DÍA DE SEMANA]	[DÍA DE FIN DE SEMANA]
SIM1	<i>Solo si dio de comer (TC4=1)</i> Anteriormente usted indicó que dio de comer a un integrante de su hogar, ¿estuvo realizando otra actividad mientras hacía esto?	☐ 1. Sí → <i>Siga a SIM2 [DÍA SEMANA]</i> ☐ 2. No → <i>Pasea SIM1 [DÍA FIN DE SEMANA]</i>	☐ 1. Sí → <i>Siga a SIM2 [DÍA FIN DE SEMANA]</i> ☐ 2. No → <i>Pasea SIM1 [DÍA SEMANA]</i>
SIM2	¿Qué otra actividad estuvo realizando? <i>Mostrar tarjeta N°3</i>	No act <i>Anote el código de la actividad mencionada.</i>	No act <i>Anote el código de la actividad mencionada.</i>
SIM3	¿Para quién o quiénes realizó las actividades en paralelo? <i>Identifique n° de línea</i>	No línea No línea No línea No línea	No línea No línea No línea No línea
SIM4	¿Por cuánto tiempo realizó ambas actividades?	H H : M M	H H : M M
SIM5	¿A cuál dedicó la mayor atención?	☐ 1. Dar de comer ☐ 2. Otra → <i>Siga a SIM1 [DÍA FIN DE SEMANA]</i>	☐ 1. Dar de comer ☐ 2. Otra → <i>Siga a SIM5 [DÍA SEMANA]</i>

Annex 2: Supplementary tables – Descriptive analysis

A2.1 General comparison by sex and year

A2.1.1 Mean daily time distribution

Activity	Sex	Mean time 2015	Mean time 2023	Δ_t
Care Work	Female	1:35	0:42	-0:53
	Male	0:51	0:17	-0:34
Domestic Work	Female	3:06	3:29	+0:23
	Male	1:27	1:51	+0:24
Education	Female	0:49	0:34	-0:15
	Male	1:04	0:49	-0:15
Leisure	Female	6:36	5:42	-0:56
	Male	7:03	6:21	-0:42
Meals	Female	1:19	1:29	+0:10
	Male	1:19	1:27	+0:08
Paid Work	Female	2:31	2:42	+0:11
	Male	4:31	4:10	-0:21
Personal Care	Female	0:39	1:16	+0:27
	Male	0:30	1:12	+0:42
Sleep	Female	7:09	7:47	+0:38
	Male	7:08	7:46	+0:38
Volunteering	Female	4:55	6:30	+1:35
	Male	3:04	3:04	-

A2.1.2 Activities by participation rate

Activity	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Paid Work	Female	28:02	22:25	-5:37	62.9%	84.5%	+21.6%
	Male	37:36	32:21	-5:15	84.2%	90.1%	+5.9%
Unpaid Work	Female	34:40	31:26	-3:14	100%	100%	-
	Male	16:59	15:58	-1:01	99.9%	99.7%	-0.2%
Care Work	Female	12:08	7:58	-4:10	91.6%	62%	-29.6%
	Male	6:40	4:08	-2:32	88.4%	47.5%	-40.9%
Education	Female	21:33	25:40	+4:07	26.7%	15.5%	-11.2%
	Male	23:02	27:00	+3:58	32.4%	21.3%	-11.1%
Volunteering	Female	4:55	6:30	+1:35	37.8%	32.1%	-5.7%
	Male	3:04	3:04	-	31.3%	27.4%	-3.9%
Commute	Female	3:55	4:08	+0:13	58.1%	50.3%	-7.8%
	Male	4:52	4:59	+0:07	79.6%	67.3%	-13.3%

A2.1.3 Activities by total participation rate

Activity	Sex	Mean time 2015	Mean time 2023	Δ_t
Leisure	Female	46:10	39:57	-6:13
	Male	49:21	44:25	-4:56
Personal Care	Female	4:30	8:52	+4:22
	Male	3:28	8:26	+4:58
Meals	Female	9:16	10:26	+1:10
	Male	9:11	10:07	+0:56
Sleep	Female	50:02	54:28	+4:26
	Male	49:54	54:23	+4:29

A2.2 Comparison by subgroups

A.2.2.1 Age group

Activity: Care Work

Age group	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
12-24	Female	10:56	6:12	-4:44	90%	51%	-39%
	Male	5:40	2:42	-2:58	87.5%	42.5%	-45%
25-44	Female	19:16	12:04	-7:12	97.4%	83%	-14.4%
	Male	8:54	5:45	-3:09	90.8%	62.3%	-28.5%
45-65	Female	8:31	4:55	-3:36	94.3%	60.7%	-33.6%
	Male	6:02	3:15	-2:47	89.9%	46.4%	-43.5%
66+	Female	5:00	3:53	-1:07	75.6%	39.4%	-36.2%
	Male	4:51	3:31	-1:20	81.8%	31.6%	-50.2%

Activity: Domestic Work

Age group	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
12-24	Female	9:33	10:18	+0:45	99.9%	99.9%	-
	Male	6:27	7:46	+1:19	99.6%	99.6%	-
25-44	Female	21:41	23:06	+1:25	100%	100%	-
	Male	9:05	12:42	+3:37	99.8%	99.8%	-
45-65	Female	27:59	29:08	+1:09	100%	100%	-
	Male	11:39	14:08	+2:29	99.8%	99.8%	-
66+	Female	29:32	29:34	+0:02	99.9%	99.8%	-0.1%
	Male	18:26	18:02	-0:24	99.6%	99.4%	-0.2%

Activity: Education

Age group	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
12-24	Female	27:50	31:49	+3:59	73%	69.4%	-3.6%
	Male	29:44	33:16	+3:32	74.6%	69.2%	-5.4%
25-44	Female	9:26	12:58	+3:32	18.1%	10.9%	-7.2%
	Male	9:51	13:09	+3:18	21.7%	12%	-9.7%
45-65	Female	5:15	5:59	+0:44	8.5%	3.6%	-4.9%
	Male	2:54	3:28	+0:36	9.8%	5.1%	-4.7%
66+	Female	4:28	5:56	+1:28	2.6%	0.9%	-1.7%
	Male	3:27	2:07	-1:20	5.1%	3%	-2.1%

Activity: Leisure

Age group	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
12-24	Female	52:37	50:11	-2:26	100%	100%	-
	Male	57:13	54:30	-2:47	100%	100%	-
25-44	Female	40:35	36:18	-4:17	100%	100%	-
	Male	45:26	40:55	-4:31	100%	100%	-
45-65	Female	43:01	36:21	-6:40	100%	100%	-
	Male	42:19	38:09	-4:10	100%	100%	-
66+	Female	53:08	43:40	-8:28	100%	100%	-
	Male	54:57	47:06	-7:49	100%	100%	-

Activity: Meals

Age group	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
12-24	Female	8:18	8:30	+0:12	100%	100%	-
	Male	7:34	7:49	+0:15	100%	100%	-
25-44	Female	8:13	9:10	+0:57	100%	100%	-
	Male	8:22	9:14	+0:52	100%	100%	-
45-65	Female	9:35	10:55	+1:20	100%	100%	-
	Male	10:08	10:45	+0:37	100%	100%	-
66+	Female	12:27	13:03	+0:36	100%	100%	-
	Male	13:05	13:21	+0:16	100%	100%	-

Activity: Paid Work

Age group	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
12-24	Female	11:29	9:54	-1:35	80.1%	83.2%	+3.1%
	Male	15:30	12:16	-3:14	87.3%	86.4%	-1.1%
25-44	Female	36:44	31:27	-5:17	73.2%	94.6%	+21.4%
	Male	48:27	44:55	-3:32	94.6%	97%	+2.4%
45-65	Female	37:18	25:39	-11:39	59.6%	89%	+29.4%
	Male	49:27	42:29	-6:58	91.2%	95.1%	+3.9%
66+	Female	18:10	7:12	-10:58	18.8%	65.4%	+47.4%
	Male	33:43	15:19	-18:24	36.1%	76%	+39.1%

Activity: Personal Care

Age group	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
12-24	Female	5:11	9:32	+4:21	100%	100%	-
	Male	3:19	7:13	+3:54	100%	100%	-
25-44	Female	3:45	6:59	+3:14	100%	100%	-
	Male	2:53	6:39	+3:46	100%	100%	-
45-65	Female	4:16	8:36	+4:20	100%	100%	-
	Male	3:25	8:15	+4:50	100%	100%	-
66+	Female	5:25	11:44	+6:19	100%	100%	-
	Male	5:20	12:58	+7:38	100%	100%	-

Activity: Sleep

Age group	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
12-24	Female	51:48	55:12	+3:24	100%	100%	-
	Male	51:46	55:20	+3:34	100%	100%	-
25-44	Female	45:01	49:56	+4:55	100%	100%	-
	Male	45:12	49:00	+3:48	100%	100%	-
45-65	Female	49:36	54:04	+4:28	100%	100%	-
	Male	48:49	53:34	+4:45	100%	100%	-
66+	Female	58:12	61:43	+3:31	100%	100%	-
	Male	59:04	63:04	+4:00	100%	100%	-

Activity: Volunteering

Age group	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
12-24	Female	3:38	2:59	-0:39	33.2%	28.3%	-4.9%
	Male	3:01	2:17	-0:44	33.6%	21.1%	-12.5%
25-44	Female	3:23	4:09	+0:46	40.7%	32.3%	+8.4%
	Male	2:52	2:33	-0:19	34.8%	32.7%	-2.1%
45-65	Female	6:37	9:00	+2:23	42.9%	37.9%	-5%
	Male	2:50	3:30	+0:40	30.9%	31.5%	+0.6%
66+	Female	6:33	8:09	+1:36	29.5%	25.3%	-4.2%
	Male	4:56	4:22	-0:34	18%	20.3%	+2.3%

Activity: Unpaid Work

Age group	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
12-24	Female	20:35	14:18	-6:17	100%	100%	-
	Male	12:24	9:22	-3:02	99.8%	99.6%	-0.2%
25-44	Female	41:50	34:28	-7:22	100%	100%	-
	Male	18:08	17:05	-1:03	100%	99.8%	-0.2%
45-65	Female	38:51	35:32	-3:19	100%	100%	-
	Male	17:55	16:43	-1:16	99.9%	99.9%	-
66+	Female	35:16	33:05	-2:11	100%	99.8%	-0.2%
	Male	23:13	19:49	-3:24	100%	99.4%	-0.6%

A.2.2.2 Educational level

Activity: Care Work

Educational Level	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
None	7:19	3:36	-3:43	87.1%	40.5%	-46.6%
Primary	8:36	5:11	-3:25	89.2%	47.2%	-42%
Secondary	10:59	6:23	-4:36	91.3%	58.4%	-42.9%
Technical	11:20	8:03	-3:17	95.6%	65.3%	-30.3%
University	11:37	7:55	-3:42	90.3%	62.8%	-27.5%

Activity: Domestic Work

Educational Level	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
None	16:49	22:17	+5:28	99.7%	99.6%	-0.1%
Primary	16:40	18:46	+2:06	99.8%	99.8%	-
Secondary	16:53	20:56	+4:03	99.9%	99.8%	-0.1%
Technical	18:07	20:46	+2:39	100%	99.9%	-0.1%
University	15:44	18:03	+2:19	100%	99.9%	-0.1%

Activity: Education

Educational Level	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
None	30:03	36:25	+6:22	35.6%	10.6%	-25%
Primary	29:11	33:13	+4:02	31.8%	26.8%	-5%
Secondary	17:44	24:49	+7:05	27.9%	18%	-9.9%
Technical	7:42	20:07	+12:25	10.4%	13.5%	+3.1%
University	5:36	7:55	+2:19	27.4%	11.7%	-15.7%

Activity: Leisure

Educational Level	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
None	49:06	42:24	-6:42	100%	100%	-
Primary	49:30	44:36	-4:54	100%	100%	-
Secondary	46:39	41:17	-5:22	100%	100%	-
Technical	44:55	39:27	-5:28	100%	100%	-
University	44:38	40:19	-4:19	100%	100%	-

Activity: Meals

Educational Level	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
None	10:20	12:18	+2:08	100%	100%	-
Primary	9:30	10:31	+1:01	100%	100%	-
Secondary	8:42	10:11	+1:29	100%	100%	-
Technical	8:53	9:54	+1:01	100%	100%	-
University	9:04	9:49	+0:45	100%	100%	-

Activity: Paid Work

Educational Level	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
None	20:30	14:03	-6:27	61.7%	65.3%	+3.6%
Primary	26:22	15:59	-10:23	65.8%	80.9%	+15.1%
Secondary	36:33	27:21	-9:12	75.2%	88.4%	+13.3%
Technical	40:51	31:02	-9:49	82.1%	92.8%	+10.7%
University	43:03	37:52	-5:11	86.3%	94.8%	+8.5%

Activity: Personal Care

Educational Level	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
None	4:22	11:51	+7:29	100%	100%	-
Primary	4:16	9:47	+5:31	100%	100%	-
Secondary	3:55	8:18	+4:23	100%	100%	-
Technical	3:52	7:47	+3:55	100%	100%	-
University	3:41	7:20	+3:39	100%	100%	-

Activity: Sleep

Educational Level	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
None	56:22	62:57	+6:35	100%	100%	-
Primary	52:23	58:18	+5:55	100%	100%	-
Secondary	47:48	53:23	+5:35	100%	100%	-
Technical	45:26	51:46	+6:20	100%	100%	-
University	3:41	7:20	+3:39	100%	100%	-

Activity: Volunteering

Educational Level	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
None	4:24	7:19	+2:55	30.6%	25.1%	-5.5%
Primary	4:38	6:55	+2:17	30.4%	26.1%	-4.3%
Secondary	4:19	5:11	+0:52	37.4%	31%	-6.4%
Technical	3:36	5:04	+1:28	45%	31.5%	-13.5%
University	3:07	3:06	-0:01	39.9%	36.2%	-3.7%

Activity: Unpaid Work

Educational Level	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
None	24:32	25:35	+1:03	99.9%	99.6%	-0.3%
Primary	25:43	23:01	-2:42	100%	99.8%	-0.2%
Secondary	28:30	26:16	-2:14	100%	99.9%	-0.1%
Technical	30:33	27:38	-2:55	100%	99.9%	-0.1%
University	27:27	24:08	-3:19	100%	100%	-

A.2.2.3 Zone

Activity: Care Work

Zone	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Metropolitan	Female	13:38	8:13	-5:25	92.2%	64.7%	-27.5%
	Male	7:57	4:53	-3:04	89.9%	56.5%	-33.4%
Other Regions	Female	11:37	7:56	-3:41	91.3%	61.5%	-29.8%
	Male	6:11	3:58	-2:13	87.8%	46%	-41.8%

Activity: Domestic Work

Zone	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Metropolitan	Female	5:17	4:46	-0:31	63.1%	90%	+26.9%
	Male	6:12	5:54	-0:18	84.6%	92.7%	+8.1%
Other Regions	Female	3:23	4:20	+0:57	56.4%	82.5%	+26.1%
	Male	4:20	5:11	+0:51	77.8%	88.6%	+10.8%

Activity: Domestic Work

Zone	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Metropolitan	Female	21:02	24:24	+3:22	100%	100%	-
	Male	9:31	13:17	+3:46	99.9%	99.9%	-
Other Regions	Female	21:56	24:25	+2:29	99.9%	99.9%	-
	Male	10:23	12:57	+2:34	99.6%	99.6%	-

Activity: Education

Zone	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Metropolitan	Female	19:38	22:24	+2:46	30.6%	18.3%	-12.3%
	Male	19:48	20:40	+0:52	33.8%	27.1%	-6.7%
Other Regions	Female	22:20	25:53	+3:33	25.3%	15.1%	-10.2%
	Male	24:17	28:30	4:13	31.9%	20.3%	-11.6%

Activity: Leisure

Zone	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Metropolitan	Female	45:02	39:30	-5:32	100%	100%	-
	Male	47:45	43:54	-3:51	100%	100%	-
Other Regions	Female	46:33	40:01	-6:32	100%	100%	-
	Male	49:56	44:31	-5:25	100%	100%	-

Activity: Meals

Zone	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Metropolitan	Female	9:22	9:49	+0:27	100%	100%	-
	Male	9:12	9:39	+0:27	100%	100%	-
Other Regions	Female	9:14	10:31	+1:17	100%	100%	-
	Male	9:11	10:12	+1:01	100%	100%	-

Activity: Paid Work

Zone	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Metropolitan	Female	29:48	22:53	-6:55	68.4%	91.6%	+23.2%
	Male	40:27	33:50	-6:37	89.3%	93.7%	+4.4%
Other Regions	Female	27:21	22:21	-5:00	60.9%	83.3%	+22.4%
	Male	36:28	32:05	-4:23	82.3%	89.4%	+7.1%

Activiy: Personal Care

Zone	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Metropolitan	Female	4:21	8:57	+4:36	100%	100%	-
	Male	3:25	7:50	+4:25	100%	100%	-
Other Regions	Female	4:34	8:51	+4:17	100%	100%	-
	Male	3:29	8:32	+5:03	100%	100%	-

Activity: Sleep

Zone	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Metropolitan	Female	47:38	52:37	+4:59	100%	100%	-
	Male	47:23	52:26	+5:03	100%	100%	-
Other Regions	Female	50:51	54:46	+3:55	100%	100%	-
	Male	50:50	54:44	+3:54	100%	100%	-

Activity: Volunteering

Zone	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Metropolitan	Female	4:46	6:20	+1:34	33.4%	36.7%	+3.3%
	Male	2:34	2:34	-	31.1%	32.6%	+1.5%
Other Regions	Female	4:57	6:32	+1:35	39.4%	31.4%	-8%
	Male	3:14	3:10	-0:04	31.4%	26.5%	-4.9%

Activity: Unpaid Work

Zone	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Metropolitan	Female	35:12	32:02	-3:10	100%	100%	-
	Male	17:28	16:53	-0:35	99.9%	99.9%	-
Other Regions	Female	34:29	31:21	-3:08	100%	100%	-
	Male	16:49	15:37	-1:12	99.9%	99.7%	-0.2%

A.2.2.4 Quintile

Activity: Care Work

Quintile	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
1	Female	15:49	9:32	-6:17	93.5%	57.8%	-35.7%
	Male	8:16	4:12	-2:04	92.7%	40.6%	-42.1%
2	Female	12:45	8:24	-4:21	91%	60.8%	-30.2%
	Male	7:06	3:56	-3:10	92.1%	48.9%	-43.2%
3	Female	10:25	6:48	-3:37	92.4%	64.7%	-27.7%
	Male	5:40	4:14	-1:26	88.9%	46.9%	-42%
4	Female	9:18	7:32	-1:46	91.7%	65.1%	-26.6%
	Male	5:45	3:27	-2:18	86.5%	51.9%	-34.6%
5	Female	9:26	7:07	-2:19	86.9%	62.9%	-24%
	Male	6:24	4:54	-1:30	80.3%	49.8%	-30.5%

Activity: Commute

Quintile	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
1	Female	3:39	4:24	+0:45	46.9%	81.6%	+34.7%
	Male	4:34	5:04	+0:30	66.1%	86.7%	+20.6%
2	Female	3:53	4:25	+0:32	54.4%	83.3%	+28.9%
	Male	4:46	5:37	+0:51	77%	91.5%	+14.5%
3	Female	4:01	4:32	+0:31	59.2%	82.8%	+23.6%
	Male	5:13	5:17	+0:04	81.4%	88.8%	+7.4%
4	Female	4:12	4:17	+0:05	66.7%	84.2%	+17.5%
	Male	5:00	5:27	+0:27	85.2%	90.4%	+5.2%
5	Female	3:47	4:20	+0:33	75.6%	87.6%	+12%
	Male	4:42	5:02	+0:20	89.8%	88.8%	-1%

Activity: Domestic Work

Quintile	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
1	Female	22:01	25:16	+3:15	99.8%	100%	+0.2%
	Male	9:45	13:50	+4:05	99.8%	100%	+0.2%
2	Female	22:21	23:58	+1:37	100%	99.9%	-0.1%
	Male	9:25	12:28	+3:03	99.6%	99.6%	-
3	Female	22:38	24:44	+2:06	100%	99.9%	-0.1%
	Male	10:11	12:40	+2:29	99.6%	99.4%	-0.2%
4	Female	21:03	25:04	+4:01	100%	99.9%	-0.1%
	Male	10:53	12:49	+1:56	99.9%	99.6%	-0.3%
5	Female	19:11	22:08	+2:57	100%	99.9%	-0.1%
	Male	10:36	13:10	+2:34	99.7%	99.7%	-

Activity: Education

Quintile	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
1	Female	24:15	28:43	+4:28	28.2%	17.6%	-10.6%
	Male	27:57	31:07	+3:10	41.7%	26.2%	-15.5%
2	Female	23:45	25:59	+2:14	24.3%	15.7%	-8.6%
	Male	25:03	27:12	+2:09	30%	21.9%	-8.1%
3	Female	22:01	26:29	+4:28	23.8%	13.3%	-10.5%
	Male	23:09	29:23	+6:14	28.6%	18.5%	-10.1%
4	Female	18:12	23:36	+5:24	27.2%	13%	-14.2%
	Male	21:07	25:53	+4:46	27.5%	17.8%	-9.7%
5	Female	16:32	18:58	+2:26	32.1%	18.1%	-14%
	Male	15:42	21:05	+5:23	35.3%	22%	-13.3%

Activity: Leisure

Quintile	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
1	Female	46:18	39:14	-7:04	100%	100%	-
	Male	52:23	46:44	-5:39	100%	100%	-
2	Female	46:17	40:41	-5:36	100%	100%	-
	Male	49:54	42:22	-7:32	100%	100%	-
3	Female	45:48	39:11	-6:37	100%	100%	-
	Male	48:00	44:11	-3:49	100%	100%	-
4	Female	46:00	39:22	-6:38	100%	100%	-
	Male	48:00	43:35	-4:25	100%	100%	-
5	Female	46:26	42:01	-4:25	100%	100%	-
	Male	48:18	45:06	-3:12	100%	100%	-

Activity: Meals

Quintile	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
1	Female	9:32	10:17	+0:45	100%	100%	-
	Male	9:21	9:35	+0:14	100%	100%	-
2	Female	9:17	9:58	+0:41	100%	100%	-
	Male	9:17	9:55	+0:38	100%	100%	-
3	Female	9:22	10:46	+1:24	100%	100%	-
	Male	9:17	10:17	+1:00	100%	100%	-
4	Female	8:52	10:49	+1:57	100%	100%	-
	Male	9:01	10:24	+1:23	100%	100%	-
5	Female	9:08	10:21	+1:13	100%	100%	-
	Male	8:59	10:25	+1:26	100%	100%	-

Activity: Paid Work

Quintile	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
1	Female	18:09	17:58	-0:11	52.8%	82.5%	+29.7%
	Male	23:41	25:25	+1:44	75.6%	87.2%	+11.6%
2	Female	25:18	22:43	-2:35	59.5%	84.1%	+24.6%
	Male	36:06	35:27	-0:39	81.5%	91.7%	+10.2%
3	Female	30:23	23:13	-7:10	63.7%	83.3%	+19.6%
	Male	40:13	32:16	-7:57	84.6%	89.7%	+5.1%
4	Female	34:30	24:30	- 10:00	70.7%	85.2%	+14.5%
	Male	42:42	35:09	-7:33	88.1%	91.4%	+2.7%
5	Female	35:10	25:48	-9:22	78.8%	89.4%	+10.6%
	Male	43:48	33:35	- 10:13	92.4%	90.5%	-1.9%

Activity: Personal Care

Quintile	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
1	Female	4:41	9:09	+4:28	100%	100%	-
	Male	3:42	8:42	+5:00	100%	100%	-
2	Female	4:38	8:28	+3:50	100%	100%	-
	Male	3:31	8:08	+4:37	100%	100%	-
3	Female	4:30	9:05	+4:35	100%	100%	-
	Male	3:31	8:56	+5:25	100%	100%	-
4	Female	4:13	8:57	+4:46	100%	100%	-
	Male	3:21	8:12	+4:51	100%	100%	-
5	Female	4:20	8:29	+4:09	100%	100%	-
	Male	3:13	8:08	+4:55	100%	100%	-

Activity: Sleep

Quintile	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
1	Female	52:09	55:54	+3:45	100%	100%	-
	Male	54:26	56:00	+1:34	100%	100%	-
2	Female	51:31	54:40	+3:09	100%	100%	-
	Male	51:33	54:09	+2:36	100%	100%	-
3	Female	49:50	54:50	+5:00	100%	100%	-
	Male	50:27	54:46	+4:19	100%	100%	-
4	Female	47:33	53:26	+5:53	100%	100%	-
	Male	47:29	53:58	+6:29	100%	100%	-
5	Female	46:16	52:27	+6:11	100%	100%	-
	Male	44:46	52:55	+8:09	100%	100%	-

Activity: Volunteering

Quintile	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
1	Female	5:11	7:49	+2:38	41.4%	35.8%	-5.6%
	Male	4:02	4:25	+0:23	28.8%	25.8%	-3%
2	Female	4:19	6:44	+2:25	34.8%	29.5%	-5.3%
	Male	2:55	2:18	-0:37	30.4%	28%	-2.4%
3	Female	4:52	7:24	2:32	34.2%	29.1%	-5.1%
	Male	3:09	3:15	+0:06	28.6%	27.3%	-1.3%
4	Female	6:04	4:44	1:20	40.4%	32.5%	-7.9%
	Male	2:29	2:31	+0:02	34.7%	28.5%	-6.3%
5	Female	3:41	4:46	+1:05	38.7%	33.4%	-5.3%
	Male	2:55	2:54	-0:02	34.3%	27.5%	-6.8%

Activity: Unpaid Work

Quintile	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
1	Female	38:55	33:35	-5:20	100%	100%	-
	Male	18:35	16:40	-1:55	99.9%	100%	+0.1%
2	Female	35:28	31:05	-4:23	100%	99.9%	-0.1%
	Male	16:49	15:03	-1:43	99.9%	99.6%	-0.3%
3	Female	33:55	31:18	-2:37	100%	99.9%	-0.1%
	Male	16:06	15:33	-0:33	99.9%	99.5%	-0.4%
4	Female	32:01	31:29	-0:32	100%	100%	-
	Male	16:42	15:19	-1:23	100%	99.7%	-0.3%
5	Female	28:48	28:12	-0:36	100%	100%	-
	Male	16:44	16:25	-0:19	99.9%	99.7%	-0.2%

A.2.2.5 Minors in household

Activity: Paid Work

Minors in household	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Minors	Female	25:49	22:45	-3:04	69%	90%	+21%
	Male	34:37	32:42	-1:55	90.1%	92.4%	+2.3%
No minors	Female	32:18	22:04	-10:14	53.6%	79.2%	+25.6%
	Male	41:35	32:06	-9:29	77.4%	88.4%	+11%

Activity: Unpaid Work

Minors in household	Sex	Mean time 2015	Mean time 2023	Δ_t	Participation 2015	Participation 2023	Δ_p
Minors	Female	37:20	33:11	-4:09	100%	100%	-
	Male	17:03	14:42	+2:21	99.9%	99.7%	-0.2%
No minors	Female	30:40	29:46	-0:54	100%	99.9%	-0.1%
	Male	16:55	16:36	-0:19	99.9%	99.7%	-0.2%

Annex 3: Detailed charts of subgroups

Figure A3. 1: Weekly time in care work by age group, sex and year

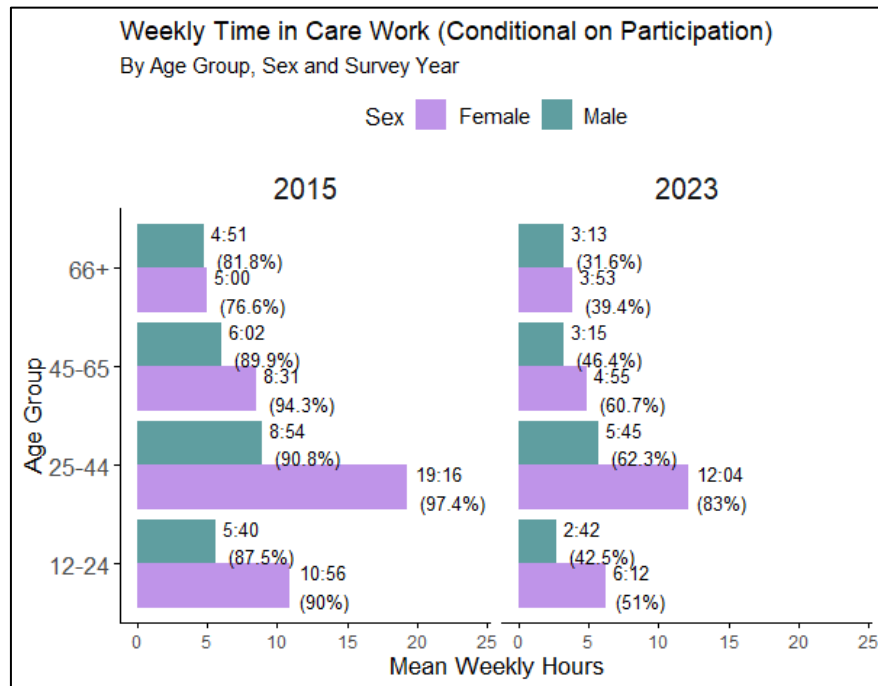


Figure A3. 2: Weekly time in education by age group, sex and year

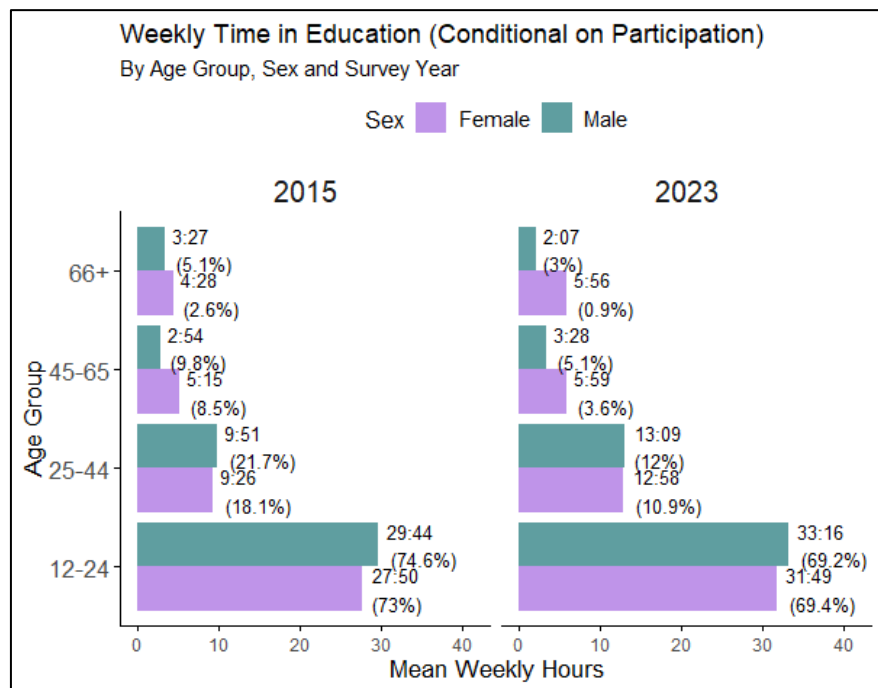


Figure A3. 3: Weekly time in by age group, sex and year, full sample

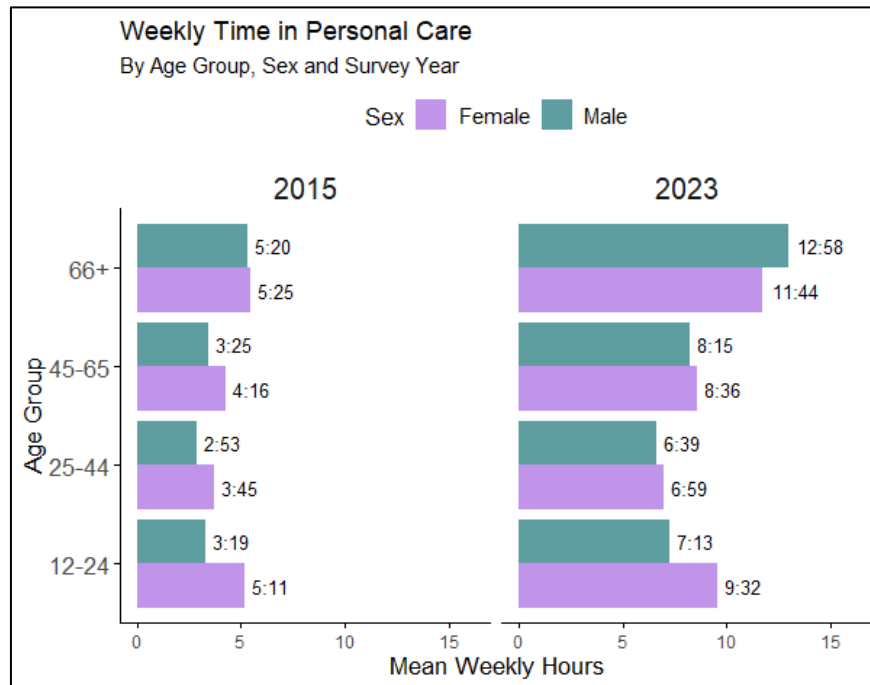


Figure A3. 4: Weekly time in sleep by age group, sex and year, full sample

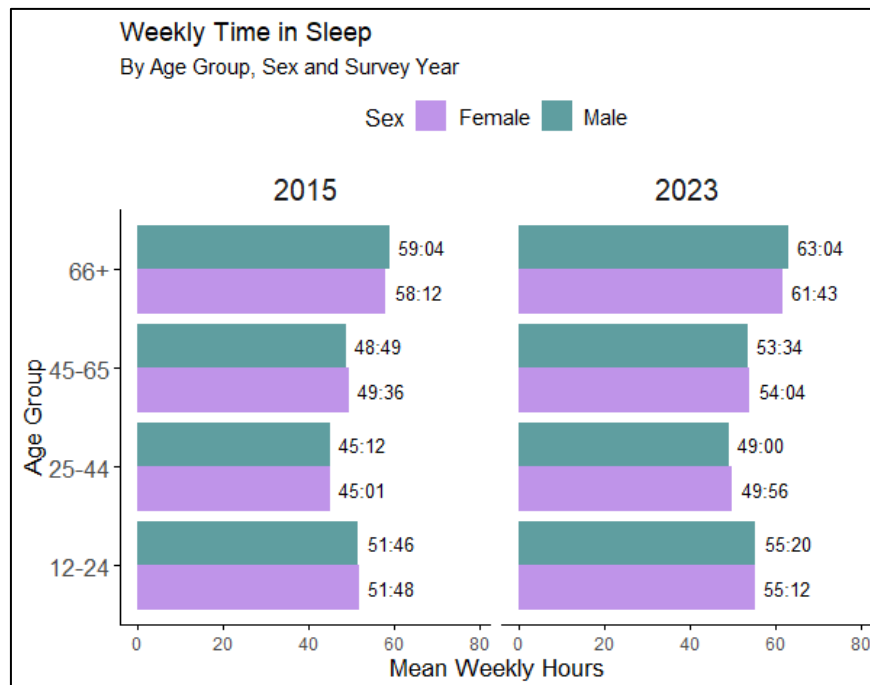


Figure A3. 5: Weekly time in volunteering by age group, sex and year

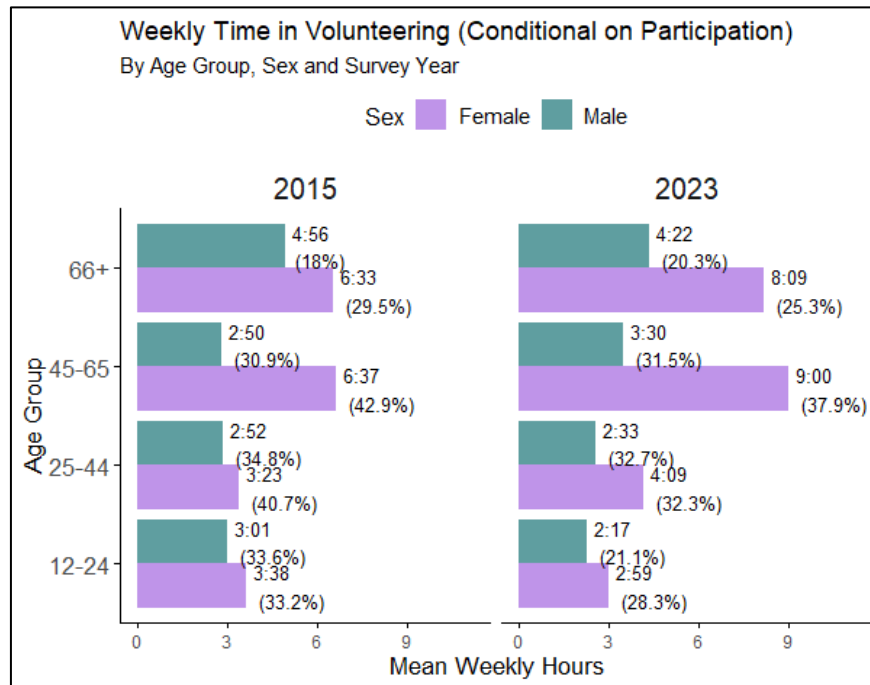


Figure A3. 6: Weekly time in care work by educational level and year

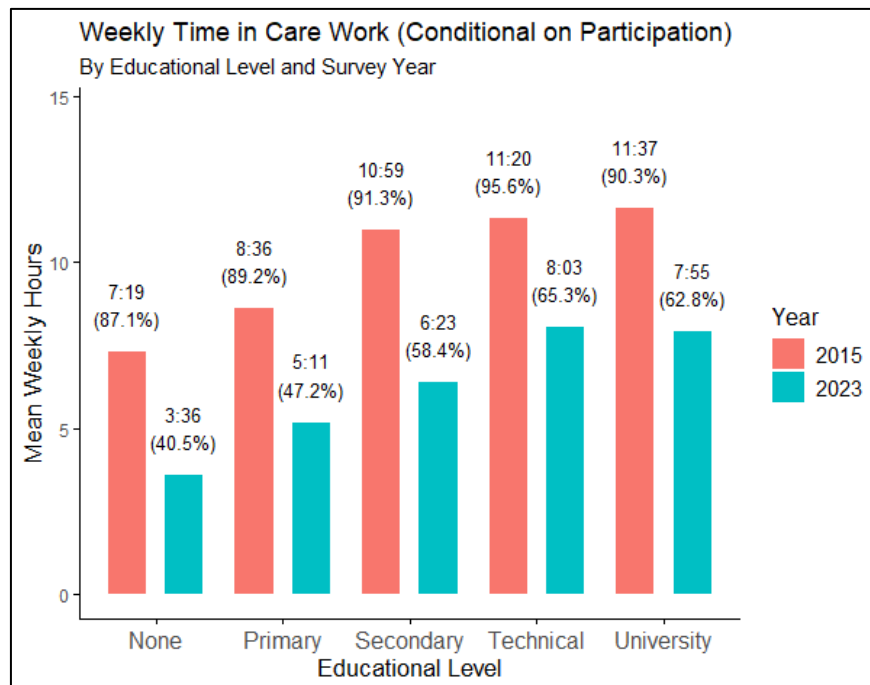


Figure A3. 7: Weekly time in education by educational level and year

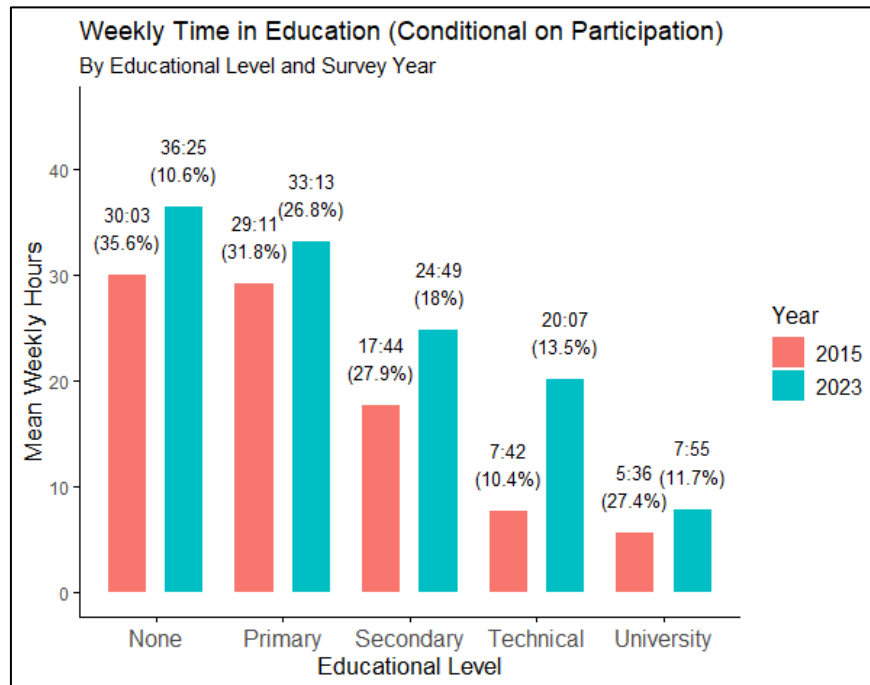


Figure A3. 8: Weekly time in personal care by educational level and year, full sample

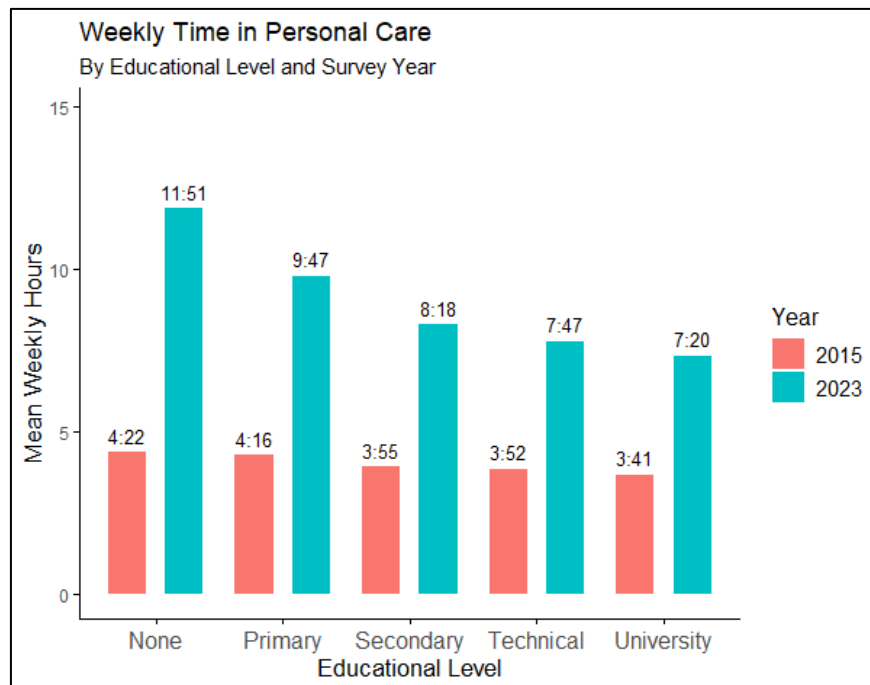


Figure A3. 9: Weekly time in sleep by educational level and year, full sample

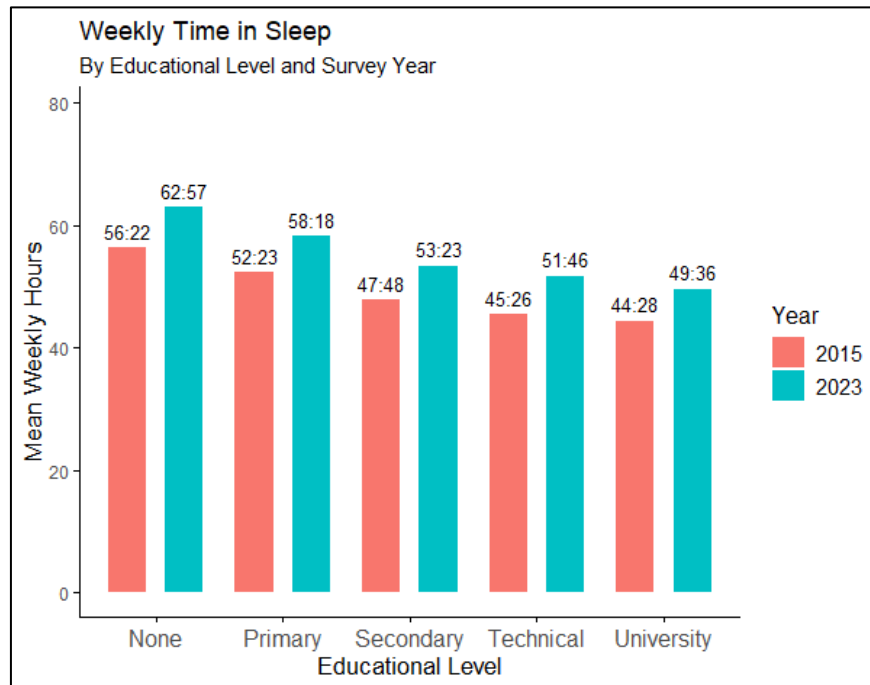


Figure A3. 10: Weekly time in volunteering by educational level and year

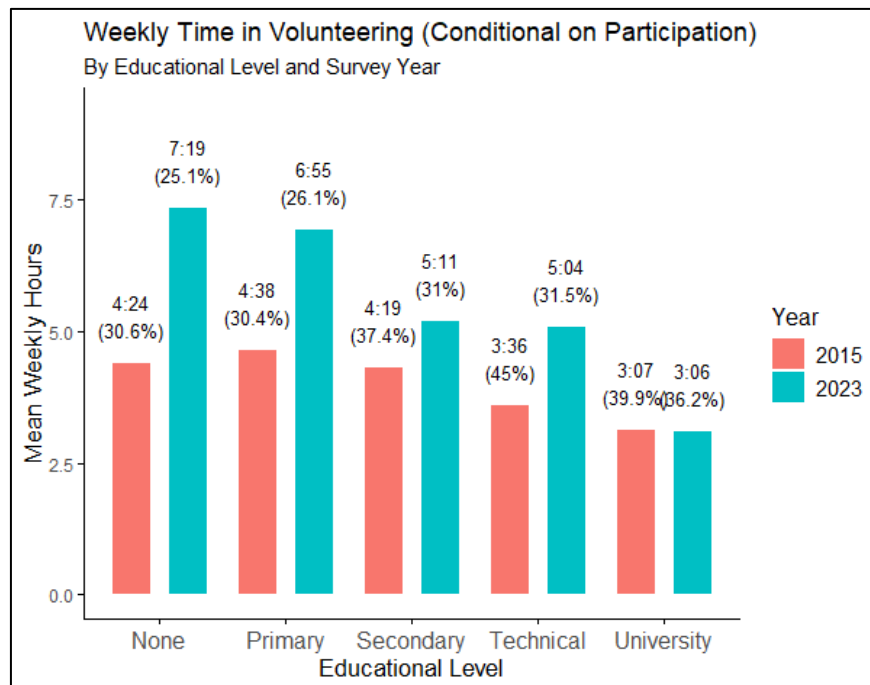


Figure A3. 11: Weekly time in care work by zone, sex and year

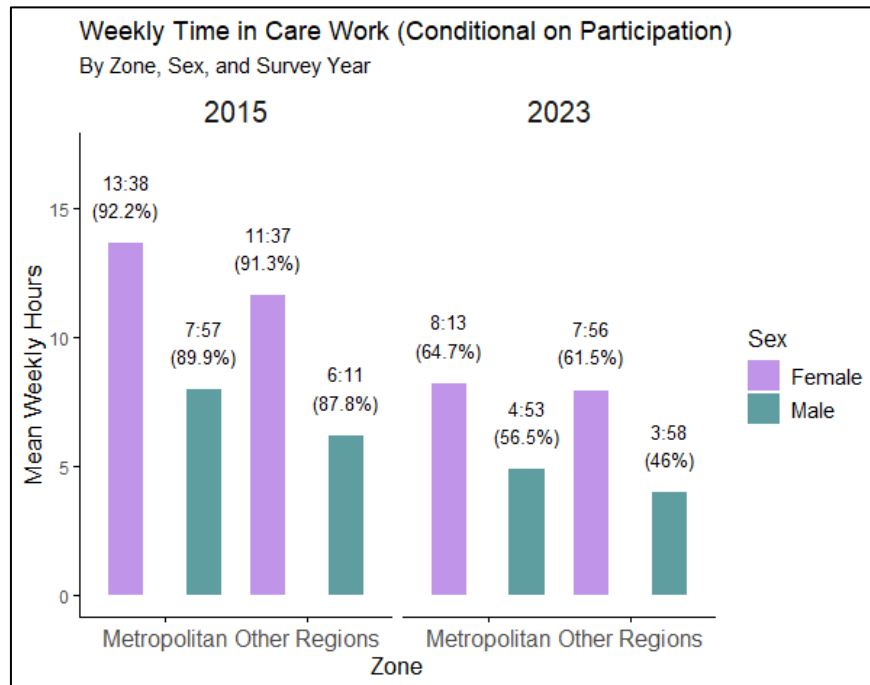


Figure A3. 12: Weekly time in domestic work by zone, sex and year

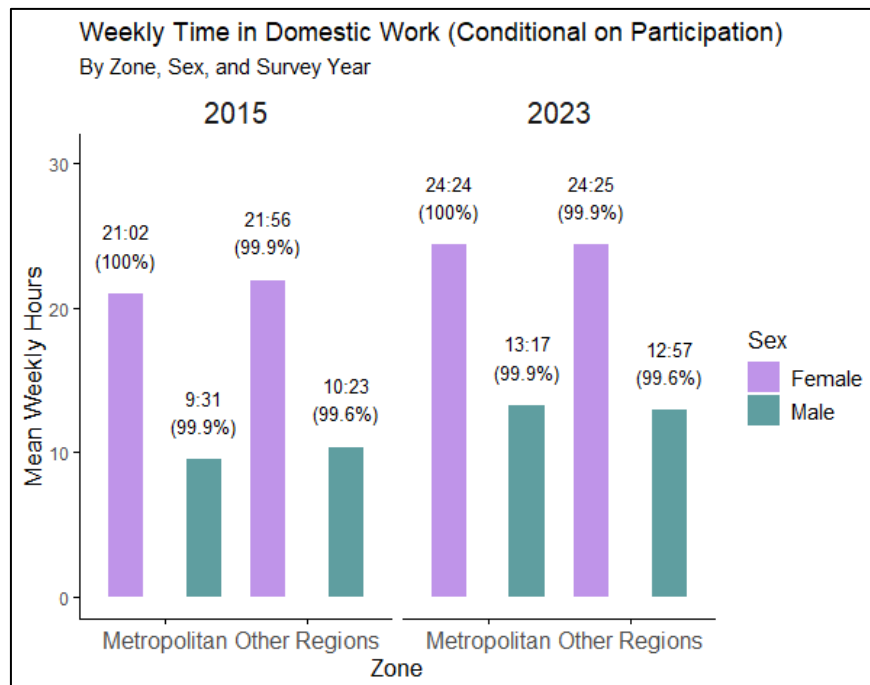


Figure A3. 13: Weekly time in education by zone, sex and year

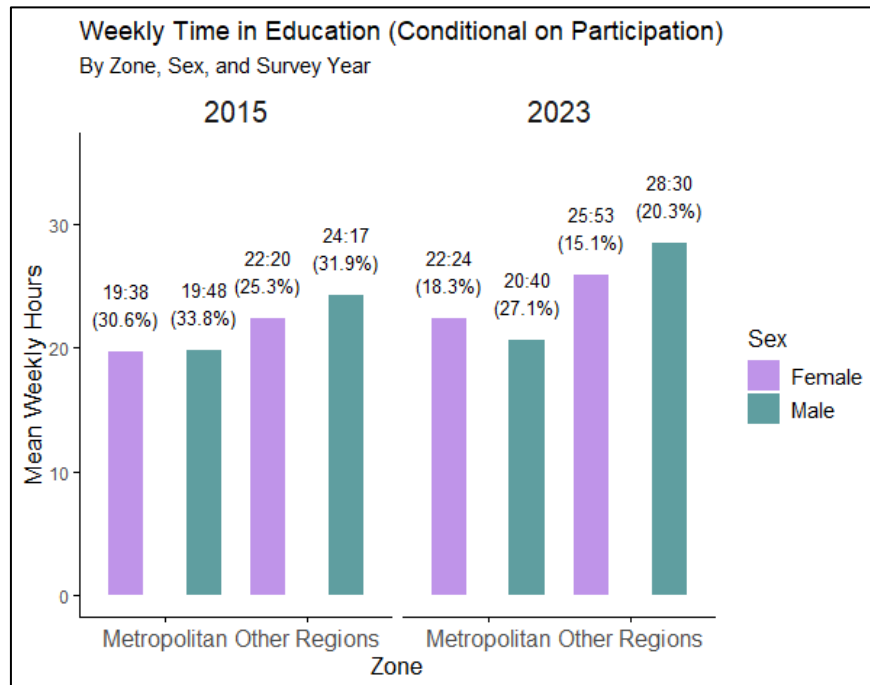


Figure A3. 14: Weekly time in personal care by zone, sex and year, full sample

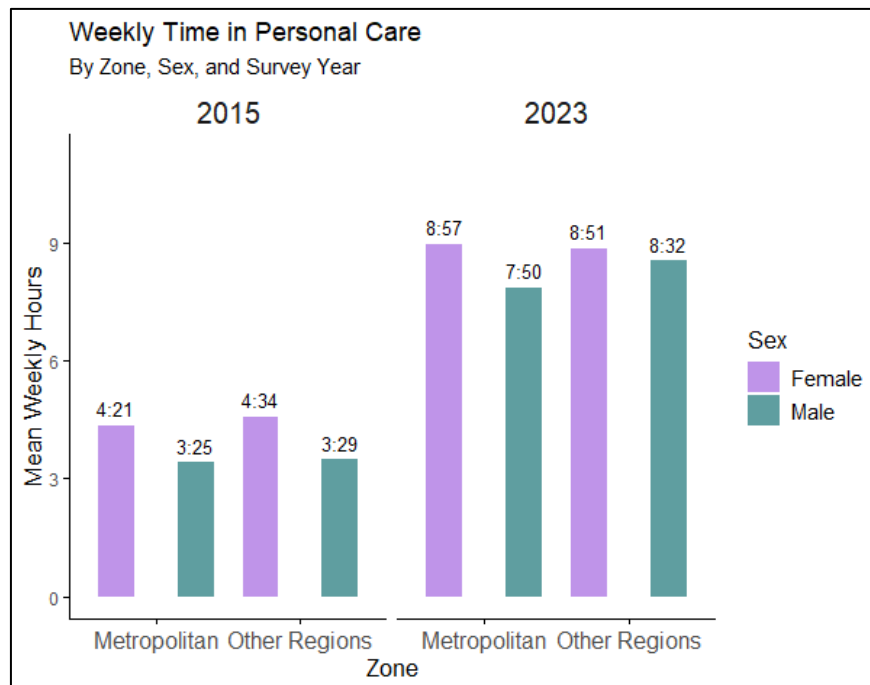


Figure A3. 15: Weekly time in sleep by zone, sex and year, full sample

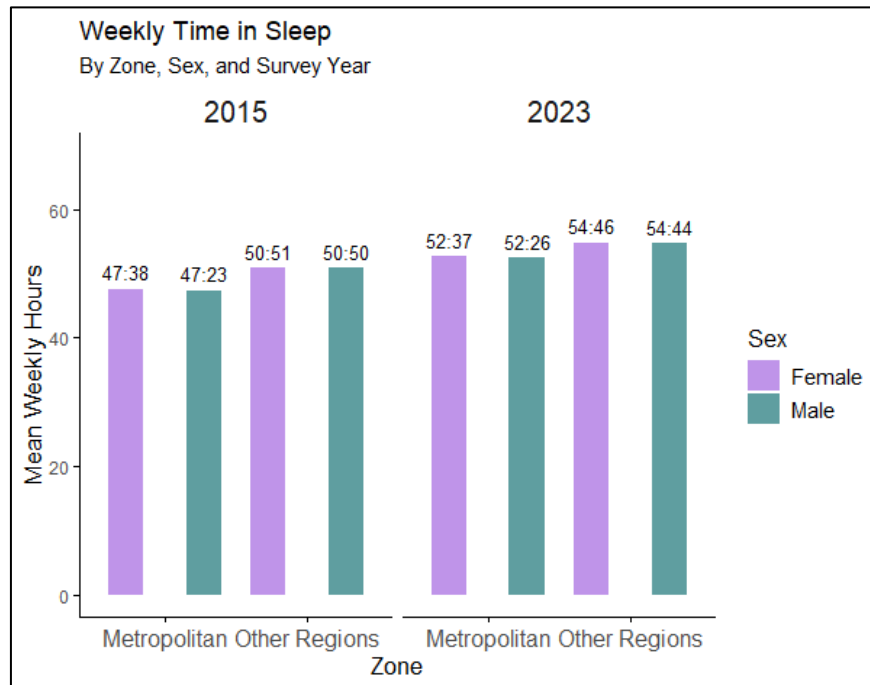


Figure A3. 16: Weekly time in volunteering by zone, sex and year

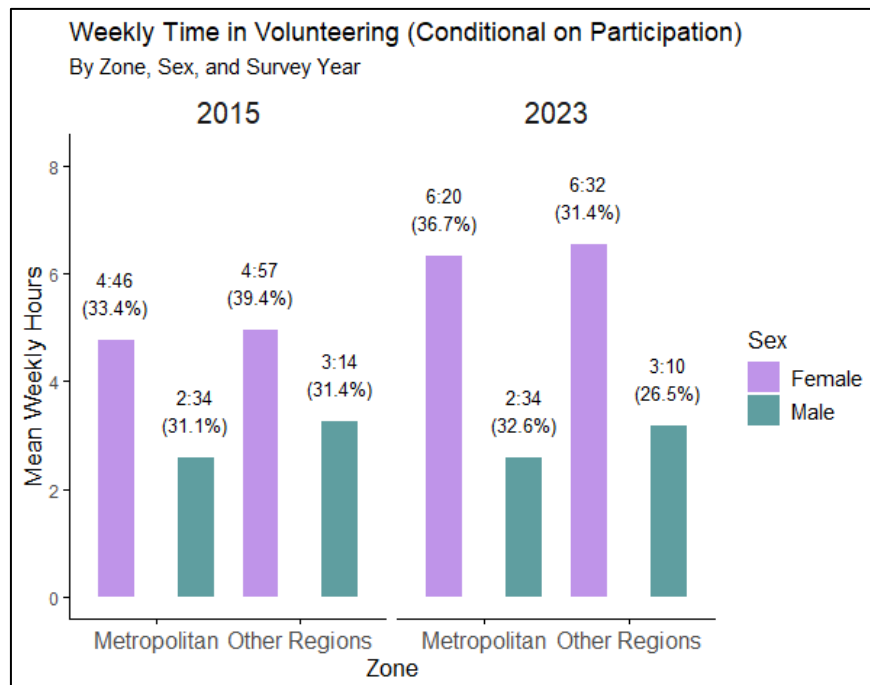


Figure A3. 17: Weekly time in care work by quintile, sex and year

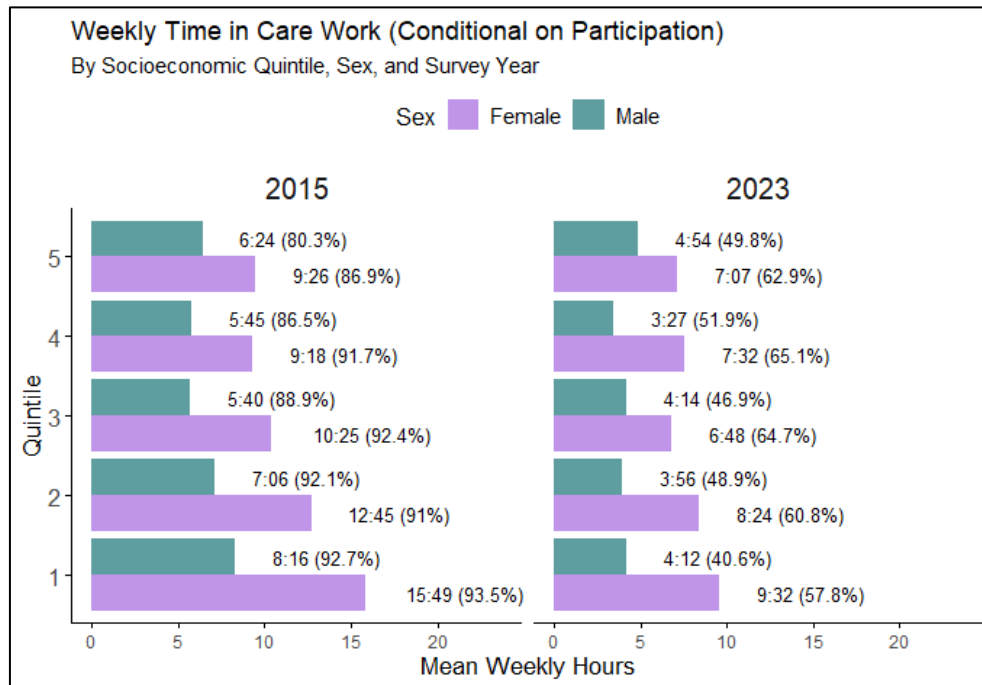


Figure A3. 18: Weekly time in commute by quintile, sex and year

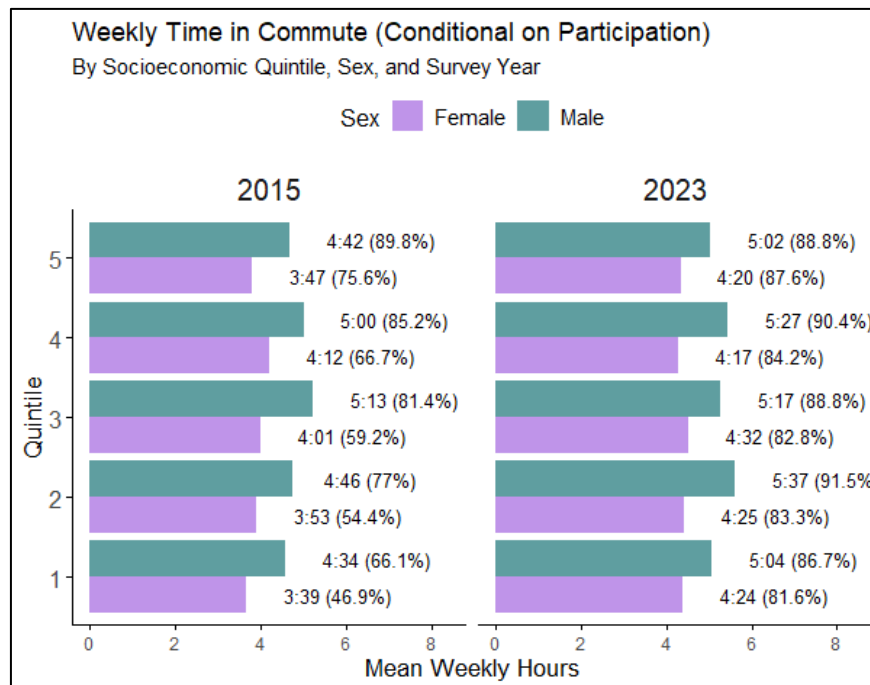


Figure A3. 19: Weekly time in education by quintile, sex and year

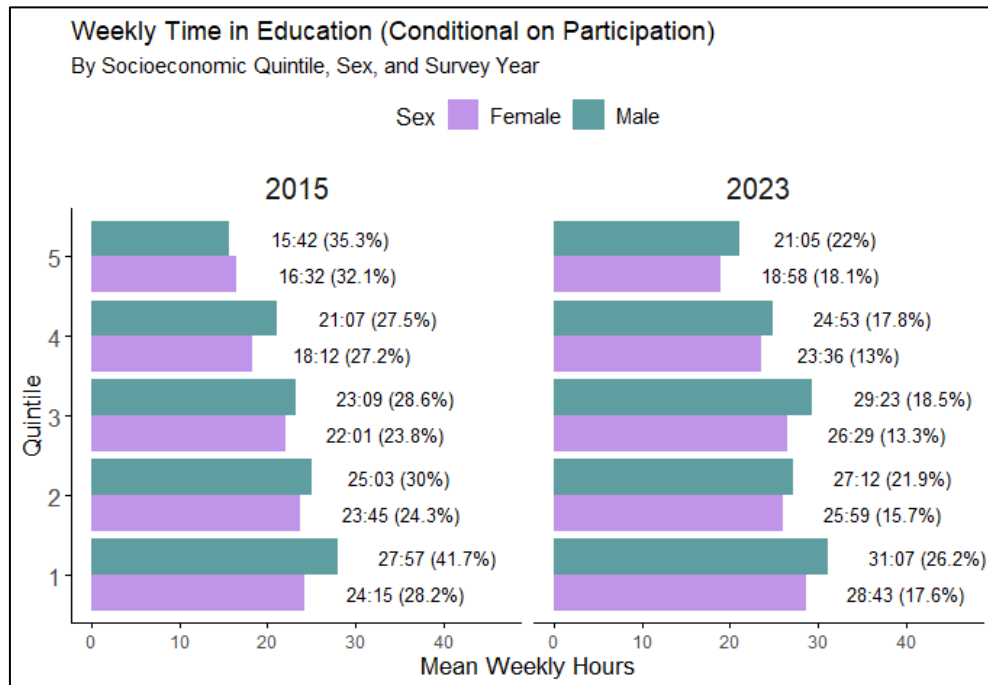


Figure A3. 20: Weekly time in personal care by quintile, sex and year, full sample

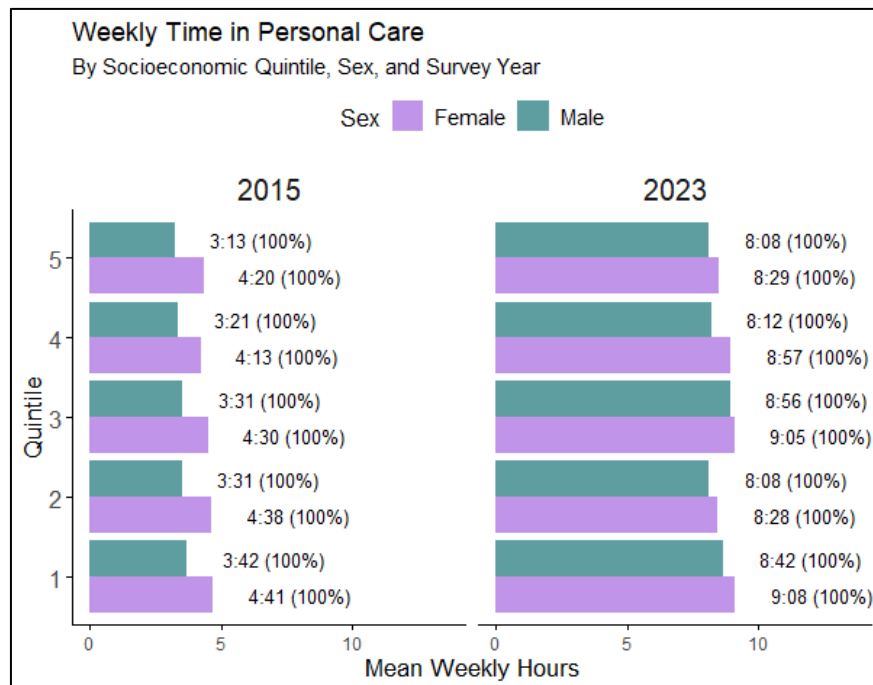


Figure A3. 21: Weekly time in sleep by quintile, sex and year, full sample

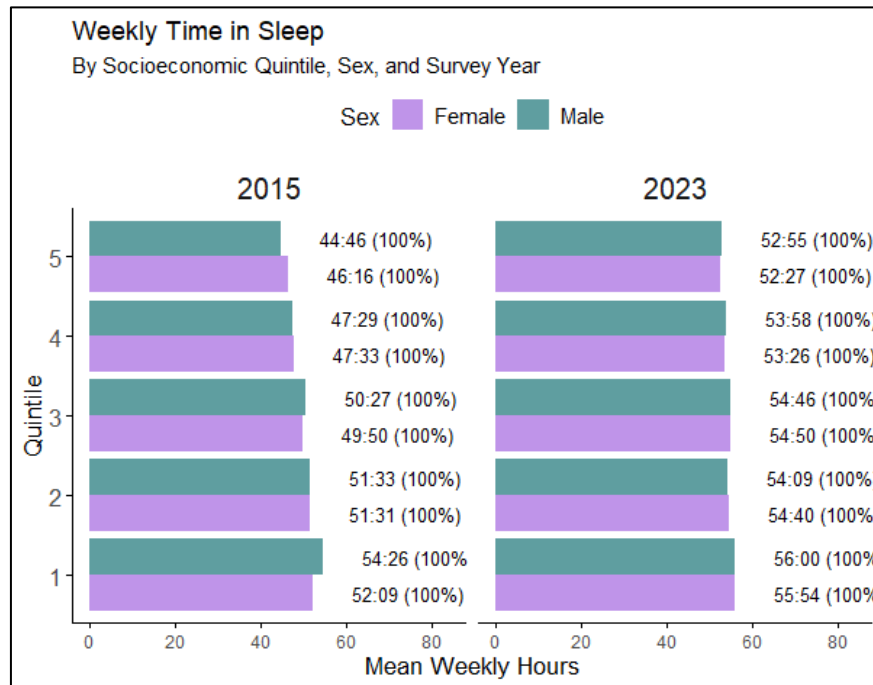


Figure A3. 22: Weekly time in volunteering by quintile, sex and year

