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Hours of Peace: Youth Gender Roles, Labor Participation, and Care Time Reallocation Following the 2014 Ceasefire in Colombia

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Abstract

This study examines how a major reduction in violence, Colombia’s 2014 ceasefire with the Revolutionary Armed Forces of Colombia (FARC-EP), shaped the way young people allocate their time. Using a difference-in-differences strategy and nationally representative data from the Encuesta Nacional del Uso de Tiempo (ENUT), linked to municipal-level conflict exposure, we study changes in daily activities among youth aged 14 to 28. Results show that the cessation of violence led to a substantial increase in time devoted to caregiving, and a notable rise in labor market participation, particularly among young women, accompanied by reductions in time spent sleeping. The ceasefire also contributed to a more equitable distribution of household responsibilities, with men increasing their participation in domestic work. Notably, these effects are concentrated among individuals from more advantaged households, suggesting that socioeconomic disparities may moderate the benefits of peace efforts. We explore potential mechanisms, including forced migration, household composition, and local economic activity. The results are time-sensitive and remain robust even when accounting for selective migration patterns. The findings highlight time use as a key behavioral margin through which peace agreements can affect economic and social outcomes, and offer actionable insights for post-conflict policy design.

Keywords Time Use, Youth, Gender Roles, Caregiving, Labor Market, Armed Conflict

JEL Codes D74, J16, J22

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1 Introduction

Colombia’s 2014 ceasefire with the Revolutionary Armed Forces of Colombia (FARC-EP) marked a critical turning point in one of the world’s longest-running armed conflicts, spanning more than fifty years. While peace processes are typically evaluated using aggregate metrics such as economic growth or institutional consolidation, their medium- and long-term impacts on individual behavior and well-being remain comparatively underexplored. In principle, the transition to peace can facilitate a reallocation of resources toward physical and human capital, alongside the implementation of development interventions. However, individual behavioral responses to such transitions remain underexplored. How individuals allocate time use provides a unique lens to examine such behavioral responses since time is an inherently valuable economic resource. This is particularly important for youth, who are both in a formative stage of life and represent more than a quarter of Colombia’s population, making them central to the country’s future development trajectory.

Time use among youth in developing countries plays a pivotal role in shaping both immediate well-being and long-term life trajectories. The ways in which young people allocate their time—whether toward education, employment, caregiving, or leisure—are closely linked to the development of their capabilities. However, these decisions are shaped by structural constraints, including limited resources and weak institutional support, which often restrict the extent to which youth can invest their time in ways that align with their aspirations. Understanding and improving youth time use is therefore essential not only for promoting individual development but also for strengthening broader community and economic progress.

One of the structural conditions that shapes youth time allocation is violence, as it alters economic opportunities and the needs of individuals and households. In violent environments, young people face limited and reactive choices: violence can restrict opportunities for productive uses of time—such as education, social activities, and work—or it can push youth to redirect time away from their own interests, for instance from leisure toward coping with insecurity. Reductions in violence can therefore lead to behavioral changes that induce youth to reallocate time toward different activities. Promoting more equitable patterns of time use, especially across gender and socioeconomic groups, can also reinforce social cohesion and support inter generational mobility. For policymakers, shifts in time allocation offer a powerful lens to assess the broader and often intangible impacts of peace building and development interventions.

This paper examines how the cessation of violence impacted time-use patterns among youth aged 14 to 28. Using a difference-in-differences strategy, we exploit variation in municipal exposure to FARC-EP violence alongside nationally representative data from the *Encuesta Nacional de Uso del Tiempo* (ENUT) to estimate the causal impact of the ceasefire on both the probability of engaging in key daily activities and the amount of time devoted to them. Our analysis focuses on

domains that encompass the primary activities individuals engage in on a daily basis, and that are closely connected to individual well-being and long-term development: caregiving, labor market, education, household tasks, leisure and self-care, and sleep.

Our results indicate that, on average, young individuals living in municipalities previously exposed to FARC-EP conflict experienced a significant increase in both the likelihood of engaging in caregiving and the time allocated to such activities, constituting the most pronounced behavioral shift. This was accompanied by reduced sleep hours and a redistribution of household responsibilities. Labor market participation rose among young women, while young men assumed a larger share of domestic tasks, resulting in a decline in the time women devoted to household work. These shifts point to a narrowing of gender gaps, as a more balanced division of domestic responsibilities may have facilitated greater female engagement in the labor market. However, increases in labor market participation were concentrated among youth from households with higher educational attainment and asset ownership, suggesting a potential widening of pre-existing socioeconomic disparities. We find no evidence that selective migration drives the results. We also explore potential mechanisms, including shifts in household composition and changes in local economic conditions.

This paper contributes to two strands of literature. First, it adds to the growing body of work that uses time use as a lens to understand individual well-being and national development, particularly through its connection to labor market dynamics, the care economy, and various dimensions of social inequality. Second, it engages with research on the socioeconomic implications of peace building policies in fragile contexts affected by prolonged conflict and violence.

Literature has begun to conceptualize time as a critical asset, examining how it is allocated across different contexts. For instance, [Aguilar et al. \(2012\)](#) highlights how time-use data can inform theories of labor supply, life-cycle behavior, and responses to macroeconomic fluctuations. In Colombia, analyses of the 2012–2013 ENUT have documented disparities in time allocation by age, gender, and socioeconomic status, emphasizing the value of empowering individuals to make informed life-changing decisions about how they spend their time ([Urdinola and Tovar, 2019](#); [Medina et al., 2021](#); [Aguirre and Ferrari, 2013](#)). Beyond descriptive analyses, time use has also been linked to various development outcomes. For instance, research has identified family and peer time as key predictors of youth behavior ([Barnes et al., 2007](#)), caregiving and domestic labor as contributors to gendered health disparities ([Bird and Fremont, 1991](#)), and time constraints as significant barriers to the demand of and access to public services and benefits ([Schwartz and Hursh, 2023](#)). The relationship between time, work, and rest is particularly salient for youth, with studies documenting trade-offs between sleep and employment that vary by gender and age ([Basner et al., 2007](#)).

In the context of armed conflict, growing attention has turned to how national-level peace-

building efforts shape socioeconomic outcomes at the household level. Evidence from Sri Lanka, for example, shows that ceasefire agreements can generate gains in income, housing quality, and access to essential services (Mahamadachchi, 2006). More broadly, research has documented the reciprocal relationship between peace and development. Contrasting cases, such as Botswana’s economic growth fueled by diamond exports versus Sierra Leone’s stagnation under weak governance, illustrate how peace-oriented policies can either enable or constrain long-term development (Collier et al., 2003). Colombia’s conflict has become a case of global interest given its duration and intensity, and recent studies have begun to evaluate the effects of peace building efforts. For example, Prem et al. (2019) finds that the 2014 ceasefire led to a reduction in school dropout rates in areas most affected by FARC-EP activity. Other research documents increases in fertility and improved access to agricultural credit in formerly violent regions (Guerra-Cújar et al., 2022; Roux and Martínez, 2021).

The remainder of the paper is structured as follows. Section 2 provides background on the relevance of time use studies, with particular attention to youth and the historical context of Colombia’s armed conflict. Section 3 describes the data sources and outlines the construction of the analytical dataset. Section 4 details the empirical strategy used to estimate the impact of the ceasefire on youth time allocation. Section 5 presents the main results while Section 6 explores potential explanations for the observed effects. Section 7 offers a brief discussion, and Section 8 concludes.

2 Context

2.1 Colombia’s long lasting conflict and the ceasefire

The Colombian armed conflict represents one of the longest-running and most complex internal conflicts in recent history, significantly shaping the country’s social, economic, and political landscape. As of 2021, approximately 16 percent of the population, or over nine million people, had been directly affected, especially those living in rural areas (Red Nacional de Información (RNI), 2021). According to *Registro Único de Víctimas*, youth are disproportionately impacted, accounting for nearly 30 percent of victimizing acts such as forced displacement, killings, kidnappings, and land dispossession. They have also been primary targets of forced recruitment and enforced disappearances, particularly in remote, underprivileged communities. Strikingly, in 2012, children and adolescents made up nearly four in ten members of the FARC-EP (British Council Colombia, 2018; Springer, 2012).

Unfortunately, being exposed to violent environments is associated with a decrease in years of schooling and engagement in productive activities characterized by lower levels of human capital

(Fergusson et al., 2015), among others. Displaced individuals, for instance, usually struggle to regain their previous level of welfare due to a permanent loss of physical and human capital (Ibañez and Moya, 2010). Moreover, direct contact with acts of injustice and human rights violations can foster a sense of hopelessness, driven by perceptions of insecurity and limited stable opportunities. This can lead to outcomes such as brain drain and significantly hinder the progress of both current and future public policy initiatives. Prioritizing young generations' physical, emotional and intellectual capabilities in public policy agendas is the way to secure country resilience and adaptability towards meeting future needs of the population.

Efforts to achieve lasting peace in Colombia have spanned several decades. In 1990, the first peace agreement was signed between the M-19 guerrilla group and the Colombian government. A significant milestone came in 2012 with the initiation of formal negotiations between the National Government and the FARC-EP, culminating in the signing of the General Agreement for the Termination of the Conflict and the Construction of a Stable and Lasting Peace in 2016 (Peace Agreement). These negotiations took place under the leadership of President Juan Manuel Santos during his first term (2012–2016). The Peace Agreement laid out a comprehensive framework aimed at ending the armed conflict, preventing further victimization, and establishing long-term stability. Central to the agreement was the commitment to a definitive and bilateral ceasefire, along with the disarmament of FARC-EP combatants (Cancillería, 2016). The ceasefire, which aimed to end all hostilities against civilians, the armed forces, and public infrastructure, was monitored by the United Nations. Notably, the FARC-EP declared a unilateral ceasefire in December 2014, which transitioned into a bilateral ceasefire by August 2016, marking a pivotal step toward peace (Centro Nacional de Memoria Histórica, 2020).

Colombia is acknowledged for having one of Latin America's most prominent and resource-rich economies, however, its macroeconomic figures today reveal significant social and economic disparities. A substantial body of literature has investigated the origins of inequality, poverty, among other phenomenon in the country. Notably, research has found an inverse relationship between violence and human capital, with higher levels of violence often linked to lower levels of education. Interestingly, increased violence also tends to correlate with higher voter turnout. Additionally, state presence has been associated with patterns of violence, while forced displacement has been shown to have a negative impact on literacy and educational attainment (Holmes et al., 2006). In great scale, conflict and violence are two prominent negatively influential factors in the country's path towards higher levels of equality and opportunities. These factors, alongside many other well-documented challenges, underscore the urgent need for effectively designed, peace- and development-oriented policies that are both equitable and sustainable.

2.2 Time use and time disparities in Colombia

In Colombia, research has found important disparities in time allocation. For instance, young women with lower levels of education spend up to three times more time on unpaid domestic work by the age of twenty, significantly constraining their ability to pursue income-generating activities. In contrast, individuals from more privileged socioeconomic backgrounds, across age groups, devote considerably more time to leisure and recreation (Urdinola and Tovar, 2019; Medina et al., 2021). These patterns underscore the importance of recognizing time autonomy—the ability to make meaningful choices about how time is used—as a fundamental component of human development. As the United Nations Development Programme (UNDP) emphasized in its 2001 report, the exercise of such freedoms is both a reflection and a driver of broader social and economic progress.

Beyond structural inequalities, disparities in time use are especially consequential for Colombia’s youth. This life stage is marked by pivotal decisions around education, employment, and identity formation. With young people accounting for roughly 26 percent of the population, their time allocation patterns carry significant weight for productivity levels. Nonetheless, exposure to a violent context can make any effort for development substantially more challenging. Given the vulnerability generated by facing economic inequality and lack of social mobility in the context of armed conflict, young people are more likely to abandon productive activities and/or develop habits that endanger their personal growth and, by extension, that of their context (Cuartas et al., 2019).

3 Data

The main source for our database is the Colombian *Encuesta Nacional de Uso del Tiempo* (ENUT) which is a cross-sectional household level survey, representative at the national level and has detailed information about time use at the individual level. We use three waves of this survey (2012-2013, 2016-2017 and 2020-2021). To this we merge municipal level data from other sources; the most important of which is conflict related events, information that comes from the CERAC database and is available at the municipal level. This allows to have a database to study the impact of the permanent ceasefire on time use by youth. According to Law 1885 of 2018, individuals between the ages of 14 and 28 are defined as youth and serve as the focus of this study. The analysis covers the period from 2012 to 2021, with 2012 marking the beginning of peace negotiations with FARC-EP and highlighting 2014 as the initial step towards implementing the ceasefire. The sample consists of **41,526** individuals across **202** municipalities.

3.1 Use of time

The ENUT is carried out by the Colombian Official Statistics Bureau (*Departamento Administrativo Nacional de Estadística* – DANE). This survey provides information about the time dedicated by the population aged 10 and over to daily activities. It is composed of 9 chapters: identification, housing conditions, household characteristics, household composition, health, care for children under 5 years of age, education, labor force and time use. It takes place every three to four years, thus, the data used comes from the surveys that took place between 2012-2013, 2016-2017, and 2020-2021¹. Depending on the chapter, the observation unit is dwellings, households, or individuals, and it is representative at the national level for the country’s five regions.

We use the Time Transfer Accounts (NTTA) methodology developed by Gretchen Donehower (2014), as well as the International Classification of Activities for Time-Use Statistics (UNDESA, 2016), to construct our main six activity profiles: labor market, leisure and self-care, sleep, education, household activities, and care of individuals. We separate sleep from leisure and self-care because it constitutes a distinct activity that occupies a substantial share of the daily time budget, whereas leisure and self-care include discretionary recreational and personal activities. Household activities and caregiving are considered NTTA activities, as they involve unpaid care work, a key component of the generational economy.² These profiles serve as the study’s main dependent variables and were calculated by summing the time reported by each individual for each activity in each category. The reported time was converted into hours and adjusted for multitasking to ensure that each individual’s total daily time use did not exceed 24 hours (Urdinola and Tovar, 2019). To control for outliers, observations above the 99th percentile were excluded from the analysis. More details on the variables used in this work can be found in Table 17.

To ensure comparability across time and municipalities, we treat missing values as zeros when respondents report not having performed a given activity, since the survey does not record time spent for non-participants. In practice, this means that missing values in these cases correspond to true zeros rather than non response. The frequency and percentage of observations with no reported time spent on each dependent variable are shown in Table 2. The analysis indicates that sleep, leisure, and self-care have the lowest share of non-participation—each representing less than 1 percent of observations—whereas education, household activities, caregiving, and labor market activities show rates of non-participation exceeding 29 percent. Furthermore, it is important to

¹Data collection for the ENUT took place from July 2, 2012, to August 31, 2013, for the first edition; from September 5, 2016, to August 31, 2017, for the second edition; and from September 1, 2020, to August 31, 2021, for the third and most recent edition.

²The National Time Transfers Account (NTTA) was developed as an extension of the National Transfers Account (NTA) framework to analyze household economic flows related to unpaid care work by age. The NTA provides national-level estimates that account for economic flows to and from residents of a country, classified by age. It is organized around the economic life cycle and designed to highlight the generational economy and its key characteristics. More details can be found in the *National Transfer Accounts Manual: Measuring and Analyzing the Generational Economy* report by the United Nations (United Nations, 2013).

consider the impact of the COVID-19 pandemic, which began in late 2019 and early 2020. Notably, the ENUT 2020–21 survey accounted for pandemic-related behavioral changes by including variables that captured activities performed from home. This likely reduced reported time spent on transportation, particularly in municipalities with greater access to technological tools, and introduced new forms of virtual engagement.

3.2 Exposure to FARC-EP armed conflict

Our definition of exposure to armed conflict by FARC-EP guerrilla follows [Prem et al. \(2019\)](#) who also use the CERAC municipal level data described in [Spagat et al. \(2004\)](#). This data source has information of events listed in the periodicals *Justicia y Paz* from *Noche y Niebla* published quarterly by the Colombian NGO Centro de Investigación y Educación Popular (CINEP) and the Comisión Intercongregacional de Justicia y Paz. Exposure to armed conflict is captured by a dichotomous variable based on the number of attacks by FARC-EP in each municipality between the years of 2011 and 2014 (the first presidency period of Juan Manuel Santos and previous to the agreement’s signature). This variable takes the value of one if the number of attacks in the municipality is greater than zero, indicating the presence of FARC-EP violence, and zero otherwise. Applying this measure, 18 percent of municipalities (36 out of 202) have been exposed to FARC-EP violence, affecting 21 percent of the sample or 8,621 individuals between the ages of 14 and 28. A visualization of the municipalities in the sample by level of exposure to FARC-EP armed conflict is shown in [Figure 2](#).

3.3 Additional data sources and analysis

Other data sources used in this paper include a municipality panel database developed by the [Centro de Estudios sobre Desarrollo Económico \(CEDE\) \(2021\)](#) at Universidad de los Andes. This comprehensive panel provides municipal-level data on a wide range of topics, including agriculture, governance, general municipal characteristics, conflict and violence, education, and health. The panel covers the period from 1993 to 2020. Additionally, the paper draws on data from the 2018 Colombian Population and Housing Census conducted by [Departamento Administrativo Nacional de Estadística \(DANE\) \(2018\)](#), primarily used for robustness checks. As the country’s largest and most important statistical operation, the census serves as a cornerstone for public policy planning and offers detailed sociodemographic information at the household and individual levels. To proxy local economic activity in the mechanisms analysis, the paper uses nighttime light intensity data, calculated as the sum of light emissions within municipal boundaries. This data is based on satellite imagery re calibrated using the methodology developed by [Li et al. \(2020\)](#), who produced a globally harmonized nightlights dataset spanning 1992 to 2021. Lastly, a municipality-level shapefile for

Colombia was sourced from the Humanitarian Data Exchange (HDX), an open platform managed by [Office for the Coordination of Humanitarian Affairs \(OCHA\) \(2022\)](#) that provides standardized geographic and humanitarian data for countries worldwide.

3.4 Descriptive analysis

Table 1 presents descriptive statistics for the main variables used in the analysis. The sample comprises 41,526 individuals, of whom approximately 16 percent live in municipalities affected by the FARC-EP conflict. The average respondent is about 20.5 years old, and the gender distribution is balanced, with 49 percent being female. Household possession of goods, used as a proxy for household income, was constructed using dummy variables indicating which goods were present in surveyed households, and it reveals moderate asset ownership (mean = 0.38), suggesting that the sample largely represents low- to middle-income households. Educational attainment among household heads is concentrated at lower levels: around 39 percent completed preschool or elementary school, 40 percent finished middle or high school, and only 14 percent hold a tertiary degree.

Panel A examines the *extensive margin*, the proportion of individuals who engage in each activity. About 36 percent report participation in labor market activities, while 70 percent perform household tasks and 41 percent provide care to other individuals. As expected, all respondents report some time spent on leisure and self-care and sleep.

Panel B reports the *intensive margin*, measuring the average daily hours spent in the activity across the entire sample. On average, individuals devote 2.6 hours to the labor market, 1.7 hours to household work, and 2 hours to caregiving. Time devoted to leisure and self-care (7.7 hours) and sleep (8.6 hours) dominates the daily schedule. The large dispersion in time allocated to productive activities (e.g., standard deviation of 3.9 hours in labor market participation) reflects heterogeneity in employment opportunities and roles within the household.

Panel C restricts the analysis to those who actually report spending time on a given activity. Among these individuals, labor market participants work about 7.2 hours per day, consistent with full-time engagement, while those performing household or care activities spend 2.5 and 4.9 hours, respectively. This contrast highlights that while fewer individuals engage in the labor market, those who do tend to allocate a full working day, whereas unpaid domestic and caregiving work remains more widely distributed but with fewer hours per person.

Figure 1 displays the evolution of average daily time allocation by age (Panel A) and the corresponding gender differences (Panel B). The results reveal marked transitions from education to work during late adolescence and early adulthood, as well as substantial gender disparities in unpaid and paid activities.

In Panel A, time devoted to education declines sharply from around 3.5 hours per day at age 14 to nearly zero by the mid-twenties, reflecting the completion of formal schooling, education dropouts (with high rates in Colombia) and low tertiary enrollment rates. Conversely, labor market participation increases steadily from age 16, overtaking education around age 18, and stabilizing near 4 hours per day by the mid-twenties. This pattern captures the early school-to-work transition typical in low- and middle-income settings. Time spent on household activities and care of individuals rises gradually with age, indicating growing domestic and family responsibilities as individuals become adults. Meanwhile, leisure and self-care and sleep dominate total time allocation throughout the age range but decline moderately with age as productive activities expand.

Panel B highlights pronounced gender asymmetries. From adolescence onward, young women consistently devote more time than young men to household work and care activities, with the gender gap widening with age, reaching about 2 to 3 hours daily by the late twenties. In contrast, men spend substantially more time in labour market activities, with differences exceeding three hours per day in early adulthood. Gender differences in education are small and slightly positive, suggesting comparable school attendance during adolescence. However, as women assume greater domestic and caregiving roles, their time for paid work, leisure, and rest becomes increasingly constrained. In particular, leisure and self-care time is consistently lower for women, suggesting unequal access to discretionary time.

Overall, Figure 1 underscores the persistence of a gendered division of labor that emerges early in life and intensifies into adulthood. While men’s time allocation becomes increasingly oriented toward paid labor, women’s schedules reflect a dual burden of unpaid household and care responsibilities, limiting their engagement in the labor market. These patterns are consistent with structural gender inequalities in time use observed in developing and post-conflict contexts such as Colombia.

4 Empirical strategy

The strategy to identify the effects of the FARC-EP guerrilla’s announcement of a permanent ceasefire in 2014 focuses on using data on violence exposure in each municipality to establish the treatment’s spatial boundaries. To estimate the effects, we employ the *difference-in-differences* model. Letting i represent individuals, m municipalities and t time in years the model can be represented by the following equation

$$Y_{imt} = \alpha_0 + \mu_t + \phi_m + \beta(FARC_m \times Post_t) + \sum_{x_m \in X_m} \gamma'(x_m \times Post_t) + \varepsilon_{imt}. \quad (1)$$

In the equation, Y_{imt} captures the time use variables described in Table 1; this includes six different forms of time use as well as its intensive and extensive margins forms. We define the *extensive margin* as the likelihood that an individual engages in a particular activity at all (e.g., whether they spend any time on caregiving or labor market work), while the *intensive margin* captures the number of hours devoted to the activity. This distinction allows us to understand both behavioral engagement and time allocation dynamics in response to the ceasefire.

The variable $Post_t$ is a dummy variable that takes a value of zero for the year before the ceasefire and one for the years following the ceasefire. The variable $FARC_m$ is a dummy variable that indicates whether a given municipality, m , was highly exposed to violent attacks by FARC-EP before the ceasefire, taking the value of one in that specific case and zero otherwise. The term μ_t represents the year fixed effects, while ϕ_m represents the municipality fixed effects. The control variables included in the estimation are represented by x_m ; the set containing all these variables is X_m which refer to municipal characteristics measured before the ceasefire. These control variables are interacted with the ceasefire time indicator allowing for a flexible control of potential differential changes that occurred before and after the ceasefire. The set of characteristics includes variables such as the total population and the Multidimensional Poverty Index. Finally, ε_{imt} is the error term, clustered at the municipality level.

In addition to Ordinary Least Squares (OLS) estimations, we employ Tobit regressions to address the censored nature of the data, as several activities exhibit a high proportion of zero values. We prioritize OLS estimates for sleep and leisure, which report less than 1 percent of zeros, and additionally use the Tobit specification for the remaining outcomes, where zero values exceed 29 percent (see Table 2). The Tobit model, introduced by James Tobin in 1958, is particularly suited for handling censored dependent variables, in this case, left-censoring at zero. Ignoring censoring or treating censored observations as fully observed can result in biased estimates. The Tobit approach addresses this by combining probability density and cumulative distribution functions. However, unlike OLS, it relies on stronger assumptions, including normality and homoscedasticity of the error term.

To account for multiple hypothesis testing, both the Romano-Wolf step-down procedure and the Šidák correction were applied. Adjustments are necessary because the time-use outcomes analyzed, by design, sum up to 24 hours, introducing dependence between tests. The Romano-Wolf procedure, implemented for both the extensive margin and the intensive margin using OLS, controls the familywise error rate by adjusting p-values with a Studentized bootstrap approach (Romano and Wolf, 2005b,a; Clarke, 2016). Given that the Tobit model is a nonlinear estimator, the Šidák correction offers a more appropriate approach for multiple testing adjustment. Derived under the assumption of independence, it offers a direct analytical adjustment to maintain the

overall confidence level across multiple comparisons (Šidák, 1967). By applying these corrections, the analysis ensures that statistical inference remains robust while properly accounting for the structure and interdependence of the outcome variables.

The main identifying assumption of the difference-in-differences model is that of *parallel trends*, which requires that, in the absence of treatment, treated and control groups would have experienced similar trajectories in the outcomes of interest. In our context, this implies that, had the ceasefire not occurred, young people in municipalities with comparable characteristics would have exhibited similar post-2014 patterns of time use. Unfortunately, the ENUT provides only one pre-treatment period (2012–2013), preventing a formal test of the parallel trends assumption. We acknowledge that this constrains the strength of causal interpretation. Instead, we address the concern for causality by improving comparability between treatment and control municipalities through Propensity Score Matching (PSM). Specifically, we estimate a Propensity Score using municipality-level covariates (see Table 17) and restrict the analysis to the common support region. This procedure balances the sample on pre-treatment characteristics, helping to approximate the conditions under which parallel trends are more likely to hold.

We perform additional analyses. First, we estimate heterogeneous effects by gender, age, and socioeconomic background, measured through the household assets and education level of the household head. These analyses are fundamental to comprehensively understanding the ceasefire’s impact on key dimensions of inequality. To this end, we estimate Equation 1 separately for subsamples defined by these subgroups, thereby enabling an assessment of whether the ceasefire’s effects differ across populations with varying backgrounds and characteristics.

Second, we examine the demographic and economic forces that may help explain changes in youth time use. Specifically, we assess whether the ceasefire influenced (i) forced displacement and in-migration, (ii) household re-composition, and (iii) trends in economic activity. As violence declines, individuals may either return to or leave their municipalities, altering household structures and reshaping both needs and available opportunities. To capture these dynamics, migration is assessed through OLS regressions of treatment status on the share of individuals displaced from or arriving to conflict-exposed municipalities. Household composition is analyzed by estimating changes in the proportion of members by gender and disability, also using OLS. Economic activity is measured through an event-study analysis of nightlight intensity, using 2013 (the year prior to the ceasefire) as the baseline. Increases in economic activity can affect time allocation by raising labor demand (a price effect) and by relaxing resource constraints through higher income (an income effect). All specifications include year and municipality fixed effects.

Finally, we conduct analysis to test the validity of our estimations. For this purpose, variations of the specification in Equation 1 are estimated, including models with and without control

variables. Unfortunately, we cannot directly test the parallel trends assumption, the key identifying condition of difference-in-differences estimations, due to data limitations. Instead, we assess this assumption indirectly by estimating Propensity Scores through a logit model that incorporates a set of municipality-level covariates and their logarithmic transformations. Further, we test whether the observed changes in time-use result from a change in population composition rather than behavioral changes among the local population, as the ceasefire may have influenced migration patterns. To test this alternative explanation, the interaction term between $Post_t$ and $FARC_m$ is replaced with $FARC_m$ alone.

5 Results

We present the main results of the estimation of the change in time use by youth after the 2014 ceasefire with the FARC-EP guerrilla group. Our results include the OLS or Tobit estimation of equation 1, the Propensity Score Estimation, and the heterogeneous effects.

5.1 Descriptive statistics for the treatment and control municipalities

The pre-treatment means and standard deviations of the main outcome variables for treatment and control municipalities are summarized in Panel A of Table 3. Across all samples and specifications, treatment and control groups show comparable averages before the ceasefire, supporting the validity of the identification strategy. Youth in both groups dedicate roughly similar patterns of time to education and labor market activities. Minor differences appear in household and care activities, young people in conflict-affected municipalities spend slightly less time caring for others (0.75 versus 0.85 probability in the extensive margin) and somewhat more time in domestic tasks, though these gaps are small and not statistically meaningful. Overall, the balance across groups prior to the ceasefire suggests that any post-2014 divergence can plausibly be attributed to the reduction in conflict intensity rather than pre-existing differences. Panel B of Table 3 shows the analogous results, but for the Propensity Score Matching estimation, allowing the same qualitative comparison.

5.2 The impact of the ceasefire on youth time allocation

Table 4 presents the estimated impact of the 2014 ceasefire on the allocation of time among youth living in municipalities affected by the FARC-EP conflict. Columns 1–2 report the extensive margin results estimated by OLS, while Columns 3–4 present the intensive margin results estimated through OLS and Tobit models. All specifications include municipality and year fixed effects, as well as controls for household and demographic characteristics.

The results indicate a notable reallocation of time following the ceasefire. On the extensive margin, the probability of engaging in labor market activities increases by about 4.7 percentage points in conflict-affected municipalities, with effects concentrated in 2020-2021, when the estimated increase reaches 5 percentage points. Similarly, the likelihood of performing care activities rises substantially, by 16.8 percentage points overall, indicating a significant reallocation of time toward unpaid caregiving responsibilities. These findings suggest that the reduction in violence may have allowed greater participation in both productive and caregiving labor.

5.3 Matching estimation

Figure 4 shows the distribution of the propensity score before and after trimming. The resulting sample includes 34,278 individuals (8,223 treated and 26,055 controls) across 159 municipalities (32 treated and 127 controls). Our main results remain robust under this restricted sample (see Table 5), with only a marginal increase in estimated effects and no change in statistical significance.

On the intensive margin, the estimated effects are consistent in direction and magnitude. Youth in conflict-affected municipalities spend approximately 1.75 more hours per day on care activities relative to those in non-affected areas. This increase is robust across years. In contrast, sleep time declines significantly, by about 0.48 hours per day, suggesting that the additional time devoted to work and caregiving activities may come at the expense of rest. No statistically significant effects are found for education, household activities, or leisure and self-care, consistent with their limited flexibility and high baseline prevalence.

Taken together, the results indicate that the 2014 ceasefire reshaped how young individuals allocate their time, encouraging greater engagement in the labor market and care-related tasks, while reducing rest. These patterns suggest that the peace process may have simultaneously expanded economic opportunities and intensified unpaid responsibilities, particularly within the household. Importantly, all main results remain robust after applying multiple hypothesis testing corrections, reinforcing the reliability of the estimated effects.

5.4 Heterogeneous effects

To explore whether the effects of the 2014 ceasefire on youth time allocation vary across socioeconomic groups, we analyze heterogeneity by age, gender, household head's education, and asset ownership. Tables 6 to 13 report descriptive statistics and regression results for each subgroup. Across all specifications. As with the main results, all heterogeneous results remain robust after applying multiple hypothesis testing corrections.

Tables 6 and 7 show that, prior to the ceasefire, older youth (ages 24–28) were substantially more engaged in the labor market, while younger individuals (ages 14–19) devoted more time to education

and rest. Following the ceasefire, clear age-specific adjustments emerge. On the extensive margin, participation in labor market activities rises mainly among individuals aged 20–23, increasing by 12 percentage points, accompanied by an additional 1.9 hours per day dedicated to this activity. Correspondingly, the same group shows a 7-percentage-point decline in education, suggesting a substitution from schooling to work during early adulthood. The strongest effects are observed in care activities, where participation rises across all age groups, by 20 percentage points among those aged 14–19 and around 13–15 percentage points among older youth. On the intensive margin, these changes translate into an additional 1.3 to 1.8 hours per day devoted to caregiving activities. Finally, sleep time decreases by about 0.5 hours across all groups, consistent with an overall intensification of time commitments, although this reduction is statistically significant only among individuals aged 14–23.

Marked differences also arise when examining responses by gender in Tables 8 and 9, suggesting evidence of a gradual narrowing of gender gaps in time use. Before 2014, women dedicated substantially more time than men to household and care activities, while men spent considerably more hours in the labor market. Following the ceasefire, female labor market participation increased significantly, by 7 percentage points, accompanied by a 1.6 hour rise in daily working time. At the same time, women continued to expand their engagement in caregiving, with increases of 15 percentage points on the extensive margin and 1.7 hours on the intensive margin. For men, the main effects are also concentrated in care activities, with an increase of 19 percentage points and 1.5 additional hours per day, suggesting that men have become more involved in unpaid work. This convergence in care responsibilities, combined with women’s greater insertion into paid labor, points to a rebalancing of gender roles in the post-conflict context. The observed decline in sleep time for both groups (0.59 hours for men and 0.38 hours for women) reflects an overall intensification of time use.

The magnitude of the ceasefire’s impact also varies with parental education, used here as a proxy for the household’s socioeconomic background, as shown in Tables 10 and 11. The largest changes are concentrated among youth from less-educated households. For those whose household heads have no education, participation in care activities rises by 25 percentage points, with an average increase of nearly 3.8 hours per day, widening disparities in unpaid work. In contrast, youth from highly educated households exhibit smaller yet significant effects, especially in labor market activities (a 15 percentage point increase and 2.8 more hours). This pattern suggests that improved security conditions enabled greater participation among those better equipped to take advantage of new opportunities, contributing to a partial closing of pre-existing gaps. Interestingly, education time declines only among youth from tertiary-educated households (16 percentage points and 2.8 hours), likely reflecting substitution toward employment opportunities in areas where the

peace process stimulated local economies. Finally, sleep declined mainly among the least and most educated groups, suggesting that both ends of the socioeconomic spectrum adjusted rest patterns in response to increased demands in work and care.

Finally, Tables 12 and 13 compare the effects across high- and low-asset households. Prior to the ceasefire, slight differences existed between groups, where individuals from wealthier households devoted more time to education (in both margins) and less to labor market, household, and caregiving activities. Following the ceasefire, however, the overall pattern indicates stronger behavioral adjustments among youth from lower-asset households. The probability of engaging in care activities increased by 14 percentage points (versus 21 points among wealthier households), while the time spent caring rose by 1.3 hours per day compared to 2.4 hours for those in wealthier households. This may reflect differences in how families reallocated time as security conditions improved. Notably, sleep time declines only for lower-asset households (0.53 hours), indicating that less wealthier youth may have compensated for the increase in productive and domestic work at the cost of rest. In contrast, there is no significant change in leisure or education across asset groups, suggesting that these dimensions remain relatively fixed once basic time needs are constrained.

6 Explaining the changes in time use after the ceasefire agreement

This section explores two potential explanations to the observed increase in time devoted to care activities and the likelihood of labor market participation in municipalities previously affected by FARC-EP violence following the ceasefire.

6.1 Migration due to forced displacement

Migration is a persistent phenomenon in many countries and it is often related to violence. People are usually drawn to places with a higher sense of security and stability, being why, municipalities previously affected by conflict could have become more attractive after the ceasefire. To investigate this further we present three different results two of which rely on data different from that used for our main results presented in Section 5. First, we use census data to show that, prior to the ceasefire, migration into and out of treated municipalities was substantial, and that its magnitude declined markedly around the time of the agreement. Second, we use municipal data on forced displacement to show that this form of migration also declined substantially following the agreement. Finally, we use our main database to document changes in household composition in treated municipalities following the agreement. Taken together, these three pieces of evidence suggest that the main demographic shifts associated with the peace agreement occurred within

households, providing partial support for the idea that changes in time devoted to care activities may reflect evolving care needs in treated municipalities.

Table 14 presents migration patterns in Colombia based on the 2018 population census. Columns 1 and 3 indicate whether an individual's municipality of residence five years prior (2013) differed from their current location, while columns 2 and 4 report the same measure for residence 12 months prior (2017). The results show that individuals from municipalities highly affected by FARC-EP conflict were less likely to have lived in a different municipality five years ago or one year ago. To interpret these patterns, recall that the ceasefire took place in 2016 and the census was collected in 2018. The fact that the coefficient for residence five years earlier is larger (in absolute value) than the coefficient for residence one year earlier suggests that migration flows slowed during the ceasefire period, and that population mobility in treated municipalities became more stable relative to prior years. Overall, these findings indicate that changes in youth time use are unlikely to be driven by large shifts in the core population of conflict-affected municipalities.

Table 15 examines the share of people expelled from or received into municipalities heavily affected by conflict. The results show a significant decrease in these migration flows after the ceasefire, indicating that the agreement reduced forced displacement in conflict-exposed areas. Consistent with the census-based findings, this evidence suggests that population movements slowed during the years surrounding the peace agreement compared with earlier periods.

Table 16 shows that, prior to the ceasefire, households in conflict-affected municipalities had fewer men, particularly young men, residing in them (columns 2–3). Following the ceasefire, however, household composition shifted markedly, with a higher proportion of men and individuals with disabilities living in these municipalities (columns 2–4). Several factors may explain this increase in the presence of men. Their earlier absence could be linked to participation in the armed conflict or to migration driven by insecurity. Between 1958 and 2015, Colombia recorded 16,879 cases of illegal recruitment and use of children and adolescents ([Centro Nacional de Memoria Histórica, 2017](#)), underscoring the scale of the problem. The ceasefire led to a substantial reduction in child recruitment (ages 12–16) in areas affected by FARC-EP-related violence ([Prem et al., 2019](#)), which, together with a heightened sense of stability, may have encouraged young men to return to their households.

On the other hand, the rise in the number of people with disabilities in conflict-affected municipalities may reflect the increased feasibility of caring for them in areas that became safer after the ceasefire. Armed conflict often forces people to flee when violence intensifies, and individuals with disabilities face heightened risks during such episodes. Limited access to assistive devices, such as wheelchairs, prostheses, crutches, or hearing aids, and the scarcity of basic services create especially hostile environments for them. Conflicts also exacerbate social stigma, leading in

some cases to threats, shackling, and physical or verbal abuse within communities ([Human Rights Watch, 2021](#)). In contrast, the option to remain in a municipality now considered safer may have encouraged families to keep or bring back relatives with disabilities, increasing the demand for care services and consequently requiring more time and support from young people.

6.2 An economic shock

Economic shocks that alter productivity and the value of work can influence how individuals allocate their time. Increases in wages or in the likelihood of employment, for example, may shift optimal decisions regarding time use. To assess whether the ceasefire generated such an economic shock in municipalities most affected by FARC-EP violence, we use geocoded satellite data on nightlights. We conduct an event-study analysis to examine whether nightlight intensity increased in these municipalities following the ceasefire. The results, presented in [Figure 3](#), indicate a clear rise in nightlights after the agreement, consistent with the interpretation that the peace process generated a productivity boost in these areas. This aligns with the observed increase in labor market participation and the reduction in sleep time. However, it remains unclear why leisure time did not decline correspondingly.

7 Discussion

The primary findings indicate that the ceasefire significantly influenced time-use decisions among younger generations, affecting variables closely linked to their well-being. Specifically, the change led to an adjustment in how youth allocate their time to meet both household and individual demands. At the extensive margin, youth increased their labor supply and time spent caring for others. At the intensive margin, there was a reduction in time devoted to sleep and household activities, alongside an increase in caregiving time. These patterns are consistent with a productivity shock. Notably, we do not observe any significant changes in education or leisure time at either margin.

Heterogeneous results reveal a complex and multifaceted pattern of outcomes, though they do not provide definitive evidence of overall welfare improvements. Gender-disaggregated findings highlight distinct adaptation patterns among youth. Women primarily drove the increase in labor market participation at the extensive margin, suggesting potential empowerment and/or economic necessity following the ceasefire. In contrast, men increased their involvement in household activities, both extensively and intensively, while women reduced time spent on these tasks at the intensive margin. This pattern may reflect a gendered redistribution of household responsibilities, with men assuming a larger share caregiving work, signaling evolving gender roles within the house-

hold. Additionally, the rise in labor market participation is concentrated among less disadvantaged households, as indicated by higher education levels of the household head and greater household asset ownership.

Age-specific patterns are particularly revealing, as the increase in labor supply is concentrated among individuals aged 20 to 23, with significant effects on both extensive and intensive margins. The reduction in sleep and household activities is focused among those aged 20 to 28. Importantly, the ceasefire's impact on labor supply and sleep is not statistically significant for the 14 to 19 age group, likely reflecting their continued need for sleep and engagement in non-work activities. Nevertheless, this reallocation of time may constrain opportunities for personal development through leisure and self-care activities, as well as hinder long-term professional development via education. It is therefore essential to recognize age-appropriate activities as critical to human development. Furthermore, during periods of conflict and violence, youth tended to allocate more time to sleep, potentially as a coping mechanism to manage fear and stress. After the ceasefire, this pattern shifted toward other activities. Alternatively, the findings may reflect that despite increased leisure time, young people faced barriers to accessing educational or recreational opportunities.

The varying impacts across age groups highlight the dual role of youth as both contributors to household productivity and as recipients of investment, emphasizing the complex balance between the supply and demand of opportunities in their contexts. Notably, individuals aged 20 to 23, often transitioning from primary to secondary education, showed increased labor force participation following the ceasefire. This trend reflects not only economic necessity but also a lack of viable pathways for academic and personal development. In contrast, older youth, who were likely already engaged in labor market activities before the ceasefire, exhibited smaller and statistically insignificant changes. Their time reallocation toward caregiving at the expense of sleep and household chores appears to be a practical adjustment to shifting household needs. Meanwhile, the younger group (aged 14 to 19) mainly took on caregiving responsibilities with less pronounced effects, and although there was some reduction in educational activities, these changes were not statistically significant.

8 Final Remarks

This study examines the impact of Colombia's recent efforts to end the conflict with the FARC-EP insurgency on the time-use behavior of young people in their daily activities. The findings suggest that the permanent ceasefire declared by FARC-EP during peace negotiations with the government significantly influenced how young individuals allocated their time. Specifically, it led to an increase in time spent on caregiving activities and a higher likelihood of labor market

participation, albeit at the cost of reduced sleep quality. Young people in municipalities previously exposed to FARC-EP violence experienced a differential reduction of 0.4 hours in sleep and 0.15 hours in household chores. Conversely, their time dedicated to caregiving increased by 0.5 to 1.4 hours, with a 14 percent rise in the probability of engaging in caregiving and a 4.8 percent increase in the likelihood of labor market entry.

Additionally, the analysis reveals heterogeneous effects based on household and individual characteristics. The absence of violence contributed to narrowing gender gaps by redistributing household responsibilities more equitably, enabling women to choose whether to enter the labor market. However, the effectiveness and direction of public policy implementation were shaped by disparities in household income and access to basic services. The study also explores potential mechanisms underlying these shifts in time-use behavior in conflict-affected municipalities. Selective migration is ruled out as a primary factor in household composition changes, and the robustness of results is confirmed using an extended measure of FARC-EP conflict exposure, which accounts for both the duration and intensity of the conflict.

The findings of this study offer valuable insights for policymakers working to promote sustainable development and stability in post-conflict regions. By understanding how young people adapt to changes in their environment, policymakers can design more effective interventions that foster productive activities and reduce emigration pressures. The results highlight the potential of time-use data as a valuable tool for analyzing the socio-economic impact of policy implementation. Moreover, they underscore the importance of considering demographic and household characteristics when designing policies. Specifically, the study suggests that reinforcing care centers and labor market reintegration programs could be particularly beneficial in conflict-affected municipalities. Additionally, greater recognition of caregiving activities as legitimate and valuable work could contribute to more equitable labor policies. Taken together, these insights offer practical guidance for crafting inclusive and sustainable peace building policies in post-conflict settings.

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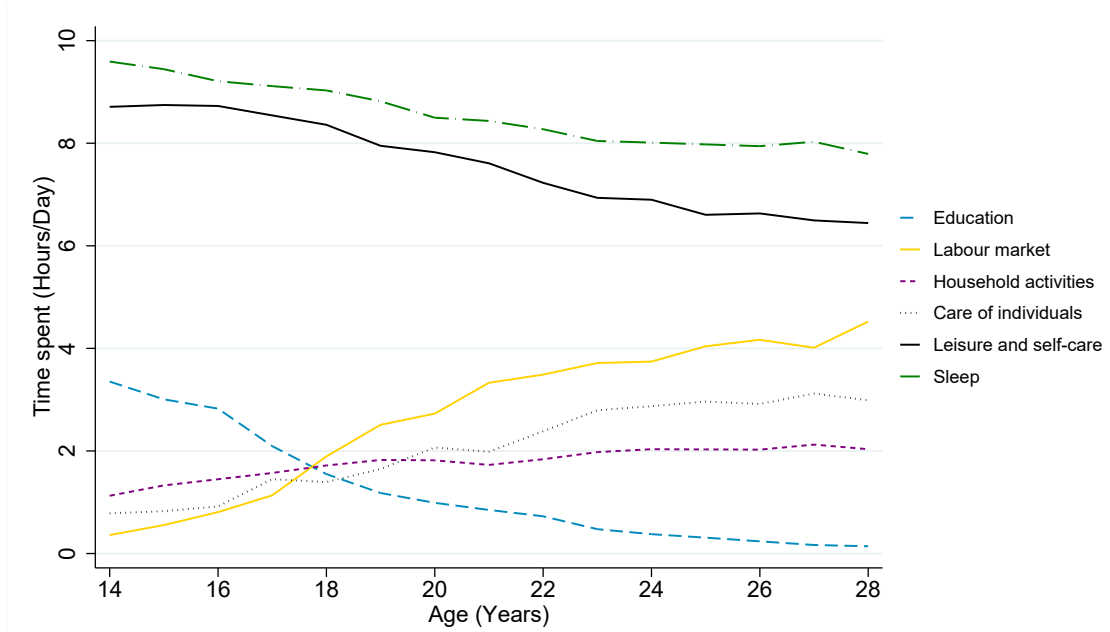
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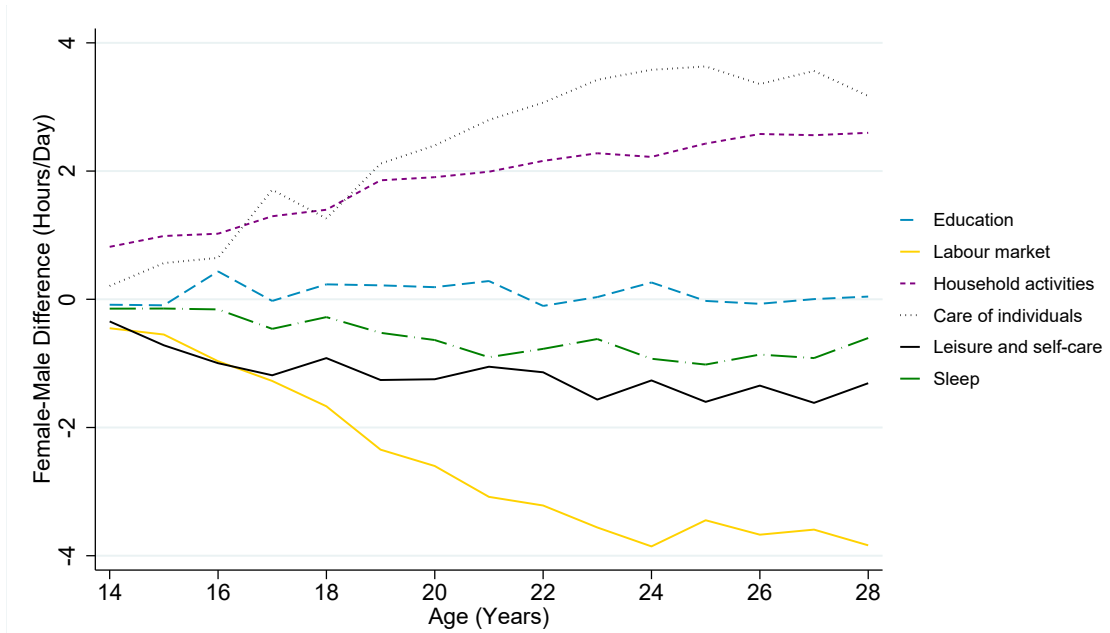
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Figure 1: Average Time Spent on Daily Activities by Age

(a) All Sample

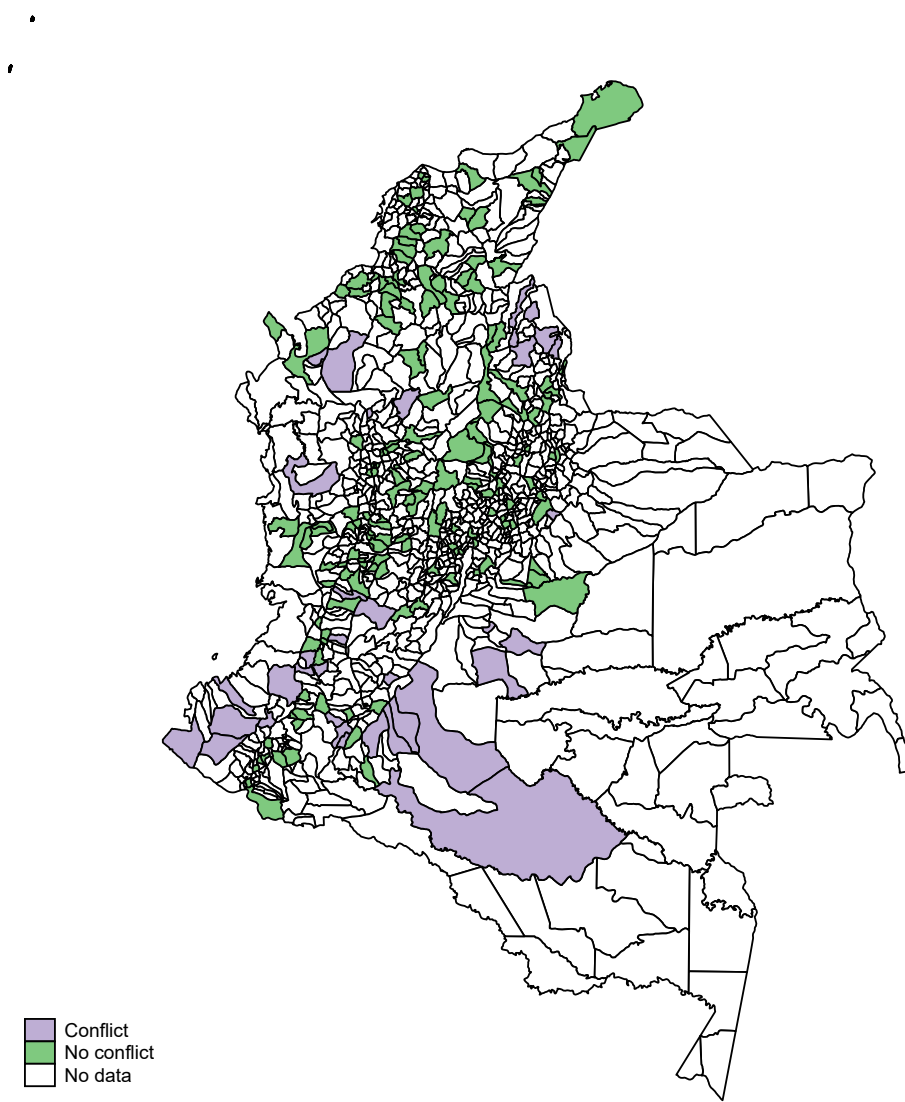


(b) Gender Differences



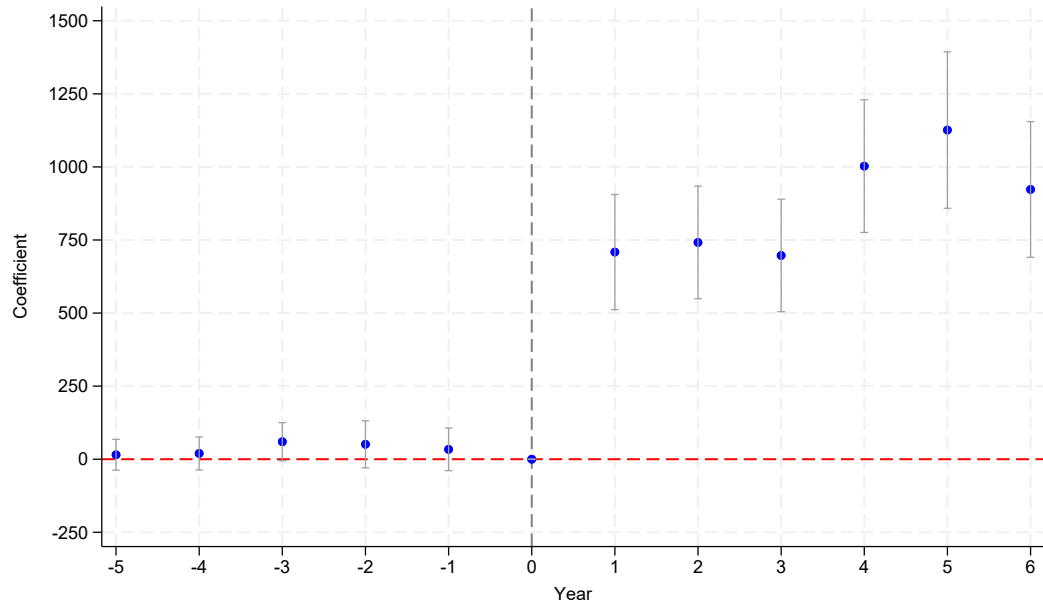
Notes: The figures presented show average time spent per activity. Panel A shows data across age and Panel B shows the gender differences. For Panel B An activity above zero means young women spend more time in that activity than young men, and vice versa.

Figure 2: Municipalities of Colombia by Level of Exposition to FARC-EP Armed Conflict



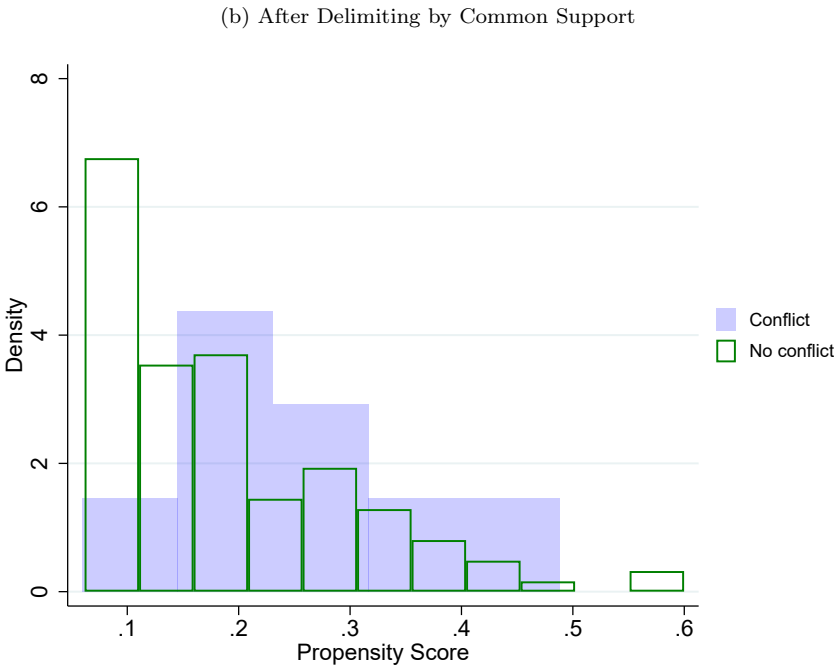
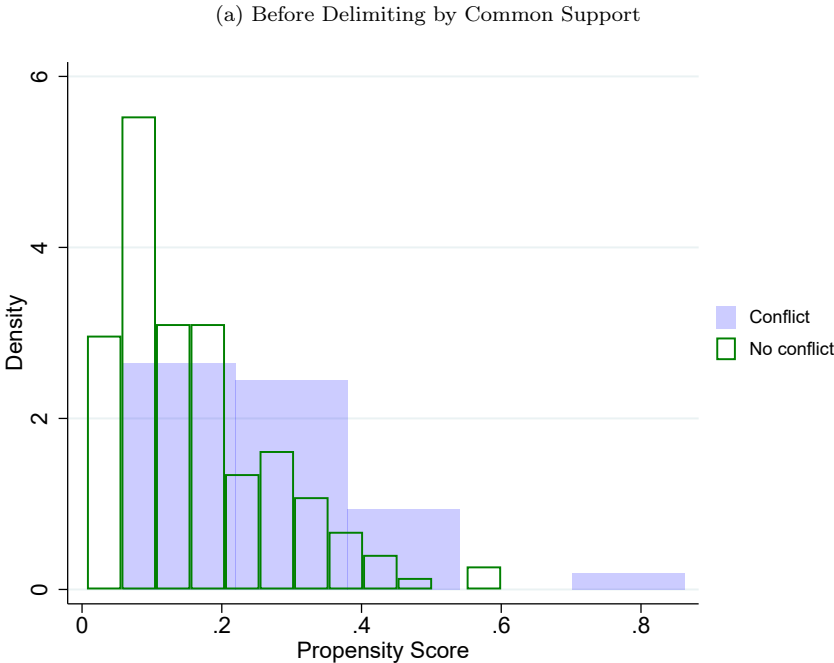
Notes: The figures presented show the Colombian municipalities that were considered exposed and not exposed to FARC-EP armed conflict according to the recorded number of attacks by this group between 2011 and 2014.

Figure 3: Impact of Ceasefire on Nightlights in Municipalities Previously Exposed to FARC-EP Violence



Notes: The figure presents the results of an event study estimating the impact of the ceasefire on nightlights in municipalities previously exposed to FARC-EP violence. The base year is 2013, as it corresponds to the year immediately preceding the implementation of the ceasefire. The event study includes year and municipality fixed effects, as well as municipality-clustered standard errors.

Figure 4: Propensity Score Density Distribution between Treated and Control Groups



Notes: The figures presented show the density distribution of the Propensity Score between treated and control groups.

Table 1: Descriptive Statistics

Variable	N (1)	Mean (2)	Median (3)	Std. Dev. (4)	Min (5)	Max (6)
Conflict (1 = FARC-affected municipality)	41526	0.16	0.00	0.36	0.00	1.00
Time (1 = Years after 2014)	41526	0.81	1.00	0.39	0.00	1.00
Age (Years)	41526	20.50	20.00	4.27	14.00	28.00
Gender (1 = Female)	41526	0.49	0.00	0.50	0.00	1.00
Household asset ownership (1 = High)	41526	0.38	0.00	0.48	0.00	1.00
Household head's education (1 = Highest level achieved)						
No education	41526	0.07	0.00	0.26	0.00	1.00
Preschool/Elementary	41526	0.39	0.00	0.49	0.00	1.00
Middle/High school	41526	0.40	0.00	0.49	0.00	1.00
Under/Postgraduate	41526	0.14	0.00	0.34	0.00	1.00
Panel A. Extensive margin						
Education	41526	0.25	0.00	0.43	0.00	1.00
Labour market	41526	0.36	0.00	0.48	0.00	1.00
Household activities	41526	0.70	1.00	0.46	0.00	1.00
Care of individuals	41526	0.41	0.00	0.49	0.00	1.00
Leisure and self-care	41526	1.00	1.00	0.01	0.00	1.00
Sleep	41526	1.00	1.00	0.00	1.00	1.00
Panel B. Intensive margin						
Education	41526	1.33	0.00	2.64	0.00	10.67
Labour market	41526	2.58	0.00	3.95	0.00	13.24
Household activities	41526	1.74	1.00	1.97	0.00	9.17
Care of individuals	41526	1.98	0.00	3.42	0.00	14.30
Leisure and self-care	41526	7.68	7.33	3.48	0.00	16.85
Sleep	41526	8.61	8.35	2.34	0.12	17.07
Panel C. Intensive margin (If time spent)						
Education	10165	5.33	5.24	2.58	0.00	10.67
Labour market	15001	7.16	8.00	3.23	0.00	13.24
Household activities	28876	2.50	2.00	1.91	0.00	9.17
Care of individuals	20001	4.86	3.87	3.82	0.00	14.30
Leisure and self-care	41524	7.68	7.33	3.48	0.00	16.85
Sleep	41526	8.61	8.35	2.34	0.12	17.07

Notes: The following columns display information about the main variables used in this study, it includes: (1) the variable number of observations; (2) the variable mean; (3) the variable median; (4) the variable standard deviation; (5) the variable minimum value; and (6) the variable maximum value. *Household asset ownership* is used as proxy for household income, and it's calculated using the number of home appliances and other goods owned by the household. *Household head's education* corresponds to the maximum level of education achieved by the head of household; 1 corresponds to no education, 2 to preschool or/and elementary, 3 to middle or/and high school and 4 to tertiary education. Questions in the ENUT data base were classified in one of the categories shown in Panels A, B and C, based on the definitions provided by the National Time Transfer Accounts (NTTA) and the International Classification of Activities for Time Use Statistics (ICATUS) methodologies, please refer to Table 17 for more details on the variables. Panel C shows the intensive margin statistics only for those who reported having spent time on the activity.

Table 2: Frequency and Proportion of Non-Participation Across Activities

	Frequency		Proportion	
	> 0 (1)	= 0 (2)	> 0 (3)	= 0 (4)
Education	10165	31361	0.24	0.76
Labour market	15001	26525	0.36	0.64
Household activities	28876	12650	0.70	0.30
Care of individuals	20001	21525	0.48	0.52
Leisure and self-care	41524	2	1.00	0.00
Sleep	41526	0	1.00	0.00

Notes: This table presents the number and percentage of individuals who reported either no time or some positive time spent on each activity included in the ENUT survey. Columns 1 and 2 show the total counts, while Columns 3 and 4 report the corresponding percentages of the full sample.

Table 3: Means and Standard Deviations of Main Outcomes for Primary and Propensity Score Matching Samples in the pretreatment period

	Extensive margin				Intensive margin			
	<i>Treatment</i>		<i>Control</i>		<i>Treatment</i>		<i>Control</i>	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. Main results sample								
Education	0.21	0.41	0.22	0.42	1.23	2.66	1.28	2.73
Labour market	0.41	0.49	0.41	0.49	2.71	3.91	2.66	3.87
Household activities	0.67	0.47	0.69	0.46	1.82	2.10	1.57	1.86
Care of individuals	0.75	0.43	0.85	0.36	3.23	3.80	3.41	3.78
Leisure and self-care	1.00	0.00	1.00	0.01	6.52	3.39	6.69	3.44
Sleep	1.00	0.00	1.00	0.00	8.38	2.15	8.23	2.07
Panel B. Propensity score matching sample								
Education	0.20	0.40	0.21	0.41	1.19	2.63	1.21	2.66
Labour market	0.41	0.49	0.41	0.49	2.74	3.92	2.65	3.84
Household activities	0.66	0.47	0.69	0.46	1.81	2.11	1.59	1.88
Care of individuals	0.74	0.44	0.85	0.36	3.18	3.77	3.42	3.79
Leisure and self-care	1.00	0.00	1.00	0.01	6.57	3.41	6.69	3.42
Sleep	1.00	0.00	1.00	0.00	8.40	2.14	8.28	2.09

Notes: The Treatment and Control means and standard deviations refer to each dependent variable's values in the pre-treatment period, calculated separately for the treatment and control groups.

Table 4: Impact of the 2014 Ceasefire on Youth Time Use in Conflict-Affected Municipalities

	Extensive margin		Intensive margin	
	OLS		Tobit/OLS	
	All	By year	All	By year
	(1)	(2)	(3)	(4)
Education				
Conflict x Time	-0.045 (0.039) [0.051]		-1.418 (1.086) {0.351}	
Conflict x 2016		-0.035 (0.036) [0.142]		-1.238 (1.065) {0.675}
Conflict x 2020		-0.048 (0.042) [0.094]		-1.489 (1.166) {0.675}
R-squared	0.064	0.064	.	.
Labour market				
Conflict x Time	0.047* (0.024) [0.006]		0.674 (0.450) {0.351}	
Conflict x 2016		0.038 (0.031) [0.094]		0.359 (0.651) {0.926}
Conflict x 2020		0.050** (0.025) [0.008]		0.799* (0.467) {0.421}
R-squared	0.030	0.030	.	.
Household activities				
Conflict x Time	0.027 (0.026) [0.086]		-0.045 (0.144) {0.752}	
Conflict x 2016		0.046 (0.029) [0.028]		-0.001 (0.161) {0.997}
Conflict x 2020		0.019 (0.027) [0.247]		-0.063 (0.168) {0.926}
R-squared	0.035	0.035	.	.
Care of individuals				
Conflict x Time	0.168*** (0.043) [0.001]		1.751*** (0.480) {0.001}	
Conflict x 2016		0.196*** (0.056) [0.001]		1.956*** (0.576) {0.005}
Conflict x 2020		0.157*** (0.042) [0.001]		1.662*** (0.514) {0.009}
R-squared	0.214	0.214	.	.
Leisure and self-care				
Conflict x Time			0.010 (0.281) [0.954]	
Conflict x 2016				0.061 (0.312) [0.961]
Conflict x 2020				-0.009 (0.334) [0.961]
R-squared			0.088	0.088
Sleep				
Conflict x Time			-0.478** (0.225) [0.006]	
Conflict x 2016				-0.470** (0.221) [0.010]
Conflict x 2020				-0.481* (0.273) [0.025]
R-squared			0.124	0.124
Observations	41526	41526	41526	41526
Year FE	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓

Notes: The table displays the coefficients of the ceasefire on the use of time, as analyzed through the intensive and extensive margins. The coefficients were estimated using both OLS and Tobit specifications based on Equation 1. Although the OLS specification was estimated for all outcomes, it is primarily reported for Sleep and Leisure and self-care, as these outcomes are not meaningfully left-censored (i.e., they have very few zero responses). For the remaining outcomes, which exhibit left-censoring, the Tobit specification is estimated and emphasized. The analysis controls for the Multidimensional Poverty Index and the population at the municipality-level. Details on the independent, dependent and control variables used in this specification can be found in Table 17. The Treatment and Control means refer to each dependent variable's values in the pre-treatment period (2012–2013), calculated separately for the treatment and control groups. Sidak-corrected p-values are reported in {curly brackets}, while Romano and Wolf's (2005a,b) step-down adjusted p-values, which control the familywise error rate using a Studentized bootstrap procedure (Romano and Wolf, 2016), are in [square brackets]. Municipality clusters standard errors in parentheses (* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$)

Table 5: Propensity Score estimation of the change in Time Use Following the 2014 Ceasefire:

	Extensive margin		Intensive margin	
	All	By year	All	By year
	(1)	(2)	(3)	(4)
Education				
Conflict x Time	-0.058 (0.038) [0.022]		-1.732 (1.070) {0.200}	
Conflict x 2016		-0.047 (0.035) [0.076]		-1.476 (1.050) {0.502}
Conflict x 2020		-0.062 (0.042) [0.046]		-1.832 (1.162) {0.456}
R-squared	0.061	0.061	.	.
Labour market				
Conflict x Time	0.057** (0.024) [0.002]		0.858* (0.463) {0.180}	
Conflict x 2016		0.043 (0.032) [0.076]		0.431 (0.676) {0.892}
Conflict x 2020		0.062** (0.026) [0.002]		1.027** (0.488) {0.195}
R-squared	0.032	0.032	.	.
Household activities				
Conflict x Time	0.032 (0.026) [0.054]		-0.028 (0.147) {0.847}	
Conflict x 2016		0.046 (0.029) [0.039]		-0.020 (0.168) {0.979}
Conflict x 2020		0.027 (0.027) [0.113]		-0.032 (0.173) {0.979}
R-squared	0.036	0.036	.	.
Care of individuals				
Conflict x Time	0.170*** (0.044) [0.001]		1.712*** (0.485) {0.002}	
Conflict x 2016		0.195*** (0.057) [0.001]		1.897*** (0.592) {0.011}
Conflict x 2020		0.160*** (0.043) [0.001]		1.632*** (0.523) {0.013}
R-squared	0.212	0.212	.	.
Leisure and self-care				
Conflict x Time			0.030 (0.285) [0.829]	
Conflict x 2016				0.110 (0.326) [0.828]
Conflict x 2020				-0.001 (0.339) [0.994]
R-squared			0.084	0.084
Sleep				
Conflict x Time			-0.483** (0.228) [0.008]	
Conflict x 2016				-0.443* (0.227) [0.021]
Conflict x 2020				-0.498* (0.280) [0.030]
R-squared			0.134	0.134
Observations	34278	34278	34278	34278
Year FE	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓

Notes: The table displays the coefficients of the ceasefire on the use of time, as analyzed through the intensive and extensive margins. The propensity score was calculated using municipality covariates, and the sample was then trimmed to ensure that it only included units with common support in their distribution across the treated and control groups. The coefficients were estimated using both OLS and Tobit specifications based on Equation 1. Although the OLS specification was estimated for all outcomes, it is primarily reported for Sleep and Leisure and self-care, as these outcomes are not meaningfully left-censored (i.e., they have very few zero responses). For the remaining outcomes, which exhibit left-censoring, the Tobit specification is estimated and emphasized. The analysis controls for the Multidimensional Poverty Index and the population at the municipality-level. Details on the independent, dependent and control variables used in this specification can be found in Table 17. The Treatment and Control means refer to each dependent variable's values in the pre-treatment period (2012–2013), calculated separately for the treatment and control groups. Šidák-corrected p-values are reported in {curly brackets}, while Romano and Wolf's (2005a,b) step-down adjusted p-values, which control the familywise error rate using a Studentized bootstrap procedure (Romano and Wolf, 2016), are in [square brackets]. Municipality clusters standard errors in parentheses (* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$)

Table 6: Means and Standard Deviations of Main Outcomes by Age Group

	Extensive margin				Intensive margin			
	<i>Treatment</i>		<i>Control</i>		<i>Treatment</i>		<i>Control</i>	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Education								
14-19 yrs	0.38	0.48	0.43	0.49	2.28	3.33	2.51	3.43
20-23 yrs	0.14	0.34	0.11	0.31	0.78	2.16	0.59	1.94
24-28 yrs	0.05	0.21	0.05	0.21	0.21	1.07	0.20	1.06
Labour market								
14-19 yrs	0.29	0.45	0.24	0.43	1.63	3.17	1.23	2.77
20-23 yrs	0.42	0.49	0.47	0.50	3.00	4.11	3.27	4.13
24-28 yrs	0.56	0.50	0.58	0.49	3.98	4.21	4.14	4.24
Household activities								
14-19 yrs	0.67	0.47	0.69	0.46	1.51	1.86	1.28	1.61
20-23 yrs	0.67	0.47	0.70	0.46	1.92	2.09	1.74	1.93
24-28 yrs	0.65	0.48	0.68	0.47	2.16	2.39	1.82	2.05
Care of individuals								
14-19 yrs	0.70	0.46	0.82	0.38	2.20	3.06	2.33	2.95
20-23 yrs	0.77	0.42	0.86	0.35	3.58	4.01	3.84	4.01
24-28 yrs	0.78	0.42	0.88	0.33	4.36	4.14	4.57	4.17
Leisure and self-care								
14-19 yrs	1.00	0.00	1.00	0.02	7.26	3.25	7.59	3.35
20-23 yrs	1.00	0.00	1.00	0.00	6.43	3.41	6.41	3.43
24-28 yrs	1.00	0.00	1.00	0.00	5.50	3.31	5.63	3.22
Sleep								
14-19 yrs	1.00	0.00	1.00	0.00	9.02	2.16	8.89	1.95
20-23 yrs	1.00	0.00	1.00	0.00	8.18	2.04	8.00	2.04
24-28 yrs	1.00	0.00	1.00	0.00	7.66	1.98	7.50	1.98

Notes: The Treatment and Control means and standard deviations refer to each dependent variable's values in the pre-treatment period, calculated separately for the treatment and control groups.

Table 7: Age Group Analysis of Heterogeneous Effects on Time Use Following the 2014 Ceasefire

	Extensive margin			Intensive margin		
	OLS			Tobit/OLS		
	14-19 yrs	20-23 yrs	24-28 yrs	14-19 yrs	20-23 yrs	24-28 yrs
	(1)	(2)	(3)	(4)	(5)	(6)
Education	-0.090 (0.068) [0.089]	-0.072** (0.033) [0.004]	0.017 (0.018) [0.274]	-1.492 (1.061) {0.407}	-2.934** (1.369) {0.063}	1.305 (1.488) {0.762}
R ²	0.142	0.086	0.049	.	.	.
Labour market	0.011 (0.038) [0.661]	0.123*** (0.043) [0.001]	0.034 (0.035) [0.274]	0.360 (1.130) {0.929}	1.961*** (0.739) {0.024}	0.150 (0.534) {0.951}
R ²	0.081	0.056	0.040	.	.	.
Household activities	0.044 (0.036) [0.130]	-0.016 (0.034) [0.505]	0.053* (0.030) [0.054]	0.065 (0.189) {0.929}	-0.229 (0.230) {0.319}	-0.055 (0.230) {0.951}
R ²	0.059	0.053	0.044	.	.	.
Care of individuals	0.204*** (0.052) [0.001]	0.150*** (0.048) [0.001]	0.128*** (0.046) [0.003]	1.928*** (0.571) {0.003}	1.833*** (0.612) {0.011}	1.323** (0.609) {0.114}
R ²	0.341	0.225	0.163	.	.	.
Leisure and self-care				0.341 (0.419) [0.409]	-0.305 (0.280) [0.196]	-0.086 (0.311) [0.935]
R ²				0.138	0.114	0.101
Sleep				-0.464** (0.195) [0.004]	-0.584* (0.311) [0.021]	-0.462 (0.289) [0.079]
R ²				0.180	0.137	0.137
Observations	15835	13323	12368	15835	13323	12368
Year FE	✓	✓	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓

Notes: The table displays the coefficients of the heterogeneous effects of the ceasefire on time use at the age group level, analyzed through both the extensive and intensive margins. The coefficients were estimated using OLS specifications (for the extensive and intensive margins) and a Tobit specification (for the intensive margin with censoring), all based on Equation 1. Although the OLS specification was estimated for all outcomes, it is primarily reported for Sleep and Leisure and self-care, as these outcomes are not meaningfully left-censored (i.e., they have very few zero responses). For the remaining outcomes, which exhibit left-censoring, the Tobit specification is estimated and emphasized. The analysis controls for the Multidimensional Poverty Index and the population at the municipality level. Details on the independent, dependent, and control variables used in these specifications can be found in Table 17. Romano and Wolf's (2005a,b) step-down adjusted p-values, controlling the familywise error rate using a Studentized bootstrap procedure (Romano and Wolf, 2016), are in [square brackets]. Šidák-corrected p-values are reported in {curly brackets}. Municipality-clustered standard errors are in parentheses (* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$)

Table 8: Means and Standard Deviations of Main Outcomes by Gender

	Extensive margin				Intensive margin			
	<i>Treatment</i>		<i>Control</i>		<i>Treatment</i>		<i>Control</i>	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Education								
Females	0.23	0.42	0.23	0.42	1.32	2.71	1.30	2.74
Males	0.19	0.39	0.22	0.41	1.14	2.61	1.26	2.73
Labour market								
Females	0.25	0.44	0.28	0.45	1.28	2.87	1.41	2.91
Males	0.56	0.50	0.52	0.50	4.16	4.27	3.80	4.27
Household activities								
Females	0.86	0.35	0.86	0.35	2.83	2.22	2.46	2.01
Males	0.47	0.50	0.53	0.50	0.79	1.36	0.76	1.23
Care of individuals								
Females	0.81	0.39	0.89	0.32	4.69	4.35	4.84	4.39
Males	0.68	0.47	0.82	0.39	1.75	2.36	2.10	2.46
Leisure and self-care								
Females	1.00	0.00	1.00	0.02	5.88	3.21	6.03	3.20
Males	1.00	0.00	1.00	0.00	7.17	3.45	7.30	3.54
Sleep								
Females	1.00	0.00	1.00	0.00	7.94	2.20	7.82	2.16
Males	1.00	0.00	1.00	0.00	8.83	2.00	8.61	1.91

Notes: The Treatment and Control means and standard deviations refer to each dependent variable's values in the pre-treatment period, calculated separately for the treatment and control groups.

Table 9: Gender Analysis of Heterogeneous Effects on Time Use Following the 2014 Ceasefire

	Extensive margin		Intensive margin	
	OLS		Tobit/OLS	
	Females	Males	Females	Males
	(1)	(2)	(3)	(4)
Education	-0.083* (0.045) [0.007]	-0.008 (0.038) [0.749]	-2.191* (1.199) {0.131}	-0.521 (1.083) {0.900}
R ²	0.072	0.076	.	.
Labour market	0.072*** (0.027) [0.001]	0.012 (0.030) [0.749]	1.595** (0.688) {0.060}	0.006 (0.504) {0.991}
R ²	0.048	0.046	.	.
Household activities	0.018 (0.020) [0.159]	0.044 (0.037) [0.168]	-0.091 (0.173) {0.599}	0.096 (0.155) {0.900}
R ²	0.039	0.071	.	.
Care of individuals	0.148*** (0.033) [0.001]	0.189*** (0.059) [0.001]	1.727*** (0.449) {0.000}	1.477*** (0.536) {0.023}
R ²	0.162	0.331	.	.
Leisure and self-care			-0.204 (0.328) [0.379]	0.166 (0.296) [0.722]
R ²			0.103	0.099
Sleep			-0.382* (0.218) [0.028]	-0.592** (0.265) [0.006]
R ²			0.130	0.141
Observations	21131	20395	21131	20395
Year FE	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓

Notes: The table displays the coefficients of the heterogeneous effects of the ceasefire on time use at the gender level, analyzed through both the extensive and intensive margins. The coefficients were estimated using OLS specifications (for the extensive and intensive margins) and a Tobit specification (for the intensive margin with censoring), all based on Equation 1. Although the OLS specification was estimated for all outcomes, it is primarily reported for Sleep and Leisure and self-care, as these outcomes are not meaningfully left-censored (i.e., they have very few zero responses). For the remaining outcomes, which exhibit left-censoring, the Tobit specification is estimated and emphasized. The analysis controls for the Multidimensional Poverty Index and the population at the municipality level. Details on the independent, dependent, and control variables used in these specifications can be found in Table 17. Romano and Wolf's (2005a,b) step-down adjusted p-values, controlling the familywise error rate using a Studentized bootstrap procedure (Romano and Wolf, 2016), are in [square brackets]. Šidák-corrected p-values are reported in {curly brackets}. Municipality-clustered standard errors are in parentheses (* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$)

Table 10: Means and Standard Deviations of Main Outcomes by Education Level of the Head of Household

	Extensive margin				Intensive margin			
	<i>Treatment</i>		<i>Control</i>		<i>Treatment</i>		<i>Control</i>	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Education								
No education	0.16	0.37	0.21	0.40	0.78	2.10	1.14	2.56
Preschool/Elementary	0.18	0.38	0.21	0.41	1.11	2.59	1.20	2.66
Middle/High school	0.20	0.40	0.22	0.42	1.11	2.52	1.31	2.79
Under/Postgraduate	0.40	0.49	0.31	0.46	2.43	3.32	1.71	2.99
Labour market								
No education	0.46	0.50	0.47	0.50	3.42	4.21	2.83	3.78
Preschool/Elementary	0.44	0.50	0.41	0.49	2.83	3.93	2.66	3.88
Middle/High school	0.38	0.48	0.38	0.49	2.51	3.82	2.66	3.92
Under/Postgraduate	0.28	0.45	0.36	0.48	2.06	3.63	2.46	3.77
Household activities								
No education	0.64	0.48	0.67	0.47	1.65	2.03	1.49	1.80
Preschool/Elementary	0.63	0.48	0.68	0.47	1.75	2.12	1.56	1.88
Middle/High school	0.72	0.45	0.70	0.46	2.04	2.14	1.65	1.88
Under/Postgraduate	0.68	0.47	0.72	0.45	1.71	2.00	1.50	1.73
Care of individuals								
No education	0.75	0.43	0.86	0.34	3.05	3.73	3.41	3.79
Preschool/Elementary	0.73	0.44	0.85	0.36	3.01	3.82	3.34	3.84
Middle/High school	0.77	0.42	0.86	0.35	3.77	3.91	3.62	3.76
Under/Postgraduate	0.75	0.43	0.82	0.39	2.94	3.42	3.08	3.49
Leisure and self-care								
No education	1.00	0.00	1.00	0.00	6.11	3.34	6.43	3.34
Preschool/Elementary	1.00	0.00	1.00	0.00	6.67	3.48	6.70	3.47
Middle/High school	1.00	0.00	1.00	0.02	6.42	3.34	6.64	3.41
Under/Postgraduate	1.00	0.00	1.00	0.00	6.55	3.19	7.07	3.45
Sleep								
No education	1.00	0.00	1.00	0.00	8.88	2.14	8.50	2.14
Preschool/Elementary	1.00	0.00	1.00	0.00	8.52	2.14	8.39	2.07
Middle/High school	1.00	0.00	1.00	0.00	8.02	2.12	7.97	2.01
Under/Postgraduate	1.00	0.00	1.00	0.00	8.24	2.11	8.05	2.07

Notes: The Treatment and Control means and standard deviations refer to each dependent variable's values in the pre-treatment period, calculated separately for the treatment and control groups.

Table 11: Education Level of the Head of Household Analysis of Heterogeneous Effects on Time Use Following the 2014 Ceasefire Ceasefire

	Extensive margin				Intensive margin			
	OLS				Tobit/OLS			
	No education (1)	Preschool/Elementary (2)	Middle/High school (3)	Under/Postgraduate (4)	No education (5)	Preschool/Elementary (6)	Middle/High school (7)	Under/Postgraduate (8)
Education	0.007 (0.075) [0.865]	-0.006 (0.041) [0.911]	-0.056 (0.049) [0.126]	-0.160** (0.071) [0.003]	0.169 (1.936) {0.944}	-0.414 (1.256) {0.967}	-1.728 (1.420) {0.397}	-2.768** (1.236) {0.074}
R ²	0.151	0.085	0.068	0.150	.	.	.	.
Labour market	-0.042 (0.063) [0.519]	0.009 (0.040) [0.911]	0.067** (0.031) [0.009]	0.146*** (0.048) [0.001]	-2.013 (1.257) {0.294}	0.198 (0.658) {0.967}	1.231* (0.714) {0.233}	2.801** (1.133) {0.053}
R ²	0.118	0.048	0.042	0.097	.	.	.	.
Household activities	0.096 (0.064) [0.112]	0.040 (0.039) [0.263]	-0.020 (0.032) [0.358]	0.035 (0.050) [0.330]	0.098 (0.326) {0.944}	-0.085 (0.205) {0.967}	-0.142 (0.149) {0.397}	-0.133 (0.284) {0.639}
R ²	0.110	0.049	0.045	0.092	.	.	.	.
Care of individuals	0.252*** (0.087) [0.004]	0.141** (0.055) [0.002]	0.192*** (0.052) [0.001]	0.153** (0.075) [0.007]	3.781*** (1.147) {0.004}	0.776 (0.623) {0.617}	2.274*** (0.614) {0.001}	1.652 (1.076) {0.234}
R ²	0.379	0.273	0.177	0.279	.	.	.	.
Leisure and self-care					0.205 (0.506) [0.895]	0.174 (0.386) [0.752]	-0.164 (0.354) [0.427]	0.284 (0.492) [0.451]
R ²					0.214	0.120	0.092	0.155
Sleep					-0.799** (0.319) [0.011]	-0.248 (0.300) [0.430]	-0.709*** (0.246) [0.002]	-0.348 (0.353) [0.385]
R ²					0.229	0.134	0.147	0.154
Observations	3481	16652	15268	6125	3481	16652	15268	6125
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓	✓	✓
Controls	✓	✓	✓	✓	✓	✓	✓	✓

Notes: The table displays the coefficients of the heterogeneous effects of the ceasefire on time use at the head of household's education level, analyzed through both the extensive and intensive margins. The coefficients were estimated using OLS specifications (for the extensive and intensive margins) and a Tobit specification (for the intensive margin with censoring), all based on Equation 1. Although the OLS specification was estimated for all outcomes, it is primarily reported for Sleep and Leisure and self-care, as these outcomes are not meaningfully left-censored (i.e., they have very few zero responses). For the remaining outcomes, which exhibit left-censoring, the Tobit specification is estimated and emphasized. The analysis controls for the Multidimensional Poverty Index and the population at the municipality level. Details on the independent, dependent, and control variables used in these specifications can be found in Table 17. Romano and Wolf's (2005a,b) step-down adjusted p-values, controlling the familywise error rate using a Studentized bootstrap procedure (Romano and Wolf, 2016), are in [square brackets]. Šidák-corrected p-values are reported in {curly brackets}. Municipality-clustered standard errors are in parentheses (* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$)

Table 12: Means and Standard Deviations of Main Outcomes by Household Asset Ownership

	Extensive margin				Intensive margin			
	<i>Treatment</i>		<i>Control</i>		<i>Treatment</i>		<i>Control</i>	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Education								
Higher possession	0.27	0.44	0.28	0.45	1.49	2.81	1.58	2.96
Lower possession	0.19	0.39	0.20	0.40	1.13	2.60	1.12	2.59
Labour market								
Higher possession	0.35	0.48	0.36	0.48	2.63	3.99	2.60	3.91
Lower possession	0.43	0.49	0.43	0.49	2.74	3.88	2.69	3.85
Household activities								
Higher possession	0.63	0.48	0.68	0.47	1.49	1.95	1.38	1.72
Lower possession	0.68	0.47	0.70	0.46	1.95	2.15	1.68	1.92
Care of individuals								
Higher possession	0.71	0.45	0.84	0.36	2.66	3.30	3.00	3.49
Lower possession	0.76	0.43	0.85	0.35	3.45	3.96	3.62	3.91
Leisure and self-care								
Higher possession	1.00	0.00	1.00	0.00	7.31	3.49	7.16	3.50
Lower possession	1.00	0.00	1.00	0.01	6.21	3.30	6.45	3.38
Sleep								
Higher possession	1.00	0.00	1.00	0.00	8.31	2.03	8.15	2.03
Lower possession	1.00	0.00	1.00	0.00	8.41	2.19	8.28	2.09

Notes: The Treatment and Control means and standard deviations refer to each dependent variable's values in the pre-treatment period, calculated separately for the treatment and control groups.

Table 13: Household Asset Ownership Analysis of Heterogeneous Effects on Time Use Following the 2014 Ceasefire

	Extensive margin		Intensive margin	
	OLS		Tobit/OLS	
	Higher possession	Lower possession	Higher possession	Lower possession
	(1)	(2)	(3)	(4)
Education	-0.031 (0.049) [0.251]	-0.054 (0.041) [0.051]	-0.801 (1.023) {0.679}	-1.847 (1.302) {0.399}
R ²	0.067	0.078	.	.
Labour market	0.039 (0.039) [0.202]	0.044 (0.030) [0.051]	0.606 (0.869) {0.679}	0.605 (0.546) {0.464}
R ²	0.041	0.040	.	.
Household activities	0.051 (0.036) [0.107]	0.007 (0.027) [0.691]	0.212 (0.196) {0.628}	-0.176 (0.180) {0.464}
R ²	0.048	0.043	.	.
Care of individuals	0.205*** (0.065) [0.001]	0.144*** (0.042) [0.001]	2.434*** (0.601) {0.000}	1.338** (0.591) {0.091}
R ²	0.255	0.204	.	.
Leisure and self-care			-0.487 (0.339) [0.139]	0.329 (0.304) [0.136]
R ²			0.090	0.097
Sleep			-0.365 (0.260) [0.145]	-0.534** (0.250) [0.005]
R ²			0.125	0.136
Observations	16660	24866	16660	24866
Year FE	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓
Controls	✓	✓	✓	✓

Notes: The table displays the coefficients of the heterogeneous effects of the ceasefire on time use at the household asset ownership level, analyzed through both the extensive and intensive margins. The coefficients were estimated using OLS specifications (for the extensive and intensive margins) and a Tobit specification (for the intensive margin with censoring), all based on Equation 1. Although the OLS specification was estimated for all outcomes, it is primarily reported for Sleep and Leisure and self-care, as these outcomes are not meaningfully left-censored (i.e., they have very few zero responses). For the remaining outcomes, which exhibit left-censoring, the Tobit specification is estimated and emphasized. The analysis controls for the Multidimensional Poverty Index and the population at the municipality level. Details on the independent, dependent, and control variables used in these specifications can be found in Table 17. Romano and Wolf's (2005a,b) step-down adjusted p-values, controlling the familywise error rate using a Studentized bootstrap procedure (Romano and Wolf, 2016), are in [square brackets]. Šidák-corrected p-values are reported in {curly brackets}. Municipality-clustered standard errors are in parentheses (* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$)

Table 14: Municipality of Residence for Total and Young Population

	Total population		Young population	
	Five years back (1)	One year back (2)	Five years back (3)	One year back (4)
Conflict	-2.329*** (0.178)	-0.840*** (0.104)	-0.017*** (0.004)	-0.007*** (0.002)
Observations	9116406	9116406	2355985	2355985
R-squared	0.038	0.009	0.039	0.010
Mean	8.47	2.63	0.10	0.04
Std. Dev.	27.84	16.00	0.31	0.19
Municipality FE	✓	✓	✓	✓

Notes: The following table presents migration patterns in the 202 municipalities included in the baseline sample. Columns 1 and 2 represent the total population, while columns 3 and 4 focus on the young population. In columns 1 and 3, a dummy variable is used as the dependent variable, taking a value of 1 if the surveyed individual resided in a different municipality five years ago than their current survey location, and 0 otherwise. In columns 2 and 4, the dependent variable is a dummy variable that takes a value of 1 if the surveyed individual resided in a different municipality 12 months ago than their current survey location, and 0 otherwise. In this specification, as independent variable, the presence of FARC-EP dummy is used alone, without interacting with the time dummy.

Table 15: Proportion of People Expelled from or Received into Conflict Exposed Municipalities due to Forced Displacement

	Received		Expelled	
	(1)	(2)	(1)	(2)
Conflict x Time	-0.351*** (0.048)		-0.823*** (0.119)	
Conflict x 2015		-0.219*** (0.083)		-0.614*** (0.204)
Conflict x 2016		-0.495*** (0.083)		-1.382*** (0.205)
Conflict x 2017		-0.490*** (0.085)		-1.090*** (0.206)
Conflict x 2018		-0.135 (0.085)		-0.143 (0.208)
Conflict x 2019		-0.419*** (0.085)		-0.873*** (0.211)
Observations	8841	8841	8714	8841
R-squared	0.428	0.429	0.445	0.447
Mean	0.47	0.47	0.94	0.94
Std. Dev.	1.02	1.02	2.54	2.54
Year FE	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓

Notes: The following table displays the migration patterns in the 202 municipalities that were included in the baseline sample. The dependent variables are the proportion of people who were received and expelled from the total population in the municipality as a result of forced displacement. The data presented covers the period from 2010 to 2019. Data was taken from the Conflict and Violence Panel of the CEDE Municipality Database.

Table 16: Household Re-composition in Conflict-Affected Municipalities following the Ceasefire

	HH size		% males		% young males		% disabled		% female head		% spouse presente	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Conflict x Time	-0.005 (0.072)		0.384 (1.135)		-0.270 (1.001)		0.673 (0.556)		-1.254 (1.696)		-0.210 (1.923)	
Conflict x 2016		0.035 (0.067)		0.206 (1.247)		-1.114 (1.215)		-0.395 (0.768)		-0.276 (1.953)		-0.060 (1.932)
Conflict x 2020		-0.043 (0.101)		0.558 (1.179)		0.555 (0.992)		1.718** (0.771)		-2.211 (1.840)		-0.356 (2.299)
Conflict	0.369*** (0.048)		0.122 (0.765)		-2.071*** (0.681)		-0.445 (0.381)		3.648*** (1.160)		2.340* (1.301)	
Time	-0.288*** (0.035)		-0.584 (0.457)		1.204** (0.472)		0.146 (0.359)		7.625*** (0.959)		-5.159*** (0.942)	
Observations	28177	28177	28177	28177	28177	28177	28177	28177	28177	28177	28177	28177
R-squared	0.039	0.039	0.017	0.017	0.010	0.010	0.027	0.028	0.409	0.409	0.111	0.111
Mean	3.63	3.63	46.18	46.18	21.74	21.74	4.00	4.00	35.79	35.79	38.10	38.10
Std. Dev.	1.52	1.52	23.46	23.46	22.30	22.30	12.03	12.03	12.88	12.88	28.13	28.13
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Municipality FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes: This table shows the impact of conflict on household composition after a ceasefire. Outcomes include household size (number of members), the percentage of males, the percentage of young males, and the percentage of disabled individuals in the household.

Table 17: Variables Definitions and Source

Variable	Definition	Source
Conflict variables		
Main FARC-EP conflict exposure variable	Dummy variable equal to 1 if the municipality was highly exposed to FARC-EP violent attacks. High exposure is defined as being above the median number of attacks per 10,000 inhabitants during the period 2011–2014, corresponding to the presidency of Juan Manuel Santos.	Universidad del Rosario - CERAC
Alternative FARC-EP conflict exposure variable	ummy variable equal to 1 if the municipality was highly exposed to FARC-EP violent attacks. High exposure is defined as being above the median number of attacks per 10,000 inhabitants during the period 2003–2014, encompassing the presidencies of Álvaro Uribe Vélez and Juan Manuel Santos.	Universidad del Rosario - CERAC
Time use variables		
labor market	Considers time invested in paid work for household enterprises that create market goods or goods produced and consumed by the household, as well as time spent commuting to/from a paid market job. Also, time spent looking for work, time spent in work-related socializing outside of paid hours. Considers time invested in unpaid work for household enterprises that create market goods or goods produced and consumed by the household.	ENUT - DANE
Leisure and self-care	Includes leisure activities such as listening to music, spending time with friends, playing, among others, as well as time spent in medical attention for self-care.	ENUT - DANE
Sleep	Includes the time spent sleeping. Is the only self-care activity considered outside of this category.	ENUT - DANE
Education	Includes the time spent in formal schooling, related homework and time commuting to/from the educational institution.	ENUT - DANE
Household activities	These activities constitute unpaid time spent producing services consumed by household or community members (Cooking, cleaning, laundry, etc.). Time spent traveling to/from doing one of this activities is included.	ENUT - DANE
Care	Care may be for own household members (so an intra-household transfer) or non-household members (so an inter-household transfer). Includes volunteering and non-specified care for the community.	ENUT - DANE
Control variables		
Multidimensional Poverty Index - MPI	This poverty measurement reflects the level of deprivation experienced by households across a range of dimensions and variables. The analysis considers five dimensions and 15 indicators, with households that are deprived in at least five of these indicators being classified as poor.	TerriData - DNP / CEDE
Total population	Based on the 2005 DANE census, the population projection for the year 2018 corresponds to the number of people per square kilometer in the municipality.	TerriData - DNP / CEDE
Propensity score covariates		
Percentage of the population of men	Based on the 2005 DANE census, the population projection for the year 2018 corresponds to the percentage of men of the total population in each municipality.	TerriData - DNP / CEDE
Urban population percentage	Based on the 2005 DANE census, the population projection for the year 2018 corresponds to the percentage of people living in urban areas of the total population in each municipality.	TerriData - DNP / CEDE
GDP per capita (constant 2005)	GDP per capita at the municipality level constant 2005.	CEDE
Unsatisfied basic needs	Unsatisfied basic needs 2005 Census Municipal capital.	CEDE
Formal employment rate	Formal employment rate in the municipality.	CEDE

Heterogeneous effects variables		
Gender	Gender of the individual.	ENUT - DANE
Age	Age of the individual.	ENUT - DANE
Household possession of goods	Number of home appliances owned by the household.	ENUT - DANE
Head of household education level	Highest educational level completed by the head of the household.	ENUT - DANE
Mechanisms and robustness variables		
Received for forced displacement	Number of people received in the municipality due to forced displacement	CEDE
Expelled for forced displacement	Number of people expelled from the municipality due to forced displacement	CEDE
Nightlights intensity	The sum of light intensity within the boundaries of each municipality. The light intensity data comes from nighttime lights rasters based on a pre-calibration method developed by Li et al. (2020) .	Figshare
Municipality of residence five years ago	Dummy variable equal to 1 if the individual resided in a different municipality five years prior to the survey, and 0 if they remained in the same municipality.	Colombia's 2018 Census
Municipality of residence one year ago	Dummy variable equal to 1 if the individual resided in a different municipality 12 months prior to the survey, and 0 if they remained in the same municipality.	Colombia's 2018 Census
Percentage of (young) males in the household	Ratio of (young) male individuals to the total number of household members.	ENUT - DANE
Percentage of disabled household members	Ratio of household members with a disability to the total number of household members.	ENUT - DANE

Notes: Definitions of time-use variables are based on the NTTA reporting template, particularly the activity group notes available on the official National Transfer Accounts website (<https://ntaccounts.org>). Additionally, the definitions are informed by questions from the ENUT survey and the International Classification of Activities for Time Use Statistics (ICATUS).