Understanding the Drivers of Unpaid Care Workload in West African Countries? A case study of Benin

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Abstract

The paper seeks to assess the factors that explain the time spent on unpaid care work in Benin. To this end, a logistic regression (Tobit model) has been used using data from the Harmonized Survey on Household Living Conditions (EHCVM). Results found that the sex of individuals, education level, size of households, and regions of residence play a critical role in the time devoted to unpaid care work in Benin. So, to reduce the unpaid care workload in Benin, policies shall keep girls in the education system as long as possible and ensure their success. Furthermore, researchers shall investigate the socio-anthropologic rationale specific to regions regarding unpaid care work. This would help better implement the triple R, particularly the reduction and equal redistribution of unpaid care workload in Benin.

Keywords: Unpaid care work, Determinants, Tobit regression, Benin

Introduction

Since its recognition as work during the 19th International Conference of Labor Statisticians (ICLS) in 2013, unpaid care work (UCW) has been placed at the heart of inclusive and sustainable development policies. For instance, Goal 5 of the 2030 Sustainable Development Agenda clearly targets the issue of care work. Previously, the 1995 Beijing Platform for Action emphasized the need to make more visible women's contributions in the domestic sector through a time-use survey. In the meantime, international institutions are advocating for the integration of UCW into national statistics, and development partners and research centers are developing tools to inform about the value of the contribution of UCW, mainly carried out by women. This greater attention paid to care work, particularly the UCW, is due to its critical role in human maintenance and personal well-being (Suh, 2021; Folbre, 1996; England, 2005) and the non-recognition of the benefits of care to society and the provision of care, mostly by women, may be taken for granted (Karimli and al. 2016).

Despite the importance of UCW for human beings and its linkages with the economy (Hirway, 2015), the unequal distribution of time devoted to it is a source of gender inequalities and may hinder progress towards women's and girls' empowerment and gender equality. In fact, heavy, intensive, and unequal burdens of unpaid care work have been qualified as a violation of human rights, particularly for women (Sepúlveda Carmona and Donald, 2014), and can negatively affect women's participation in politics, local leadership, and development programs (Woodroffe and Donald, 2014). Moreover, heavy UCW can negatively impact health

and well-being, and education outcomes for girls, while certain UCW, including fetching water or firewood, could put women and girls at risk of violence (Karimli and al. 2016). UNWomen (2022) argues that unpaid care work is one of the main barriers preventing women from moving into paid employment and better-quality jobs. However, the concept of unpaid care work remains unclear for many people.

According to UNWomen (2022), "unpaid care work" refers to all unpaid services provided by individuals within a household or community for the benefit of its members, including care of persons and domestic work. Voluntary community work that supports personal or household care, such as community kitchens or childcare. For ILO (2018), unpaid care work is non-remunerated work carried out to sustain the well-being, health, and maintenance of other individuals in the household or the community, and it includes both direct and indirect care. As emphasized by Esquivel (2014), UCW may be carried out at the community level, not exclusively within households.

To address unpaid care work and its related gender inequalities, the International Labour Organization (ILO) has developed the so-called "5R Framework for Decent Care Work[1]. In addition, UN Women has developed two practical toolkits: How to 3R Unpaid Work and Care in 2016 and a Toolkit on Paid and Unpaid Care Work: From 3Rs to 5Rs. Basically, it is to recognize the value of care, reduce the disproportionate share of unpaid care work carried by women and girls, and redistribute care responsibilities equitably between women and men, in households, communities, etc. (UNWomen, 2022). However, implementing the 3R or 5R approach requires a good understanding of factors that explain people's behavior. These factors are primarily embedded in social and cultural norms and may vary across countries and regions within a given country. This justifies why research is first and foremost oriented toward explanatory factors of UCW in each country.

This paper falls within this perspective. In other words, what are the socioeconomic and demographic factors that drive the unpaid care workload in Benin? This research question is relevant for two main reasons: Firstly, because of the sensitivity of unpaid care work that is rooted in the socio-cultural behavior of people, it would shed light on the key determinants to be focused on while implementing the 3R approach. Thus, the answer to the research question could generate key knowledge on the main factors that would rapidly reduce the unpaid care workload primarily carried by women and girls. Secondly, in the context of Benin, marked by the scarcity of research on the issue of unpaid care work, this research intends to be an empirical contribution to the rare literature on UCW.

Although it is not abundantly studied, the factors that would explain the time spent on unpaid care work have been investigated and highlighted in the empirical literature. In India, Singh and Pattanaik (2020) concluded that women intensively engage in UCW because of three major factors: i) social norms and religion as constraints; ii) the failure of markets and states to provide essential provisioning, resulting in a lack of choices; and iii) the low opportunity cost of unpaid work in the market. In addition, they found that the intensity of the unpaid care load of Indian women is inversely correlated to the level of education and positively correlated to the quintile of wealth. In other words, less educated women and those belonging to the lower

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[1] 5R is an updated version of the 3R

wealth quintile in society tend to have a heavy unpaid care workload. According to Treas and Drobnič (2010), the socio-economic status, areas of residence (urban or rural), and number of children in the household, as well as their age, play a critical role in the time devoted to unpaid care work.

Empirical evidence also highlights other key determinants of UCW. These factors include the employment status and age (Budlender, 2008; Brines, 1994; Gershuny and Robinson, 1988), women's level of education (Shelton, 1992), the literacy skills acquired (Marphatia and Moussié (2013), ethnic origin, marital status, gender, and the type of UCW Budlender, 2008). It is evidenced that being employed and having an increased level of education seem to reduce the amount of time women allocate to unpaid care work. The time devoted to UCW is likely to increase with marital status, particularly if they are married even if they don't have children (Amarante and Rossel, 2018). While the type of unpaid care work matters as a determinant of time devoted, the sex of individuals appears consistently as the main determinant (McCloughan and al., 2011). For Karimli and al. (2016), access to equipment and services, bargaining power, etc. are also, among others, factors that shape unpaid care workload.

These determinants are consistent with those found in early research on the topic. In fact, tempting to explain the time devoted to UCW, early scholars have already highlighted the key role played by family policies, demographic structures and trends, the level of economic development, the configuration of labor markets, cultural factors, and social norms (Neilson and Stanfors, 2014; Folbre and Nelson, 2000; Gornick and Meyers, 2003; Antonopoulos and Hirway, 2010). This overview of the literature leads to the conclusion that, while quite well documented, very little is known about UCW in Sub-Saharan Africa, particularly in Benin. Knowing the critical role of socio-cultural norms and socialization that may significantly vary across countries and regions in Africa, it becomes imperative to understand the factors that influence UCW. This is crucial to ensuring the effectiveness of 3R and accelerating women's and girls' empowerment programs and gender equality. That is where the relevance of this paper stems from, with Benin as the study case.

The main objective of this paper is to assess the socioeconomic and demographic factors that explain the time spent on unpaid care work in Benin. In the remaining sections, the paper is structured as follows: the first section presents some stylized facts about unpaid care work in Benin. The second exposes the methodological approach used and the data source. The paper ends with the analysis of the results and discussion presented in the third section, followed by the conclusion.

Unpaid Care Work in Benin

Benin's UCW profile according to ILO statistics

In their latest report on care work in 2018[2], the International Labour Organization (ILO) displayed crucial insights and figures on UCW in certain countries, including Benin. According to ILO (2018), women spend 263 minutes (4.38 hours) per day in Unpaid Care Work in Africa, while men spend 78 minutes (1.3 hours) per day. Considering the three main categories of unpaid care work, namely: i) domestic services for own final use within the household; ii)

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[2] ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_633135.pdf

caregiving services to household members; and iii) community services and help to other households, time devoted by women amounts to 189 minutes (3.15 hours), 32 minutes, and 0 minutes per day, respectively, whereas men dedicate respectively 39 minutes, 3 minutes, and 0 minutes per day in Benin. These facts demonstrate the gender division of labor that assigns women to unpaid care work. Childcare is one of the areas where the gender gap in UCW is noticeable. In fact, women spend 108 minutes per day while men's counterparts spend just 38 minutes per day, resulting in a gap of 70 minutes per day in childcare.

It reported that, unpaid care work represents 9% GDP, including 7.6% for women and 1.4% for men. Thus, to reach gender equality in this domain, men should complete an additional 34% of total unpaid care work. Contrary to several other countries where it is observed that unpaid care work is usually less time-consuming in urban areas, men and women are more engaged in UCW in urban than rural areas in Benin. For instance, Beninese women dedicate 226 minutes per day to UCW in rural areas versus 216 minutes per day in urban areas. Men devote 45 minutes per day and 40 minutes per day, respectively, in urban and rural areas to UCW in Benin (ILO, 2018). Considering unpaid care work like fetching water and collecting firewood, Beninese women spend five times more time than their urban counterparts. Beninese men devote four times less time to rural areas than their urban counterparts. This demonstrates that there is a specialization of UCW according to the areas of residence (urban or rural) and a socio-cultural behavior behind the gender division of UCW.

The unpaid care workload varies slightly over the life cycle or according to the age groups of individuals. For instance, in Benin, adults (276 minutes per day) spend more time on UCW than youth (239 minutes per day) and older persons (153 minutes per day). People with no education spend more time (274 minutes per day) at unpaid care work compared to those with primary (247 minutes per day), secondary (215 minutes per day), and tertiary (218 minutes per day) levels of education. In addition, married women (294 minutes per day) in Benin devote more time to unpaid care work than single women (156 minutes per day) and divorced women (201 minutes per day). However, it is the opposite in the case of men, whereby married men spend just 32 minutes per day compared to 54 minutes per day and 50 minutes per day, respectively, for single and divorced (ILO, 2018).

Unpaid Care Work recorded by EHCVM Benin

The recent Harmonized Survey on Living Standards (EHCVM) includes a module that collects data on unpaid care work. The module considers five (05) activities as unpaid care activities, including i. shopping; ii. Domestic work; iii. care for children and elders; iv. Fetching water; and v. fetching wood.

Table 1 below presents a brief description of the sample and descriptive statistics of time devoted to unpaid care work (UCW) in Benin. The EHCVM database is a sample of 42,343 individuals, including 20,703 males and 21,640 females. Regarding the unpaid care workload, on average, males devote 4.42 hours per week to complete UCW, while women dedicate approximately 13.01 hours per week to those activities. This highlights the unequal distribution of time allocated to UCW among men and women in Benin. However, on average, Beninese would spend around 8.82 hours per week completing unpaid care work.

Table I: Average weekly hours of UCW in Benin

	Obs.	Av. hrs per week
Male	20,70	4.42
Female	21,64	13.01
Total / Mean	42,34	8.82

Source: Authors based on 2018 EHCVM

The graph below depicts the distribution of unpaid care workloads between urban and rural areas. On average, in urban areas, women spend 12.04 hours per week, compared to about 13.80 hours per week in rural areas. In the meantime, men devote just 3.98 hours per week to unpaid care work in urban areas, compared to 4.76 hours per week in rural areas. While both men and women spend more time on unpaid care work in rural areas than in urban areas, the difference seems to be negligible. This may reflect the equal socio-cultural importance associated with those activities regardless of the areas of completion.

Graph 1: Average weekly hours of UCW by residence in Benin
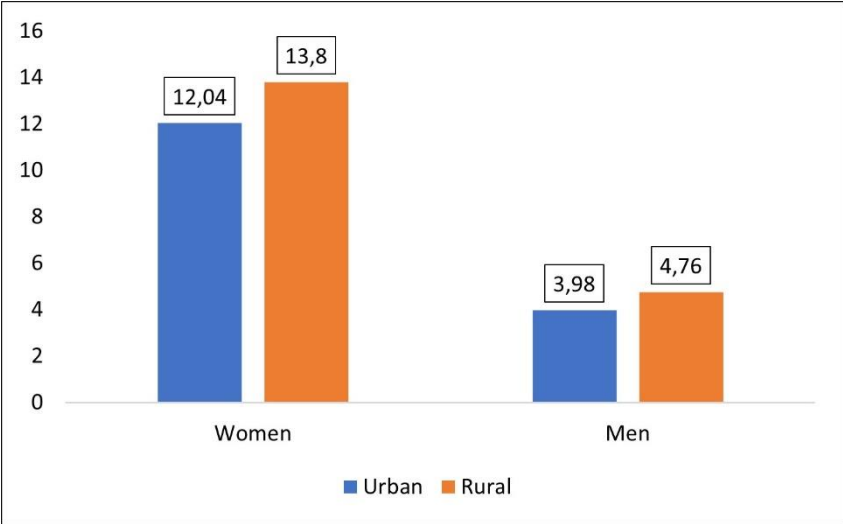
Source: Authors based on 2018 EHCVM

According to the five unpaid care activities, domestic work is the most time-consuming for both men and women. Graph 2 indicates that women spend about 6.74 hours per week on domestic work, while men's counterparts spend just 1.97 on domestic work. This activity is followed by care activities, whereby women devote 3.0 hours per week against 0.99 for men to providing care to children and older persons. The time distribution is quite similar for fetching water, with 2.51 hours per week for women versus 1.03 for men. While women dedicate, respectively, 2.06 and 1.35 hours per week to shopping and fetching firewood, men

allocate less than 1 hour (0.76 and 0.60 hours per week, respectively) to those unpaid care tasks. This graph demonstrates that unpaid care work is mainly completed by women in Benin.

Graph 2: Average weekly hours of UCW by activities in Benin
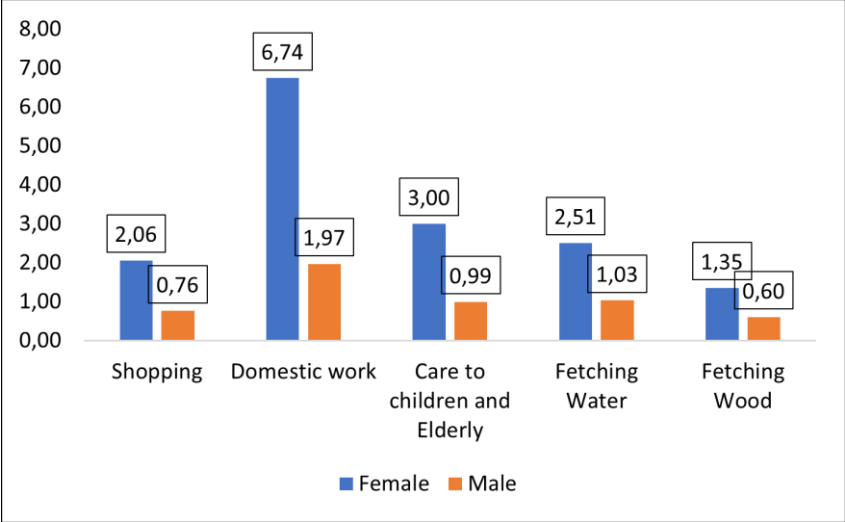
Source: Authors based on EHCVM

The distribution of time over unpaid care work varies slightly across regions. In fact, while on average, the time to UCW is around 8.8 hours per week, it is 17.7 in Alibori (the highest amount of time) and 5.9 in Littoral (the lowest amount of time). This time seems to be approximately similar per block of regions. It is 9.1 in Atacora, 10.1 in Borgou, and 9.3 in Couffo. In the second block of regions, the time dedicated to UCW is 8.1 hours per week in Collines and 8.4 hours in Mono. Atlantique (7.3), Donga (7.5), Oueme (7.3), Plateau (7.2), and Zou (6.7) are a third block of regions where the time to UCW is similar. These figures imply that there must be regional features that would explain differences in the time allocated to unpaid care work.

Graph 3: Average weekly hours of UCW by region in Benin
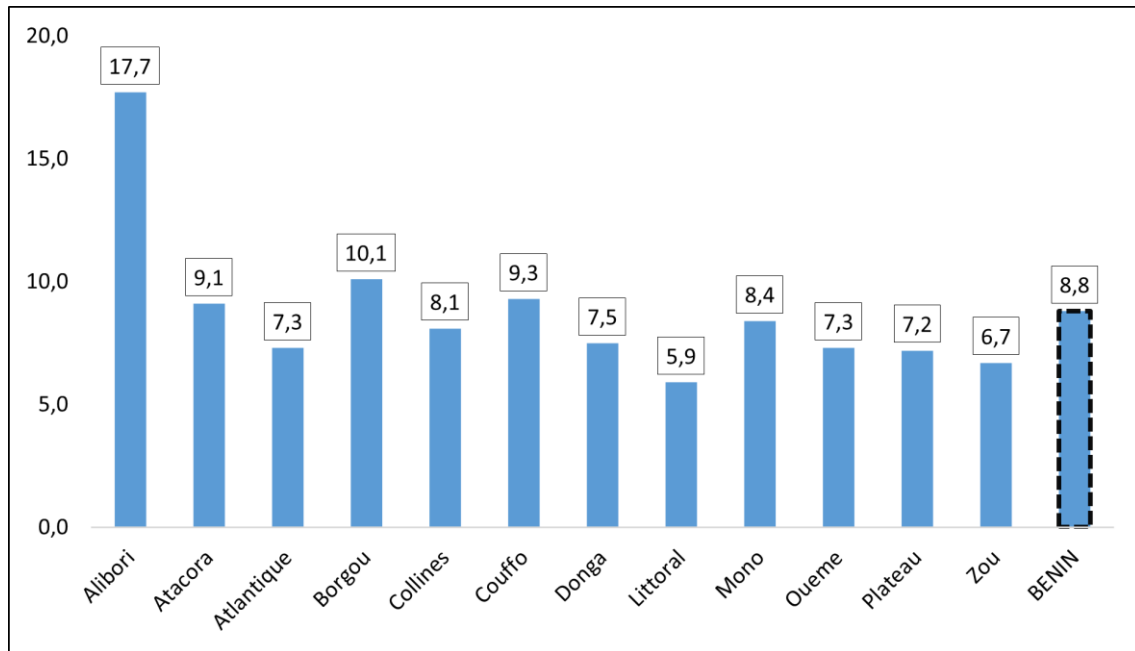
Source: Authors based on 2018 EHCVM

Methodology and data

The methodological approach used in this paper is inspired by the one employed by Amarante and Rossel (2018). Basically, the authors explained the time devoted to unpaid care work (dependent variable) by socioeconomic variables (explanatory variables) referenced in the literature as determinants of unpaid care workload. These variables include individual characteristics such as gender, age, educational level, etc., and household characteristics such as household composition, income, wealth, areas, and regions of residence, etc. The empirical equation is written as follows:

$$Y_i = X_i\beta_i + \varepsilon_i$$

Where Y represents the number of hours spent on unpaid care work per week, X is the vector of explanatory variables, ε stands for the error term, and i represents individuals in the dataset. Our equation specification uses the same variables but considers explanatory variables according to data availability. The variables are weekly hours spent on unpaid care work (ucw), sex (sex), age (age), level of education (educ), employment status (empst), income (inc), household size (hhs), handicap status (hst), marital status (mst), religion affiliation (rel), regions of residence (lr), wealth quintile (qw), and areas of residence (ar). So, the equation could be specified as follows:

$$ucw_i = \beta_1 sex_i + \beta_2 age_i + \beta_3 age_i^2 + \beta_4 educ_i + \beta_5 empst_i + \beta_6 inc_i + \beta_7 hhs_i + \beta_8 hst_i \\ + \beta_9 mst_i + \beta_{10} rel_i + \beta_{11} qw_i + \beta_{12} lr_i + \beta_{13} ar_i + \varepsilon_i$$

To estimate the above equation, ordinary least squares (OLS) techniques can be used, but they may lead to biased results. Following estimation strategies employed by several scholars, including (Amarante and Rossel, 2018; Floro and Miles, 2003), we specify a Tobit model to

examine factors that explain time devoted to unpaid care work. This choice is justified insofar as the dependent variable is limited or censored. The lower bound of the dependent variable (weekly hours spent in unpaid care work) is zero, given that it cannot take a negative value. Regarding the upper bound of the dependent, we assume, like Amarante and Rossel (2018), that, over the 24 hours available in a day, any individual should allocate at least five (05) hours per day for his own self-care and sleeping. This implies that the maximum time one could allocate to unpaid care work could not exceed 133 hours per week. In such a context of limited dependent variables where the dependent variable is censored, the Tobit model is appropriate. The censored normal regression model (Tobit model) is written as follows:

$$Y_i^* = X_i \delta_i + \varepsilon_i$$

For this paper, the censoring rule could be formulated as follows:

$$Y_i = \begin{cases} 0 & if & Y_i^* \leq 0 \\ X_i \delta_i + \varepsilon_i & if & 0 \leq Y_i^* \leq 133 \\ 133 & if & Y_i^* \geq 133 \end{cases}$$

The time-use survey is appropriate to provide data for care work analysis. According to Eurostat[3], time-use surveys measure the amount of time people spend doing various activities, such as paid work, household and family care, personal care, voluntary work, social life, travel, and leisure activities. The survey consists of a household interview, a personal interview, a diary, and a weekly diary. However, to our best knowledge, very few African countries have conducted time-use surveys. Traditional poverty and/or living conditions Surveys that African countries usually conduct include sections or modules that capture unpaid care work. The recent one, the Harmonized Survey on the Household Living Condition (EHCVM), conducted by Benin, includes, under its "Employment" section, questions that allow, at least approximately, to collect information on the volume of time devoted to unpaid care work. In this survey, five major categories of unpaid care work are mentioned. These activities include the following: (i) shopping; (ii) housework; (iii) caring for children and the elderly; (iv) fetching water; and (v) fetching firewood. In this paper, the 2019 EHCVM database will be exploited to explore factors that influence the volume of time spent on unpaid care work in Benin.

Results and Discussion

This section presents the results of the empirical estimation. The main objective is to determine factors explaining the volume of time spent in unpaid care work in Benin. The table below displays the results of the Tobit regression and the marginal effects associated with these estimates. The probability associated with the Chi-squared (Prob> chi2) equal to zero indicates that the model is globally significant. The correlation between the predicted and observed values of UCW is 0.5827. This indicates that predicted values share about 34% (0.5827^2 = 0.339) of the variance with the dependent variable (UCW).

Results analysis

As expected, the sex of individuals plays a key role in the allocation of time for unpaid care work. In fact, as displayed in the table above, women in Benin are likely to spend more time

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[3] Time use survey (tus) (europa.eu)

completing UCW compared to their male counterparts. The p-value of the Tobit regression is less than 5% meaning that women would increase the volume of time devoted to UCW by 10.2 hours per week on average in comparison to men. Compared to no education, the amount of time spent at UCW starts to decrease at the secondary and high levels by 1.1 hours and 1.6 hours per week, respectively. For men, this decrease in time to UCW is 1.4 hours per week for the secondary level and 1.1 hours per week for the high level. This finding is consistent with previous findings that have established a negative relationship between time devoted to UCW and the education level attained. Indeed, as one goes further in the education system, the time devoted to studying increases, and subsequently, time at UCW goes down. However, the level of education does not significantly explain the time to UCW for this sub-group of women. This last finding reveals the patriarchal structure and gender division of UCW in Benin. In fact, being enrolled in the education system and even performing well does not exempt girls from completing unpaid care work in Benin. Whether individuals are in the education system or not, the completion of UCW is primarily the responsibility of women and girls. Furthermore, depending on its importance and structure, Unpaid care work is considered as part of informal education, particularly for girls and women (Uramová and al., 2018).

Table II: Tobit estimates and Marginal effects

Variables	Estimates	Marginal effects	Estimates Men	Marginal effects _ Men	Estimates _ Women	Marginal effects _ Women
Sex						
Male	Ref.	Ref.	-	-	-	-
Female	14.28***	10.17***	-	-	-	-
	(0.500)	(0.320)	-	-	-	-
Levels of education						
No education	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Primary	-0.740	-0.527	-0.928	-0.564	-0.207	-0.187
	(0.635)	(0.452)	(0.580)	(0.353)	(1.402)	(1.266)
Secondary	-1.580***	-1.125***	-2.228***	-1.355***	1.052	0.950
	(0.592)	(0.422)	(0.551)	(0.335)	(1.274)	(1.151)
High	-2.225***	-1.584***	-1.785***	-1.085***	-2.080	-1.879
	(0.792)	(0.564)	(0.709)	(0.431)	(1.807)	(1.632)
Age	33.73***	24.01***	27.976***	17.015***	37.572**	33.943***
	(9.564)	(6.807)	(9.495)	(5.774)	(18.612)	(16.816)
Age2	-5.449***	-3.879***	-4.358***	-2.650***	-6.247**	-5.644**
	(1.339)	(0.953)	(1.327)	(0.807)	(2.618)	(2.366)
Employment status						
Employment_No	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Employment_Yes	1.021	0.727	-1.462*	-0.889*	4.964***	4.484***
	(0.829)	(0.590)	(0.869)	(0.528)	(1.507)	(1.361)
Income	-0.0363	-0.0258	0.183	0.111	-0.510	-0.461
	(0.212)	(0.151)	(0.199)	(0.121)	(0.440)	(0.397)
Household size	-0.392***	-0.279***	-0.284***	-0.172***	-0.430***	-0.388***
	(0.076)	(0.054)	(0.069)	(0.042)	(0.165)	(0.149)
Handicap status						
Dependent_No	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Dependent_Yes	0.615	0.438	0.414	0.252	1.106	0.999
	(0.569)	(0.405)	(0.524)	(0.319)	(1.204)	(1.088)

Religious affiliation

Other	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Muslim	-0.290	-0.207	-0.465	-0.283	1.288	1.163
	(0.940)	(0.669)	(0.815)	(0.496)	(2.355)	(2.128)
Christian	-0.179	-0.127	-0.413	-0.251	1.009	0.912
	(0.727)	(0.517)	(0.640)	(0.389)	(1.737)	(1.570)
Marital status						
Single	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Married	0.0932	0.0663	-2.584***	-1.571	7.207***	6.511***
	(0.660)	(0.470)	(0.592)	(0.360)	(1.539)	(1.391)
Separated	0.692	0.492	1.807	1.099	6.489***	5.862***
	(0.982)	(0.699)	(1.112)	(0.677)	(1.865)	(1.685)
Area of residence						
Urban	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Rural	-0.0404	-0.0288	0.474	0.288	-0.368	-0.333
	(0.497)	(0.354)	(0.446)	(0.271)	(1.131)	(1.021)
Regions of residence						
Littoral	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Alibori	14.17***	10.09***	10.981***	6.679***	17.967***	16.231***
	(1.318)	(0.941)	(1.174)	(0.718)	(3.051)	(2.760)
Atacora	5.336***	3.799***	4.011***	2.439***	5.596*	5.056*
	(1.336)	(0.951)	(1.163)	(0.707)	(3.348)	(3.025)
Atlantique	1.308*	0.931*	0.216	0.131	2.558*	2.311*
	(0.729)	(0.519)	(0.685)	(0.416)	(1.477)	(1.334)
Borgou	5.383***	3.832***	3.380***	2.056***	8.620***	7.787***
	(0.986)	(0.701)	(0.880)	(0.534)	(2.285)	(2.065)
Collines	2.563**	1.824**	0.819	0.498	4.326*	3.908*
	(1.156)	(0.823)	(1.064)	(0.647)	(2.467)	(2.229)
Couffo	3.687***	2.624***	1.583	0.963	6.190**	5.592**
	(1.192)	(0.849)	(1.125)	(0.684)	(2.435)	(2.200)
Donga	3.570***	2.541***	2.853***	1.735***	3.329	3.008
	(1.186)	(0.844)	(1.092)	(0.664)	(2.582)	(2.333)

	(1)	(2)	(3)	(4)	(5)	(6)
Mono	3.539***	2.519***	2.935***	1.785***	1.422	1.285
	(0.961)	(0.684)	(0.882)	(0.536)	(2.099)	(1.896)
Ouémé	2.153***	1.532***	1.694**	1.030**	2.133	1.927
	(0.800)	(0.570)	(0.755)	(0.459)	(1.608)	(1.453)
Plateau	3.770***	2.684***	2.587***	1.573***	3.219	2.908
	(1.028)	(0.732)	(0.926)	(0.563)	(2.317)	(2.093)
Zou	2.511**	1.788**	3.738***	2.273***	-2.595	-2.344
	(1.016)	(0.723)	(0.958)	(0.582)	(2.054)	(1.856)
Wealth						
Poorest	-0.203	-0.145	-0.977	-0.594	3.134*	2.831*
	(0.865)	(0.616)	(0.829)	(0.504)	(1.760)	(1.590)
Poor	-0.534	-0.380	-0.750	-0.456	1.336	1.207
	(0.811)	(0.577)	(0.746)	(0.454)	(1.749)	(1.580)
Middle	0.177	0.126	0.267	0.162	1.997	1.804
	(0.693)	(0.494)	(0.618)	(0.376)	(1.624)	(1.467)
Rich	-0.0165	-0.0118	-0.511	-0.311	2.217*	2.003*
	(0.581)	(0.414)	(0.526)	(0.320)	(1.299)	(1.174)
Richest	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
var(e.tuw)	99.55***		57.092		142.705	
	(3.281)		(2.445)		(7.484)	
Constant	-48.96***		-39.570***		-44.595	
	(16.77)		(16.506)		(32.586)	
Observations	2,564	2,564	1,802	1,802	762	762

Standard errors in parentheses

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

Source: Authors based on 2018 EHCVM

As expected, and confirmed by previous studies, the age of the individual influences positively and significantly at 1% threshold the volume of time dedicated to UCW. The time spent on unpaid care work increases with age by 24 hours per week, 17 hours per week for men, and 34 hours per week for women. However, after a certain age threshold, the time for unpaid care work decreases. Results show that beyond a certain age, it decreases by 3.9 hours per week in general, 2.7 hours per week for the men's sub-group, and 5.6 hours per week for women. In Benin, being employed does not significantly influence the amount of time devoted to UCW. However, it does significantly reduce, although in a small way, at 10% threshold, this time by 0.9 hours per week for men. Regarding women's employment, it seems to affect positively and significantly the time to UCW at 1% by 4.5 hours per week. However, the magnitude is lesser than that of 10.17 hours per week observed in the case of just being female.

Other variables that significantly explain the amount of time individuals devote to UCW include the size of households, marital status, and regions of residence. At a threshold of 1%, the size of households reduces the volume of unpaid care work by 0.3 hours per week. It is true even within the sub-populations of male and female, whereby the time to UCW decreases by 0.2 and 0.4 hours per week, respectively. Referring to singles, while the time to UCW decreases by 1.6 hours per week for married men, it increases by 6.5 hours per week for women. In addition, it increases by 5.9 hours per week for separated women, while it is not statistically significant for men. This finding, although consistent with the socio-cultural context of Benin, depicts the gender inequality effects of UCW in the country.

Regional features play a key role in explaining the volume of time devoted to UCW in Benin. In fact, in reference to the department of Littoral[4], regions significantly increase the time to UCW. However, the magnitude varies slightly across regions and men's and women's sub-populations. For instance, in Alibori, where the time increase is 10.1 hours per week overall, it is just 6.7 hours per week for men and 16.2 hours per week for women. Similarly, Atacora (3.8 hours per week) and Borgou (3.8 hours per week) record a high amount of time devoted to UCW. It is 2.4 hours per week for men and 5.1 hours per week for women in Atacora, 2.1 hours per week for men, and 7.8 hours per week for women in Borgou. It is noteworthy to notice that, while time to UCW increases both overall and for men in Donga, Mono, Ouémé, Plateaux, and Zou, it is not statistically significant for the female population of those regions.

Unlike the findings of other studies in the literature, wealth seems to play a negligible role in the explanation of UCW in Benin. In fact, results show that, at a threshold of 10%, the time to UCW is statistically positive and significant just for the poorest women and for rich women. In other words, the poorest and rich women are likely to spend about 2.8 and 2 hours per week respectively compared to their richest counterparts.

Discussion

As highlighted in several studies, the completion of Unpaid Care Work is the responsibility of women and girls in Benin. There is a social division of labor based on social and cultural norms, with women predominantly present in the non-market (unpaid) domestic economy and men in the market (paid) economy. This was recently highlighted in the work by Padonou et al.

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[4] The department of Littoral is composed of only one municipality, namely Cotonou, the economic capital city of Benin.

(2023) whereby childcare, eldercare, and other home tasks were assigned to women according to social norms, with men carrying out the more physically demanding roles (coconut harvesting, moto riding, basket lixiviation, palisade construction, fishing). As Adjamagbo et al. (2009), pointed out, women perceive their role within the household (housework) as an important element of their status and social recognition; the image of a good wife depends on maintaining the home, knowing how to cook well, and looking after the children. Unpaid Care Work generally begins at an early age through the socialization process (Atim and Awodola, 2020).

The results show that, in comparison to no education level, secondary education reduces unpaid work by around 1.12 hours for all and by 1.355 hours for men. Higher education reduces unpaid work by 1.584 hours for all and 1.085 hours for men. This could be explained by the fact that, with a high level of education, the individual is able to have a job that enables him or her to pay for services and to substitute unpaid work for paid work. In addition, as one goes further in the education system, the time devoted to studying increases, and subsequently, time at UCW goes down. However, we find no effect of the level of education on the time devoted to UCW for the sub-population of women. Consistently with Adjamagbo et al. (2009), completing the household's work is tied to socialization, which gives a certain status and recognition to women regardless of their level of education. Moreover, in Beninese culture, a woman's social status, whether she is active in the labor market or has a higher education diploma, does not exempt her from domestic chores, even if she has a domestic helper at her disposal.

Findings also indicate the reverse effect of the age of an individual on the time devoted to Unpaid Care Work. In fact, the time to UCW increases up to a certain threshold before decreasing by 2.65 hours per week for men and 5.64 per week for women in Benin. This result can be explained by the fact that, over time, both men and women have had children or relatives to help them with unpaid care work. This is consistent with the findings that household size reduces the hours allocated to unpaid work (Rowe and Hong, 2000). In fact, an increase in the number of household members results in the sharing of unpaid care chores. Subsequently, the volume of time per capita allocated to unpaid care work decreases. This is particularly true if the household is composed of girls and women (Flagg et al., 2014). In the case of Benin, where the average size of a household was 5.2 in 2018, according to INStaD[5], the time dedicated to unpaid care work decreases by 0.39 and 0.17 hours per week, respectively, for women and men.

On average, having a professional occupation does not influence the time devoted to unpaid care work in Benin. However, it does for men. Indeed, being employed decreases the time spent on unpaid care work by 0.89 hours per week for men. The finding is coherent with the expectations that employment status reduces the daily available time and increases the financial resources that could be used for the payment of the services. The case is similar for women. In comparison to being female, employed women would devote 4.5 hours per week, which is 5.7 (10.2–4.5) less than being just female. This finding is highlighted in several studies, including Shelton (1990), Lilly et al. (2007), etc. The difference observed between employed

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[5] https://instad.bj/actualites/476-document-des-principaux-indicateurs-ehcvm

men and women regarding the time devoted to unpaid care work could be explained by the fact that the longer time women spend on unpaid work is offset by a reduction in paid work. In fact, in Benin, around 98.2% of women work in the informal sector, earning less than men. As a result, the time spent working outside the home, which is less than men's, is compensated for the time spent on unpaid work. In addition, in Benin, a woman's social status, even if she is active in the labor market, does not exonerate her from domestic chores, even if she has a housekeeper at her disposal.

Consistent with the context of Benin, being married decreases the time devoted to unpaid care work by 1.6 for men and increases that time by 6.5 for women. For women, being married in Benin is synonymous with overseeing domestic chores of the in-laws. Furthermore, if she lives in an extended family home, she will not only have to perform the domestic chores in her own household but also those of other household members. This analysis corroborates several research findings whereby, married status increases the time allocated to housework, particularly for women (Young and Grundy, 2008; Baxter, 2005; Shelton and John, 1993; Furtado et al., 2022; Pepin et al., 2018; Islam and Sharma, 2021). This is not the case for men, for whom marriage constitutes an almost total exemption from domestic chores. However, the little decrease in men's domestic work time in Benin reflects the new reconfiguration of men's participation in domestic work induced by the increased involvement of women in the labor market in some sub-Saharan African countries (Moguérou et al., 2019).

Although the causal relationship needs to be established, particularly for African developing countries, the level of wealth would influence the amount of time devoted to unpaid care work. Indeed, the poorest (women in particular) are confined to household chores as they participate very little in paid work. This is highlighted in several studies, including Sepulveda Carmona (2013), Tacoli (2012), etc., whereby there is an intertwined relationship between unpaid care work and poverty via the time poverty circle. Regarding the rich women, as highlighted by Adjamagbo et al. (2016) and Adjamagbo et al. (2009), completing unpaid care work in the Benin context is governed by social norms that give women a certain social status both within the household and in society. So, being rich does not completely exempt women from completing unpaid care work, even though they may have financial resources to pay for the services.

In comparison to the region of the littoral, living in a given region increases the volume of time devoted to unpaid care work. The regions of Alibori (10 hours per week), Borgou (3.8 hours per week), and Atacora (8.8 hours per week) record the highest increase in the time allocated to unpaid care work. These regions are in the north of the country and have a large proportion of Muslims. The amount of time spent on unpaid care work is relatively higher for women than men in those regions. This raises the need to deepen studies on the effect of religion on unpaid care work in Benin. Except for the regions mentioned above, the increase in the time to unpaid care work is just about 2.6 and 1.5 hours per week for the remaining regions. The region of Atlantique records the lowest increase (0.9 hours per week) in the time devoted to unpaid care work. This may reflect a certain mutation of behavior toward the merchandising of care work and a contamination effect due to the proximity of the region with the region of the Littoral, composed of Cotonou, the economic capital city of Benin. In those regions, it is noted that there is a relatively high level of participation of women in the labor market, thus reducing the

time to devote to unpaid care work and increasing the financial capacity to purchase care services. The increase in the time allocated to unpaid care work by men in some regions, including Zou (23 hours per week), Borgou (2.2 hours per week), Alibori (6.7 hours per week), etc., may indicate a mindset change in society, particularly by men regarding unpaid care work. This is what is highlighted in Adjamagbo et al. (2016), where the authors found a new reconfiguration of society with men taking more and more part in the completion of unpaid care work.

Conclusion

The problem of UCW is now a central contemporary issue, given its long-ignored importance and the socio-economic and demographic changes underway. One of the solutions proposed by the United Nations to address the gender inequalities generated by UCW is the triple R approach: recognize, reduce, and reward. However, given the sociological nature of UCW, which is essentially rooted in social norms, particularly in Africa, it is important to understand the factors that explain the amount of time devoted to UCW. This is the perspective of this paper, which seeks to assess the factors that explain the time spent on unpaid care work in Benin. The paper uses a quantitative methodological approach, particularly a logistic regression (tobit modeling) over data sourced from the harmonized survey on living conditions (EHCVM).

Results found that the sex of individuals, education level, size of households, and regions of residence play a critical role in the time devoted to unpaid care work in Benin. Accordingly, to address the issue of unpaid care work and accelerate the implementation of the Triple R, this paper suggests:

- The government shall keep girls in the education system as long as possible, ensure their success, educate children and young men about their responsibilities to take part in unpaid care work, train professionals, create care infrastructures, and value care work in society.
- Researchers shall investigate the socio-anthropological rationale specific to regions regarding unpaid care work. This would allow for understanding the behavior behind that attitude and better-tailored public policies.
- Communicate and provoke the societal debate about the importance of tackling the issue of unpaid care amid the ongoing social mutation.

This study is a tentative effort to understand factors that drive the amount of time people devote to unpaid care work in Benin. It highly recommends getting deeper into the analysis, as the EHCVM provides just a broad idea about unpaid care work and does not necessarily contain certain key explanatory variables. The paper is thus advocating for the time-use survey to effectively quantify the unpaid care load in Benin and in Sub-Saharan Africa.

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