

A Comparative Analysis of Time Transfers between Generations and Genders *

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Abstract

BACKGROUND: Reallocation of economic resources between generations and genders has important consequences for economic growth and inequality. Unpaid work is an important component of intergenerational transfers, but is invisible to traditional accounts. Time use data can complement accounts of monetary transfers.

OBJECTIVE: The main goal of this article is to provide estimates of life cycle profiles of consumption and production of unpaid activities. These profiles can be used to evaluate transfers of time by age and sex.

METHODS: We use data from the Multinational Time Use Study (MTUS) to estimate profiles of time allocated to unpaid productive activities, by age, sex and household structure, for selected European countries. The unpaid working time is then distributed, with a statistical model, to those age groups that benefit from it, in order to estimate age-specific consumption profiles of time.

RESULTS: We observe large transfers of time from females to males, and from adults to children and the elderly. Life course trajectories are qualitatively similar across countries, but with significant variations in levels. Differences in profiles by household structure may be associated with incentives or disincentives for particular fertility choices in different social and institutional settings.

CONCLUSIONS: The article quantifies the amount of time dedicated to unpaid productive activities and the extent of the underestimation of the economic contribution of women.

COMMENTS The article provides some descriptive findings that could be incorporated with other research pursued by scholars in the National Transfer Accounts (NTA) project to monetize the value of time and include it in standard transfer accounts.

Introduction

A large quantity of goods and services are produced by household members for their own consumption, without involving market transactions. Despite the economic and social importance of unpaid work, these productive activities are largely invisible to standard national economic accounts. As a consequence, traditional measures of intergenerational transfers typically ignore household production, and thus underestimate the overall value of goods and services produced over the life cycle; in particular, the economic contribution of women.

Recently, there have been some efforts to evaluate the extent of household production, and to integrate it into national accounts (e.g., Abraham and Mackie 2005; Anzo et al. 2007; Donehower and Mejia-Guevara 2012; Sambt and Malacic 2012). The increasing availability of harmonized time use surveys has made possible comparative analyses of non-market activities. The estimation of time transfers between generations and genders is intended to create a map of new and partially unexplored territories. The results of this line of research would complement traditional studies of intergenerational market-based transfers between generations and across countries.

In this article, we estimate household production and consumption of unpaid work, by age and gender, in a comparative perspective. The profiles that we obtain and the patterns that we document are relevant to address questions like: to what extent women contribute more than men to household production? What is the age direction of intergenerational time transfers? How much time do people spend to provide care for their children or elderly parents? How much does the time investment on children vary across countries?

Data and Methods

We use data from the Multinational Time Use Study (MTUS) to estimate age- and sex-specific profiles of time consumption and production. MTUS consists of a collection of time use surveys that have been harmonized to allow for comparative analyses. Large samples of micro data, with information on the allocation of time to various activities of daily life are available for several European countries.

Data on time use are collected using diaries in which respondents report

their main and secondary activities during a randomly assigned day, as well as the location and the presence of any other person. The MTUS micro data provide us with valuable information about time dedicated to production and consumption, both at the household and individual levels. We estimate both age- and sex-specific profiles of time production directly from survey data. First, we identify a set of unpaid productive activities that meet the third party criterion, i.e. people can potentially pay somebody else to do the activities for them (Reid 1934). These activities include childcare, housework, shopping, caregiving, gardening, and other related household activities. Then we evaluate the average time dedicated to these activities by gender and age group, and use Friedman’s smoother (Friedman 1984) to obtain a smooth profile of time dedicated to unpaid productive activities by age.

We assume that the overall time produced within the household is equal to the overall time consumed, and that time consumption does not vary by sex. We do not have any direct information about how household members consume the time produced at the household level. Hence, in order to generate age-specific profiles of time consumption, we use an indirect method. More specifically, we generate estimates of profiles of time consumption using an approach that has been widely used to evaluate consumption of economic goods for individuals, by age, from aggregate household-level data (e.g., Mankiw and Weil 1989; Zagheni 2011). The method is based on a regression model with indicator variables for different age groups in the household:

$$C_j = \beta(0)N_j(0) + \dots + \beta(a)N_j(a) + \dots + \beta(80)N_j(80) \quad (1)$$

where:

C_j = total time for domestic activities produced/consumed by household j

$N_j(a)$ = Number of members of age a for household j

$\beta(a)$ = OLS parameter estimates that represent the effect of an additional person of age a on household time consumption/production.

The β coefficients in equation 1 can be interpreted as demand or consumption of time, for the respective age groups. We smoothed the series of coefficients for each single age group, using Friedman’s smoother, to obtain a smooth profile of time consumption by age and sex.

The difference between profiles of consumption and production gives a measure of the life cycle deficit for each age group and sex. Positive values for the life cycle deficit indicate that the person in the specific age group

considered consumes more household time than he or she produces.

Results

Figure 1 shows the estimated profiles of average daily time dedicated to unpaid productive activities by age and sex, and consumption of time, by age, for selected countries. We show the results for selected countries for which we have data from relatively recent surveys in the MTUS dataset: Italy (2002), Spain (2002), Germany (2001) and France(1998). Females tend to spend more time in unpaid household activities than males virtually at all ages. Time dedicated to domestic activities increases with age. For males, it slowly grows in almost a monotonic way. For females, it reaches a peak between age 30 and 40, and then tends to either stabilize or slightly decrease. In some countries we observe two peaks, one around typical age at childbearing, and the other around age at retirement, or the age when women become grandmothers.

The age patterns are fairly similar across countries, but there are important differences in levels. For example, we observe the highest levels of gender inequality in Southern European countries. In Italy and Spain we observe the largest gap between time production of men and women over the life cycle. Patterns of time consumption are quite regular across countries. We assumed that both men and women equally benefit from the result of unpaid household production, regardless of whether it is gardening, chores, or other activities. The difference between profiles of consumption and production by age gives us a measure of the life cycle deficit/surplus of time production. Women tend to generate a surplus of time production, and transfer it to men, throughout most of the life cycle. The gap between women and men becomes small only late in the life cycle. For all the countries considered, the mean age at time production is slightly larger than the mean age at time consumption. This tends to indicate that overall time transfers flow from adults to children. However, our sample is limited to people who are 80 years old and younger. Therefore we may underestimate the flows from adults to the elderly.

Figures 2 and 3 show our estimates of profiles of the time that women and men, respectively, dedicate to unpaid household production by age and by household structure. We construct profiles of time production for households with no children less than 18 years old, households with at least one child less

than 5 years old, and households with at least one child who is 5-17 years old. We observe a large difference in the time that women dedicate to household production between parity 0 and parity 1 or more. Women with young children increase substantially the time dedicated to household activities. Most of the increase can be attributed to childcare. Women with older children tend to dedicate less time to domestic activities than women with young children. However, in some countries like Italy and Spain, the difference in time production of women with older children and younger children is minor. We observe an age shift in the profile of household production, reflecting the fact that older women have older children. Overall, the time dedicated to household production by women with older children is very similar to the one of women with young children.

Profiles of household production for men show much smaller differences with changes in household structure, indicating that most of the work related to children is done by women. Men tend to increase the time dedicated to household production when there is a young child in the household. However, for most countries, the difference between the profiles of men with no children less than 18 and the profiles of men with at least one child 5-17 years old, is negligible.

Figure 4 shows profiles of time dedicated to two important activities, childcare and housework, by age and sex, across the selected countries. The large differences between men and women are as striking as they are regular across countries. However, there are also noticeable differences. Germany is the country where both men and women tend to spend more time on childcare, compared to their counterparts in other continental and southern European countries. In France, the time that young couples dedicate to childcare is lower, but the role of grandmothers is clearly visible from a bump in the age profile for women around age 60. In terms of housework, Italy and Germany are the two extremes. In Italy, women spend more time on housework than women in other countries virtually at all ages. In Germany, the opposite is true. At the same time, men in Italy have one of the lowest profiles of time dedicated to housework. Men in Germany spend more time doing housework than men in other countries, at all ages.

Our results show that there is evidence of fairly high levels of gender specialization across countries. The results also show that there is a large amount of household work produced by females that is invisible to national economic accounts, which thus tend to underestimate the economic contribution of females. Our estimates are relevant for the study of gender in-

equalities and intergenerational ties. The results also provide information to understand incentives and disincentives to fertility choices in countries with below-replacement fertility levels.

References

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Figures

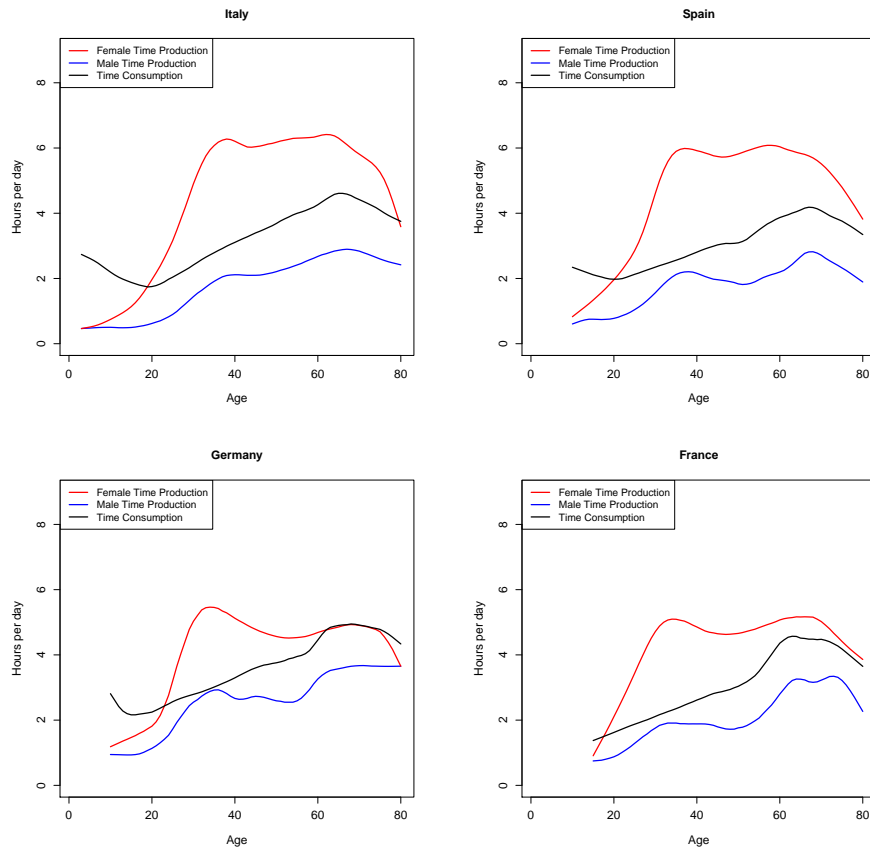


Figure 1: Estimates of profiles of time dedicated to unpaid productive activities by age and sex, and consumption of time, by age, for selected countries. Source: own elaborations on MTUS data.

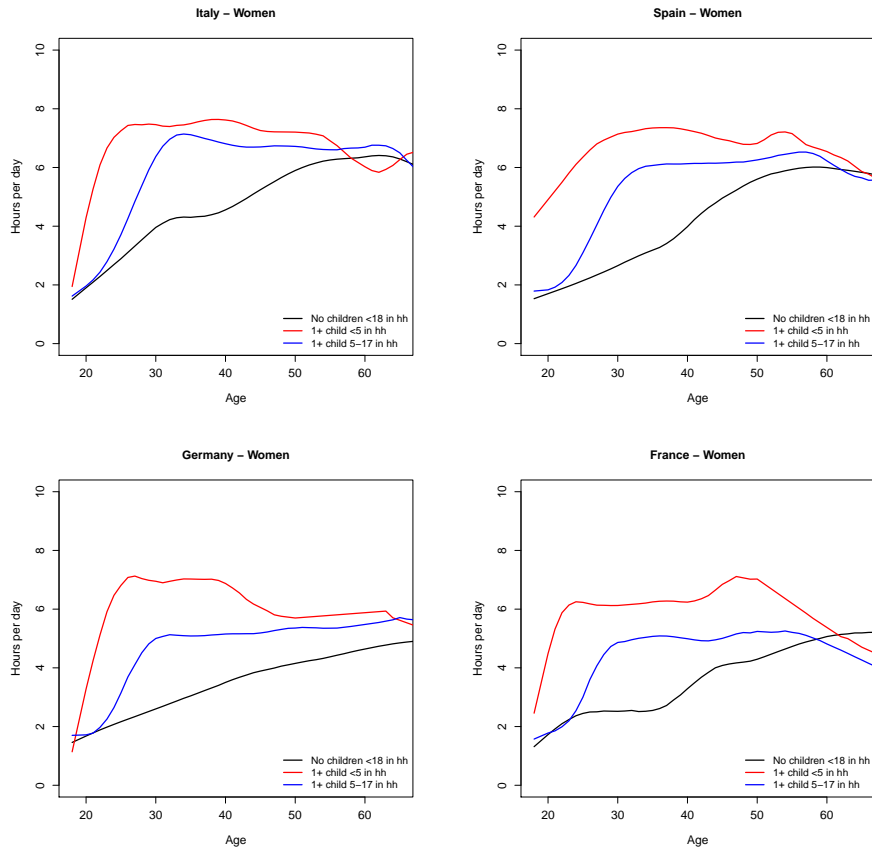


Figure 2: Estimates of profiles of the time that women dedicate to unpaid productive activities by age and household structure. Source: own elaborations on MTUS data.

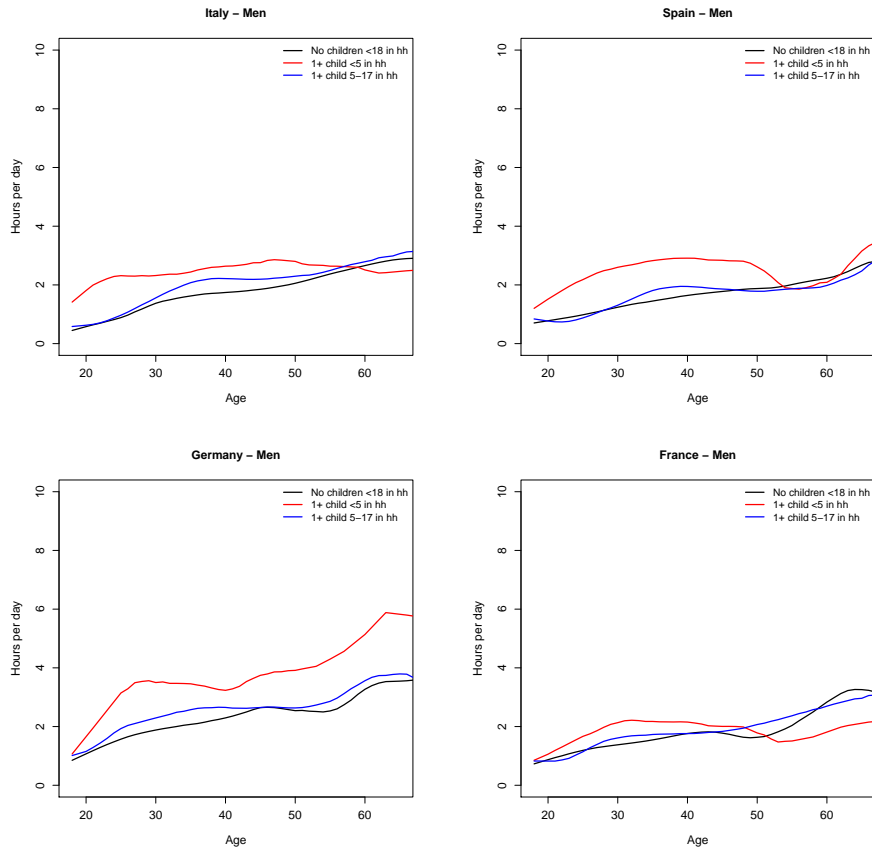


Figure 3: Estimates of profiles of the time that men dedicate to unpaid productive activities by age and household structure. Source: own elaborations on MTUS data.

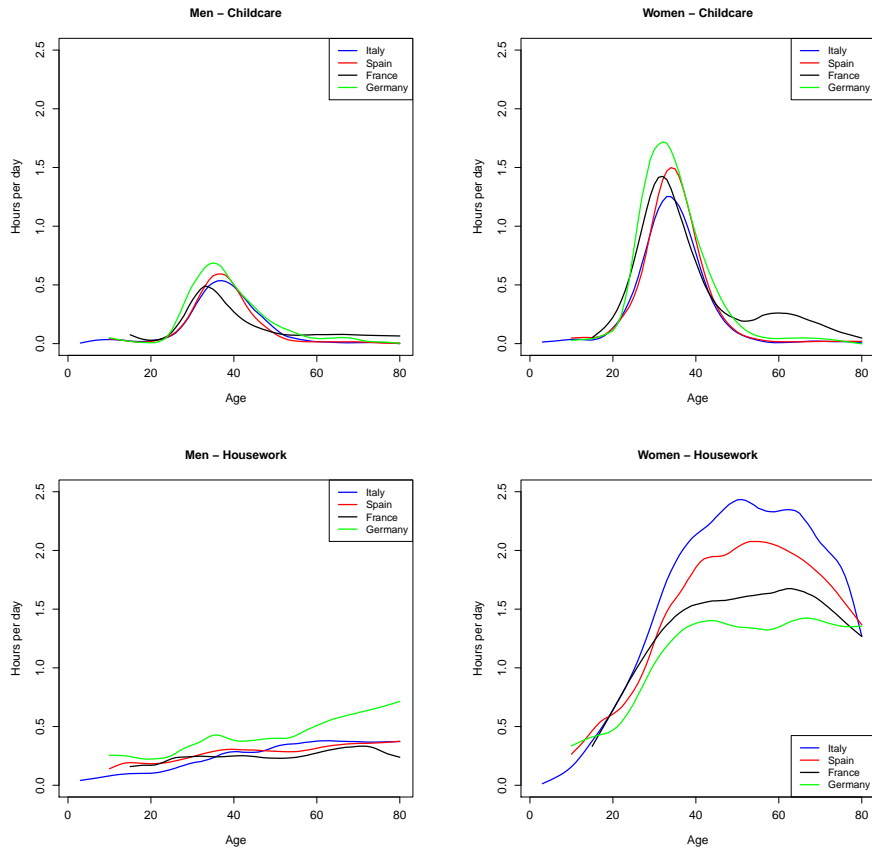


Figure 4: Estimates of profiles of the time that men and women, respectively, dedicate on average to childcare and housework, by age. Source: own elaborations on MTUS data.