COUNTING WOMEN'S WORK

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CWW Working Paper WP2
Counting Women's Work Mexico

Intergenerational time transfers and their contribution to Mexico's economy in 2014

Estela Rivero

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Contents

Introduction

According to the World Bank, Mexico is a lower middle-income country with the second largest Gross National Product (GNP) in Latin America (The World Bank, 2017). In the few last years, the country has experienced multiple economic difficulties, due in part to the adverse international context of low economic growth that has discouraged investment plans and productivity in the private sector, public spending, labor productivity and wages (OECD, 2017). In this setting, the World Bank notices a slow economic recovery in the country during 2017. GDP has grown at a better rate than initially expected (2.3%), the conditions of financial markets have improved as the Mexican peso has appreciated with respect to the US dollar, and external trade has recovered. Furthermore, public consumption has been expanding at a steady rate, even when an annual consumer inflation rate of 6.7% limits consumers' purchasing power and real income growth (The World Bank, 2017).

In demographic terms, Mexico is going through the second phase of the demographic transition as the total fertility rate declined from 7.2 in the 1960s to 2.2 in the year 2000 (Bush, 2004), while life expectancy at birth increased from 64.0 years in 1980 to 74.6 in 2005 (Mina, 2010). As a consequence of those changes, the age structure has changed dramatically in the last fifty years. In 1970, 47.67% of the population was aged 0 to 14 years old, 48.96% was 15 to 64, and 3.37% was 65 and older. In 2010, these percentages were, 28.13%, 65.95% and 5.92%, respectively (Ham Chande, 2010).

Much has been written about the current demographic opportunity for economic growth (represented by the large proportion of the population being of working age), and how part of it may be missed because of poor labor market participation. For example, Mejía Guevara (2008) compares the demographic dependency rate with the economic dependency rate and concludes that, in the case of Mexico, the first indicator gives an overly optimistic perspective. This is because the demographic dependency rate – estimated as the ratio of the population aged 0 to 14, and 65 plus to the population of working age (15 to 64) – does not effectively reflect that the working span of the population when income surpasses consumption, is too short. It also fails to reflect that this surplus does not compensate for the lack of earnings among children and the elderly. This is better reflected in the concept of economic dependency, which measures the ratio of aggregate consumption to labor income among children and the elderly.

An argument that has been put forward to complement Mejía's conclusions with a gender perspective, is that the market income measured in the economic dependency ratio and the economic life cycle perspective that he uses, does not adequately reflect all that is produced

in an economy. This is because it ignores non-market services such as housework and care. Ignoring these components, which are commonly performed by women, underestimates women's economic contribution. The Counting Women's Work project (CWW) has proposed a methodology for estimating the monetary contribution to the economy of the time that individuals spend on housework and care. CWW is an extension of the National Transfer's Account (NTA) framework to which Mejia subscribes, and results in the estimation of housework and care production, consumption and transfers, both in time and money units, as well as of a complete NTA system that includes both market and non-market results (Donehower, 2014). In this working paper, this methodology is used to generate these indicators for Mexico in 2014.

Gender and time-use in Mexico

Despite an important increase in women's labor market participation in the last three decades, the gender division of labor in Mexico is still very traditional. According to the OECD, only 47% of Mexican women of productive age participate in the labor market, and 60% of those who do are in the informal sector with low salaries and lack social protection. In addition, it has been documented that women do more than three fourths of all housework and childcare in the country, and that they do this without pay: women spend, on average, more than six hours per day on unpaid house- and carework, while men spend less than two hours in these activities. When the analysis is restricted to carework, women spend 28.8 hours weekly on these activities, and men 12.4 hours. The care of children, adolescents and individuals with an illness or a disability, is the most time-consuming (INMUJERES; INEGI, 2015). This places Mexican women among those with the largest load of housework in the OECD (OECD, 2017).

Recent studies on the gender division of labor in Mexico have tried to document the variation in time-use patterns, how these reflect inequalities, and the factors that may explain why some households and individuals have more equal distribution of house- and carework. Still, the conclusions of this research paint, in general, a dim panorama. For example, Santoyo and Pacheco (2014) analyze how four indicators of gender inequality in time-use and quality of life vary across type of household. The authors' results indicate that gender differences in housework and carework are greater in nuclear households, where the time that women spend in these activities is almost three times that spent by men. When the total load of labor – that is, the number of hours spent in the labor market and in unpaid domestic work – is analyzed, the authors find that the type of household does not make a significant difference. Women's total work load always surpasses the total work load of men, which results in less free time and participation in non-productive activities such as leisure and study. Women's greater participation in housework and carework explains most of the difference in both cases.

Rivero and Hernández Jabalera (2014) explore the difference of time-use patterns among Mexicans aged 24 and older. The objective of their research is both to document differences and to contribute to the understanding of changing gender roles in the country. Using latent profile analysis, the authors find that there are different patterns. The most frequent is the traditional pattern for women, which is characterized by a lot of time spent in housework and carework, and little time spent in the labor market. Still, there are others, including a pattern where individuals spend much of their time on agricultural work, helping other households, doing housework, and studying. Another is characterized by individuals spending a lot of time on leisure. An important discovery is that men and women can be found in all the time patterns identified. Another conclusion of the study is that innovative men who contribute actively to domestic and carework are highly educated and live in households that require a considerable amount of housework and carework.

Another line of research that has received a lot of attention in the country is the estimation of the domestic value of unpaid housework and care. Starting in 2003, the national institute of statistics (INEGI) publishes Household Production Satellite Accounts (INEGI, 2003-2015). The most recent of these data, which refers to 2015, show that unpaid work in Mexico was valued at 4.4 thousand billion pesos and represented 24% of the GDP. This number is greater than the contribution of any single activity. For instance, manufacturing represents 17%, and trade is 15.5%.

Counting Women's Work (CWW), an international project that seeks to document the gendered economy, can make an important contribution to the study of the gender division of labor and time-use in Mexico. CWW includes nine low income and middle income countries, and proposes a methodology that allows for time and international comparisons. It derives from the National Transfer Accounts (NTA) project that seeks to understand the intergenerational economy, and extends its framework to include productive activities that are performed within households (National Transfer Accounts (NTA); Donehower, 2014). Differently from household production satellite accounts, CWW produces estimates of housework and care production and consumption, and intergenerational time transfers.

Sources of information

The estimation of Counting Women's Work (CWW) requires three types of data for the same period:

a) time-use data, to calculate the time each individual spends in market, household, care and other activities;

b) wages in the paid economy to those who perform activities comparable to household and care activities; and
c) age and sex distribution of the population.

a) Time-use data

In the case of Mexico, time-use data comes from the National Time Use Survey 2014 (Encuesta Nacional sobre Uso del Tiempo – ENUT, 2014), wages are obtained from the National Occupation and Employment Survey (Encuesta Nacional de Ocupación y Empleo – ENOE, 2014), and population totals are sourced from projections by the National Population Council (Consejo Nacional de Población – CONAPO, 2012).

The National Time Use Survey (2014) is a nationally representative household survey that gathers self-reported time-use information on all individuals aged 12 and older. In addition to time-use data, the survey collects information on household characteristics, identification and sociodemographic characteristics of household members, and non-paid activities of non-household members (Encuesta Nacional sobre Uso del Tiempo, 2014). The sample included 18,966 housing units, which lead to the observation of 15,501 households and 42,118 individuals aged 12 and older[1]. Of these, 1,642 do not have time-use data either because they had a mental disability (369), or because they did not respond to the survey (1,273).

Time-use data is collected through an activity-based questionnaire that includes most activities individuals can perform during a day[2]. For each activity, respondents are asked how much time they spent performing that activity during the week, distinguishing the time spent from Monday to Friday, from that spent Saturday and Sunday. The survey uses the Mexican Classification of Time Use Activities (CMAUT, 2014), a framework for classifying activities based on the System of National Accounts (SNA) that is comparable to the United Nations International Classification of Activities for Time-Use Activities (ICATUS) (Instituto Nacional de Estadística y Geografía (INEGI), 2014). Appendix A shows the list of all activities included in the survey, along with the classification used by CWW.

As is the case with other time-use surveys that use an activity-based questionnaire instead of a diary, the total time that respondents report can be more or less than the 168 weekly hours expected[3]. We leave those cases that report less than 168 hours intact, but correct over-reporting when it surpasses more than 5 hours. To do this, we use the method suggested by

[1] Own estimates.
[2] See Bonke (2005) for a description of different types of time-use questionnaires.
[3] This number results from multiplying 24 hours per day times 7 days per week.

Donehower in the National Transfer Accounts website (NTA) and used by Jiménez-Fontana (2016): We adjusted the time spent in each activity proportionally to a total of 168 hours. This is done using the following formula:

$$T'_{\lambda i} = T_{\lambda i} * \frac{168}{\sum_{\lambda} T_{\lambda i}}$$

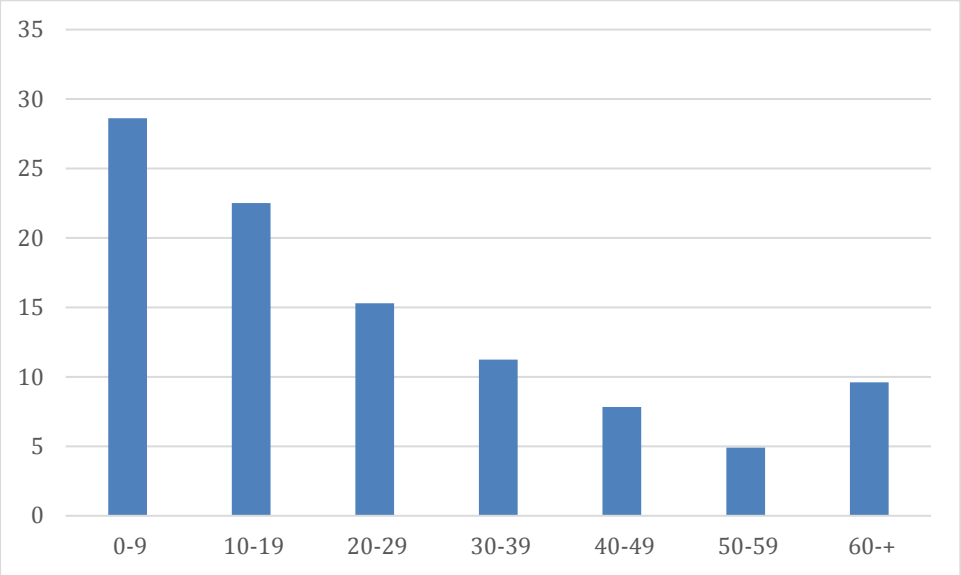
$T'_{\lambda i}$ is the adjusted time spent in activity λ by individual *i*

$T_{\lambda i}$ is the observed time spent in activity λ by individual *i*

Of 42,118 individuals who responded to the time-use questions, 8,277 (19.7%) reported having spent more than 168 hours per week in the activities included in the questionnaire. As figure 1 shows, 29% of those who declared more than 168 hours per week overestimated this time by less than 10 hours, and 22% overestimated between 10 and 19 hours.

Estimations based on the ENUT were weighted to correct for the sample design[4].

Figure 1. Weekly over-estimation of the time spent in the activities included in the survey



Source: Author's estimates

b) Wage data

Counting Women's Work (CWW) indicators related to the monetary value of household and care activities undertaken within the household, require an estimation of how much households would pay, in the market, for these services. These are obtained using the specialist replacement method, where the price of activities is the hourly wage, including taxes, of individuals in occupations that perform a similar task (Donehower, 2014). In the case of

[4] ENUT weights are designed to expand the numbers to represent the total population. These weights were re-estimated so that they correct for the over- or under-representation of certain groups in the sample, but keeping the weighted totals equal to the number of respondents.

Mexico, these data come from the National Occupation and Employment Survey 2014 (ENOE) (Instituto Nacional de Geografía y Estadística (INEGI), 2014).

The National Occupation and Employment Survey in Mexico is a nationally representative household survey of individuals aged 14 years and older, that collects detailed information about their participation in the labor market[5]. The survey is collected four times a year and has a rotating panel design: each household is visited five times and each trimester a fifth of the sample is replaced. Additionally, each panel is representative of the national labor market situation during at the time data were gathered. For our estimations, we use the first trimester of 2014, when an extended questionnaire with detailed data on occupations was used.

Wage data from ENOE does not include taxes. These were added afterwards.

c) Population data

The age and sex structure of the population used to estimate population totals comes from the official population projections produced by Consejo Nacional de Población (CONAPO) in 2010 (CONAPO, (2012).

Methodology

The following indicators are estimated under the CWW methodology:

a) Time-use profiles, distinguishing time spent producing NTA labor income, in education, and other activities
b) Housework production, in time and money units
c) Care production, in time and money units
d) Housework consumption, in time and money units
e) Care consumption, in time and money units
f) Housework transfers, in and out, in time and money units
g) Care transfers, in and out, in time and money units
h) A complete NTA by sex that combines traditional NTA results with housework and care production and consumption in monetary units

All these indicators are calculated for each sex and both sexes are combined (i.e. one indicator for men, one for women, and one for men and women together), and disaggregated by age. First, we estimate production and consumption profiles, which should be interpreted at the

[5] Starting in the last trimester of 2014, only individuals aged 15 and older were interviewed, responding to the legislative minimum age at work.

individual level. That is, how much housework and care does each average individual produce in time and money units. After these are computed, the profiles are multiplied by the population structure to obtain the aggregate production and consumption of housework in the country.

In the following discussion, the estimation procedure of each indicator is briefly described.

a) *Time use profiles, distinguishing time spent producing NTA labor income, in education, and other activities*

   These indicators are commonly estimated as a product of time-use surveys. In this case, time spent producing NTA labor income is the average number of hours per week spent by individuals of a certain age and sex, in the following labor market activities: wage work, paid and unpaid work for household-owned farm or business, looking for a job or doing paperwork to start a new job, and in transportation to and from a job.

   Time spent in education includes time spent in classes, doing homework and in transportation to and from school.

   Other activities include time spent sleeping, engaged in personal care and leisure activities.

b) *Housework production, in time and money units*

   When measured in time units, this is the average number of hours per week that individuals of a certain age and sex spend doing housework. When measured in money units, this is the gross value that this time would have in the market, if performed by a specialist worker. Table 1 indicates the activities considered in this group and the occupation whose wage is used for estimating the money value.

Table 1. Housework activities included in the Mexican CWW project and equivalent occupations

Broad activity groups	Specific activity	Equivalent occupation
Cleaning	Sweeping	Domestic worker
	Cleaning the household	Domestic worker
	Disposed the garbage	Domestic worker
Laundry	Laundry	Domestic worker
	Ironing	Domestic worker
	Folded the clothes	Domestic worker
Cooking	Prepared the food	Domestic worker
	Lit the fire	Domestic worker
	Cooked	Domestic worker
	Did the dishes	Domestic worker
	Took food to a household member	Driver in private homes
Household maintenance and repair	Repaired clothes or linens	Seamstress
	Did minor repairs	Construction worker
	Repaired furniture or household appliances	Support worker in the electric industry
	Washed the car	Car washer
	Repaired the car	Car mechanic
Lawn and garden care	Garden care	Gardener in private homes
Household management	Paid household bills	Messenger
	Managed household accounts	Financial advisor
	Did the paperwork of a social program	Messenger
	Took shoes for repair	Messenger
	Supervised the repairs of the living quarters	Supervisor of construction workers
	Supervised furniture and household appliances repairs	Supervisor of artisan workers
	Took the car or bicycle to the mechanic	Driver in private homes
	Locked the doors, windows, etc.	Watchmen
	Waited for the gas, electricity, or other services	Domestic worker
	Distributed household chores among members	Supervisor of cleaning staff
Pet care	Bathed, fed and cared the pets	Animal trainer
Purchasing goods and services	Sought and bought supplies for household and vehicle repairs	Car mechanic
	Bought food, medicines, etc. For household consumption	Domestic worker
	Sought and/or bought furniture and household appliances	Business administrator
Gathering wood and/or water	Gathered wood	Lumberjack
	Gathered water	Workers who collect plants
Other household activities	Cared for farm animals	Farm workers
	Collected plants for food	Workers who collect plants
	Cared for the farm	Farm workers
	Made clothes and other textiles for household consumption	Textile producers
	Made preserves for household consumption	Preserve producers
	Made furniture and other household appliances	Carpenter
	Renovated the living quarters	Construction worker
	Cleaned the shoes	Shoe shiners

c) Care production, in time and money units

The Mexican time use survey includes questions about time spent in care for household members in five different categories: Care for children aged 0 to 5 years old, children aged 0 to 14 years old, persons aged 15 to 59 years old, the elderly aged 60 and older, and people with an illness or a disability[6]. Each of these activities are mutually exclusive, as Table 2 shows. Sex and age profiles of the time spent in each of these broad categories was calculated separately, and money profiles were estimated using the mean wages in 2014 of occupations displayed in the third column of Table 2.

[6] These include household members with a mental or physical disability and those with a chronic or a temporary illness.

Table 2. Care activities included in the Mexican CWW project and equivalent occupations

Broad activity groups	Specific activity	Equivalent occupation
Childcare for household children 0 to 5 years	Fed them	Children, elderly and disabled caregivers in private homes
	Bathed and dressed them	Children, elderly and disabled caregivers in private homes
	Put them to bed	Children, elderly and disabled caregivers in private homes
Childcare for household children 0 to 14 years old	Drove them to school or somewhere else	Driver in private homes
	Special therapy or exercises	Physiotherapists
	Helped them with homework	Elementary school teachers
	Attended school meetings	Children, elderly and disabled caregivers in private homes
	Drove them to receive health care	Children, elderly and disabled caregivers in private homes
Care for home member 15 to 59	Helped them with computer work or homework	High school teachers
	Drove them to receive health care	Driver in private homes
	Drove them to school, work or somewhere else	Driver in private homes
Care for household elders and adults	Helped them with computer work or homework	High school teachers
	Drove them to receive health care	Driver in private homes
	Drove them to work or to run errands	Driver in private homes
Disabled Care for Household member	Fed them	Children, elderly and disabled caregivers in private homes
	Bathed and dressed them	Children, elderly and disabled caregivers in private homes
	Put them to bed	Children, elderly and disabled caregivers in private homes
	Fixed a household remedy	Alternative medicine specialists
	Gave them their medicines and/or checked their symptoms	Specialized nurses
	Drove them to receive health care	Children, elderly and disabled caregivers in private homes
	Special therapy or exercises	Physiotherapists
	Drove them to school, work or somewhere else	Driver in private homes
	Assisted them with homework	Elementary school teachers
	Attended school meetings	Children, elderly and disabled caregivers in private homes

For each of the care activities described above, the questionnaire included a question about simultaneous care (that is, the time spent overviewing a household member, while doing something else). These are not included in the analysis because it would overestimate the time spent in care activities.

The survey also includes four broad questions about the time spent providing interhousehold care to children, the elderly, and people with disabilities or an illness. Only 11.5% answered having spent time in these activities. The average time they reported was minimal, with a maximum of 0.55 hours weekly in the activity: care of children aged 0 to 6 years old. These were not considered in this analysis because,

with such small amounts, assigning them to the general population would result in small and unstable consumptions.

d) Housework consumption, in time and money units

Housework consumption profiles indicate how much housework time each average individual consumes. This is estimated assuming that each individual in the household consumes the same amount of housework, independently of their sex or age. To obtain the individual-level consumption of housework, the housework produced in the household across all members is added, and then divided by the number of household members. Equation 1 exemplifies this calculation.

$$\bar{C}_{\lambda j} = \frac{\sum_{i=1}^{n} T_{\lambda ij}}{n} \qquad (1)$$

where $\bar{C}_{\lambda j}$ is the average consumption of activity λ among individuals in household *j*

$T_{\lambda ij}$ is the time of activity λ produced by individual *i* in household *j*

n is the total number of household members.

e) *Care consumption, in time and money units*

Care consumption is estimated differently from household consumption because an individual cannot consume the care he or she has produced[7]. In addition, care is specific to certain age and population groups.

The average care that each individual consumes is estimated in two steps:
First, the following regression is used to calculate the average care that each individual of sex *s* and age *a* would receive from a potential caregiver in the household:

$$P_{ij} = \sum_a \sum_s \alpha(a,s) E_{ij}(a,s) + \sum_a \sum_s \beta(a,s) NE_{ij}(a,s) + \varepsilon_{ij} \qquad (2)$$

P_{ij} is the total care time given by individual *i* in household *j* . P_{ij}can be 0 if individual *i* in household *j* did not spend any time giving care. In the case of Mexico, these regressions are estimated separately for each of the five different types of care: To individuals 0 to 5 years old, to those aged 0 to 14 years old, to 15 to 59 year olds, to those aged 60 and more, and to those who have a disability or are ill.

$E_{ij}(a,s)$ is the number of persons aged a and with sex s who can receive care from individual *i* in household *j*. It is important to notice that $E_{ij}(a,s)$ can vary from individual to individual within the same household: if a potential caregiver *i* is in the age group

[7] Time spent in self-care is asked through a different set of questions and measured in another category.

and sex for which care is being estimated, s/he is not taken into account in $E_{ij}(a,s)$. For example, in a household with three individuals: a woman aged 7, a woman aged 14, and a man aged 20, we would include two observations for the regression of care to those aged 0 to 14. The first would be for the care given by the woman aged 14 and all the dependent variables would be 0 – with the exception of the variable for age 7 and female sex. The second observation would be for the care given by the man aged 20. The dependent variables in this regression would be 0 for all sexes and ages – with the exception of the variable for age 7 and female sex, and of the variable for age 14 and female sex: both of which would be 1.

$\alpha(a,s)$ is estimated in the regression and represents the average care that each individual of age *a* and sex *s* obtains from a potential caregiver in the household.

In the second step of the estimation we multiply $\alpha(a,s)$ by the number of potential caregivers in the household, to obtain the total care that an individual aged *a* and of sex *s* receives. Here again, the number of potential caregivers varies between individuals.

f) Housework transfers, out and in, in time and money units

Housework transfers out, are how much of the housework that an individual produces is consumed by others. This is calculated, as shown in equation (3), as the time that individual *i* spends engaged in housework, minus the amount of his/her own housework that s/he consumes.

$$To_{\lambda j} = T_{\lambda ij} - \frac{T_{\lambda ij}}{n} \qquad (3)$$

$To_{\lambda j}$ is how much of the activity λ produced by individual *j* is transferred out to others in the household.

Housework transfers in, are how much of the housework produced in the household by others is consumed by an individual. These are estimated according to equation (4)

$$Ti_{\lambda j} = \bar{C}_{\lambda j} - \frac{T_{\lambda ij}}{n} \qquad (4)$$

$Ti_{\lambda j}$ is how much of the consumption of activity λ by individual *i* is produced by others in the household.

g) Care transfers, out and in, in time and money units

As individuals cannot consume the care they produce, care transfers out are equal to the care produced, and care transfers in are equal to the care consumed.

h) *A complete NTA by sex that combines traditional NTA results with housework and care production and consumption in monetary units*

The money profiles and aggregate results were added to the NTA estimated by Mejía for 2014. The profiles are smoothed using locally weighted regressions, with a bandwidth between 3 and 5. Once the profiles were smoothed, we checked that the aggregate time production matched the aggregate time consumption, and that transfers out matched the transfers in.

Time use and gender specialization in Mexico

Despite important advances in women's labor force participation (see Arceo, 2012; Arceo & Campos, 2013; and Pérez Baleón, 2012) and in gender equality in education at all levels (see Parker & Pederzini, 2000) in the last three decades, time-use is still highly specialized in Mexico, as Figure 2 shows. Time-use differences between men and women are especially noticeable in the time they spend in paid work (NTA work) and non-remunerated activities, (NTTA work) and in the variations in time-use across the life cycle.

In 2014, net enrollment rates were 100% in primary education, 88% in lower secondary and 57% in upper secondary (Instituto Nacional de Evaluación Educativa (INEE), 2015). These numbers reveal the sharp and steady decrease in the time men and women spend in education after age 12, shown in the orange lines in Figure 2. At 12 years old, when they are entering lower secondary, both men and women spend about 60 hours per week in education. By age 15, when they should be starting upper secondary, they spend an average of 44 hours in these activities, and by age 18, they only spend 27 hours in education.

Men start working in the labor market at young ages and increase the time they spend in these activities rapidly as they age – this is measured as NTA work and shows in Figure 2 as the solid red line. At 22 years old, Mexican men are spending, on average, 41 hours per week in NTA work. By the time they reach 26 years old, they are working 51 hours weekly – and continue to do so until 56 years old. From then on, the time that men spend working starts to decrease continuously. Nevertheless, Figure 2 shows evidence that even at older ages there is still a fraction of men working in the labor market. A portion of men aged 75 years old work an average of 20 hours per week, which is equivalent to a part-time job.

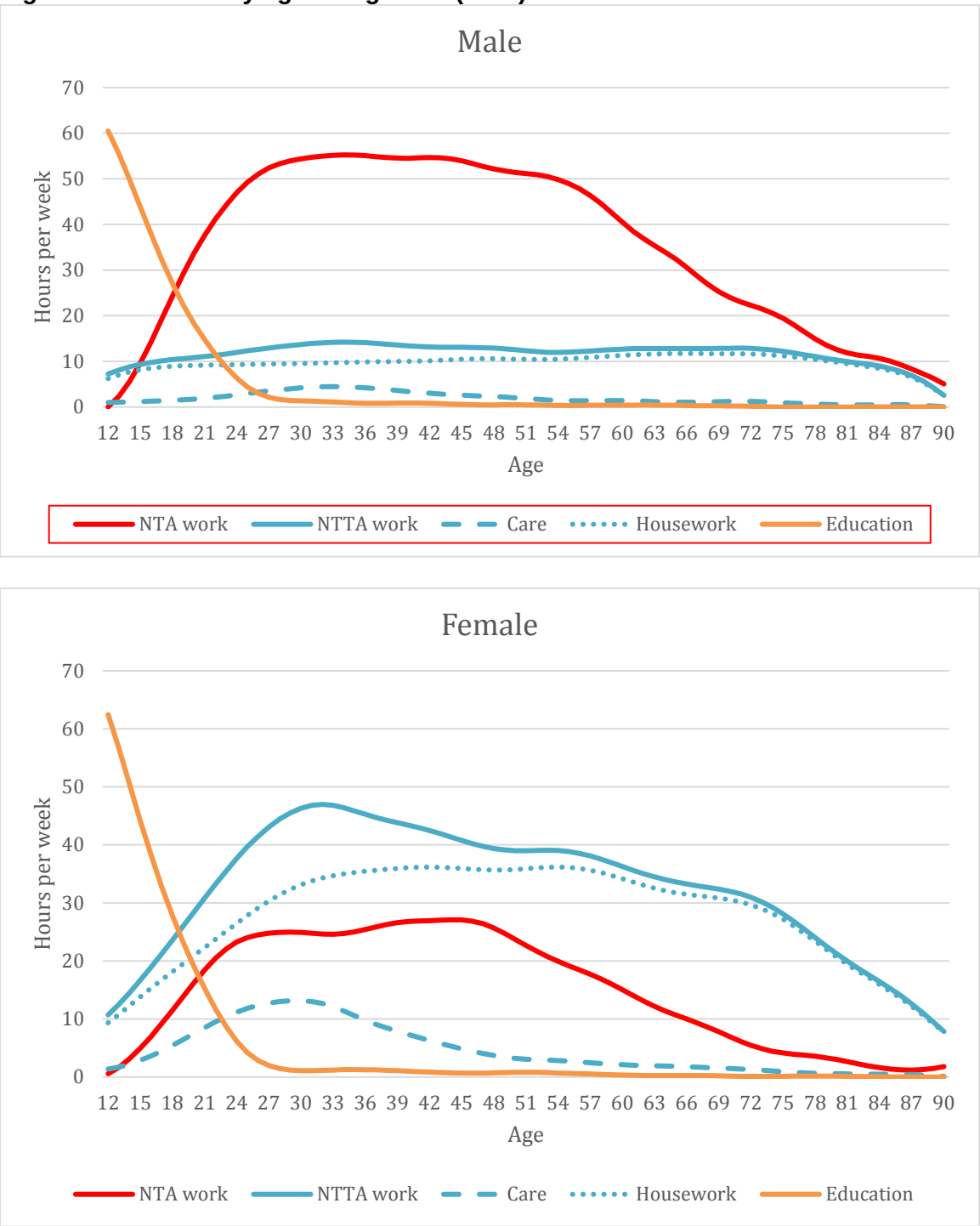
The time that men spend in productive activities outside of the labor market is shown in Figure 2 in blue. The dashed line represents carework, the dotted line housework, and the solid blue

line represents the sum of these two (which we consider to be NTTA work). Most of men's NTTA time is housework (85%). There is evidence that by 12 years old they are spending an average of 6.25 hours per week engaged in these activities (a little less than an hour daily) and increase their participation as they age. They probably transition into a steady union, only for that time to decrease again after they reach 75 years old and potentially become frail and dependent. A similar pattern is observed for care, but the time spent in these activities is much lower. At 12 years old, men spend an hour per week on care activities, at 25 years old (the average age when their first child is born), they spend 3 hours, and at 35 they spend 4 hours (a little more than half an hour per day). After age 45, men's contribution to care decreases until the older ages.

Apart from education, women's time-use patterns are very different from men's. Throughout their lifetime they employ more time engaged in NTTA work than in NTA work, and most of this is in housework, although they also spend a lot of their time in care. By the time women are 17 years old, they invest about 21 hours per week in NTTA work, 17 in housework and 4 hours in care. These numbers continue to grow through the life cycle, but peak at different ages. Women's highest time-use in care is when they are aged between 27 and 32 years old, with about 12 hours spent in childcare and care of the elderly. For housework, the crest is lengthier, with an average of more than 30 hours weekly between the ages of 27 and 72. This indicates that women are responsible of most of the housework activities and that this changes little with the household stage and potential household composition.

In addition to the time that women work in NTTA activities, women between 22 and 55 years old employ more than 20 hours weekly in NTA activities. This means that, if NTA and NTTA activities are taken together, these women work more than 60 hours a week in productive activities.

Figure 2: Time use by age and gender (2014)



Source: Author's calculation based on ENUT 2014.

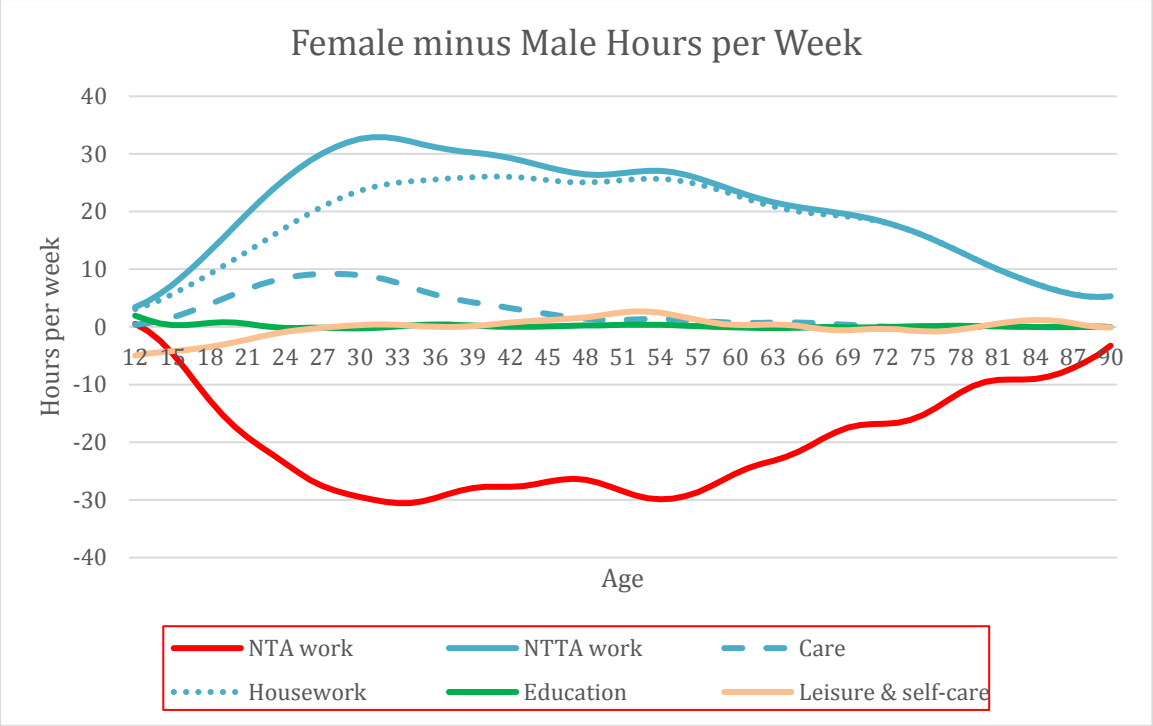
The contrast between men's and women's time-use discussed above, is clearly illustrated in Figure 3. The lines in this figure indicate the difference in the number of hours that women and men spend in each activity. Values greater than 0 mean that women invest more time in the activity than men, 0 indicates that men and women spend the same time, and values lower than 0 imply that men spend more hours in that activity.

The results of this figure show that, at all ages, women specialize in NTTA work, while men specialize in NTA work. The solid blue line, representing NTTA work, almost mirrors both in shape and value, the solid red line, which represents NTA work. For example, among individuals in their 30s, women's investment in NTTA work surpasses men's by a little more than 30 hours per week. In the same age group, the time that men spend in NTA work is about 30 hours greater than women's.

It is important to understand that behind these gender differences in NTTA and NTA work is a pattern where men's involvement in NTTA work is very limited – but they work a lot in the paid economy. Women, on the other hand, do participate in NTA work (about 20 hours per week), but this participation is not equal to the long hours that men work in the paid economy.

As total work hours are the combination of NTA and NTTA work, and men compensate their lack of time in care and housework with NTA work, there are many noticeable differences between both sexes in time spent in leisure and personal care. In Figure 3, this is shown by the pale orange line and is very close to zero for all ages greater than 24. Among the youth, men's time in leisure and personal time is about 5 hours greater than women's. This is explained by the fact that women get involved in NTTA at earlier ages than men do.

Figure 3: Gender specialisation in time use, by age (2014)



Source: Author's calculations based on ENUT 2014.

Combining market and household production

One of the CWW programme's motivations is to value the economic contribution of household and care production. The part of this work that is unpaid is already included in the regular NTA, but most of it (labelled here as NTTA work) is unpaid and does not have a direct market value. To estimate its monetary value, the CWW methodology suggests that this be done through wage imputation. The second graph in Figure 4 shows the results of this exercise, while the first graph shows the value of male and female market production and the overall consumption valued in the regular NTA.

According to these calculations, in 2014, NTTA work represented 22% of Mexico's GDP[8]. As happens in other countries within the same income group (Jiménez-Fontana, 2015; and Oosthuizen, 2015), in Mexico, the monetary value of women's NTTA production is greater than men's: women produce 70%, and men 30%. This difference is maintained throughout all ages. Women's NTTA production varies between 20% and 60% of peak labor income, and is higher than 40% of peak labor income from age 20 to age 70. Men's NTTA production is around 20% of peak labor income from age 30 until age 80.

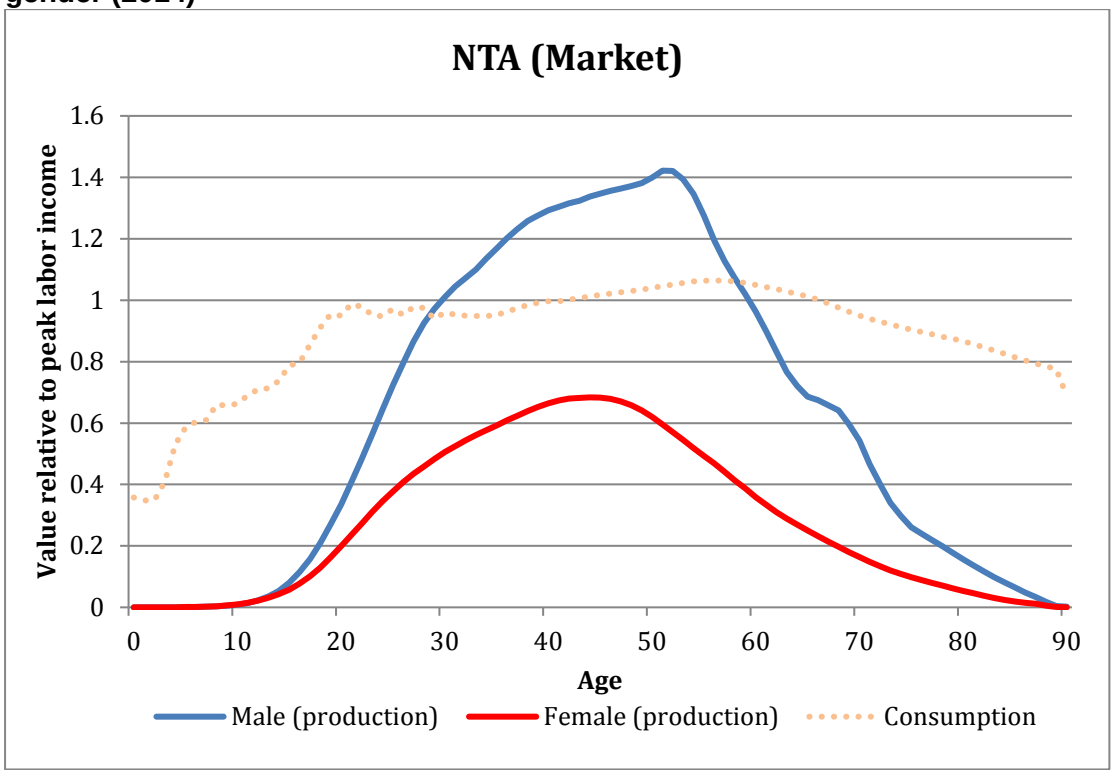
In the case of NTTA, consumption was estimated separately for men and for women. Both lines (the dotted blue and red lines) in the second graph of Figure 4 are very close. The greatest consumption of care and domestic work is in childhood, as childcare is very time-consuming. After age 12, both men and women's consumption decreases and reflects mostly the use of domestic work. NTTA consumption starts increasing again after age 40, when some chronic illnesses begin to show. It is important to indicate that, with the exception of the childhood years, women's NTTA production is greater than their consumption. Men's, on the other hand, is only greater than their production for the brief period of age 30 to 40.

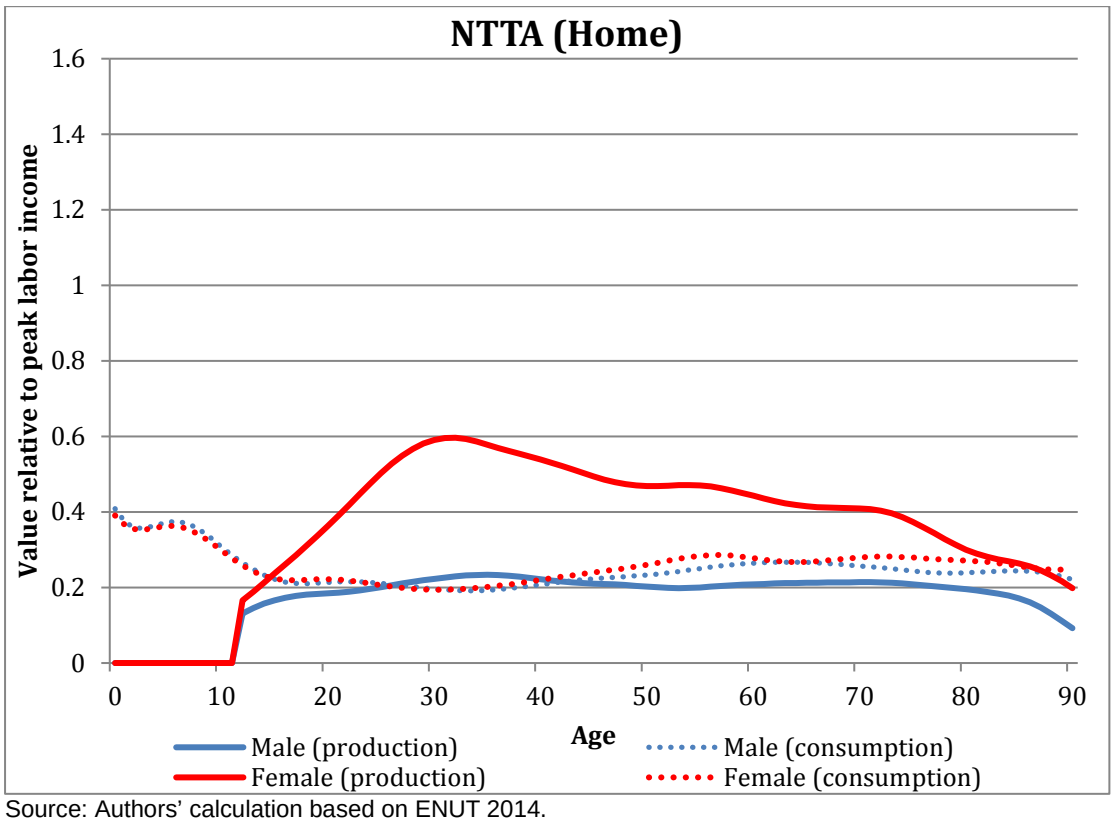
NTA production and consumption behaves very differently from NTTA. For men, the values of NTA production are higher than NTTA values. Between 30 and 60, men's NTA production is greater than the peak labor income, reaching its maximum – approximately 40% greater than the peak labor market – a little after 50 years old. In contrast, the value of women's NTA production is similar to their NTTA production. It averages 28% of peak labor income, whereas NTTA female production averages 36% of peak labor income. The difference between these two curves is that women's NTA production is steeper, and shows a clear peak between ages

[8] The Satellite Account of Non-Remunerated Work estimated that domestic and care work were, in the same year, 20.4% of the GDP (INEGI e INMUJERES, 2014). Though very close, the difference in both numbers can be the result of small differences in the methodology. Children's contribution to care and housework are not included. The numbers throughout the life cycle are smoothed and different occupations when substituting for the wages may be used.

40 and 50. Women's NTA consumption is also different from their NTTA consumption. It increases with age through the childhood years, from age 20 to age 70 it is very close to the peak labor market income, and it decreases in old age.

Figure 4: Production and consumption in the market and the home, by age and gender (2014)





Source: Authors' calculation based on ENUT 2014.

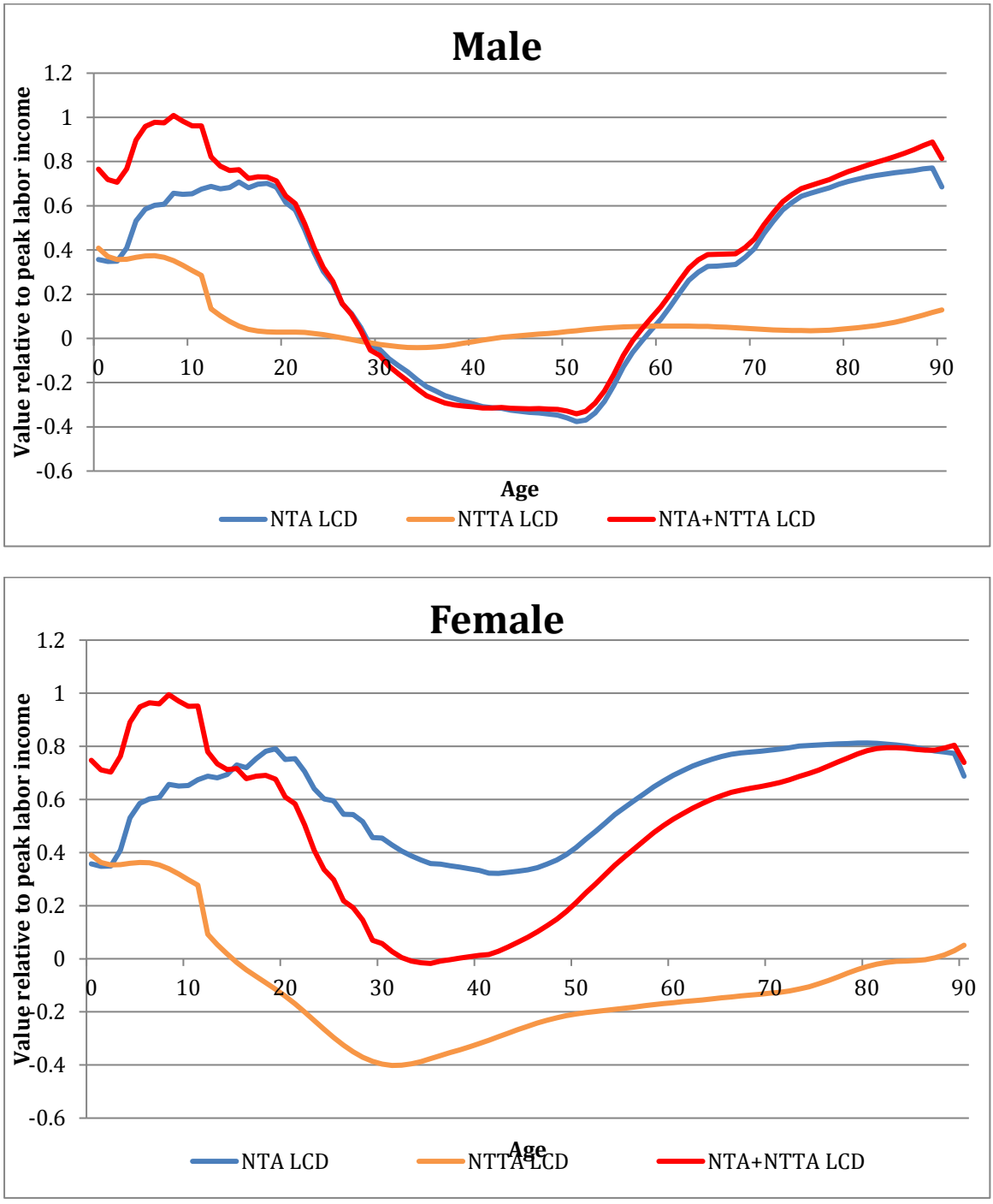
The lifecycle deficit (LCD), one of NTA's key concepts, measures the difference between consumption and production. When extended to NTTA, as in Figure 5, the indicator shows by how much the consumption of different types of income exceeds its production. The blue line measures the difference between consumption and production of goods and services produced in the paid labor market, the orange line the LCD of goods and services produced in the household economy (NTTA), and the red line is the combination of both, measuring overall consumption and production. Values greater than one mean that consumption is greater than consumption, while values lower than one mean that, at that certain age, production exceeds consumption.

Men's NTA and overall (NTA+NTTA) lifecycle deficit follow the traditional pattern observed in other countries: a deficit (positive values) in childhood, youth and old ages, and a surplus (negative values) among prime working age adults. These prime working ages, however, span a very short window that starts at age 30 and closes before age 60 (also noted by Mejía Guevara, 2008).

When the analysis is restricted to NTTA, men's lifecycle deficit is, for the most part, positive or close to zero. Before age 12, men experience a clear deficit of care and housework: Their consumption is greater than their production in between 20% and 40% of the peak labor market income. Between 20 and 80 years old, their NTTA consumption is very close to their income, but after age 80 they experience another deficit, as their demand for care rises.

The shape of women's NTA and overall (NTA+NTTA) lifecycle deficit is similar to men's, but their values are not. If only NTA is considered, women's NTA LCD shows a deficit throughout the lifecycle, with two peaks: one in their youth and one in old age. This is because, due to the still limited female participation in the labor market and gender inequalities in wages (Arceo & Campos, 2013), their market production does not make up for their consumption. When NTTA work is considered, women only have a deficit before 12 years old and in very old age (85 and more). This shows that in Mexico, women continue to be caretakers even into their late life. However, the value of these activities does not, for the most part, compensate for their overall consumption. The red line indicates that, before age 15, women's NTTA and NTA deficit accumulate to a value between 80% and 100% of the peak labor market income. After 15 years old women's surplus of NTTA work contributes to ameliorate their NTA deficit. Yet when both quantities are taken together, their consumption is greater than their production.

Figure 5: The lifecycle deficit in the market and the home, by age and gender (2014)



Source: Authors' calculation based on ENUT 2014.

Conclusion and policy recommendations

Several recent efforts, such as the literature on the care economy and the satellite accounts of unpaid household work (INEGI, 2003-2015) have aimed at making women's contribution to the economy more visible by valuing their unpaid house and care work. Counting Women's Work (CWW) is an international project that seeks to make a contribution on that front, by measuring the gender economy throughout the lifecycle with a methodology that is

comparable across countries and time. This report summarizes the main findings of CWW in Mexico in 2014.

My results show that, as other authors have found, time-use and the economy are highly gender-specialized (INEGI, 2003-2015; Rivero & Hernández Jabalera, 2014; and Santoyo & Pacheco, 2014). In general, men focus on paid productive work and make few contributions to care and housework. Women, on the contrary, spend most of their productive time in unpaid care and housework, and do so from age 12 onwards. However, they also spend an important part of their productive time (about 30%) in paid work.

One important contribution of CWW research is to help understand how this gender specialization plays into the production and consumption of goods and services produced in the market and within the household. During childhood and old age, both men and women consume more care and household work than they produce. It is women's investment in these activities that helps to satisfy these needs. During their productive years, women spend about two thirds of their time in NTTA activities, which is mostly transferred and consumed by other household members. This has important policy implications, especially for the planning of care services. Due to the demographic and epidemiologic transition, the care needs in Mexico are undergoing important transformations and will continue to do so in the near future. While the proportion of children in the population is decreasing, the percentage of the elderly is rising: and is estimated to reach 28% in the year 2050 (Zuñiga & Vega, 2004). This may free women's time from childcare, which is very time-intensive. However, the time that is freed from these occupations may need to be transferred to caring for the elderly and people with disabilities. It is difficult to foresee the implications of this now, as some authors have argued that population ageing will be accompanied by an increase in chronic illnesses and severe disabilities (González & Ham Chande, 2007). More research is needed on this topic. In addition, before making any forecasts, more research is needed on how households organize to care for different members.

One issue that has been repeatedly discussed in the literature is whether care and housework prevents women from joining the labor market at higher rates (Jiménez-Fontana, 2015). In the case of the Mexico, the fact that the same time that men use in NTA work women use in NTTA work, may be interpreted along these lines. However, this interpretation is not accurate because, in addition to spending time in NTTA work, women also work part-time in the paid labor market. For example, during their working age, which coincides with the most accrued household demands, women work about 20 hours per week in paid work. Men, on the other hand, seem to be more specialized than women: they work more hours in employment, and

their involvement in housework and care is very limited. More research is also needed to understand whether unpaid house and care work crowd-out the possibility of women spending time in the labor market, as well as how households decide who spends time on which activities.

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