The life course starts and ends with periods of economic dependency. Children and elderly people consume more than they produce. This is financed—always and everywhere—by reallocation of resources between generations through a multi-channel institutional system including families, markets and the welfare state. Net taxpayers are typically of active age, while net beneficiaries of public programmes, such as education, health care and pensions, are mostly children and the old. The income of households with children is produced by parents, but children also benefit from it through intra-household transfers. Mortgages of young active-aged families are mainly financed by the savings of older middle-aged people preparing for retirement. This lends a strong demographic perspective to the welfare system, finance and insurance markets, and the household economy. Also, this model, underlying the recently developed accounting system of National Transfer Accounts (NTA), gives a wider institutional background to the analysis of the welfare system in which government is just one of the intermediaries among people in different age.

The NTA project was initiated by Ronald Lee at the Center on the Economics and Demography of Aging (CEDA) in Berkeley. NTA introduces age into age-insensitive National Accounts. The accounts of NTA measure how much income each age group generates through work and ownership of capital, how income is redistributed across age groups through public and private transfers and how each age group uses its disposable resources for consumption. This makes NTA a particularly useful tool in the analysis of the effects of population ageing (for more details see Lee and Mason 2011).

However, NTA does not go beyond GDP (or, more precisely the national income as NTA aggregates are consistent with net national income rather than GDP). It comprises reallocations observed in National Accounts but does not include unpaid household labour. There are two asymmetries which make this particularly distortive. The first one is gender asymmetry in the division of labour. The gender-specific age profiles of paid income and consumption might falsely indicate that there is a large flow from males to females, since consumption patterns of the two genders are rather similar but men contribute more to market work than women. However, this is a misleading conclusion. Time use surveys show that in terms of unpaid work the situation is quite the opposite, i.e. women spend more time on house-
hold production than men. Hence, overall (i.e. including market and household work), women may even contribute more time than men to production activities. Therefore, introducing the gender dimension to the NTA framework, as well as both paid and unpaid work, provides a more complete picture of the life course consumption and production. The other asymmetry appears at the level of public involvement in financing the two dependent sections of the lifecycle. Inter-age reallocations flowing from the active-aged to elderly persons are socialized to a larger extent than reallocations flowing from the active-aged to children. To put it in a simplified way, children are raised by their parents, the elderly are supported by society. By excluding unpaid household labour from the accounts we overlook inter-age transfers that are essential in financing future public spending.

**Evidence and Analysis**

We have extended NTA for Europe by introducing market and non-market work by gender (for previous work in this field see the literature review in Vargha, Gál and Crosby-Nagy, forthcoming). This gives a more comprehensive picture about production and consumption activities at different ages and about flows of resources among different ages.

Even in societies sensitive to gender equality women do more unpaid labour in the household whereas men are more active in the labour market. By drawing age profiles (per-capita averages by age) of the production of unpaid household labour, we show that this difference does not only hold in aggregate terms, but also at all ages (Figure 1). The difference is not evenly distributed throughout the economic life course; the female age profile shows two clear peaks, the first at childbearing age and the second after retirement (see the dashed lines in Figure 1). For men this age pattern is different because the second peak is more pronounced than the first.

**Figure 1:** Per-capita production and consumption of unpaid household labour and net time transfers in monetary terms by age and gender in 15 European countries around 2000

Notes: Country profiles are normalized on their respective per-capita GDP and summed up applying population weights. Total population of the countries covered (BE, BG, EE, FI, FR, DE, HU, IT, LV, LT, PL, SI, ES, SE, UK) representing about 80 percent of the EU population. Source: Vargha, Gál and Crosby-Nagy (forthcoming).

Through the comparison of production and consumption of unpaid labour we can identify the net beneficiaries of this activity. Men are net beneficiaries through most of their lives (see the solid blue line) whereas women are net givers of what we call time transfers once they grow...
up (see the solid red line). How much either gender benefits from and contributes to the household economy again varies by age, and even though men are recipients of a sizeable amount of intra-generational net time transfers, in total they receive far less than children.

Figure 1 shows production and consumption only in the household economy. In Figure 2 we add age profiles of the national economy. The non-working ages consume more than their labour income while the working ages tend to consume less than their labour income. Thus the difference between consumption and production is positive for the dependent ages resulting in a lifecycle deficit; and it is negative for the working ages resulting in a lifecycle surplus (see the solid line in the left panel of Figure 2).

The counterpart of lifecycle deficit/surplus in the household economy, net time transfers, is positive only in childhood and among the oldest old (see the solid line in the right-hand panel). The main beneficiaries of unpaid household labour are not the elderly or men in general but children. The youngest generation till the age of 7 receive more resources from the household economy than from the national economy.

Figure 2: Per-capita production and consumption and the resulting lifecycle deficit /surplus in monetary terms in the national economy and the household economy in 9 European countries around 2000

Notes: Country profiles are normalized on the average per-capita labour income of the 30-49 year old cohorts in the respective economy and averaged unweighted. Countries covered are FI, FR, DE, HU, IT, SI, ES, SE and the UK.


References


POLICY IMPLICATIONS AND RECOMMENDATIONS

A comprehensive analysis of production and consumption over the life course and of transfers between genders and generations needs to take into account both paid and unpaid work. Most of the net transfer in form of unpaid work is between generations, in particular from parents to children. These transfers constitute a fundamental part of the welfare system, it is therefore of central importance that these transfers are acknowledged and supported by public welfare arrangements. Pay-as-you-go pension systems, which are dominant in many European countries, “reward” paid work and the corresponding transfers to the elderly in form of pension contributions. They largely ignore private investments into children that are mostly made in
the household through unpaid work, as demonstrated above. However, it is the current investments in human capital of children which are the source of future benefits and which ensure the sustainability of pay-as-you-go pension systems. As parents are often forced to reduce working hours (and thereby their own pension entitlements), this creates intergenerational redistribution across households where private investments in children are penalised. In other words, the current pension systems levy an implicit tax on child raising. The public system of intergenerational transfers need to better take into account the unobserved private investments in children. This can be done either within the pension system in the form of child-related contributions or benefits, by developing institutions which allow a better reconciliation of childcare responsibilities and paid work (such as providing child care facilities and other public services relieving household labour) or by cash transfers cash (in various forms of family benefits).

**Research Parameters**

The premise of National Transfer Accounts is to be consistent with the System of National Accounts (SNA), i.e. age-specific profiles of consumption, income and transfers have to be consistent in the aggregate with SNA data. Put differently, NTA brings age into the SNA by breaking down the various quantities by age, and thereby introduces information on the relation between the age of individuals and their economic activities into the System of National Accounts framework. The general approach of NTA is to obtain age profiles from surveys or administrative datasets and to adjust these profiles by age-specific population numbers to match the aggregate controls from the SNA. The data requirements are quite extensive since the various components of consumption, income, transfers, assets, taxes, etc. have to be estimated by single years of age. Hence, the NTA dataset contains an extensive number of age profiles on age-specific averages of various economic activities.

**Project Identity**

**Project Name**

Ageing Europe: An application of national transfer accounts (NTA) for explaining and projecting trends in public finances (AGENTA)

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#### FURTHER READING


- Stancanelli, E. (forthcoming) Institutional Long-Term Care and Government Regulation, IZA World of Labor.