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The age-profile of invisible transfers: the true size of asymmetry in inter-age reallocations

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ABSTRACT

We argue that the institutional composition of funding consumption in the two dependent sections of the lifecycle, childhood and old age, are different. To put it sharply, children are raised by their parents, the elderly rely on society. Since the reallocation of resources within households are not registered in National Accounts, the majority of the resources transferred to children are not visible in contrast to resources flowing to the elderly, which are almost entirely observed in public statistics. For our analysis we apply a recent extension of National Accounts, called the National Transfer Accounts, which include intra-household transfers; and a further, experimental extension, the National Time Transfer Accounts, which quantifies the value of time transferred among household members in the form of unpaid household labor. We show that about one third of the full transfer package flowing to children is registered in the National Accounts and another roughly one third is made visible by the National Transfer Accounts. The remaining one third, which is the value of parents caring for their children, is made visible by the National Time Transfer Accounts. The corresponding shares in funding old age are quite different: nearly 90 percent is observed in public statistics and the two accounting extensions unfold only a bit more than 10 percent.

Keywords: Unpaid household labor, intergenerational transfers, time use survey, National Transfer Accounts

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1 INTRODUCTION

There is an asymmetry in financing the two dependent periods of the life-cycle, childhood and old age. Inter-age reallocations flowing backward from the active aged to the elderly are socialized to a larger extent than reallocations flowing forward from the active aged to children. By inter-age reallocations we mean resources conveyed between people in different ages, such as pay-as-you-go pensions, mortgages, student loans, public health care, consumption goods bought by parents for their children or caring for children, just to name a few of the numerous forms. By socialization we mean the arrangement of inter-age reallocations by institutions larger than kinship or local community. Intuitively, partners in a socialized arrangement do not know each other in person whereas in the case of non-socialized reallocations they do. A socialized reallocation is arranged by government (such as public child care facilities, child support programs, education, social security and public health plans), non-profit organizations serving households and for-profit corporations (such as private schools, pension plans, insurance agencies and various other financial institutions). Due to the participation of corporate actors in inter-age resource reallocations we use the word *socialization* instead of *nationalization*.

Asymmetric socialization has been demonstrated in the past, most recently by Lee and Donehower (2011) and Patxot et al. (2012), who applied a new accounting standard, the National Transfer Accounts (NTA), and derived conclusions on the balance of backward and forward public transfers. We too will use this method; as well as its extension – the National Time Transfer Accounts (NTTA) – to check the validity of our starting statement.

NTA is a new chapter in the development of national accounting.[1] It brings two substantial changes to National Accounts. First, it introduces age into age-insensitive National Accounts (NA). In the standard form of the Income Account of NA, revenues flow among institutions such as households, corporations and government. NTA demonstrates that the main entries of this complex system have characteristic age-profiles. Compensation of employees and labor-related taxes are minimal or zero in childhood and old age. In contrast, individual and public consumption expenditures as well as consumption-based taxes are more uniform over the life cycle. Public transfers are financed mostly by people in their active age and consumed uniformly (such as national defense and other pure public goods) or mostly by people in their early or old age (such as education, pension, etc.). By bringing in the age profiles of these items NTA redefines income streams flowing among institutions to flows among generations.

The second change brought about by the NTA methodology is that it adds a new level to national accounting. NA observes the allocation of primary income, such as labor income and asset-based revenues, and its secondary distribution (and redistribution in kind) in the form of taxes and benefits. However, the tertiary redistribution of after-tax revenues within the household (such as parents paying for the consumption of their dependent children), or between households (such as retired parents supporting their non-cohabiting adult children) is not recorded in NAs. In this respect NTA introduces intra-household and interhousehold relations to national accounting.

NTA however does not go beyond the frontiers of NA aggregates, such as the net national income. It does not cover the provision and consumption of unpaid household labor other than what is imputed in the national income by current statistical standards. Since our aim in this paper is to account for the full range of intergenerational transfers, we will provide calculations for unpaid household labor. Based on information of a time use survey we will estimate the age-profiles of production and consumption of unpaid

1 The method of National Transfer Accounts was established by Lee (1994a,b). An NTA Manual was published by Mason et al (2009) and the Population Division of the United Nations has published a revised manual (United Nations 2013). A comprehensive introduction to the method, including theoretical foundations, comparative results and a wide range of country-studies can be found in Lee and Mason (2011a).

household labor and add these items to our estimations of inter-age reallocations. In other words we will introduce age into the Household Satellite Account of National Accounts. Donehower (2012) calls this, the age-enriched Household Satellite Account, the National Time Transfer Accounts (NTTA). We will combine NTAs with the NTTAs.[2] We will show that the age composition of the satellite account is such that it can significantly affect previous conclusions.

The article is structured as follows. In the following section (Section 2), we will demonstrate that the asymmetric socialization hypothesis holds in regular NTA. In Section 3, we create NTTAs based on Hungarian time use data and show that the asymmetry in the socialization of inter-age reallocations is more acute than it seems in regular NTA. In Section 4 we summarize our results.

2 ASYMMETRIC SOCIALIZATION IN THE NATIONAL TRANSFER ACCOUNTS

A key concept of NTA is the lifecycle deficit (LCD), which is the difference between consumption and labor income. It is positive in childhood and old age as children and the elderly consume more than they produce, and it is negative in active age when labor income exceeds consumption (making it a lifecycle surplus or LCS). The channels of filling the gap between consumption and labor income are asset-based reallocations (such as capital income, property income and savings) and transfers, which are either public or private. Public transfers are taxes and contributions (outflows) and benefits in kind or in cash (inflows).[3]

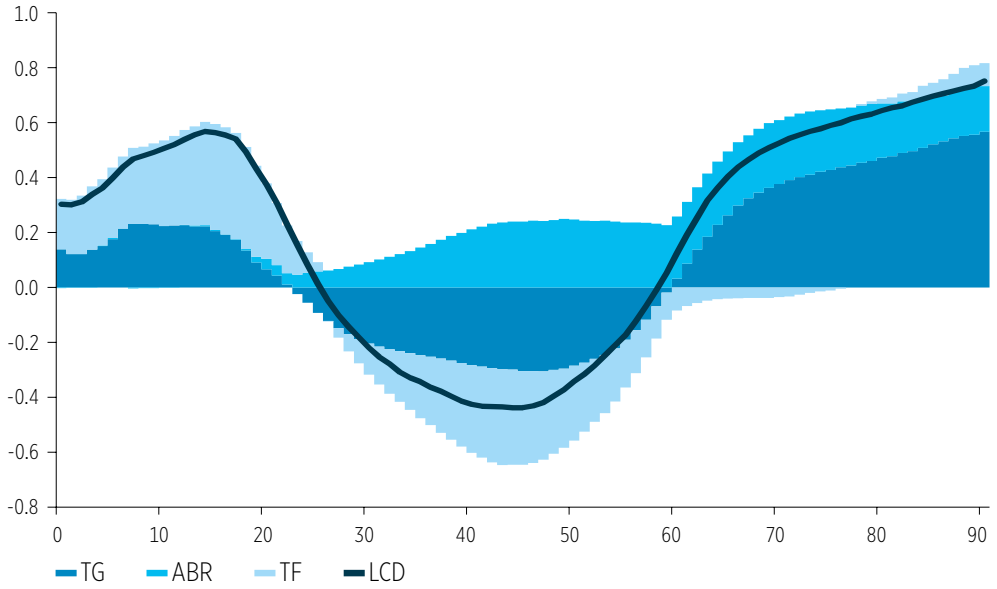
A major innovation of NTA is that it informs these items with age, which appear as aggregates in NAs. Additional information is introduced to standard NAs in the form of age-profiles for all the entries of the equation. Based on administrative or survey data, aggregate consumption is divided up into consumption by cohort. Similarly, labor income, asset-based reallocations, savings, and transfer inflows/outflows are also divided up by year-groups. The typical pattern of these age-profiles is that labor income is raised by the active aged; the active aged pay most of the taxes; while the net beneficiaries of transfers are children and the elderly.

In addition, NTA includes a tertiary redistribution of income. The Income Account of NA follows the route of revenues in two levels: the first level is the allocation of primary income, such as wages and profits; and the second level is the secondary distribution of income (as well as redistribution in kind), such as taxes on income and wealth, social contributions and benefits in cash and in kind. However, NA does not include the tertiary redistribution of the remaining disposable income, which takes place within and between the households.[4] NTA however does consider this level of resource allocation. Figure 1 demonstrates that adding the third level of redistribution is necessary to account for the lifecycle deficit. Without intra-household transfers, the way the lifecycle deficit is financed cannot be explained, especially in childhood.

2 Throughout this paper we will refer to the method as NTA and NTTA, in singular, and its results, the actual accounts, as NTAs and NTTAs, in plural.

3 Some transfers are paid and received by households and the corporate sector but do not flow through the government. Examples are mandatory social security contributions paid to private pension funds, sickness pay (as much as they are paid directly by the employer to the employee), insurance premiums and claims, non-public fines and penalties, lotteries and gambling, non-insurance compensation payments or resources transferred from household to household by non-profit institutions serving households. The net of these transfers are negligible (Lee and Donehower 2011) either because both inflows and outflows are small or because inflows and outflows cancel out not only on the aggregate level but also by age. In other words, such transfers are intra-generational rather than inter-generational. In this paper we treat them as public transfers.

4 The complete tertiary redistribution comprises interhousehold transfers flowing between households usually bonded by kinship. The NTA database currently includes only limited information on such transfers. The available evidence shows that this item is negligible, at least in high income societies.

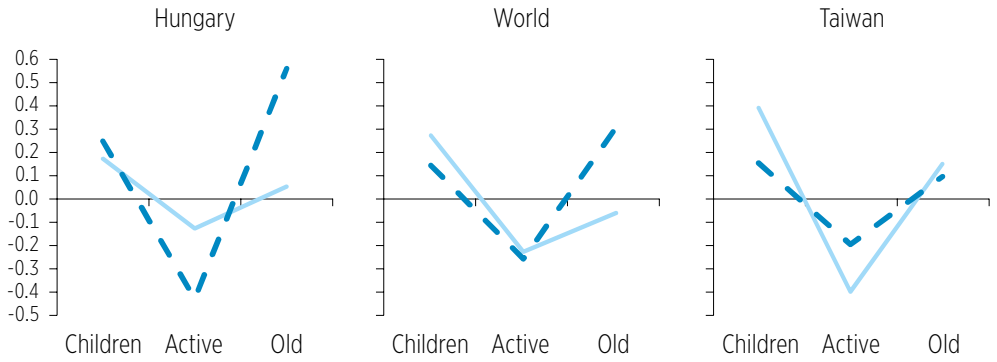


Source: Authors' calculation based on NTA data (www.ntaccounts.org). See also Mason and Lee (2011, 57–58). Notes: Values are unweighted averages of 23 countries normalized on per capita labor income of the 30–49 age bracket of the respective country. LCD (lifecycle deficit) is the difference of consumption and labor income. TG: public transfers, which include all transfers recorded in National Accounts transmitted either by government or the private sector. ABR: asset-based reallocations; TF: intra-household transfers.

Figure 1:

Lifecycle deficit (LCD) in different ages and its funding in the World around 2000

Figure 1 also shows that the institutional composition of financing the lifecycle deficit in childhood differs from the arrangements in old age. Children are supported by their parents in the form of intra-household transfers and by government in the form of public transfers. Old age is mostly financed by means of asset-based reallocations (previous savings by the individuals themselves or their predecessors) or by public transfers, such as social security and public health care. There are cross-country variations beyond this general pattern. In panel B of Figure 2, we show the unweighted average of age distributions of net intra-household transfers and net public transfers for all the 23 NTA countries. Hungary and Taiwan are two extreme cases and are presented separately in the figure. The panels are simplified as the distributions are by generations and not by cohorts. The borders between childhood and active age as well as between active age and old age are defined country-by-country.



Source: Authors' calculation based on NTA data (www.ntaccounts.org).
Notes: Values are unweighted averages of 23 countries. Public transfers include all transfers recorded in National Accounts transmitted either by government or the private sector. Values are normalized on per capita labor income of the 30–49 age bracket of the respective country.

Figure 2

Age-distribution of net intra-household transfers (solid line) and net public transfers (dashed line) in the World, Hungary and Taiwan, around 2000

Childhood ends when the lifecycle deficit becomes negative; old age starts when it grows above zero once again. There are only two countries that differ from the rest of the countries: Hungary, where government spends more on children than households do; and Taiwan, where the old receive more from their relatives than from the government. The differences are represented by the different intersections of the lines in the panels. None of the countries in the sample is an outlier at both ends of the life cycle. The Hungarian case being an exception justifies the focus of the subsequent exploration on this single country.

3 ASYMMETRIC SOCIALIZATION WHEN NATIONAL TRANSFER ACCOUNTS ARE EXTENDED WITH NATIONAL TIME TRANSFER ACCOUNTS

NAs cover market production, be it recorded or hidden, as well as non-market production (volunteer work resulting in goods, household production of goods for own use and household production of housing services for owner occupiers).[5] Services produced and used in the household (other than housing related) and volunteer production of services are part of the Household Satellite Accounts (HHSAs), an extension of NAs. Estimation of these satellite accounts is justified by the considerable value produced by households, ranging between 25 percent and 40 percent of GDP, even in industrialized countries. In addition, as Gershuny (2011) argues, the conventional GDP measure takes a view of labor that is too narrow to correctly represent cross-country differences and historical changes in economic activity. Creating HHSAs requires special methodology. . Whereas the entries of NAs are recorded and evaluated in the market, HHSAs are based on household surveys and a valuation procedure.

Extending the aggregates of NAs with unpaid household labor is not new. First estimates of HHSAs have been published since the early 2000s (e.g. Holloway, Short and Tamplin 2002; Soupourmas and Ironmonger 2002; Sik and Szép 2003). Eurostat, the statistical service of the European Union, released its manual of methodology in 2003 (European Communities 2003). However, it is new to introduce age into HHSAs; that is, to draw age-profiles of the production and consumption of unpaid household labor.[6] Donehower (2012) calls this extension of NTA the National Time Transfer Accounts (NTTA) and offers a general methodology, which we apply in our calculations.[7]

Below, we first describe how HHSAs are produced. We go through the main steps of the methodology, then describe and justify our choices. Second, we introduce age into the HHSA: we present and analyze the age-profile of the value of household labor. Finally, in order to complete the NTTAs, we draw the age-profile of consumption of household labor. In the absence of comparative data, we will limit ourselves to Hungarian figures.

A HOUSEHOLD SATELLITE

A Household Satellite Account has been produced for Hungary by experts of the Hungarian Central Statistical Office (HCSO) and TARKI Social Research Institute (Sik and Szép 2003). We use their results extensively. Wherever the HCSO-TARKI work differ from the NTTA-standard (Donehower 2012) we have made new calculations.

5 See the recommendations of Eurostat, the statistical service of the European Union, on the definition of production boundaries (European Communities 2003).

6 We are aware of only one pilot study by Phananiramai (2011).

7 Two asymmetries motivate the creation of NTTAs. The first one is asymmetric socialization discussed in this paper. The other one is gender asymmetry in division of labor. Even in societies sensitive to gender equality women usually do more unpaid labor in the households whereas men are more active in the labor market. Consequently, an NTA exercise by gender limited to the National Accounts would give a distorted picture of gender participation in inter-age resource reallocations. Gender-specific NTAs are presented by Hammer, Prskawetz and Freund (2013) in a European cross-country comparison.

Data

The analysis below is based on the 1999/2000 Hungarian Time Use Survey (HuTUS). The survey was conducted by the HCSO; the datasets of which can be downloaded from the TARKI Data Bank (www.tarki.hu). The sample represents the population aged 15–84 years living in private (that is, non-institutional) households. Data were collected by diaries of people who were selected by a three-stage stratified sampling procedure. Diary dates represented the four seasons and the days of the week.

What Is Labor?

The HCSO survey differentiates between 508 activities. In line with the purposes of the study we neglected the time spent with paid work. The rest was split to household labor versus recreational/leisure time activities (we will refer to the latter two as leisure time activities hereafter) based on the *third person principle*. Accordingly, work is an activity that can be done by someone else, a third person, on behalf of the respondent (such as different types of housework and caring activities), whereas leisure time activity cannot be transferred (such as fitness activities, sleeping or eating out). We selected 267 activities for analysis. The distinction between household labor and leisure does not refer to happiness or joy. In the separation of the two types it is irrelevant whether the individual actually enjoyed the activity. The same way as in the case of market labor, people like some household activities and dislike some others.

The questionnaire allows parallel activities, such as cleaning the dishes and helping the child with her homework all at the same time. If one of them is unpaid household labor, whereas the other is paid labor or leisure activity and as such is out of the scope of the research we take only the first one into account. If both belong to the selected group of 267 activities we apply a 0.5 weight on both. This way we allow parallel activities but still limit the day at 1440 minutes.

Since we will add up NTAs and NTTAs, it is necessary to avoid double registration of activities. NTAs are based on national accounts, which include parts of imputed unpaid household labor such as food production for own consumption and construction of the owner-occupied house. Since age profiles of these activities can be more accurately estimated from the time use survey, we correct our NTA figures for the purposes of this study.

Pricing

The literature distinguishes between the output and the input method of evaluating unpaid household labor. The former derives the value of an activity from the value of the product, such as a dinner, created by the activity in question. This approach allows taking into account productivity differences and the economies of scale, which is an advantage compared to the input approach. Productivity of labor depends on age: on average a 40-year-old person finishes a task faster than an 80-year-old. Output pricing would assign the same value to the same dinner irrespective of the time it took to prepare it. In contrast, input pricing would find the output of the less productive person more valuable. In addition, if every member of a family eats the same dish, say goulash, preparing the same meal requires just a bit more work irrespective of the size of the family and no matter if they eat at home or in a restaurant. However, the restaurant applies output pricing so the bill does depend on family size whereas an input approach would find just a minor difference.

Unfortunately time use surveys usually do not include information on the output of household production. Data on other means of production, such as imputed rent of a home and the value of household durables, are also very limited. So in line with the NTTA methodological standard and almost all studies on the value of household labor, we will apply the input approach. We will measure only the time devoted to an activity and try to tackle the problems of productivity differentials and economies of scale in an indirect way.

Evaluating household labor is not straightforward even by the simpler input approach. Pricing unpaid household labor is difficult for it is unpaid: there is no market mechanism to make the evaluation. Applying the observable market prices raises two problems. First, it is not obvious whose wage should be considered: the wage of the person who is doing the household work (the opportunity cost approach) or that of the person whose job is done (specialist replacement wage approach). In the first case we apply the unit wage of the respondent of the survey, an IT expert for instance, even if she just washes up the dishes. In the second case we use the regular market wage of someone who washes dishes full-time as her main job. Since much of household labor requires basic or no skills, the opportunity cost approach assigns higher value to household labor, in particular tasks done by men, than the replacement wage approach. The NTTA-standard applies the latter specialist replacement wage approach.

Wages were assigned to the activities based on the Payroll Survey of the National Employment Service. We could match each of the 267 activities with its specific price. Most of the matching job has been done by the HCSO-TARKI project mentioned above. This method of evaluation based on market wages raises the problem of selection bias. Since productivity of a specialist is typically higher than that of an ordinary person doing household work, the value of unpaid labor is overestimated. In order to mitigate this bias NTTA-methodology applies quality adjustment factors. They can take the value of 1, typically assigned to caring activities and some non-specialist activities, or 0.75, assigned to the rest.

The two main flaws of the input approach mentioned above, insensitivity to productivity differentials and economies of scale, make the labor produced by older people appear to be more valuable than it is in reality. Above we have demonstrated this in the case of age-specific productivity differentials. Economy of scale creates such an age effect because the household size is also age-dependent. Older people typically live in separate households, alone or in couples, away from their adult children in Hungary. The size of such a household is smaller on average than the size of two-generation households, which tend to be inhabited by middle aged people and their children. Age-specific productivity differentials can be tackled with coefficients similar to quality adjustment factors, but which are attached to age rather than activity type. Both solutions bring in external knowledge to the time use survey. In contrast, corrections for economy of scale can be gained directly from the survey. Age-specific household size can be estimated directly from the sample and applied to a corrective factor.

The current standard of NTTA does not correct for any of these two deficiencies. Fortunately, neither age-specific productivity differentials nor economies of scale affect the conclusions derived in this paper or if they do, they do so in a conservative way. Even if we overestimate the value of household labor produced by older people it is they who consume it due to the typical household structure mentioned above, namely that the elderly live in smaller, single-generation households. This makes our age-profiles of net time transfers, that is age-profiles of lifecycle deficits/surpluses of household labor, unaffected by the insensitivity of the method to productivity differentials. What we cannot neutralize in this way is the underestimation of the value of household labor produced by the active aged and consumed by children. Due to neglecting the effect of the economy of scale on the value of household labor in general, irrespective of age-distortion, we underestimate the value produced and consumed in larger households. However, this weakens rather than strengthens our main conclusion, which is to point out that private transfers are more important in financing childhood consumption than consumption in old age and that this asymmetry is amplified by the inclusion of time transfers. If this hypothesis is supported under the current methodology of NTTA, it would be even more explicit should we apply a methodology that successfully deals with the economies of scale.

The Payroll Survey consists of gross wages. However, labor income in NTA includes not only gross wages but total labor costs, i.e. taxes nominally paid by the employer. If NTTA is to be consistent with NTA, these taxes have to be imputed into unpaid household labor. We estimated the rate of employers' contributions as the rate of two entries of national accounts (minus 1), "compensation of employees, total" and "wages and salaries," as the implicit tax rate.

Results: The Aggregate Value of Unpaid Household Labor in Hungary

After identifying and pricing household activities, we can give an estimation of the value of unpaid household labor in Hungary in 2000. The total amount was 3,579 billion forints, an equivalent of 27 percent of GDP, 36 percent of the national income and 50 percent of labor income earned in the labor market.

About 3.9 percent of the aggregate amount constitutes household labor done by the respondent in other households, such as grandparents babysitting in the homes of their adult children or the other way around, adult children caring for their ailing parents. This is the NTTA equivalent of NTA's inter-household transfers. Below we calculate only with labor consumed in the household.

NATIONAL TIME TRANSFER ACCOUNTS

NTTA introduces two novelties to HHSAs. First, it introduces age by drawing the age-profile of unpaid household labor, and second, it looks for the consumer of the products and services of the labor in question.

Introducing Age into the Household Satellite Account

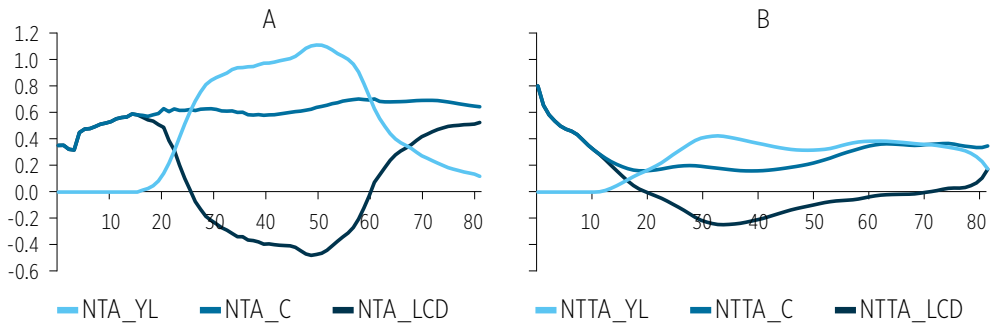
In NTA most of the research effort is devoted to finding the proper age profiles of macro aggregates established by statistical routines. In NTTA it is the other way around. Producing the macro aggregates of the household satellite account from time use surveys is still far from standard, but once they are created, drawing the underlying age-profiles is straightforward. In panel B of Figure 3, we present the per capita NTTA age-profiles. In order to put them in context we added the standard NTA lifecycle deficit curves for Hungary in panel A. Like NTAs, NTTAs are also cross-sectional.

The age-profiles of labor income and that of the value of household labor are markedly different. In a country such as Hungary where hardly any potential new entrants of the labor market can get a job without completing secondary education, the labor income profile rises steeply between the ages of 16 and 24 years. In contrast, people start to work in the household at a younger age, probably even younger than indicated here; the sample of the HuTUS does not cover children at or below the age of 14 years. The NTTA curve reaches its first peak in the early 30s when people devote much attention to their small children. As children grow, become more independent and eventually move out of the household the value of per capita household labor decreases and does not start growing until people enter retirement. In 2000 the average age of leaving the labor market was a mere 55 years for women and 57 years for men in Hungary. This estimation, based on a calculation on raw participation and population data of the OECD, is also reflected in the time use survey data.

The exit from labor is also different in the two curves. Hungary has a universal pay-as-you-go pension scheme offering practically full coverage, which limits the actual retirement from paid labor to a few cohorts between the ages of 54 and 59 years. The very fact that we find people producing labor income in higher ages is due to the adjustment of the standard NTA labor income age-profile with the age profile of unpaid labor imputed in national income and therefore not part of the HHSA but of the NA.

By contrast, the value of household labor reaches its second peak after retirement exposing either a pension scheme with too low retirement age or an obsolete skill composition of older workers who are crowded out of the labor market and have to retire, still healthy and able, to their households. People are still active but either they do not find a job or they do not have to. The curve might also bear the marks of the distortive effect mentioned above of overestimating the value of less productive labor in old age.

Market labor income mostly disappears above the retirement age but people keep working in the household practically as long as they live. In this respect the dashed line in panel B of Figure 3 resembles the age-profiles characterizing hunter-gatherer societies rather than the labor income curve of developed nations (see Lee and Mason 2011b).



Source: Authors' calculation.

Notes: Values are normalized on per capita labor income of the 30–49 age bracket. NTA_YL: labor income, NTTA_YL: value of household labor, NTA_C: consumption, NTTA_C: consumption of household labor, NTA_LCD: lifecycle deficit, NTTA_LCD: net time transfers.

Figure 3

Lifecycle deficit in NTA (panel A) and NTTA (panel B), Hungary, 2000

Consumption of Household Labor

Some household activities are done for a particular household member, such as helping a child with homework. The HuTUS does not record the consumer but the activity codes give a good, if not perfect, indication. In particular, child care activities are easily assigned to the beneficiary by age group, such as the age brackets of 0–3, 4–6 and 7–14 years. If there is more than one child present belonging to the same age bracket we share the value of labor equally among them. Elderly care is less straightforward to identify. The HuTUS contains one code for caring for an old or sick person. Since we do not know who is sick in the household we assign all such values to the elderly (60 years old or older).

Often the recipient of the activity is the entire household. All household members share the benefits of a house cleaned or a meal prepared. In order to handle such cases we need an algorithm distributing the value of labor among them. The NTTA standard applies full equivalence resulting in a per capita sharing of these household public services.

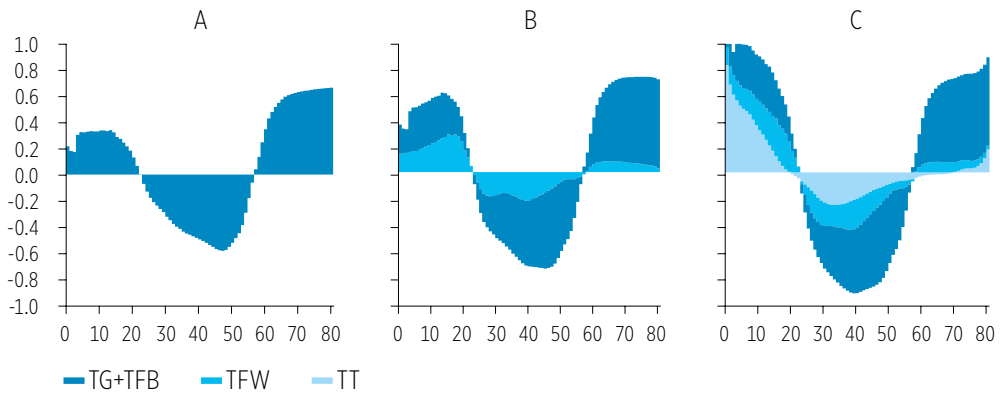
The NTA and the NTTA consumption curves are represented by dotted lines in panels A and B, respectively, of Figure 3. Consumption in the Hungarian economy recorded by the NAs (in panel A of the figure) is rather similar to the general international pattern. It is a smooth, rather uniformly distributed line. This is in contrast with the consumption profile of household labor, which is relatively small in active age but twice as much in old age and even more for small children. As it seems, household labor produces either household public goods, which are consumed equally by all household members or services for children and to a lesser extent for the elderly.

Lifecycle Deficit

The solid lines in the two panels of Figure 3 depict lifecycle deficits and surpluses in the economy and in households. Due to the differences in the production and consumption profiles of the two sectors, the two LCD/LCS curves are markedly different. NTA describes a situation with two streams of resources flowing to opposite directions from working age population to children and the elderly. In contrast, the household economy, in Hungary at least, is a scene of a one-direction flow from parents to children. The net time transfer, that is the lifecycle deficit in the household (solid line in Panel B), is high in the case of children and marginal above the age of 55 years, with the exception of the oldest old.

ASYMMETRIC SOCIALIZATION INCLUDING NTTA DATA

At this point we can return to asymmetric socialization. Above we have observed a difference in the institutional composition of financing the inactive periods of the lifecycle. In all NTA countries except for Taiwan, governments spent more on the elderly than households; and in all NTA countries except for Hungary households spent more on children than governments. NTA data largely supported the empirical hypothesis of asymmetric socialization.



Source: Authors' calculation.
Notes: Values are normalized on per capita labor income of the 30–49 age bracket. TG: net public transfers; TFW: net intra-household transfers; TT: net time transfers.

Figure 4
Cumulative effect of various channels of inter-age resource reallocations, Hungary, 2000

In light of the NTTA results we can update this finding. In Figure 4 we demonstrate how taking account of time transfers alters our understanding of the way inactive periods of the lifecycle are funded. In panel A we present only net public transfers. By and large this panel includes the net flows of what Boldrin and Montes (2005) and Miller (2011) call the intergenerational state. In panel B we add net intra-household transfers discussed above. This panel is the equivalent of panel A of Figure 2 above except that here we present more detailed cohort data, we present them in a cumulative way and this time we use the year 2000 rather than 2005 in order to match data with the HuTUS. Finally, in panel C we complete the transfer package with net time transfers, the key outcome of NTTA.

The figure demonstrates the differences in the relative size and composition of the transfer packages in the inactive periods. Per capita public transfers to children make one quarter of average market labor income of the 30–49 age group (see the first two rows of Table 1). The corresponding figure for the old is 55 percent. This difference narrows markedly if intra-household transfers enter the picture (44 percent against 57 percent) and inverts completely when time transfers are also taken into account. The combined transfer package to children exceeds two thirds of average labor income but for the old

remains below 60 percent. Aggregate figures (in the third, fourth and fifth rows of Table 1), which include the effect of relative cohort size, supports this view. Public transfers to the two inactive recipient groups combined make up to one quarter of national income, but the elderly get nearly twice as much as children. The complete package including all three types of transfers is well over 40 percent of national income, but children receive about one third more (24.5 percent against 18.3 percent) than the elderly.

Table 1

The value and composition of various transfer packages financing the life-cycle deficit

	Public transfers	Intra-household transfers + public transfers	Time transfers + intra-household transfers + public transfers
Per capita value of transfer package as % of labor income of the 30–49 age bracket			
1 Children	25.1	43.5	68.9
2 Elderly	55.0	56.5	58.6
Aggregate value of transfer package as % of net national income			
3 Children	8.9	15.7	24.5
4 Elderly	15.9	17.6	18.3
5 Combined	24.8	33.3	42.8
Composition of transfer package, %			
	Public transfers	Intra-household transfers	Time transfers
6 Children	36.2	27.9	35.9
7 Elderly	87.0	9.2	3.8

Source: Authors' calculation.

For our purposes the most important conclusions are shown in the sixth and seventh rows of the table. The first column includes public transfers, the only part of the complete transfer package visible in standard NAs. More than one third of the transfer package of children is funded by public transfers. Another 28 percent is made visible by standard NTA: this part is financed by intra-household transfers. The rest, 36 percent are invisible in both the NAs and NTAs. These rates are very different in the other dependent section of the lifecycle. The visible part observed by standard statistical routine is 87 percent of the transfer package of the elderly. NTA adds another 9 percent and NTTA adds 4 percent to this. Hungarian elderly are mostly independent of their relatives, they depend on society. In contrast, children receive almost two thirds of their resources from family members mostly their parents.

The table also shows that time transfers largely redraw the picture. Even in a country, such as Hungary, where the general public takes an important part in the welfare of children, the family proves to be the most important institution if the household economy is also taken into consideration. However, extending the scope of the analysis to time transfers is neutral in the case of the elderly as most of their resources flow through socialized channels.

4 SUMMARY OF RESULTS

We have showed that childhood is financed differently from old age. Whereas most of the resources flowing to children are familial intra-household transfers, reallocations toward the elderly are socialized to a larger extent. We also demonstrated that the full picture of this asymmetry requires two extensions of standard national accounting. First, National Transfer Accounts explore the household and unfold redistribution among household members, which in the case of reallocations to children exceeds public transfers in most countries. In the second step, National Time Transfer Accounts bring in intra-household transfers of the value of unpaid household labor, the so-called time transfers. We limited this exercise to one country, Hungary, and found that time transfers to children are as large as the original public transfers even though in cross-country comparisons Hungary has high public spending on children. Altogether we found that about two thirds of the full transfer package for children is exchanged within the household and remains unobserved by public statistics, whereas up to nearly 90 percent of inter-age transfers for the elderly go through public channels.

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