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Pro-Elderly Welfare States within Child-Oriented Societies

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Abstract: Households and policies are the main vehicles of intergenerational transfers. Working-age people are net contributors; children and older persons net beneficiaries. However, there is an asymmetry in socialization. Working-age people pay taxes and social security contributions to institutionalize care for older persons as a generation, but invest private resources to raise their own children, often with large social returns. This results in asymmetric statistical visibility. Elderly transfers are near-fully observed in National Accounts; those to children much less. Analysing ten European societies, we employ National Transfer Accounts to include public and *private* transfers and National Time Transfer Accounts to value *unpaid household labour*. All three channels combined, children receive more per capita resources (73 percent of prime-age labour income) than older persons (31 percent). Europe is a continent of pro-elderly welfare states and strongly child-oriented parents. Since children are public goods, why has investment in them not been socialized *more*?

Key words: household economy; human capital; intergenerational policies; parental investment; National Transfer Accounts; National Time Transfer Accounts

Introduction: Shining a wider light on the ‘social’ in investment

The contributions to this collection interpret ‘social investment’ nearly exclusively in terms of productivist *public policies* (see also Esping-Andersen 2002; Morel *et al.* 2012). Conceptually, however, social investment refers to the allocation, with the expectation of positive returns also to *society*, of scarce resources to the productive skills and human capital of (future) workers. This is a productive form of downward intergenerational transfer.¹ The literature on intergenerational transfers actually exhibits the same strong policy emphasis.² It puts forward three main propositions: (1) currently older persons receive more overall public transfers than in past decades (Kotlikoff and Burns 2012); (2) older persons receive more

than children (Vanhuyse 2013); and (3) the elderly/children public transfer ratio has been increasing (Preston 1984). The tendency is alternatively referred to as ‘grey power’, ‘gerontocracy’ (Sinn and Uebelmesser 2002), or ‘pro-elderly bias’ (Tepe and Vanhuyse 2010). Some even speak of ‘generational ‘storms’ or ‘clashes’ (Kotlikoff and Burns 2012).

This article argues that these portrayals of the intergenerational transfers that occur in contemporary societies are misleading, since they are limited to the statistically visible world of public transfers and largely ignore intra-familial transfers (*cash*) and the household economy (*time*). Households and public policies both serve as vehicles of intergenerational transfers (Albertini and Kohli 2013; Albertini *et al.* 2007). For instance, a key social investment function of the cash and time parents transfer to their non-adult children is to boost children’s cognitive skills and noncognitive traits. In addition to the private returns to the children involved, these private transfers have significant (and often large) *social* returns later on.³ As Folbre (1994) puts it, children are also significant *public* goods, predominantly paid for privately. Parents bear the lion’s share of the cost of raising their own children - in cash and time, both directly and in terms of opportunities foregone. Yet, to the extent that children subsequently become productive tax and social security paying adults, they create positive externalities that benefit all of society. They will finance, for instance, future infrastructure and debt repayment and public pension and health and long term care needs - all of which will also benefit non-parents.

We show that on their own, public transfer data offer an incomplete and biased picture of intergenerational transfers – a proverbial case of looking for a lost car key only where the streetlight shines at night. When it comes to the younger age groups that are the focus of the social investment literature, the bulk of the investments in society are not by policies, but by households. In other words, we follow the social investment and human capital literatures in viewing many resource transfers to younger citizens not as consumption but in large part as positive-return investments in future productive skills. But we show that once one shines a wider light by using more complete data on all relevant forms of intergenerational transfers, a radically different picture emerges on how, and how much, societies invest. The reason is the asymmetry in the forms of financing childhood and old age. Whereas older persons on the whole tend to rely on society, children are predominantly raised by their own parents (Demeny 1987). Resource transfers flowing upward from active-aged to older persons are *socialized* to a much larger extent than those flowing downward to children.⁴ Socialization leaves traces that public statistics can capture. Non-socialized transactions do not, leaving them much less visible (Folbre 2008).

Empirically, we make two contributions. First, we construct age profiles through National Transfer Accounts (henceforth NTA).⁵ This allows us to look not just at the allocation of primary income and its secondary distribution based on standard National Accounts (henceforth NA), but also at the tertiary redistribution of after-tax revenues within households (e.g., parents paying for the consumption of dependent children) and between households (e.g., retired parents supporting non-cohabiting children). However, NTA still does not cover the provision and consumption of *unpaid household labour*.⁶ Such labour, especially in the form of care for children and the fostering of their cognitive and noncognitive skills, is of course a key private resource for social investment (Esping-Andersen 2009; Folbre 1994, 2008). Since our aim is to account for the fullest possible range of transfers, in a second step we therefore provide new calculations for this key variable missing from studies of intergenerational transfers. Based on time use survey data, we estimate the value of transfers of household goods and services by age. Following Donehower (2011), we call these National *Time* Transfer Accounts (henceforth NTTA).

We analyse all three transfer channels – public resources, private resources, and time - for ten European countries spanning five welfare regime models and representing about 70 percent of the EU population around 2005: France, Austria and Germany, Italy and Spain, Hungary and Slovenia, Finland and Sweden, and the UK. Our main findings can be summarized as follows. (1) In line with the pro-elderly bias literature, European welfare states, as welfare *states*, tend to devote significantly more resources per capita to the currently old than to the currently young. (2) However, once we take into account private, mostly intra-familial transfers and unpaid household labour (time), the picture radically changes. All European societies, as *societies*, transfer far more per capita resources to children than to older persons.

Time is of the essence: Constructing resource transfer age profiles

NTA introduces age into age-insensitive National Accounts. Whereas in NA, revenues flow among institutions (e.g., households, government and firms), NTA recognizes that the main entries of NA's Income Account have characteristic age profiles. Labour income is minimal or zero in childhood and old age, and is largely concentrated in active age. Consumption is more uniformly distributed over the lifecycle. Public transfers are financed mostly by people in their active age and consumed either uniformly or mostly by people in their early or old ages. Resources of households are also reallocated from the active aged to children and older

persons. The lifecycle deficit (henceforth LCD) is defined simply as the difference between consumption and labour income at a given lifecycle stage (Lee and Mason 2011). In rich modern societies, LCD is positive (a true deficit) in childhood and old age, when consumption is not covered by one's own labour income. It is negative (a surplus) in active age, when labour income exceeds consumption.

In short, NTA redefines income flows among institutions as flows among generations. The NTA accounting standard describes age groups by (1) how much labour income they make; (2) how much they consume; (3) how much they give to other age groups, either through public channels such as taxes, or directly, mostly among relatives; (4) how much they receive from other age groups, either as public transfers, services and public goods, or as private transfers, mostly within the family; and (5) how much they (dis)save. This requires the extension of the usual information base of NA with income and consumption surveys as well as administrative or survey information on tax and transfer incidence. NTA analyses start by converting NA entries to the NTA aggregates of labour income (including taxes levied on labour), consumption (net of consumption related taxes) and the resulting lifecycle deficit (Lee and Mason 2011). The age profiles of these items are derived from administrative data or surveys. The profiles are adjusted to the aggregates to secure consistency between NA and NTA. A similar process produces the age profiles of items such as asset-based revenues, taxes and transfers and private transfers given or received, filling the gap between consumption and labour income.⁷ This allows us to define lifecycle stages according to net *resource dependency*, as opposed to chronologically as is conventional (e.g., childhood until age 18, old age from age 65).

Accordingly, panel A of Figure 1 shows the normalized per capita age profile of LCD for our ten countries.⁸ On average, NTA childhood in Europe lasts from birth until age 25, while old age already sets in at age 59. The LCD of older persons is on the whole higher than that of children. The highest LCD during childhood is around ages 14-16, when teenagers receive the equivalent of 59 percent of the per capita labour income of persons aged 30-49 in their country. But the same 59 percent share is received already at age 66. Thereafter, the resource transfers received by older persons keep rising slowly.

However, data on *unpaid household labour* are missing from both NA and NTA (and from panel A). Yet such labour is a major resource transferred across generations. Sociologists have increasingly emphasized the importance of, and the changing patterns in, the time devoted to family duties and household labour (Albertini *et al.* 2007; Esping-Andersen 2015; Gershuny 2000; Lareau 2003), including the boosting of the cognitive skills and noncognitive

traits of children (Heckman 2013; Heckman and Masterov 2007; Suh and Folbre 2016). The equivalent of LCD in the realm of unpaid household labour is net *time* transfers. Their meaning is the same: the value of household labour consumed less the value of household labour produced. The goods and services produced and consumed here, however, are not part of the national economy, but of the household economy.⁹ We therefore created the age profile of net time transfers, in three steps (explained in greater detail in online Appendix 1). First, we used HETUS and other time use surveys to identify the time spent on household production activities by age.¹⁰ Second, home production was assigned to its actual consumers. Third, we imputed the value of time spent in unpaid household labour using the wages of the person whose job is done as our reference point (specialist replacement wage approach).

Figure 1 here

Accordingly, Panel B of Figure 1 presents the per capita age profile of net time transfers, containing the market value of all work performed in the household.¹¹ Clearly, the shape of the net time transfer profile is radically different in the household economy (panel B) compared to the national economy (panel A). Net time transfers are highest among newborns: quite naturally, babies need the most time-intensive care. During their first year of life, European children receive on average more than the yearly per capita prime-age labour income in their country in time alone. These time transfers subsequently decrease, but they remain substantial throughout childhood and adolescence.

Five-year-olds still receive nearly 60 percent of yearly per capita labour income in time transfers. Time transfers still amount to more than one-third of labour income at age 10 and more than one-fifth at age 15. They only turn negative as late as age 25. The largest net time contributors are in their thirties to mid-forties. This is the notorious ‘rush hour of life’ (Bittman and Wajcman 2000), when adults reach the peak of their workload in the labour market and also tend to be burdened with extensive household and family care duties. These duties are most time-intensive precisely during the most investment-like stage of child rearing: the first years of life.

Net time transfers in panel B remain negative much longer than in panel A, becoming positive only among the oldest-old, after age 80. Active adulthood thus lasts longer in terms of unpaid household labour (from age 25 to age 79) than in terms of the national economy (from 26 to 58). This reflects the housework, grandparenting, and other civil society activities

undertaken by young-old Europeans in their sixties and seventies. Yet the value of such activities is comparatively small after age 70. This is because the biggest share of unpaid household labour by far is not direct person-to-person care or inter-household transfers but rather ‘household public goods’ produced by household *members* for joint household consumption (e.g. cooking, cleaning, gardening). Yet older Europeans overwhelmingly no longer live inside multigenerational households *with* their children and grandchildren. Conservatively estimated, at least 55 percent of Spaniards and Slovenians aged above 65 and more than 70 percent of older Europeans elsewhere do not live with their children (Eurostat Census Hub data).

The total lifecycle deficit: Europe as a child-oriented continent

Panel C of Figure 1 combines net public transfers with LCD and net time transfers to produce the fullest description of intergenerational transfers. We call this combined picture the *total lifecycle deficit* (henceforth TLCD). All three transfer types combined, children between birth and age 9 receive between 139 and 96 percent of per capita labour income in their country. This is more than even the very oldest receive - those aged 90 and above. And right until s/he reaches legal adulthood and voting age (typically 18), an average European child still continues to receive more resources than an average older person up until age 72. Young Europeans still receive more than 75 percent of per capita prime-age labour income in total resources right until they reach age 17. Older Europeans, however, start receiving the same share only after they reach age 80. Defined by resource dependency, childhood lasts on average until age 25 in Europe. Even in countries with a small higher education sector this demarcation age is still surprisingly high. It takes years in every type of economy to reach a sufficient level of labour efficiency that would compensate for increasing consumption. Young adults cost a lot and their output is limited in the first years of their career.

Table 1 here

Table 1 contains the per capita values of the full transfer package in terms of prime-age labour income by transfer type flowing to children and older persons. The bottom row shows the child/elderly transfer ratio. In line with pro-elderly welfare studies (Lynch 2006; Tepe and Vanhuyse 2010; Vanhuyse 2013), older persons receive more than twice as much in net

public transfers than children: 37 percent of the average prime-earnings income, compared to 15 percent. But limiting the analysis of intergenerational resource transfers to public transfers alone seriously misinforms about actual resources received during resource-dependent life stages. If private, mostly intra-household, transfers are also taken into account, the picture changes. The combined public-private spheres transfer package of children (39 percent) is slightly larger than that of older persons (34 percent).

And most importantly, if in a third step we add transfers of unpaid labour, the original proportions are *inverted*. The children/elderly transfer ratio jumps from less than half in public transfers alone (0.39) to more than double all transfers combined (2.35). The value of the full transfer package for a child is equivalent of 73 percent of annual per capita prime-age labour income, out of which only 15 percentage points flow through publicly recorded channels. In contrast, the public part of older persons' package is around 37 percent of prime-age labour income from society, which is reduced to 31 percent through the private transfers in cash and time they provide. In short, despite recent shifts from passive and/or curative forms of welfare toward social investments, welfare states are still very much geared toward paying passive benefits in old age. The main investment during childhood is by households.

Although public policies transfer more resources to the old and very old, once households are taken into account Europe thus emerges as a *child-oriented* continent. This message holds universally. As Table 2 shows, children receive more overall per capita transfers than older persons in every one of our ten countries. Of course, countries differ significantly in how they complement, assist, or crowd out working-age citizens in caring for dependents, although not always neatly along welfare regime type lines. The children/elderly transfer ratio ranges from a minimum of 1.29 in Hungary (a post-communist regime) and 1.31 in Finland (a Nordic regime), to a maximum of 3.58 in the UK (an Anglo-Saxon regime) and 4.64 in Spain (a Southern regime). But the latter two countries are also the meanest welfare states. They transfer comparatively few public resources both to older persons (respectively 24 and 22 percent of prime-age earnings) and to children (6 and 12 percent). And while Spanish and British families do not privately compensate for meagre state transfers going to older persons, they do step in when it comes to children, with transfers of private resources (27 and 29 percent) and time resources (32 and 31 percent) – a likely case of forced downward familialism.

Table 2 here

Within Europe, public transfers for children are highest in France and both Nordic countries (21 percent). But whereas Finland and Sweden are also the two highest-spending welfare states for older persons (50 and 64 percent), France is only an average spender in this respect (39 percent). Not surprisingly, public transfers in Italy, a notoriously pro-elderly biased welfare state, are around the European average for children (16 percent of prime-age earnings) but much above it for older persons (48 percent). But, in another likely case of forced familialism, Italy leads the way in Europe in terms of both the financial resources and the time resources spent by families for their children. It stands out markedly in the latter respect. A staggering one-half of prime-age earnings is devoted to time for Italian children; much above the European average (34 percent), and twice as much as in Slovenia and Hungary.

Revisiting the three channels for financing intergenerational transfers

The TLCD curve of Figure 1 reappears in Figure 2, where we show how the gap between consumption and production is financed through three resource channels: public transfers (mediated by government, social security or other public actors), private transfers (within or between households, overwhelmingly among relatives), and time transfers (unpaid household labour). Inflows and outflows of the various types are netted out. The enveloping curve of public transfers (including taxes and subsidies on production, taxes on income and wealth, social contributions and benefits) shows that public policies create pro-elderly biased welfare *states*. Defined in terms of public resource dependency, childhood lasts until age 21 and old age starts at age 60. The highest net public transfer in childhood is around age 12-13, at less than one-quarter of prime-age earnings. Europeans aged above 65 receive more than this. By the time they reach age 77, they receive more than half of prime-age labour income in public transfers alone. And those aged above 90 even receive more than three-quarters of prime-age earnings.

Figure 2 here

However, public transfers far from cover TLCD, particularly among children. Consumption exceeds production by an equivalent of nearly 140 percent of annual prime-age labour income for newborns, out of which public transfers cover only 15 percentage points. Other forms of inter-age reallocations must fill the gap. The dark grey area shows the age profile of private transfers - flows of items that are part of the national income (e.g., services

and commodities) bought by parents but consumed by their children. They are exchanged almost exclusively among relatives and overwhelmingly within households.¹²

The age profile of private transfers is very different from that of public transfers. First, reflecting the typical household structure prevalent across Europe, private transfers are mostly a two-generation affair. Those up to age 27 are net receivers, and around age 60 net private transfers become marginal, remaining so through all older age groups. Second, while negligible in old age, private transfers are more important than public transfers at every childhood stage. Yet, large parts of the area below the TLCD curve are still uncovered. This gap is mostly filled with time transfers. Children require more time resources when small and more cash as they grow older. Private transfers start at a lower base, but exceed the value of time transfers by age 12 and subsequently remain above them throughout youth. Second, on the whole, children receive nearly one-and-a-half times as many time transfers as private transfers. Third, older Europeans up to age 79 are modest net providers of time.

In sum, taking the complete transfer package into account, children cost more than older persons. For Europe as a whole, the largest transfer package in childhood (for newborns, at 140 percent of prime-age earnings) is 60 percentage points higher than that in old age (80 percent). Moreover, Europe is also a relatively *idle* continent, with short periods of productive life. Defined not chronologically but by *total* resource dependency, childhood lasts on average until age 25, while old age already starts at age 60. As Table 2 shows, there is only minor cross-country variation in this respect. TLCD-childhood ends earliest in Hungary and the UK (at age 23) and latest in Southern Europe (age 26). TLCD-old age starts earliest in Slovenia (age 58), and latest in Sweden (age 63).

Asymmetric socialisation, asymmetric visibility

There is a significant asymmetry in the forms of financing childhood (mainly households) and old age (mainly public policies and market institutions) in modern societies. Public transfers are visible as they are covered by standard public statistics. Private and time transfers are captured only by the recent methodological novelties NTA and NTTA, and thus fly under the radar of current statistical standards. In Table 2 we also split the full transfer package by visibility. Market and government transfers flow between people connected by contractual relations enforceable by law. The value of transfers is largely set by market forces or regulation, and it is registered and accounted for. But regarding invisible transfers, the cooperation of the actors, most frequently family members, is regulated by customs and

social norms (Alessie *et al.* 2014; Coleman 1990). Violation of these norms is less observable, less systematically registered and, except for extreme cases, not enforceable by law. In the case of time transfers, they cannot even be measured directly because the transfer is not evaluated in the market. As a result, these transfers largely missing from public statistics. Statistical visibility corresponds with socialization of transfers since it is socialization that leaves traces and makes valuation easier.

In some sense, there is a universal functional division of labour going on between governments and families in contemporary societies. Working-age citizens pay taxes and social security contributions to care indirectly for currently older *generations* through state programs. But they predominantly spend private time and private resources to care directly for their *own* children themselves. Notwithstanding the notable increases in resources invested in public education over the past decades (Goldin and Katz 2008; this collection), the resources involved in raising children remain mostly a family affair. But since working-age adults no longer tend to live with their parents, care for older generations is largely institutionalized through government programs or markets. Transfers to older persons are easier to socialize through cash or public services provision without the intercession of a guardian. Table 3 gives further details by showing the institutional composition of transfers flowing to the two groups of net beneficiaries in our sample.

Table 3 here

Children in Europe, defined by TLCD, receive on average one-fifth of their complete transfer package through public channels, and another third from the family as commodities and services bought in the market.¹³ But they receive nearly *half* of their net transfers in the form of unpaid household labour. In contrast, older persons are net providers of both time transfers and private transfers (-10 percent both). Combined, the net invisible transfers reduce their complete package by one-fifth; the positive side of the net transfer package consists only of public transfers. Since the visibility of the transfer packages received by children and older persons is asymmetric, it is thus misleading to analyse lifecycle financing through public transfers only.

Conclusions: why not *more* socialization of child rearing?

Contrary to widely held perceptions, children receive more resources per capita than older persons in Europe. Our findings do not refute the key propositions of either the elderly bias or the social investment literatures. Welfare states, *as* welfare states, may indeed have undergone a paradigm shift towards policies aiming to boost productivity through investment in human capital and skills (de la Porte and Natali, this collection; Esping-Andersen 2002, 2009; Morel *et al.* 2012), while at the same time transferring most resources to older persons (Lynch 2006; Tepe and Vanhuyse 2010; Vanhuyse 2013). But our findings do suggest that these literatures might be in danger of looking for a lost car key only where the streetlight shines. Public transfer data alone offer a highly incomplete picture of what societies accomplish in terms of intergenerational transfers and investment in the productive human capital of (future) workers. Any apparent pro-elderly welfare state bias is the consequence of the asymmetric socialization of intergenerational transfers and their resulting asymmetric visibility in National Accounts. Once one shines a light also on private cash and time transfers, conclusions are radically different. European societies, as *societies*, transfer more than twice as many resources on average to each child as to each older person.

Children are public goods, yet the bulk of investment in them is not by states but by households. Prescriptively, these findings indicate that there is still much scope left for states to step in to assist or complement families in boosting cognitive and non-cognitive human capital, through the various (early) education, training and work-family reconciliation policies discussed in the social investment literature. Skill formation is characterized by dynamic complementarities and is a strongly cumulative process: 'Skill begets skill: early learning makes later learning easier and more effective' (Carneiro and Heckman 2003: 90). While early childhood is therefore crucial for the effectiveness of social investment, continuity is needed throughout childhood and early youth (Farkas 2011) into early adolescence (Bailey and Dynarski 2011). Effect sizes of policy interventions may go down during primary and middle school ages, but the causal mechanisms are similar. For instance, test scores, behaviors, attitudes, and curriculum enrolment of middle and high school students are key predictors of later schooling, criminal and labor market outcomes (Farkas 2011). Social investment may also have a differential impact across childhood (Vanhuyse 2015). Cognitive abilities appear to be malleable predominantly during early childhood (Duncan and Magnuson 2013), but key noncognitive skills seem responsive to well-designed interventions much longer, until at least late adolescence (Heckman 2013, Dweck 2012).

Economic models of human capital tend to explain the emergence of intergenerational *social* policies for the young (e.g. Goldin and Katz 2008). In Becker and Murphy's (1988) account, in the absence of reliable and enforceable long-term contracts, welfare states have historically evolved in order to provide a public (cross-sectional) solution to the problem of transferring private resources from 'producers' to economically less powerful younger 'dependents' over the life cycle. Lee (2012: 26) argues that cooperative child rearing has paved the way for the emergence of the welfare state as an institutional improvement over, private family care for young dependents. These models provide plausible accounts of the historical development of state policies for children. But they do not explain why, empirically, it is families, not states, who still take upon themselves the overwhelming share of resource transfers to younger generations.

Given the positive externalities that children will later bring to all of society, why *so little* socialization of child care and early human capital investment? Interestingly, the traditional private model of child rearing has reasserted itself even in communities originally set up explicitly to deny or modify it. For instance, in a number of egalitarian collective childrearing communities founded in the 1960s and 1970s, commune member mothers ended up expressing even stronger preferences than mothers in ordinary household forms for caring for their *own* biological children (Cohen and Eiduson 1976). The originally radical Israeli kibbutzim model of collective rearing by multiple non-kin caregivers of even very small children was gradually diluted over time to allow ever greater parental involvement including home sleeping, until the whole system was abandoned in the 1980s (Aviezer *et al.* 1994; Beit-Hallahmi and Rabin 1977).

We have highlighted that the puzzle of primary theoretical interest is why early human capital investment has not been socialized much *more* than we can observe in reality. Notwithstanding the 'social investment states' paradigm shift extensively analysed in this collection, even spending on social programs with remarkable social rates of return, such as early childhood education, still remains marginal as a share of GDP in the advanced democracies, with the exception of Nordic Europe (Heckman 2000, 2004, 2013; Vanhuyse 2015). The strong present-bias of actors and institutions in democracies is undoubtedly one key factor (Gonzalez-Ricoy and Gosseries 2016). One can also speculate that the long-term retreat away from multigenerational households to (ever-smaller) nuclear families has been accompanied by an increase in public provision and a decrease in the importance of local community and larger kinship – the original cooperative child rearing units (Coleman 1990). At the same time, women have become much more active on the labour market, while not

reducing their unpaid household labor to anything like a proportionate degree (Esping-Andersen 2009, 2015).

There is ample evidence of ‘overworked’ Americans (Schor 1991) or Israelis, Mexicans, Greeks and Brits (Fraser and Gornick 2013) - mainly women - who spend the ‘rush hour’ of life in a ‘time bind’ at work and in their ‘second shift’ at home (Bittman and Wajcman 2000; Hochschild 1997). Our snapshot account of the complete transfer burden on the active-aged only serves to strengthen these claims. Clearly, gender, parenthood, and class are the three elephants in the room here. There are additional key differences in resource contributions, by far most importantly between women and men, but also between parents and non-parents (Esping-Andersen 2009; Folbre 1994, 2008). Children in Europe may receive nearly half of their net transfers in the form of unpaid household labour, but the overwhelming share of such caring and rearing is performed by *women*. Europe’s small social investment states may be embedded within large child investment societies, but the latter are primarily motored by women in families. Moreover, as before children face diverging futures depending on the accident of birth (Esping-Andersen 2015). There is a strong, possibly increasing class gradient to the private resources spent on children, which is likely to be exacerbated by high divorce and single motherhood rates among low-SES groups and increasing educational homogamy in partner choice (Esping-Andersen 2009, 2015; Lareau 2003).

We do not have retrospective information describing temporal processes. Are investments in children *still* higher per capita than to older persons, or are they higher *by now*? Were higher pro-elderly public transfers a form of compensation for lost private and time transfers due to lower co-habitation levels with adult children? Although we cannot address these questions, there is evidence that the average time spent on unpaid household labour, but not chores, has increased since the 1950s (Gershuny 2000). Time transfers have probably become more valuable in monetary terms. There are clear Becker-Lewis type quantity/quality tradeoffs. Lower fertility tends to increase time transfers to, and human capital investment in, each child (Vargha and Donehower 2016). Future research must elucidate the overall impact and the class and gender dimensions of such developments. As they stand, our results significantly modify the one-sided storyline of a creeping resource grab by older citizens. The growing public resource share of older persons might well have gone in parallel with increasing societal resources for the young. Notwithstanding population aging and growing pro-elderly policy bias, the 20th century might have also been the century of the child, as Ellen Key (1909) predicted at its start.

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Disclosure statement

No potential conflict of interest was reported by the authors.

Supplemental data for this paper can be accessed at [PUBLISHER WILL ADD AT PROOF]

FIGURES

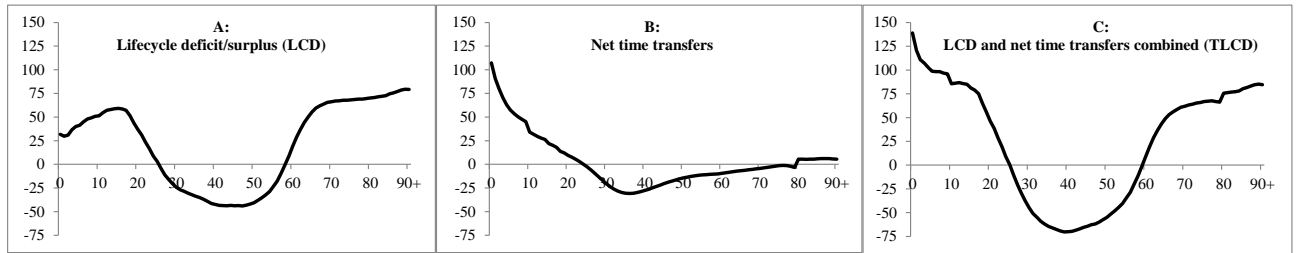


Figure 1. Per capita lifecycle deficit, net time transfers, and total lifecycle deficit by age in Europe.

Source: LCD: authors’ calculation based on NTA data (www.ntaccounts.org); net time transfers: authors’ calculation based on Vargha *et al.* (2016).

Notes: Values are population weighted averages of 10 European countries around 2005 normalized on the per capita market labour income of persons aged 30-49 of the respective country.

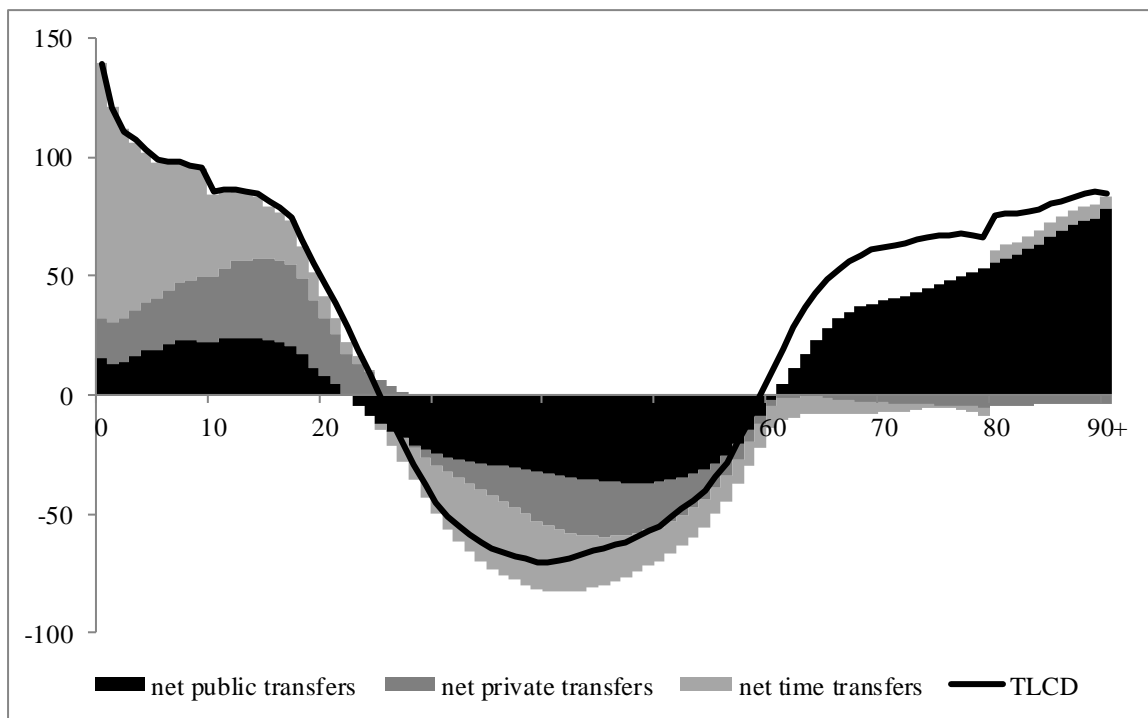


Figure 2. Per capita public, private and time transfers and their contribution to filling the gaps of total lifecycle deficit by age in Europe.

Source: Authors’ calculation based on NTA data (www.ntaccounts.org) and Vargha *et al.* (2016).

Notes: Values as in Figure 1.

TABLES

Table 1. Per capita value of the transfer package towards children and the elderly.

	Public transfers	Public + private Transfers	Public + private + time transfers
Children	15	39	73
Elderly	37	34	31
CH/E ratio	0.39	1.14	2.35

Note: Transfer values as in Figure 1.

Table 2. TLCD demarcation ages, per capita net transfers by type, and children/elderly transfer ratios, 10 European countries.

	Demarcation ages, TLCD (years)		Per capita transfers by type (% of YL ₃₀₋₄₉)										
			Private		Time		Invisible (private + time)		Visible (public)		Total (invisible + visible)		
	End of childhood	Start of old age	Children	Elderly	Children	Elderly	Children	Elderly	Children	Elderly	Children	Elderly	CH/E ratio
Austria	24	59	22	0	32	-3	54	-3	15	46	69	42	1.6
Finland	24	60	16	0	28	0	43	-1	21	50	64	49	1.3
France	24	59	17	-3	30	-4	48	-7	21	39	68	33	2.1
Germany	25	59	23	-5	34	-2	57	-7	14	40	71	32	2.2
Italy	26	60	29	-4	49	-5	78	-9	16	48	95	40	2.4
Hungary	23	60	24	-1	25	5	49	4	18	48	67	53	1.3
Slovenia	24	58	27	1	24	-6	51	-5	15	40	66	35	1.9
Spain	26	61	27	-5	32	-5	59	-10	6	24	65	14	4.6
Sweden	24	63	23	-8	33	0	57	-9	21	64	78	56	1.4
UK	23	59	29	0	31	-2	60	-2	12	22	72	20	3.6
Total	25	60	24	-3	34	-3	59	-6	15	37	73	31	2.4

Notes: demarcation age: age when the difference of consumption and labour income changes sign; YL₃₀₋₄₉: average per capita labour income of the 30-49 year olds.

Table 3. Composition of the net transfer package for net recipients, %.

	Public transfers	Private transfers	Time transfers	Total
Children	20	33	47	100
Elderly	120	-10	-10	100

Note: Population weighted averages based on data of 10 EU countries.

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Notes

¹ Intergenerational transfers are defined here as the resources redistributed among *current age groups* at a given moment in time, not diachronically between cohorts.

² For critical reviews, see Vanhuyse and Goerres (2012), Tepe and Vanhuyse (2009).

³ See Esping-Andersen (2009), Folbre (1994; 2008), Heckman (2004; 2013). We view transfers to *older* generations as predominantly financing *consumption*, not investment, as such transfers do not systematically produce significant positive returns (e.g. Heckman 2004; Heckman and Masterov 2007; Carneiro and Heckman 2003).

⁴ By socialization we mean the arrangement of intergenerational reallocations by large-scale, anonymized institutions, rather than close kin or local communities. The former include governments (e.g., public child care, education, social security) but also non-profit organizations serving households and for-profit corporations (e.g., private schools, pension plans, insurance agencies) (Lee and Mason 2011:65).

⁵ NTA was established by Lee (1994). An NTA manual was published by United Nations (2013); an introduction is Lee and Mason (2011).

⁶ That is, other than the small fraction that is imputed in the national income by current statistical standards. Consumption of unpaid household labour is short for consumption of goods and services produced by the labour in question.

⁷ Since the tax-transfer systems and data sources vary across countries the technical details of producing the age profiles differ. Istenič *et al.* (2016) provide a standardized methodology for European datasets. The age profile of private transfers is derived from a household sharing model.

⁸ Data can be downloaded from www.ntaccounts.org

⁹ On top of market production NA also includes estimates of parts of non-market production such as volunteer work resulting in goods, household production for own use, and household production of housing services for owner-occupiers (European Communities 2003). This creates an overlap, marginal in Europe, which is not dealt with here.

¹⁰ HETUS is an effort to harmonize European time use surveys. Information and metadata are at: <https://www.h2.scb.se/tus/tus/default.htm>

¹¹ That is, except for the work not transferred but consumed directly by the worker. More precisely, Panel B of Figure 1 includes *inter-age group* time transfers. In addition to the value of household labour consumed by the person working, transfers between people of the same age are also missing. Since time transfers flow almost exclusively among close relatives who are rarely of the same age, their volume is negligible.

¹² They are considered the balancing item between private consumption and disposable income (labour income less net public transfers) communicated among family members. Estimations are based on a household sharing model and a simple set of assumptions accommodating global cross-country comparison (United Nations 2013). Calculations are made on large consumption surveys; in Europe, household budget surveys.

¹³ We apply age limits of the total economy (cut off by the TLCD curves) in the respective countries.