

POLICY BRIEF
Political Sustainability of Public Intergenerational Transfers
An Application of National Transfer Accounts.¹

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1. Introduction

Welfare state policies constitute one of the greatest achievements of the past century, well worth maintaining. However, in order to evaluate its impact on welfare it is necessary to take a comprehensive view of the human life cycle. During the life cycle there are two periods – childhood and retirement – when people find themselves in a state of dependence because there is a mismatch between the material needs and the ability to satisfy them, the “life cycle deficit”. In contrast during the working age period people produce more than they consume creating the “life cycle surplus”. As such, there is a need for a mechanism to reallocate economic resources between age groups. Thus, to finance the life-cycle deficit working age cohorts make intergenerational transfers towards children and retirees. In the past, these transfers were arranged privately within families. However, in developed economies, the state has taken over the role of the main provider for the young and especially for the elderly. More specifically, the welfare state transfers have substituted family transfers, but in a clearly asymmetric way. As we can see from Figure 1 in most of the countries especially in those with big welfare states the share of consumption financed by public transfers (net of taxes) goes beyond 50% in case of the elderly, while almost all of them are below 50% for children. One of the main reasons for this outcome seems to be the life cycle pattern of welfare state transfers, which turns out to be focused towards the elderly, combined with the fact that children do not vote.

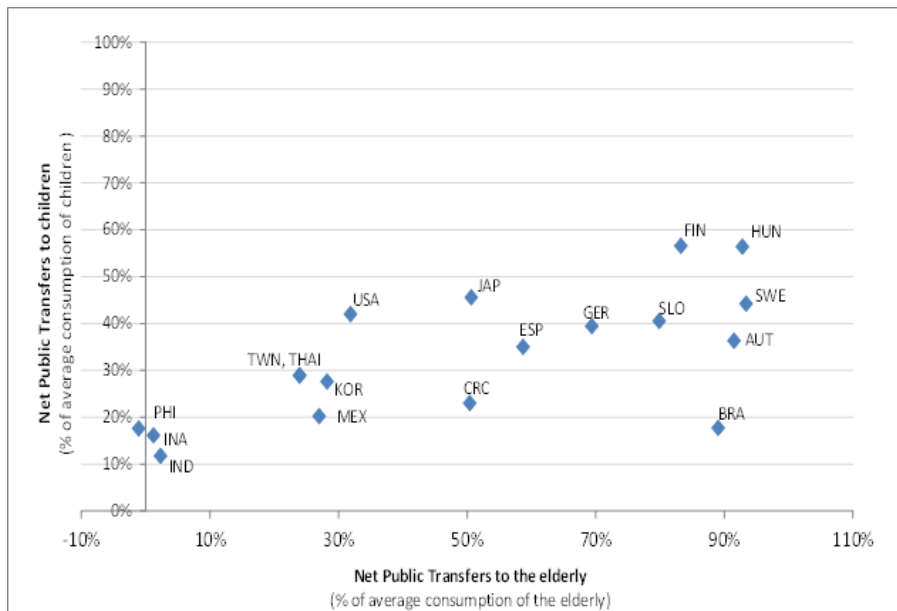


Figure 1: Asymmetric distribution of public resources between young and elderly

Source: Reproduced from Solé et al. (2020).

¹ The results shown in this policy brief have been published in Michailidis and Patxot (2018, 2019).

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In parallel, the steady improvement in life expectancy coupled with a decline in birth rates has fueled the demographic transition resulting in current population aging in developed world. This trend combined with a major substitution of private transfers – family transfers to dependent members (children and elderly) - for public intergenerational transfers has brought enormous financial and political stress on welfare systems across developed countries. Population aging shrinks labor force undermining the possibility to finance the transfers to an increasing number of elders. Moreover, aging increases the political power of elderly augmenting the unequal allocation of public resources, shifting more resources towards the older cohorts (e.g. for pensions) and fewer to the younger cohorts (e.g. for education).

The aim of our study (Michailidis and Patxot, 2019) is to examine the political viability of the public system of backward (from working age adults/parents to children) and forward (from working age adults to the elderly) public intergenerational transfers. More specifically we empirically examine the political viability of such a system by asking what the outcome would be if the decision *per se* to reallocate economic resources between generations was put to the vote. For this we conduct an empirical exercise using a novel data set and a theoretical model of political economy of public intergenerational transfers.

2. Empirical Exercise & Data

Our empirical exercise is based on the political economy application derived by Rangel (2003). This application considers a realistic demographic structure, where agents are dependent children in the first two decades of their life, working age adults in the next five and retirees in the last two. All the decisions regarding the size and the directions of public transfers are made through a majority rule by retirees and working age adults. In this context, certain conditions under which it is possible to have a politically sustainable system of intergenerational transfers must be satisfied. More specifically, the majority of the voting cohorts must have a positive continuation value – which is the present value of all benefits received minus taxes paid – for the joint system of backward (pensions) and forward (education) public intergenerational transfers. The backward transfers are financed by workers, who have to pay a lump-sum payroll tax. The forward transfers are financed by another lump-sum tax imposed on both workers and retirees. Each age cohort cast a positive vote in favor of the system only if their own continuation value of the system of backward and forward intergenerational transfers is positive.

In order to calculate the continuation values we exploit the data from the National Transfer Accounts (NTA Project) which provides us with detailed accounting of the direction and the magnitude of public intergenerational transfers for each age group coherent with National Accounts.³ More specifically, the NTA estimates provide us with measures of total public transfer inflows (benefits) and outflows (taxes and public asset-based flows) by single years of age. This enables us to calculate the continuation value for every voting cohort of the 18 countries included in our sample and to assess the political support for public pensions and public education if such a vote would take place.⁴ Moreover, we conduct the same exercise

³ The NTA data is taken from Lee and Mason (2011), <http://www.ntaccounts.org/web/nta/show/Country%20Summaries>. The NTA manual presents the concepts, methods, and estimation procedures to measure these flows over the life cycle (UN, 2013).

⁴ Cross-sectional data for a specific year in each country: Austria (2000), Brazil (1996), Costa Rica (2004), Finland (2004), Germany (2003), Hungary (2005), India (2004), Indonesia (2005), Japan (2004), Mexico (2004), Philippines (1999),

using data on total public transfers to children and elderly.⁵

Finally, we use data for the current demographic structure of each country as well as for that projected in the future to compute the size of the voting cohorts and to examine the effect of population ageing on the sustainability of the joint system of public intergenerational transfers to children and elderly.

3. Results and Policy Implications

Our results indicate that the joint system of pensions and education as is now politically sustainable in most of the countries in our sample. More specifically, our findings indicate that countries with a developed system of public intergenerational transfers (i.e. a big welfare state) and “greying” population structure – Austria, Finland, Germany, Japan, Spain, Sweden and the U.S. - would vote in favor of a joint system of pensions and education if such a vote would take place. In contrast, countries with relatively young populations - Brazil, South Korea, Taiwan and Thailand - where public intergenerational transfers are still dominated by private arrangements (family transfers) would vote down such a system as they have less political incentives to support it. Moreover, we show that population aging would reinforce political support and strengthen political viability of a joint system of pensions and education. A similar pattern occurs when considering the joint system of total backward and forward intergenerational public transfers which includes apart of pensions and education, healthcare transfers and other in kind or in cash transfers.

Unfortunately, political sustainability does not go in the same direction as financial sustainability. Aging increases the political sustainability by increasing the political power of the elderly but reduces the working age population and consequently the possibility to finance the transfers to an increasing number of retirees. Nevertheless, a linked system of education and pensions might soften these tensions. A higher continuation value for the median voter can be invested in education making the joint system of pensions and education politically more viable. Thus, pensions can foster education. This, in turn, improves the future financial prospects of the PAYG system. Higher investment in education can boost the productivity of future workers and consequently the level of their contributions to social security and revenues from taxing their income. The immediate policy conclusion is that pensions could be pre-funded by increasing education expenditure. Moreover, we can suggest that it might be a useful reform to require legislation to vote on pensions and education as a unique social policy package. Consequently, this reasoning could also be applied to a broader spectrum of intergenerational transfers (healthcare, other in-cash or other in-kind transfers).

Slovenia (2004), S. Korea (2000), Spain (2000), Sweden (2003), Taiwan (1998), Thailand (2004), US (2003). Data for pensions and education are not available for Indonesia and Phillipines.

⁵ The total public transfers consist of education, health, pensions, and other in-kind and in-cash transfers.

References

- Istenič, T., Šeme, A., Hammer, B., Lotrič Dolinar, A., & Sambt, J. (2016). The European NTA Manual. AGENTA Public Deliverable. Download from: <Http://Www. Agenta-Project. Eu/Jacomo/Upload/Publications/d-1.4-Submitted. Pdf> (Accessed on 13 September 2016).
- Michailidis, G., Patxot, C. 2019. “Political viability of public pensions and education. An empirical application”. *Applied Economics Letters* 26(3), 245-249.
- Michailidis, G., Patxot, C. 2018. *Political viability of intergenerational transfers. An empirical application*. UB Economics Working Papers 2018/370.
- Rangel, A., 2003. “Forward and backward intergenerational goods: Why is social security good for the environment?”. *American Economic Review* 93, 813–834.
- Solé, M., Souto, G., Rentería, E., Papadomichelakis, G. and C. Patxot. (2020) “Protecting the elderly and children in times of crisis: An analysis based on National Transfer Accounts”. *The Journal of the Economics of Aging*, 15.
- UN, 2013. *National Transfer Accounts Manual: Measuring and Analysing the Generational Economy*. Population Division, Department of Economic and Social Affairs., New York NY: United Nations.