Reallocation of Resources across age and Sustainability of Public Transfers in Austria and Sweden[1]

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Abstract: Public transfers constitute to a large extent a redistribution of resources from the active population to the non-active elderly. The changing age structure in most European countries requires fundamental adjustments in the financing structure of these transfers, as the number of elderly in need of public transfers increases relative to the working age population. The required pace of adjustment is mainly determined by the demographic development and by the extent to which the elderly are economically dependent (strongly influenced by the retirement age). A comparison of Austria and Sweden shows that Sweden has largely adjusted its public transfer systems to the changing age structure, by keeping elderly longer in the labour force and by providing comprehensive support to families (thereby promoting investment in children). In Austria the low retirement age and generous public pension system require – in the face of pronounced population ageing – an unsustainable high share of resources redistributed to the elderly, leading to a high net-tax-burden for the active population.

I. Introduction

Public transfers strongly influence the shape of the economic lifecycle and lead to a standardization of the individual life-course; for example the age at first labour market entry (influenced by the public educational system), the retirement age (determined by the public pension system) and the consumption of health and care services. Public transfer systems and consequently the age of specific life-course transitions vary across welfare state systems (Esping-

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Andersen, 2000). In the following we consider Austria and Sweden as representing a conservative (Austria) versus a social-democratic (Sweden) welfare state system. Sweden constitutes a benchmark with regard to female labour force participation and participation of the elderly – the participation rates are among the highest in the European Union[2]. Together with comparably high tax-rates they form the funding-basis for a comprehensive provision of public services, in particular also for services directed to families and children (e.g. child-care, education, care-services for invalids and disabled).

In Figs 1 and 2 we plot per capita age profiles of labour income and overall consumption (including private and public consumption) for both countries. All of the quantities presented are measured in purchasing power standard Euros[3], which are well comparable as the net national income per capita in the two countries was the same in 2010 with € 22,950. Labour income in the age groups from 45 to 70 is much higher in Sweden as compared to Austria (Fig. 1.), reflecting the much higher effective age of labour market exit in Sweden: For the period 2004-2009 it was 58.9 for Austrian men, 66 for Swedish men, 57.5 for Austrian women and 63.6 for Swedish women[4].

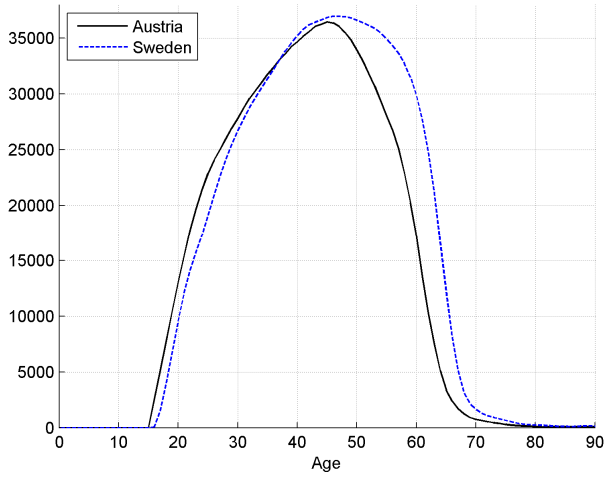

Fig. 1. Average Per-Capita Labour Income in Euro (PPS)

Source: www.ntaccounts.org; own calculations.

[2] Sweden had the highest activity rate in the European Union in 2010 for the age-group 55-64 with 70.5 percent (compared to 42.4 percent for Austria); Sweden also had the highest activity rate of women in the age-group 25-49 with 81.5 percent (compared to 76.2 percent in Austria). *Source:* Eurostat (accessed 5 April 2012)

[3] PPS- Purchasing Power Standards are an artificial currency with the same purchasing power in each country. One PPS-Euro has the average purchasing power of one Euro in the European Union.

[4] *Source:* OECD, Pensions at a Glance 2011. Available at http://dx.doi.org/10.1787/888932370341 (accessed 19 March 2012).

The consumption age-profiles (Fig. 2.) reflect the higher public consumption expenditure for child-care and long-term-care[5] in Sweden in the younger and older age groups, respectively. By contrast, for the age-groups 30-70 the average consumption is higher in Austria as compared to Sweden since the share of consumption in total income is higher in Austria (i.e. the savings rate is lower) and the lower number of children in Austria leaves more resources for the age-groups of parents[6].

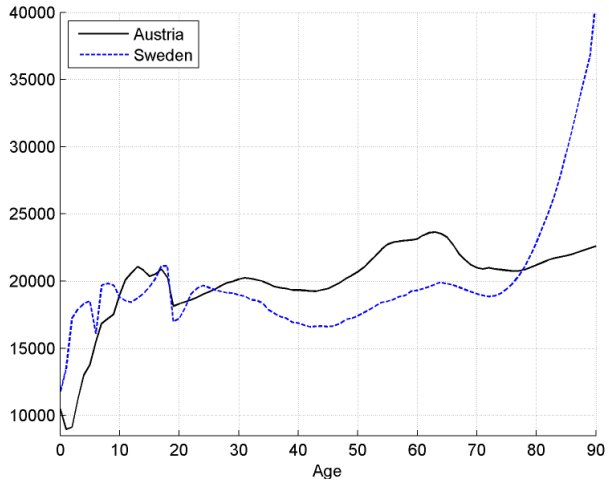

Fig. 2. Average Per-Capita Consumption in Euro (PPS)

Source: www.ntaccounts.org; own calculations.

Of particular interest is a composite indicator of consumption and labour income: The lifecycle-deficit - defined as consumption minus labour income. In childhood and old-age the lifecycle deficit is positive; in these periods part of consumption has to be financed through public and private transfers from other age-groups and through asset based reallocations such as asset income and dissaving. The lifecycle deficit therefore serves as a measure of economic dependency. In the following sections we compare the public reallocation of resources across age-groups in Austria and Sweden and we use the aggregate life-cycle deficit of the elderly to evaluate the sustainability of public sector funding. The analysis is based on data from the National Transfer Accounts (NTA) project (Lee and Mason, 2011). NTA measure consistently

[5] In 2008 Sweden spent 3.6 percent of GDP on long-term-care, Austria 1.3 percent (of which around 60% are used for cash-benefits and therefore not part of public consumption). *Source:* OECD (2011), Help Wanted? Providing and Paying for Long Term Care.

[6] The total fertility rate in 2010 was 1.98 in Sweden and 1.44 in Austria. *Source:* EUROSTAT (accessed 5 April 2012)

with the System of National Accounts for a certain year how much labour- and asset income each age-group generates, how income is redistributed across age-groups through public and private transfers and how each age-group uses the disposable resources for saving and consumption. The dataset consists of age-profiles (age-group averages) of income, public and private transfers, consumption and saving. More information on Austrian NTA is provided in Sambt and Prskawetz, 2011; most of the Swedish NTA-data is taken from Forsell *et al.*, 2008, who also provide a detailed description.

II. Public Age-Reallocation

Large parts of transfers related to social protection in old age are based on a generational contract – the active population invests in children who in turn finance their care in old age. The public sector plays an important role in providing and promoting such investments, in particular by transfers to younger generations in form of publicly funded education and child-care facilities. Adequate and smartly designed transfers to the younger population can therefore enhance the sustainability of the welfare system. The Swedish public sector provides more resources to younger generations than the Austrian, visible in the age-profiles of public net-transfers plotted in Fig. 3. The higher net-benefits for the children in Sweden reflect the comprehensive provision of child-care facilities and the higher public consumption expenditure for education; the higher net-benefits (lower net-contributions) of Swedes as compared to Austrians in the age-groups 20-48 reflect the slightly higher taxation of labor income and the lower share of transfers which is directed to these age-groups in Austria (e.g. care and health services). Around the age of 48 this age pattern reverses: Swedes between 48 and 64 provide a fundamental share of total public transfers while Austrians start leaving the labor force and the net-contributions decline very fast. Austrians become net-receivers of public transfers already at the age of 58, Swedes at the age of 64.

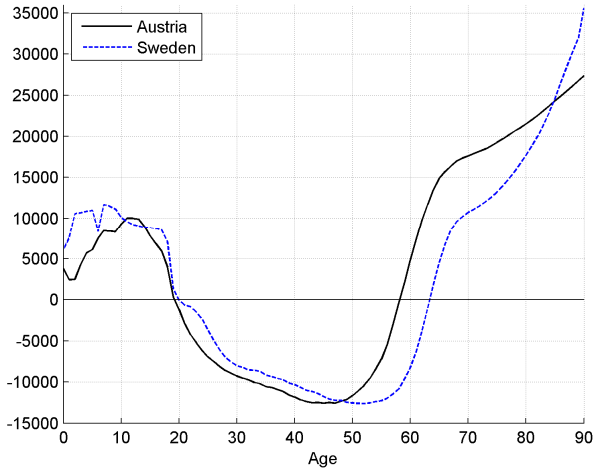

Fig. 3. Net-Benefits from Public Transfers 2010 in Euro (PPS)

Source: www.ntaccounts.org; own calculations.

Fig. 4 illustrates how public transfer benefits are distributed over age-groups - it plots the population percentiles ordered by age against the cumulative distribution of public transfer benefits. The youngest 30 percent of the population receive 27 percent of total public transfers in Sweden, but only 20 percent in Austria; the oldest 30 percent in turn receive 45 percent of total public transfers in Sweden, but 55 percent in Austria.

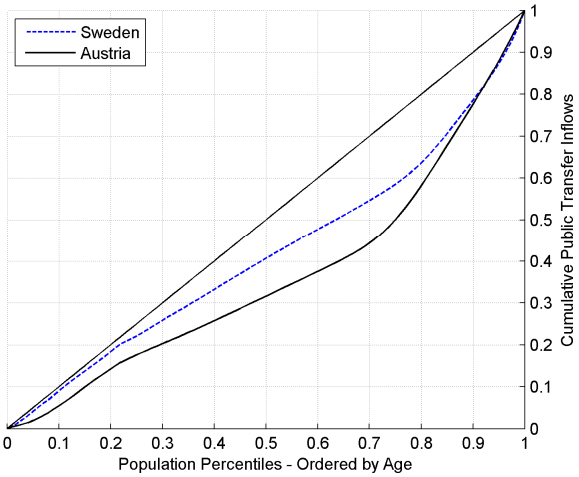

Fig. 4: Cumulative Distribution of Public Transfer Benefits by Age

Source: www.ntaccounts.org, own calculations.

III. Sustainability

One of the most important factors influencing public sector revenues and expenditure is demography: The age-structure of the Austrian population is shaped by the persistently low fertility in the last 20-30 years and the large cohorts born during the baby-boom in the nineteen-sixties. The Swedish population is more equally distributed across age-groups with a higher share of children and young adults. Demographic measures (e.g. old age dependency ratio) are often used to evaluate the effect of population ageing on the transfer systems. But the extent to which the ageing of the population also implies an increase in the demand of intergenerational public transfers depends also on the distribution of contributions and benefits over age. The life-cycle deficit (LCD) takes this into account; we therefore use the aggregate lifecycle deficit in old age relative to total labour income as a measure for sustainability. The projections of the LCD are calculated using the EUROSTAT population projection (EUROPOP 2010); we assume that the per capita age-profiles of consumption and labour income are the same as in the base year (Austria 2005, Sweden 2006). It is therefore a simulation of the LCD given the base-year design of the public transfer systems. Under this assumption the LCD in Austria would have decreased between 1975 and 2000 as a result of the baby-boomers gaining foothold on the labor market (Fig. 5). However, since we assume the 2005 lifecycle we overestimate its value in these years; the per-capita LCD in the sixties was much smaller due to a higher retirement age, a lower life expectancy and less generous public benefits in old age. The demographic dividend as caused by the entry of the baby boomers into the labor market has been used to expand the per-capita life-cycle deficit by increasing the benefit-level and decreasing the retirement age – resulting in an aggregate LCD of the elderly of around 25 percent today. From 2020 onwards the demographic dividend will turn into a demographic burden as the baby-boomers retire – the LCD of the elderly explodes. Strategies to deal with this challenge include increasing the retirement age, cutting benefits, financing a larger share of consumption through savings and increasing the share of labor income which is distributed to the elderly – which is undesirable given the already high burden on the active population. Sweden expects a more moderate increase in the aggregate LCD of the elderly. The demographic old-age dependency ratio in Sweden is higher than in Austria[7]; the aggregate LCD of the elderly however is at the same level as in Austria since Swedes

[7] In 2010 the ratio of the population 60+ to the population aged 20-59 was 0.48 in Austria and 0.52 in Sweden.

generate own labour income until a higher age. Due to the higher fertility future population ageing is moderate.

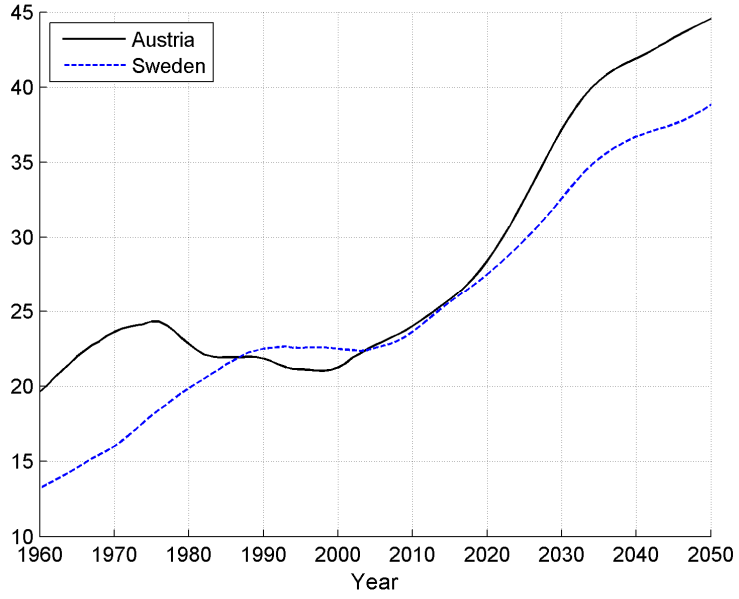

Fig. 5: The Aggregate Lifecycle Deficit in Percent of Total Labour Income

Source: EUROSTAT (population), www.ntaccounts.org, own calculations.

IV. Conclusions

The high labour force participation of older age-groups has a positive impact on the sustainability of the Swedish social transfers system - Swedes are net-contributors until a much higher age than Austrians. This frees resources to support young families, finance education, public investment and public saving. Austria faces a huge challenge to adjust its public transfer systems to the drastic changes in the age-structure of its population. A pronounced increase of the retirement age is an important step to sustain the current welfare state in Austria: The compressed period of active labor force participation leads to a high burden for the active population since they need to finance the public transfer systems. At the same time there is less public support of families through child-care facilities and other care-services, making it difficult to reconcile work with care-responsibilities.

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