

**Authors**

Pieter Vanhuysse

Márton Medgyesi

Róbert I. Gál

# Welfare states as lifecycle redistribution machines

Age is more important than status in how  
social policies operate

---

In practice, European welfare states are neither primarily nor solely responsible for inequality reduction.

---

They redistribute much more across age than across socio-economic status lines.

---

Accordingly, welfare states should be viewed mostly as an institutional solution to the lifecycle consumption financing problem.

---

**POPULATION  
EUROPE**



THE NETWORK OF EUROPE'S LEADING  
DEMOGRAPHIC RESEARCH CENTRES

## The welfare state as Robin Hood and piggy bank, beyond metaphor

---

European welfare states have evolved into sizable and resource-consuming institutions with a total social spending of around 28 percent of GDP and social policies affect every stage of citizens' lives. But what do welfare states mostly do? Standard economic accounts view welfare states' primary role as resolving market failures, aided by the state's unique ability to avoid moral hazard and adverse selection. Standard sociological, political and public policy accounts view welfare states as political Robin Hoods; redeemers of markets and families and tools for poverty relief and redistribution from higher socio-economic status (SES) groups to lower-SES groups. Sociologists such as Gøsta Esping-Andersen have added that welfare states temper the social costs of market forces through social citizenship rights and reduce citizens' dependence on markets and families.

Both approaches incorporate a lifecycle perspective. The social investment paradigm has refocused attention on how 'predistributive' social policies such as education, training and activation can boost individuals' ability to earn market incomes, thereby preventing many social problems early ('preparing') rather than dealing with them later ('repairing'). And economists such as Nicholas Barr and Peter Diamond added a further key purpose: redistribution 'over the lifecycle'. In this case, a piggy bank strategy would be necessary as individuals' productivity and earning powers are heavily concentrated in the middle of the lifecycle but people have to consume in childhood and in old age, too, when they do not earn much primary income.

So which of the two core welfare state functions is more important - Robin Hood or piggy bank? There is no straightforward answer because the piggy bank is largely metaphorical. It interprets the welfare state as enabling individuals to make transfers between 'their own selves' at different life stages. But, such time-travel of resources is not a well-defined system of quid-pro-quo exchanges imparting enforceable property rights. As economists Gerhard Mackenroth and Paul Samuelson noted, in reality no direct intertemporal intra-personal links can be established.

Simply put, short of Robinson Crusoe's solutions such as stockpiling, there cannot be any intertemporal reallocations between one single person's selves over their lifetime without making inter-age group transactions. In Barr's words, the piggy bank has to operate cross-sectionally, by exchanging one's current production for a claim on future production by younger generations - either by saving to

accumulate assets to be sold later to younger generations, or by obtaining a 'promise' of a share of future production. The particular solution offered by welfare states uses taxes and promises to exploit the fact that at any given time, people who have been born in different years live together in the same society. There are always 'resource productive' people (typically working-aged) who can finance transfers downward to children and upward to the elderly.

In other words, the welfare state solves the endemic problem of lifecycle consumption smoothing by arranging resource reallocations between age groups in cross-section. We have therefore reconceptualized the piggy bank function accordingly, to assess its importance relative to the Robin Hood function. In Vanhuyse et al. (2021), we present a first-ever analysis of the joint distribution of socio-economic status, age and (a) all cash and in-kind benefits, (b) financing contributions ('taxes'), and (c) resulting 'net benefits' (benefits minus taxes), for over 400,000 Europeans from 22 EU countries in 2010.

## The piggy bank dwarfs Robin Hood in Europe

---

We show that European welfare states, which are often maligned as ineffective Robin Hood vehicles that serve the middle class more than the poor, are better characterized as inter-age redistribution machines performing a more important task rather well: lifecycle consumption smoothing. Regarding benefits, age is much more important in explaining access; status is nearly irrelevant here. Regarding taxes, age and class are both important, but age still explains somewhat more of the variance. As for the fullest picture - net benefits - age is again much more important, accounting for 78 percent of the variance explained by both variables (Vanhuyse et al. 2021).

Figure 1 shows our results for net welfare benefits. The relief map of net welfare benefits resembles a canyon with a river flowing downstream toward the reader: the right riverbank is on Fig 1's left, and vice versa. The river has steep left and right riverbanks (older and younger ages respectively). It flows underground, where it becomes yet steeper. More than anything else welfare states are piggy banks in cross-section. Age dwarfs SES. In each SES category, the oldest age group receives most net benefits (and the second oldest gets the second-largest sum except for the highest SES group). Once below ground, the river turns fast into a waterfall that cascades steeply among the middle-aged higher SES groups. All age groups below 18 and

all age groups above 63 are net welfare recipients in every SES category. In net terms, European welfare states are progressive. In the lowest status category, all age groups are net beneficiaries. The lowest status decile is the highest net beneficiary in all age groups between 10 and 62.

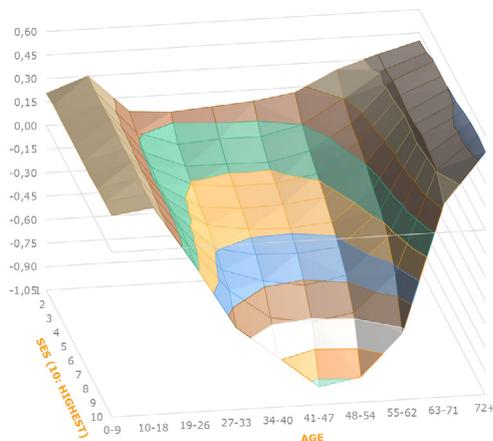


Fig 1. Per capita net welfare benefits (benefits minus taxes) by age and SES in the European Union. (Vanhuysse et al, 2021)

Our analyses confirm that European welfare states function primarily as piggy banks in cross-section. They serve as a channel through which working-age people of higher status support people of inactive age across all SES groups. Only the taxation arm is strongly progressive, and even here, redistribution across age groups is more important.

All in all, European welfare states primarily serve as a channel through which working-age people (especially those of higher status) support younger and older people in inactive ages (across all SES groups). Empirically, they are neither primarily nor solely responsible for poverty relief and inequality reduction.

## Implications: how we (should) understand and re-evaluate social policies

### Implication 1: The case for giving welfare states a break

A typical key yardstick for judging how successful European welfare states are has been their effectiveness in reducing poverty and inequality. It has become routine for OECD, World Bank and national governments to measure the distributional effects of welfare programs by income. Higher-SES groups are often found to receive as much or more than lower-SES groups – ‘not-only-the-poor’ paradoxes or ‘Matthew effects,’ which may be hard to eradicate. But our

observation that welfare states are neither primarily nor solely responsible for poverty relief and income equalization should deflect some of the mistargeting and ineffectiveness blame leveled at them. They perform a more important task rather well: lifecycle consumption smoothing.

### Implication 2: The case for modeling how population composition and non-social policies affect inequality

Well-meaning policies to reduce poverty or inequality in cross-section might lead to significant inter-cohort inequalities (cfr. Chauvel and Schröder 2014). Inequality measured in cross-section is always, in part, the result of age-specific, hump-shaped, productivity. Hence, differences in the age composition of society affect cross-sectional inequality irrespective of how welfare states operate. Consider two countries A and B, with equal-sized populations and identical welfare states. If A has larger birth cohorts 4 (say, early-career workers) and 7 (say, peak-earners) than B, A will have larger inequality. ‘Strategy of equality’ in A today might then tax cohort 7 to transfer to cohort 4, thereby reducing cross-sectional inequality. Yet this strategy would lead to larger inter-cohort inequalities in A from tomorrow, as cohort 7, now ‘naturally’ earning less, would also have concomitantly fewer resources saved up for its own old age. Meanwhile, cohort 4, having received extra transfers in the previous period, would now be earning more because of the hump-shaped curve.

The observation that European welfare states, first and foremost, are not Robin Hoods but rather lifecycle redistribution machines (piggy banks) does not imply that public policies should not be used for inequality reduction. Rather, other forms of government activity - non-social policies - could also be implemented. For example, road-construction and other infrastructure projects strongly impact equality, as do safety regulations, air pollution standards, monetary and exchange rate policy and carbon taxes. Since social policies primarily operate as an inter-age reallocation system, they should not be singled out as the sole institution to shoulder the blame for imperfectly alleviating poverty and mitigating inequality. If such goals are deemed socially worthy, non-social policies could also be judged according to the same yardstick.

### Implication 3: The case for reinterpreting welfare states more explicitly along age lines

Our findings point to the need to reinterpret what welfare states mostly do. For many, welfare states are viewed as the primary remedy of poverty and inequality reduction. For others, they are a market-correcting institution and/or

make individuals less resource-dependent on their families. We do not take issue with these functions: welfare states have evolved for multiple reasons to perform multiple functions. But we do urge a shift in analytical focus. Welfare states should primarily be viewed as an institutional solution to a logically and historically prior problem: the fundamental lifecycle consumption financing problem.

All societies need to solve this problem. Welfare societies solve it through the inter-age-group resource transfers. European welfare societies engage in a division of labor: they are 'pro-elderly welfare states within child-oriented societies' (Gál et al. 2018); societies which implicitly burden parents rather heavily (Gál et al. 2020). Societies elsewhere solve the same problem otherwise. Contemporary tax burdens on working-age people are unsurprisingly much higher in 'statist' Sweden compared to 'familialist' Taiwan. But: the combined weight of net public and net private transfers is nearly identical in both countries (Vanhuysse & Gál 2021).

#### **Implication 4: The case for a political economy of time and the generations**

European welfare states solve the problem of lifecycle consumption smoothing by sequentially sidestepping the future. But the shadow of the future looms large, in the form of ever-contingent power balances between successive generations over time. Younger generations must eternally follow older generations – and be willing, politically, to finance the latter's consumption. At a fundamental level therefore, lifecycle consumption financing depends on how successive cohorts of voters use their relative bargaining power. We need political theories of intergenerational relations (Goerres & Vanhuysse 2021). Policy research should conceptualize intergenerational justice more consistently in terms of inter-cohort resource equity and policy sustainability. Theoretical research could fruitfully model the forward and backward linkages that bind overlapping cohorts. For a clearer understanding of the cross-sectional operation of the piggy bank leads to a more urgent focus on time and the generations.

## **Policy Recommendations**

1. Non-social policies could also be judged according to how much they help achieve inequality and poverty reduction.
2. Welfare states should be viewed first and foremost as institutional solutions to the lifecycle consumption fi-

ancing problem.

3. Achieving political sustainability is key: younger generations must remain willing to finance older generations' consumption. ■

---

### **References**

- Vanhuysse Pieter, Medgyesi Marton, & Gál Robert Ivan (2021) [Welfare states as lifecycle redistribution machines: Decomposing the roles of age and socio-economic status shows that European tax-and-benefit systems primarily redistribute across age groups](https://doi.org/10.1371/journal.pone.0255760). PLoS ONE 16(8): e0255760. <https://doi.org/10.1371/journal.pone.0255760>

---

### **Further readings**

- Gál R.I., Medgyesi M., Vanhuysse P. The transfer cost of parenthood in Europe. Berkeley: NTA Working Papers 20-1; 2020.
- Gál R.I., Vanhuysse P., Vargha L. Pro-elderly welfare states within child-oriented societies. *Journal of European Public Policy*. 2018;25(6):944–958.
- Goerres A., Vanhuysse P., eds. *Global Political Demography*. Palgrave Macmillan, 2021.
- Vanhuysse P., Gál R.I.. *Intergenerational Resource Transfers as the Cement of Society*. In: Daly M, Pfau-Effinger B, Gilbert N, Besharov D, eds. *International Handbook of Family Policy*. Oxford University Press; 2021.

---

### **Imprint**

**Authors:** Pieter Vanhuysse (Department of Politics & Danish Institute for Advanced Study, University of Southern Denmark), Márton Medgyesi (Corvinus Institute for Advanced Studies & Child Opportunities Research Group) and Róbert I. Gál (Corvinus Institute for Advanced Studies & Hungarian Demographic Research Institute, Budapest; Department of Politics, University of Southern Denmark)

**Publisher:** Max Planck Society for the Advancement of Science on behalf of the collaborative network "Population Europe"

**Technical Coordination:** Mahalia Thomas

**Layout:** Karen Olze / Judith Miller / Produkt und Grafik Design

**Photo Credit (Cover Page):** iStock

**ISSN:** 2512-6164

**Contact:** Population Europe Secretariat, Markgrafenstraße 37, 10117 Berlin, Germany

**Phone:** +49 (0)30 2061 383 30

**Email:** office@population-europe.eu

**Web:** www.population-europe.eu

The opinions of the authors do not necessarily reflect those held by the publisher or the editorial office. Reprints of any part of the articles are permitted as long as the original authors and publishers are given credit. Please provide us with a specimen copy.