Progressive Sovereign Wealth Funds

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Abstract

The current downward trend of the labor share threatens to lead to a polarization of personal incomes. This paper porposes a novel instrument to reduce that threat: a sovereign wealth fund that mainly invests in the world stock market and whose gains are earmarked to a social dividend. A simple overlapping generation model with heterogeneous agents is developed in which the government uses public debt to finance the endowment of such a fund. If this institution is politically independent and devoted to its mission, a Pareto improvement is obtained; its socially optimal size is determined according to a formula that can be empirically implemented. In its final part, the paper compares this policy with one of promoting popular capitalism.

JEL-Classification: H1.

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1 Introduction

During the three decades that followed World War II, income inequality in western advanced economies was stable or declining. Comprehensive wage negotiations and a progressive system of taxes and transfers contributed to achieve that outcome. In those times, little could be gained in terms of equality by having some public ownership of capital. Today, the situation is different. Income inequality is significantly higher than in those decades and there are no signs that it will spontaneously revert to its former level. Time has come to reconsider the potential role of public ownership of capital as a redistributive tool. I contend that for some countries there is a strong case for the following type of public ownership: a mainly debt-financed sovereign wealth fund (SWF) that mainly invests in the world stock market, without achieving control of the participated companies, and rebates its net returns to the citizenry by means of a social dividend. I call it a "progressive SWF". This institution would make every citizen share in the high rates of return from capital investment that come along with globalization and automation. Being tied to capital incomes that are predicted to grow more rapidly than labor incomes, the social dividend provided by a progressive SWF would generate a lasting reduction of poverty and inequality. The aim of this paper is to spell out this policy and scrutinize its ramifications within a simple overlapping generation model.[1]

Four observations motivate the policy analysis developed in this paper. First, in many countries the labor share in national income trends downwards, thereby increasing the potential redistributive effect that could arise from public ownership of capital (Karabarbounis and Neiman, 2014; Autor et al., 2017; Barkai, 2017; Dao et al., 2017; vom Lehm, 2018). The ongoing robot revolution is likely to push forward this shift in the functional

[1] Related proposals have been formulated by Meade (1984), Atkinson (2015), and Corneo (2018a). The idea that the government should acquire ownership of some commercial assets and the ensuing returns, net of costs of finance, should be used to improve the equity/efficiency trade-off, is an old one that goes back to Gossen (1927, originally published in 1854) and Walras (1880-1881). A state-of-the-art theoretical justification for the comparative advantage of the government as a creditor and provider of liquidity is offered by Holmström and Tirole (1998).

distribution of income, possibly to a dramatic extent (Berg et al., 2017; Dauth et al., 2017; Mookherjee and Ray, 2020).

Second, younger cohorts of workers face a substantially more unequal distribution of lifetime earnings than their predecessors. This divergence is accompanied by an absolute decrease of the lifetime earnings of the bottom quartile of the lifetime earnings distribution of men, as documented for countries like the US (Guvenen et al., 2017) and Germany (Bönke et al., 2015). The ongoing robot revolution is likely to worsen also this trend (Acemoglu and Restrepo, 2017; Prettner and Strulik, 2017).

Third, trade union membership has been strongly declining in the private sector over the last three decades in most advanced economies; union coverage of wages has similarly declined and collective wage bargaining, where it still occurs, has increasingly been decentralized to the firm level. It is difficult to imagine that these trends could be reversed any soon. They were driven by structural economic changes and an erosion of the social norms that prompt individuals to join a trade union (Corneo, 1995; Goerke and Pannenberg, 2005).[2]

Fourth, as cautioned e.g. by Stiglitz (2015), capital taxes pose a number of issues in terms of incentives and shifting via general-equilibrium effects, making workers carry some of the burden of capital taxation through lower wages and/or higher prices for consumption goods. It seems fair to say that we cannot predict with sufficient confidence the consequences of large increases in capital taxes.[3] Moreover, international tax competition

[2]Even with some redressing of the bargaining power of unions, one would not have improved the situation of the workers in non-unionized firms and sectors. In countries like Germany, a stronger bargaining power of unions would actually deepen the current dual structure of labor markets: higher wages in the unionized sector decrease labor demand in this sector and thus increase the supply of workers to the non-unionized sector, which tends to decrease wages there. If the unionized sector pays higher wages to begin with, this tends to increase wage inequality.

[3]Empirical simulations of the Laffer curve of capital taxation by Trabandt and Uhlig (2011) suggest that unintended consequences of raising capital taxes are likely, unless the tax increase is moderate. Fuest et al. (2018) find that about half of the corporate tax is borne by workers, in particular the low-skilled. Personal wealth taxes and taxes on wealth returns are often avoided or evaded by the wealthiest households, e.g. using offshore investment schemes; Alstadsaeter et al. (2017) find that in Scandinavia 3% of such personal taxes are evaded on average, but this share raises to 25%-30% in case of the top 0.01% of the wealth distribution.

with respect to highly mobile capital and top earners is unlikely to get softer any soon, making it unlikely that tax progressivity will reduce the inequality of secondary incomes.

Against this background, I propose to enhance the role of public ownership of capital by mainly using public debt to establish a SWF that invests in risky assets, mainly stocks, and whose net returns are distributed to citizens through a social dividend - a monthly or quarterly universal transfer payment. The SWF of a triple-A country could borrow at a long-term interest rate close to zero and expect to earn an annual rate of return on its investment close to 7%.[4] Also countries with a somewhat inferior financial reputation would expect to gain from such a policy.[5]

Do countries with strong public finances therefore face a genuine free lunch? If all households optimize and trade on a complete set of perfectly competitive markets, the first welfare theorem tells you that there is no free lunch. More precisely, the above described policy will have no effect whatsoever. The reason is akin to the one for the Ricardian equivalence of public debt and taxation as alternative means to finance a given public expenditure (Barro, 1974; Stiglitz, 1988). If the government borrows, buys stocks, and rebates its net return to the households as a lump sum, the latter would take the budgetary effects of this policy into account in their asset management decisions. This would entail a reduction of their net demand for stocks so as to exactly offset the purchase of stocks made by the government. Eventually, nothing in the risk profile of the total portfolios of households – including their implicit share in the government's portfolio - would change, and the government's policy would be neutral with respect to their consumption opportunities. Despite the government cashing-in the equity risk premium, the households' expected utilities would be wholly unaffected.

The intuition behind this irrelevance result is simple. By rebating the equity risk pre-

[4] See e.g. Daly (2016). This is in line with historical evidence on the equity risk premium surveyed by Mehra and Prescott (2008) and can be reconciled with results from a battery of estimation models, as shown by Duarte and Rosa (2015).

[5] In the wake of the coronavirus crisis, many governments are providing loans, loan guarantees, and equity capital to companies; similar measures are being taken by the European Investment Bank. The assets that come in public hands could gradually be used to establish progressive SWFs.

mium to the households, the government acts as their representative when it swaps debt for stocks in the capital market. Since markets are perfect by assumption, it undertakes something that could have been undertaken by the households as well, and the consequences of its undertaking are borne entirely by them. Since private households optimize, there is no way in which they can benefit from this policy.

Ricardian equivalence requires heroic assumptions on market structure and agents' rationality. Empirical research in household finance has put forward various robust findings that clash with them. A prominent one is the "participation puzzle": even in economies with highly developed financial markets, many households do not invest in stocks and other risky assets despite their high mean return. This is a puzzle because risk aversion is a second-order phenomenon in mathematical terms, so that even strongly risk-averse agents with a low level of wealth are expected to invest in risky assets if they optimize. The resolution of this puzzle involves pecuniary and cognitive costs of participating in markets for risky assets. These costs create an insider/outsider divide such that individuals with low education and low income are especially unlikely to access those markets.

The optimization assumption needed for the irrelevance result might be an appropriate one for a few households, typically in the upper part of the income distribution. For a substantial part of the population, actual behaviour is better described by the passive hand-to-mouth agents put forward e.g. by Mankiw (2000). I will therefore develop an overlapping generation model with two types of representative agents: optimizers and hand-to-mouth. My model builds upon Diamond and Geanakoplos (2003) and features a stationary stochastic economy with a pay-as-you-go social security that provides an old-age income to the hand-to-mouth agents. The latter are also referred to as "workers", while the former are called "savers"; both types are assumed to be risk-averse. The savers purchase a safe asset and a risky one. These financial assets are backed by two technologies that respectively produce safe and risky output. Competitive markets determine all relative prices. Within this model, I investigate the effects of creating a SWF that in

every period emits safe debt, uses the proceeds to acquire the risky asset, and rebates its net return uniformly to all households that are alive in that period. In such a model, the kind of Ricardian equivalence described above does not hold. If the SWF is politically independent and devoted to its mission, its creation turns out to increase the expected lifetime utility of all agents.

This is a strong result because it says that public ownership of capital can increase the lifetime welfare of the workers without reducing the lifetime welfare of the savers. More precisely, almost all savers are made strictly better-off by the SWF. Hence, this policy does not require efficiency to be sacrificed for more equality: it promotes both. The main intuition for the Pareto gain due to the SWF relates to the participation puzzle. In the status-quo, the workers bear no financial risk but, as long as the equity premium is positive, would benefit from undertaking some. This is precisely what is brought about through the establishment of a progressive SWF. Such a policy delivers a genuine free lunch because it reduces the initial inefficiency in the asset allocation of the economy by moving the level of risk-taking closer to the optimal one.

An important qualification concerns the need for some accompanying capital taxation. If the interest rate on the safe asset is not pinned down by the technology – as in my baseline model – but is determined in financial markets, emitting public debt to acquire stocks may lead to an increase of the interest rate. This in turn has the effect of increasing the cost of refinancing the initial public debt, which must ultimately be matched by an increase of the primary surplus of the government. The necessity to raise taxes threatens to kill the Pareto-improvement result. I show that a capital tax equal to the gain in interest income reaped by the savers covers the gap in the government budget and preserves the Pareto improvement.

Before presenting the formal analysis in section 3, the next section summarizes the literature in household finance that documents the extent to which households hold inefficient portfolios. Section 3 develops the baseline model, and section 4 extends it in various

directions. Section 5 puts forward some institutional requirements for such a fund in order to accomplish its mission and some options that come along with its creation. The final section 6 contrasts my policy proposal with the one of popular capitalism, the main alternative proposal in order to mitigate the inegalitarian consequences of the decline of the labor share.

2 Households and the stock market

A robust empirical finding in the literature on household finance is the violation of the participation principle: even in economies with highly developed financial markets, many households do not invest in stocks and other risky assets despite their high mean return. Furthermore, participation is strongly positively correlated with household wealth. In the US, only a minority of households in the bottom half of the wealth distribution owns public equity (Campbell, 2018). Participation in the stock market is even lower in most other countries. In Germany, for example, only about one fifth of the household population owns stocks, either directly or indirectly through mutual funds and retirement accounts (DAI, 2016; Deutsche Bundesbank, 2016).

Another robust finding in the literature on household finance is the violation of the diversification principle: among the households who do invest in stocks, many hold just a few of them. These households earn a return which is too low, given the high financial risk they bear. Underdiversification is a stylized fact of household finance across the world (Guiso and Sodini, 2013). For the US, Polkovnichenko (2005) finds that the median number of stocks held by households who invest in individual stocks is two or three, depending on the year. Poor diversification is often attributable to investments in employer stock, i.e. stock of the company in which the person is employed. As shown e.g. by Dimmock et al. (2014), lack of diversification typically takes the form of a bias toward a few familiar assets.

These departures from normative portfolio theory imply that the observed patterns

of household finance behavior generate lasting effects on inequality and welfare. Using Norway's administrative tax records, Fagereng et al. (2020) document that portfolio returns are positively correlated with wealth and that returns are heterogeneous even within narrow asset classes. Results with a similar flavor are exhibited by Bach et al. (2015) for Sweden. As shown in theoretical models, such heterogeneity in returns can produce over time a large amount of wealth inequality and is paramount in order to understand the long right tail in the wealth distribution (Benhabib et al., 2011; Lusardi et al., 2017). Using Swedish administrative data, Calvet et al. (2007) empirically estimate the risk properties of household portfolios and find that underdiversification has a clear negative effect on the welfare of the median Swedish household. However, there is a wide variation in efficiency losses across households. Importantly, they find that non-participating households would likely be poor investors in the stock market, earning considerably less than the financially sophisticated households. Similar findings for Austria, Belgium, Germany, Ireland, and Spain are obtained by Wenzel and König (2019). In the static, partial-equilibrium, model that underlies these last two papers the average welfare costs arising from undiversified portfolios are relatively modest. Bhamra and Uppal (2020) extend that framework to a dynamic general-equilibrium model and find that taking the intertemporal general-equilibrium effects into account substantially amplifies the welfare loss from suboptimal household portfolio management; conversely, lifetime welfare would hugely increase if wealth were efficiently invested.

What explains the limited participation of households in the stock market and the underdiversification of their portfolios? Mankiw und Zeldes (1991), Haliassos und Bertaut (1995), and Vissing-Jorgensen (2004), among others, have put forward fixed participation costs as the main factor explaining why so many households do not hold equities. These participation costs are not limited to the time and money that must be spent in order to invest in the stock market. They include cognitive costs involved in making financial choices. Consistent with this view, Campbell (2006) and Calvet et al. (2007) find that

stock market participation correlates with education even after controlling for age, income and wealth; Christelis et al. (2010) find a similar correlation with the ability to perform numerical calculations; Grinblatt et al. (2011) find a similar correlation with IQ. Andersen und Nielsen (2011) and Das et al. (2017) find that such cognitive costs are indeed the main barrier to participation. Chetty et al. (2014), exploiting a rich dataset from Denmark, conclude that about 85% of individuals are passive savers who systematically fail to optimize their portfolios. Jappelli und Padula (2013) and Lusardi et al. (2017) develop models where fixed participation costs keep households with low wealth and human capital out of the stock market.

Cognitive costs may be viewed as the counterpart of the limited cognitive equipment that enables man to make decisions, very much in the tradition of the older literature on procedural rationality and satisficing behavior (Simon, 1976). Cognitive costs may also be viewed as resulting from personal attempts to avoid two behavioral patterns that have been extensively documented in the experimental literature: loss aversion and narrow framing (Barberis et al., 2006). According to the first one, individual decisions are much more sensitive to losses from the status-quo than to gains of the same magnitude; according to the second one, individuals tend to fail to consider the effect of a gamble on their overall consumption opportunities and focus instead on the gamble in isolation. Individuals affected by both loss aversion and narrow framing are therefore likely to keep away from stocks. A third kind of cognitive costs is the fear of being cheated by the asset management industry. Pointing to the high asset management fees that households pay for poorly performing funds, Malkiel (2013, p.98) stresses that "... perhaps the greatest inefficiency in the stock market is in "the market" for investment advice". Consistent with this view, Guiso et al. (2008) find that households that express reluctance to trust others are less likely to own stocks.

Limited cognitive skills can also explain why many stockholders hold an undiversified portfolio. Barberis and Huang (2001) put forward the loss aversion/narrow framing

approach, surmising that many people frame individual stocks narrowly. As mentioned above, underdiversification often means that households tilt their portfolio toward a few stocks that are geographically and professionally close to the household. Bhamra and Uppal (2020) conceptualize familiarity via ambiguity. They posit that households have heterogeneous knowledge about the expected returns of firms whose stock is traded; the more a household lacks knowledge about the true expected returns of a stock, the more it reduces the magnitude of that stock's subjectively expected risk premium.

3 A stylized model economy with a SWF

The model in this section captures the finding discussed above in a stylized fashion, assuming that for a share of the household population participation costs are so large that it is completely passive with respect to finance. This modeling option is the same as in Diamond und Geanakoplos (2003), from which I also borrow many of their model's assumptions.[6]

There is a stationary, infinitely-lived, stochastic, closed economy with overlapping generations and a population of mass one. Every individual lives and consumes in two periods and inelasticaly supplies one unit of labor in the first period only. Each generation has two types of individuals: optimizers and financially passive ones. Optimizers are standard neoclassical agents and are also called "savers". The financially passive individuals are mandatorily members of a pay-as-you-go social security to which they pay contributions when young and receive a pension when old. In each period they consume their entire disposable income, i.e. they are hand-to-mouth agents. I call these individuals "workers". Both types are assumed to be risk-averse.

There is one perishable good, produced by a competitive industry. This good can be either consumed or invested, in which case it delivers some amount of output in the

[6] That model is used also in Corneo (2018b). The current paper nests the analysis in that paper and extends it in two main respects. First, it offers a derivation of a formula to determine the optimal size of the fund. Second, it analyzes the case of intergenerational risk sharing.

subsequent period. Firms in which investment take place have access to two technologies: a safe one and a risky one. One unit of the good invested in the safe technology always yields $1+r$ units of the good one period ahead. The unit return of the risky investment is denoted by R; it randomly changes over time and the per-period returns are i.i.d., making the economy a stochastic and stationary one. In the model of this section, both safe and risky returns are exogenously given by some underlying linear technologies.

The status-quo is a stationary general equilibrium in which both technologies are used. Investment in the safe technology is financed by means of safe assets, called "obligations". Risky investment is financed by means of risky assets called "stocks". Parameters are assumed to be such that in the status-quo savers optimally buy both types of assets when they are young.

The main goal of the subsequent analysis is to evaluate a permanent change in the general equilibrium that is caused by the creation of a small debt-financed SWF that invests in the risky asset and whose per-period return is rebated to the household sector as a social dividend, after subtracting its financial costs.

Consider the per-period budget constraints of a representative worker. When young, her budget constraint reads

$$c_1 = w - t^s + \delta_1, \tag{1}$$

where w denotes the wage, t^s is the social-security contribution and δ stands for the social dividend - which is zero in the status-quo. When old, a worker's consumption is given by

$$c_2 = y + \delta_2,$$

where y denotes the social security benefit.

Consider now the savers. When young, a saver's consumption is given by

$$C_1 = W + \delta_1 - K^s - K^u - B. \tag{2}$$

Here, W denotes earnings, K^s safe obligations and K^u risky stocks. In the baseline model there is no pre-existing public debt and these are the only assets available. Once the government emits debt in order to endow the SWF, the savers can also invest in safe government bonds and their investment is denoted by B. Consumption of savers when old is then given by

$$C_2 = (1 + r)(B + K^s) + R_1 K^u + \delta_2. \tag{3}$$

Here, I have already taken the equilibrium condition into account that bonds must offer the same return as obligations because they are identically safe.

Because of stationarity, the budget constraint of social security is

$$y = t^s.$$

The budget constraint of the SWF reads,

$$R_{-1} K^f - K^f = \delta + rD. \tag{4}$$

On the LHS you find the per-period return of the SWF, where K^f denotes the amount of stocks owned by the SWF at the beginning of each period after its creation and its gross return is made on the amount invested at the end of the previous period. The fund's return is used to finance the social dividend δ and to pay for the interest rate on the incurred debt, D. In the status-quo there is no SWF, i.e.

$$K^f = D = 0,$$

and no social dividend, while ex-post you have

$$K^f = D = dK^f > 0$$

for all future periods. Notice that because of the perishability of the good, the new stationary equilibriurm is reached just after one period.

Proposition: *The creation of a progressive SWF leads to an ex-ante Pareto improvement.*

Proof:

A worker's expected utility is given by

$$E[u_1(c_1) + u_2(c_2)] = E[u_1(w - t^s + \delta_1)] + E[u_2(y + \delta_2)], \tag{5}$$

with $u_1' > 0 > u_1''$ and $u_2' > 0 > u_2''$. Using (4) to substitute out the social dividend yields

$$E[u_1(c_1) + u_2(c_2)] = E[u_1(w - t^s + R_0K^f - K^f - rD)] + E[u_2(y + R_1K^f - K^f - rD)].$$

To evaluate the effect from the SWF, use $D = K^f$ and differentiate with respect to K^f to obtain

$$d\{E[u_1(c_1) + u_2(c_2)]\} = E[u_1'(c_1)(R_0 - 1 - r)]dK^f + E[u_2'(c_2)(R_1 - 1 - r)]dK^f.$$

At $K^f = 0$ both c_1 and c_2 are deterministic; hence, evaluating the change from the status-quo gives:

$$d\{E[u_1(c_1) + u_2(c_2)]\}|_{K^f=0} = \{u_1'(c_1)E[R_0 - 1 - r] + u_2'(c_2)E[R_1 - 1 - r]\}dK^f.$$

The RHS is positive if $E[R_t] > 1 + r$ for every period $t = 0, 1....$ To show that this is

indeed the case, switch to the savers who in the status-quo purchase both types of assets when young. This means that the following FOCs must be satisfied:

$$U_1'(C_1) = E[U_2'(C_2)(1+r)] = E[U_2'(C_2)R_1], \tag{6}$$

with obvious notation. Rewrite the last equation as

$$(1+r)E[U_2'(C_2)] = Cov[U_2'(C_2), R_1] + E[U_2'(C_2)]E[R_1], \tag{7}$$

which implies,

$$E[R_1] = 1 + r - \frac{Cov[U_2'(C_2), R_1]}{E[U_2'(C_2)]}.$$

Because of (3), C_2 and R_1 are positively correlated; because of $U_2'' < 0$, it must be the case that $Cov[U_2'(C_2), R_1] < 0$, which implies $E[R_1] > 1 + r$. This holds true for every period. Therefore, the SWF increases the expected utilities of all workers.

Consider now the expected utility of savers:

$$\begin{aligned} E[U_1(C_1) + U_2(C_2)] &= E[U_1(W + (R_0 - 1 - r)K^f - B - K^s - K^u)] + \\ &\quad + E[U_2((1+r)(B + K^s) + R_1 K^u + (R_1 - 1 - r)K^f)]. \end{aligned}$$

Let us denote their optimal portfolio in the status-quo by (B^*, K^{s*}, K^{u*}), with $K^{s*} > 0$ and $K^{u*} > 0$. Once the SWF is established ($K^f = dK^f > 0$), the young savers must absorb in equilibrium the corresponding government bonds. This requires:

$$\left(\frac{1-m}{2}\right) dB^* = dK^f,$$

where m denotes the share of workers within each generation.

Consider the following feasible portfolio adjustment for the savers in the wake of

the creation of the SWF: when young they purchase less stocks than in the status-quo by the same amount as the new per-capita endowment of the SWF: $dK^{u*} = -dK^f$. Furthermore, they buy government bonds as required to clear the market and they reduce their investment in obligations so as to keep the same level of savings as in the status-quo, i.e. $dK^{s*} = -(1+m)dK^f/(1-m)$. This portfolio adjustment offsets completely the effects from the SWF on the second-period consumption of the savers. Although such a feasible adjustment will not in general be optimal, it is sufficient to increase the expected utility of the savers; it namely implies that their expected utility equals

$$E[U_1(C_1^* + (R_0 - 1 - r)K^f) + U_2(C_2^*)], \tag{8}$$

where (C_1^*, C_2^*) denotes the optimal consumption path in the status-quo. Starting from the status-quo, the change in the expected utility of a saver is then

$$d\{E[U_1(C_1) + U_2(C_2)]\}|_{K^f=0} = U_1'(C_1^*)E[(R_0 - 1 - r)]dK^f, \tag{9}$$

where use is made of the fact that the status-quo consumption of the young is deterministic, see Eq. (2). As shown above, $E[R_t] > 1 + r$, $\forall t$, whence the change in expected utility is strictly positive.

There exists a unique generation that is old when the SWF is created. Differently from the generations considered above, this one does not receive a social dividend in its youth. For the workers in this generation, the welfare change produced by the SWF is given by:

$$d\{E[u_1(c_1) + u_2(c_2)]\}|_{K^f=0} = u_2'(c_2)E[R_1 - 1 - r]dK^f > 0.$$

For the savers it was already shown above that they can adjust their portfolio so as to completely offset any effect of the SWF on their consumption C_2^* so as to reach the same expected utility as in the status-quo. QED

The intuition for this result is closely related to the participation puzzle. In the status-quo, the workers' intertemporal consumption profile is determined by the pay-as-you-go pension system and workers bear no financial risk. As long as the equity risk premium is strictly positive – which must be the case because the risk-averse savers optimally demand stocks in the status-quo – workers benefit from undertaking some financial risk. This is precisely what is brought about through the establishment of the SWF. Such a policy delivers a real free lunch - in terms of expected utilities – because it reduces the initial inefficiency in the asset allocation of the economy by moving the level of risk-taking closer to the optimal one.

This policy generates a strict Pareto gain, i.e. not only the passive workers benefit from it but also the optimizing savers. The reason for the latter effect is that even savers cannot optimally undertake risk in their first period of life because this would have required them to enter financial contracts before they were born. Since agents cannot trade risk in financial markets that open before they are born, the first welfare theorem fails and the SWF can make also those agents better-off by trading on their behalf (Farmer et al., 2012). The generation of savers who is already old when the SWF is introduced simply offsets this policy in the Ricardian way and is made neither better-off nor worse-off by that policy. All later saver generations gain strictly.

On the production side, the creation of the SWF increases expected output by shifting investment into the more productive risky technology. This can easily be seen for the first period of the SWF, when the savers adjust their portfolio so as to keep their saving constant. Since the government bonds they purchase are equal to the amount invested by the SWF, aggregate investment is constant. However, its composition changes because investment in the risky technology increases by

$$\left[1-\left(\frac{1-m}{2}\right)\right]dK^f=\left(\frac{1+m}{2}\right)dK^f>0.$$

Since $E[R]>1+r$, this investment shift increases expected output. In the subsequent

periods, the output effect is even stronger because savers have in expectation a higher expected income when young and thus invest more if consumption is a normal good.

Having shown the economic rationale for the proposed SWF, I now address the question of its optimal size. Clearly, the baseline model cannot deliver a precise answer to this question. However, it can help to get a feeling for the involved orders of magnitude. So, consider a straightforward generalization in which you keep the same stationary environment as before but define periods to be years and posit that every individual lives T years, so that in every year there are T birth-year cohorts alive. I posit that the government treats them equally and chooses the size of the SWF – i.e. how much to borrow in order to buy stocks – so as to maximize the expected utility of workers, i.e.

$$\max \sum_{\tau=1}^{T} \beta^{\tau-1} E[u(c_t)].$$

This may be the objective of a Rawlsian planner; alternatively it would be the approximate objective of a utilitarian planner if T is large enough - because in that case the welfare effect of the SWF on the savers is small as they tend to behave like Ricardian agents. Finally, assume for simplicity that the pay-as-you-go system is geared so as to provide workers in the status-quo with a constant level of consumption equal to y in every year.[7] Then, the planner's problem is to find a time-invariant value K^f for the SWF such that

$$\sum_{\tau=1}^{T} \beta^{\tau-1} E[u(y + (R_{t-1} - 1 - r)K^f)]$$

reaches a maximum. The FOC of this problem reads

$$\sum_{\tau=1}^{T} \beta^{\tau-1} E[(R_{t-1} - 1 - r)u'(y + (R_{t-1} - 1 - r)K^{f*})] = 0$$

[7] As shown by Bönke et al. (2020) using income biographies covering entire lifetimes in Germany, such an assumption is a fairly accurate description of what occurs in the bottom half of the distribution of lifetime incomes.

and the SOC is satisfied. Suppose that the root K^{f*} of this equation is such that one term in the sum is strictly negative: since all expectation terms have the same value because of stationarity, also the sum would necessarily be strictly negative, which contradicts the assumption that such a K^{f*} is the root of that equation. The same impossibility arises in the case of a strictly positive term. Hence, the optimal K^{f*} must be such that

$$E[(R-1-r)u'(y+(R-1-r)K^{f*})] = 0.$$

This implies that

$$\begin{aligned} K^{f*} &= \arg\max E[u(c)] \\ & \quad s.t. \qquad c = y + (R-1-r)K^f. \end{aligned}$$

This problem can be transformed into a familiar one by means of two changes of variables. First, introduce a new variable $\omega \equiv y/(1+r)$ and, second, express the per-capita endowment as $K^f = \alpha\omega$, so that α becomes the new control variable of the planner. Substituting out y and K^f for ω from the constraint above yields

$$c = [1 + (1-\alpha)r + \alpha(R-1)]\,\omega.$$

Choosing α to maximize $E[u(c)]$ subject to this budget constraint is thus formally equivalent to selecting the optimal share of some initial wealth ω that an agent should invest in the risky asset.

This problem can be solved if one assumes that the utility function is given by a CRRA specification and the rate of return of the risky asset, $R-1$, is lognormally distributed (see e.g. Campbell, 2018). The optimal α is then given by:

$$\alpha^* = \frac{E[R] - 1 - r}{\rho\sigma^2}, \tag{10}$$

where ρ is the coefficient of relative risk aversion and σ is the standard deviation of the log of stock returns. The solution of the original problem is thus given by

$$K^{f*} = \frac{\alpha^* y}{1 + r}, \tag{11}$$

and the optimal size of the SWF as a percentage of GDP is

$$s^* = \frac{K^{f*}}{\overline{GDP}}, \tag{12}$$

where $\overline{GDP}$ denotes per-capita GDP. Let ψ denote the ratio of the income of a worker to average income and let γ denote the ratio of national income to GDP. Using these definitions and inserting (11) into (12) yields

$$s^* = \frac{\psi\gamma\alpha^*}{1 + r}, \tag{13}$$

which, along with (10), gives a closed-form solution for the optimal size of the SWF as a share of GDP.

Representative findings from the literature are $\rho = 1.5$ and $\sigma = 0.2$. Assume further that $E[R] = 1.07$ and $r = 0.01$. The ratio γ of national income to GDP is usually in a range between 3/4 and 4/5. The range of ψ that a social planner may consider could be between 1/2 and 2/3. Using these values, it turns out that s^* is in a range between 37% and 53%. Posit $s* = 1/2$; then, three percentage points of GDP can be spent on the social dividend. For a country like Germany, this would imply a social dividend of about 1,500 euros per person and year. Computations based on the German SOEP indicate that the poverty rate in Germany would be reduced by about a third.

4 Extensions

4.1 Wage risk

Suppose now that workers face a wage risk that cannot be fully insured against - neither through market transactions, nor through welfare-state arrangements and family ties (Chiu and Eeckhoudt, 2010; Wang and Gong, 2013). Then, differently from the basic model, the risk-taking that comes along with the creation of the SWF has a first-order effect on workers' expected utilities. If the wage is positively correlated with the return on the risky asset, the income risk of workers increases. If this effect outweighs the increase in expected income triggered by the SWF, workers' welfare is lowered by the creation of the SWF. If instead the wage is negatively correlated with the return on the risky asset, the SWF generates an additional insurance effect, and the positive effect from the creation of the SWF is strengthened.

Empirical studies for the US find that the low-frequency variation in the equity risk premium over time has been countercyclical (Mehra and Prescott, 2008; Bayer and Juessen, 2012). However, the earnings at the top percentile of the distribution tend to be positively correlated with stocks returns (Mankiw und Zeldes, 1991; Constantinides und Ghosh, 2017; Guvenen et al., 2017, online appendix). But these households at the top of the distribution are likely to correspond to the savers in my model; hence, they can offset the risk taken up by the SWF through a suitable adjustment of their portfolios in the Ricardian way.

In practice, a progressive SWF could invest in an internationally diversified portfolio that takes the domestic wage risk into account. This would lead the SWF to privilege investment in countries and sectors whose stocks returns are negatively correlated with the domestic wage income, so as to increase the positive welfare effect from its investments.

4.2 Endogenous interest rate

In the baseline model of section 3, the government has no debt in the status-quo. Suppose now that its status-quo level of debt is $G > 0$ and that in the stationary equilibrium the debt is rolled over so that in every period interest-rate payments rG must be covered by the government. Using obvious notation, the government's per-period budget constraint reads,

$$m\left(\frac{t_1+t_2}{2}\right)+(1-m)\left(\frac{T_1+T_2}{2}\right)=rG, \tag{14}$$

with tax revenue on its LHS. This extension is immaterial for the evaluation of the SWF because its financial costs, rD, were already taken into account by the determination of the social dividend, see Eq. (4), and the interest rate was pinned down by the productivity of the safe technology.

Suppose now that, in addition to having some pre-existing public debt G, the interest rate is endogenously determined in the bonds market - thus, no firm adopts the safe technology in the status-quo. The market for government bonds clears if

$$\left(\frac{1-m}{2}\right)B=G+D, \tag{15}$$

where bonds demand on the LHS implicitly depends on the interest rate through B. In this case, as shown by (14), creating the SWF ($K^f = D = dK^f > 0$) generates a fiscal externality because the tax revenue must be increased in order to restore the equality in the government's budget constraint.

Since young savers' income is on average increased by the SWF, this income effect tends to increase their demand for bonds; hence, the sign of the effect from creating the SWF on r cannot be determined a priori. I now posit the plausible scenario in which the SWF causes a rise in the interest rate. In this case, the SWF generates a negative pecuniary externality for the government and a positive one for the savers.

Since it generates a need for additional tax revenue, a rise of the interest rate threatens to kill the Pareto-improvement result. As I am going to show, creating the SWF still leads to a Pareto improvement if the additional public expenditures for interest-rate payments on the pre-existing debt are entirely financed through an increase of T_2, the tax paid by the savers when they are old. Since their only primary income in period 2 is capital income, T_2 may be interpreted as a capital tax.

Intuitively, the proposed increase of T_2 implies that the savers can afford the same consumption that they could afford, had the interest rate stayed constant; so they cannot be made worse-off by the SWF. Formally, the required tax increase amounts to,

$$dT_2 = \left(\frac{2G}{1-m} \right) dr > 0. \tag{16}$$

At $K^f = D = dK^f = 0$, the market-clearing condition (15) implies $G = (1-m)B/2$, and so,

$$dT_2|_{K^f=0} = Bdr, \tag{17}$$

which implies

$$dC_2|_{K^f=0} = (Bdr - dT_2)|_{K^f=0} = 0.$$

This tax increase cancels out the externality while the savers retain the positive welfare effect due to the efficiency gain from undertaking risk in the first part of their life cycle - as shown in the previous section. The welfare-enhancing effect from the SWF for the workers remains intact. However, an increase of the equilibrium interest rate decreases the optimal size of the SWF, see Eq. (13).

4.3 Endogenous stocks prices

With concave technologies and assets that last more than one period, several additional extensions become possible. For the sake of brevity, I refer the reader to the analysis in Diamond und Geanakoplos (2003) that in essence confirms the main conclusion of the baseline model. However, it is worthwhile mentioning the most relevant points. First, if the marginal return of the risky technology is strictly decreasing and stocks returns decrease, this will reduce the optimal size of the SWF, see Eq. (13). Second, if assets last many, possibly infinite, periods, intergenerational effects will arise through changes in asset prices. For instance, the investment in stocks by the SWF may increase the market value of stocks. In this case, the generation of savers that is old when the SWF is created benefits through this channel whereas all future savers have to pay higher stocks prices. In order to cancel out this externality, the government can introduce a tax on capital gains and use the proceeds to finance a cut of T_1, the tax on savers' earnings when young. Notice however that, as pointed out by Diamond und Geanakoplos (2003), the value of the stock market needs not rise if creating the SWF at the same time increases the interest rate through the channel examined in the previous section.

4.4 Intergenerational risk sharing

Hitherto I have assumed a closed economy that has to bear whatever aggregate risk is implied by the existing technology. In this case, it is impossible to reduce the income risk generated by the SWF. A small open economy that does not affect world market prices could instead do better than in the baseline model by using the international financial policy of the government to intertemporally smooth the payment of social dividends to its citizens. E.g., in times of supernormal returns these could be used by the government to buy back the country's public debt and build a financial reserve that would be used to ensure that a stable social dividend is paid in times of subnormal returns. A similar policy has indeed been followed during the last decades by the only existing SWF that

pays out a social dividend: the one in Alaska.[8]

In order to show the benefits from this type of financial policy, consider, just for ease of exposition, the special case of the model in which $m = 1$, $u_1 = u_2 = u$, $w - t^s = y$, and $r = 0$. The government implements at each period t a history-dependent, possibly negative, tax τ_t that satisfies $E[\tau_t] = 0$, $\forall t$, thereby fulfilling the intertemporal budget constraint of the government. This tax is given by:

$$\tau_t = \frac{(n-1)\epsilon_t - \sum_{i=1}^{n-1} \epsilon_{t-i}}{n}, \tag{18}$$

where

$$\epsilon_j = (R_{j-1} - E[R])\, K^f, \qquad j \in \{t-n+1, ...t\}, \qquad n \geq 2.$$

The claim to be shown is that in a stochastic steady state such a policy raises the expected utility of every generation and eliminates the income risk from the SWF altogether if n goes to infinity.

Suppose a stationary SWF of size K^f is in place. Under the assumptions made and in the absence of the tax (18), per-capita consumption at any period t is the same for the young and the old and given by $c_t = \overline{c} + \epsilon_t$, where the time-invariant term is $\overline{c} = y + E[R-1]K^f$ and the random component has $E[\epsilon_t] = 0$ and $Var[\epsilon_t] = s > 0$. If instead the tax (18) is adopted, per-capita consumption at period t equals $\widetilde{c}_t = c_t - \tau_t = \overline{c} + \Sigma_{i=0}^{n-1}(\epsilon_{t-1}/n)$. Since c_t is a means-preserving spread of $\widetilde{c}_t$ and workers are risk-averse, this tax policy increases their expected utility. The variance of their consumption is then given by

$$Var[\widetilde{c}_t] = n\left(\frac{1}{n}\right)^2 s = \frac{s}{n},$$

which vanishes as $n \to \infty$.

[8]The Alaska's Permanent Fund Dividend is computed as an average return of the fund over the last five years; see e.g. Goldsmith (2012).

5 Institutional aspects

Progressive SWFs should be democratically legitimate independent agencies - institutional cousins of those central banks, competition authorities, and regulatory bodies to which many polities have assigned the task of tackling some complex problem in view of a broadly supported long-run goal (Tucker, 2018). Existing SWFs are often embedded in an institutional framework known as the "manager model" (Al-Hassan et al., 2013; Bernstein, et al., 2013; Clark et al., 2013). The legal owner of the assets constituting the SWF is the government, usually the ministry of finance. In turn, the owner gives an investment mandate to an asset manager, typically the central bank or a separate fund management entity owned by the government. Some additional governance requirements are likely to be necessary in order to ensure an efficient management of public wealth through progressive SWFs. First, the SWF should be explicitly assigned a purely financial objective, namely the long-run maximization of the risk-adjusted return on the invested capital. As explained later, this does not imply that non-pecuniary goals be neglected, but it is necessary for accountability. Second, the SWF should be professionally managed and be shielded from interference by the government by means of effective norms of political independence. As an example, the norms that guarantee the independence of the Bundesbank in Germany have proven to serve this purpose well over several decades. Third, preventive measures should be taken to minimize the danger of capture by large firms and the financial industry, as they could benefit from manipulating the investment decisions of the SWF. This suggests that the core personnel of the SWF should be staffed by civil servants and strict rules limit the extent of revolving doors. Depending on country-specific conditions, it might be recommendable to put a relatively low cap – possibly zero - to the investment of the SWF in domestic firms.

The social dividend need not be paid out every month or every quarter: it could alternatively be reinvested in personal accounts of the citizens at the SWF that they could use to finance sabbatical years during the middle part of their life cycle and an annuity in

old age. The former would contribute to meet a secular rise in people's demand for more personal autonomy and the latter would help to avoid old-age poverty.

Upon reaching adulthood, every citizen could be granted the option to open at any time a *sabbatical account*, entailing the commitment to let her social dividend accumulate in such an account for a fixed number of years, say seven. During that period, her regular social dividends are reinvested in the SWF instead of being paid out, and the resulting returns are exempted from taxation. At the end, the holder of the account would receive the capitalized social dividends, a sum that would suffice to finance a sabbatical year. This could be spent volunteering in the social economy, engaging in politics, and pursuing lifelong learning. Those activities would thus become ordinary events in most people's lives and generate far-reaching positive externalities. Employees of large and medium-sized firms would be entitled to unpaid leaves for sabbaticals in order to conduct those activities.

Starting at a later age, say forty, every citizen may choose to reinvest her social dividend in an *old-age-provision account*, instead of a sabbatical account. The SWF could offer accounts with different lock-in periods, e.g. between twenty and thirty years. Countries fighting against old-age poverty could decide to make such old-age-provision accounts compulsory. At the end of the stipulated period, the accumulated amount would be transformed into an annuity, which the citizen would then receive along with her social dividend. In combination, they would drastically reduce the risk of old-age poverty. As it is not linked to one's employment and payment of social security contributions, this method of providing retirement income would not suffer from limited coverage but be available to everyone.

Finally, a progressive SWF fund should be a faithful expression of the aspirations of the citizenry. Those aspirations are not limited to increasing one's purchasing power but mirror deep concerns about the quality of human relationships in society and of man's relationship to nature. This broader view of the common good could be acknowledged

by subjecting the fund's investment decisions to *ethical requirements*. Norway shows a way how to do it. The Norwegian government released ethical guidelines for the investment of its SWF that were endorsed by the Norwegian parliament. Then, the ministry of finance appointed an independent 5-member Council of Ethics in charge of making recommendations about the exclusion of individual companies from the universe of potential stocks available for fund investment, based on those guidelines. The criteria for exclusion include the production of nuclear weapons and cluster munitions, serious violations of human rights, and severe environmental damage. The list of the excluded companies and of those that have been put under observation is available online from the homepage of Norges Bank, the asset manager of the fund.[9]

One should expect ethical investment to come with a cost in terms of returns, although this cost is likely to be negligible if the universe of investable stocks is large enough. To economists, the existence of such a trade-off is obvious; formulating ethical requirements for a SWF that pays out a social dividend would make it transparent for everybody. Such an ethical SWF is thus likely to come with recurring debates on endorsed values and broader social goals. This could counteract political apathy and strengthen feelings of communality.

In the case of large and medium-sized countries or groups of countries, such an ethical SWF would not merely be the expression of a collective identity. Because of its size, it would be a prominent financial investor. Hence, its ethical criteria would have an impact on share prices, and thus on the behavior of publicly quoted corporations - that would have an incentive to pay more attention to peace, environmental sustainability and human rights.[10]

[9] In the case of Norway, Norges Bank makes the final decision about the exclusion of companies. I'd rather suggest that the asset manager should not be charged with the task of solving ethical dilemmas on behalf of the polity. The SWF is to be managed by professionals who maximize its risk-adjusted return subject to a set of investable stocks. In turn, this set could be determined by a democratically appointed body.

[10] See Heinkel et al. (2001) for a related model of green investment and Hong and Kacperczky (2009) for related empirical evidence.

6 Coda: a comparison with popular capitalism

In many countries, maintaining social cohesion is likely to require that the rise of the capital share be prevented from leading to a polarization of personal incomes. A progressive SWF would mitigate this threat by ensuring a universal capital income from a collective investment in the world stock market and other markets for risky assets. There is, however, an alternative approach that could be followed to avoid income polarization despite a declining labor share: transfoming each worker into a small capitalist. If you managed to make every single worker save more and invest her savings in a portfolio with a high mean return, then the composition of workers' incomes would shift from labor to capital, and this would reduce the risk of an irreparable falling apart of haves and have-nots. This is, in a nutshell, the idea of popular capitalism that was cherished by e.g. Margareth Thatcher. It still finds supporters, not only in conservative circles but also in some liberal ones, in which people prefer to use the term "property-owning democracy".

As the historical record amply shows, popular capitalism is not the spontaneous outcome to which modern economies tend, so that popular capitalism would have to be induced by suitable policy measures. The main ones are tax incentives, financial education, and a basic capital. Let us briefly discuss them in turn.

The most widespread tax incentive to encourage private wealth formation by workers is the *subsidization of private retirement plans* under some conditions. Clearly, this policy is not recommendable if workers are rational forward-looking agents because in that case subsidization just causes an efficiency loss (mainly by distorting the relative price of consumption at different dates) and some arbitrary redistribution (from the individuals who finance the subsidy with their taxes to those who receive it). A necessary condition for this policy to make economic sense is that some individuals save too little in terms of their own long-term well-being. The problem is that precisely these irrational individuals should choose to participate in subsidized programs, while rational individuals should voluntarily abstain from them. This is not at all what happens in reality. Optimizers,

who are likely to be overrepresented among the high-skilled, tend to participate in such programs, whereas those with behavioural problems, who are overrepresented among the low-skilled, tend to abstain from them. E.g., Burman et al. (2004) find that in the US about 41 % of the households in the top quintile of the income distribution self-select into subsidized retirement saving programs while only 3 % of the households in the bottom quintile do. A similar pattern exists in Germany and contributes to explain why the top quintile receives a strongly over-proportional share of the subsidies while the bottom quintile hardly benefits from this policy (Corneo et al., 2018). Making participation in saving plans compulsory would overcome this problem, but also create new ones. In particular, it would harm those working poor who rationally consume their entire income and have no access to credit in order to finance mandatory contributions to saving plans.[11]

The second instrument that is often proposed to bring about popular capitalism is *mass financial education*. In order to avoid the same self-selection problem as the one faced by subsidized saving programs, financial education should be mandatory, e.g. in form of compulsory classes on saving and portfolio management, starting in elementary school. Pupils would be made aware of the benefits from saving, familiarized with the world of financial markets and intermediaries, and introduced to the basic concepts of consumption smoothing and portfolio diversification. Over time, this would increase the average degree of financial knowledge in the adult population and induce people to make wise saving and portfolio decisions.

Apart from the substantial economic costs of programs of mass financial education (Willis, 2011), empirical studies cast serious doubts on their efficacy. Christelis et al. (2010), Grinblatt et al. (2011), Agarwal and Mazumder (2013), and von Gaudecker (2015) find that the binding hurdle for the problem at hand is not financial knowledge but cognitive, especially mathematical, skills. E.g., the latter author writes: "That the factor measuring financial-numerical skill turns out to be much more important than

[11] This is compounded by an incidence problem, i.e. the subsidies being partially or totally shifted to the suppliers of private retirement plans through higher participation and management fees.

financial knowledge suggests that increasing the latter would not do much for portfolio outcomes." (p.503). Financial education could even backfire by making people excessively self-confident and prompting them to invest in a few badly chosen risky assets.

A third lever to bring about popular capitalism is to have the government transferring a *basic capital* to every individual that enters adulthood. If this amount were large enough, than everyone would have the chance of becoming a small capitalist. Since such a basic capital requires some redistributive taxation, this policy is mainly advocated from the liberal supporters of the idea of a property-owning democracy. Ackerman and Alstott (2000) proposed an amount of $80,000 for a basic capital in the US; given the strong rise of college tuition fees and house prices, maybe as much as twice that amount could be envisaged today. Depending on its generosity, a basic capital would cost two to five points of GDP to the public purse. Since a basic capital is a kind of universal inheritance, it is natural to finance it by an inheritance tax. This would however be insufficient to finance the more generous versions of basic capital so that further tax revenue would have to be raised, e.g. by means of a wealth tax (Piketty, 2020).

Arguably, some combination of tax incentives, financial education, and basic capital could install a form of property-owning democracy in which most individuals would behave like small capitalists, i.e. would receive a significant share of their incomes in form of capital income. So, I am not going to argue that the blueprint of popular capitalism is irremediably utopian, although in some countries it may well be so. Rather, I claim that for most people its underlying vision of future society is not desirable.

The proposal of popular capitalism is informed by a distinctive *Weltanschauung*, one that views individuals' choices in markets, especially financial markets, as the centerpiece of human freedom and one that makes individual economic responsibility the touchstone of virtue. This is a highly one-sided assessment. I will briefly criticize it by including two fundamental topics in that assessment: time and values.

Technological progress will likely continue to raise productivity and robots will dra-

matically reduce the relative scarcity of labor. But the scarcity of *time*, that is entailed by the biological conditions of human life, is bound to persist and hence to be felt ever more sharply. And human life is too short to be spent running after the stock market. That is why most people neither want to become small capitalists nor wish that for their children. Most people complain that they do not have enough time to spend with their beloved ones; they never complain that they would like to spend more time reading the financial pages of the newspaper. But most people would not object to a collective institution that does that tedious job for them: a SWF that collectively undertakes and manages financial risk on their behalf.

Human existence is finite and its time is precious. That is why not only the goal, but also the means of popular capitalism are undesirable. Already nowadays citizens spend a lot of time and attention dealing with the bureacratic burden created by subsidized saving plans and various taxes. A property-owning democracy would steal even more time from people by imposing mass financial education. Furthermore, financing a basic capital would almost certainly require to lower the exemption thresholds for the inheritance tax; and because of increasing longevity, it would also require an intense monitoring of inter-vivos gifts, that tend to substitute for bequests. Both measures will cost people much of their scarce time and plenty of their personal energies. And matters will be even worse if a comprehensive wealth tax is introduced to finance a generous version of the basic capital. So, one reason why a property-owning democracy of small capitalists fails to be the blueprint of a desirable society is that a good society leaves citizens masters of their lifetime to the largest possible extent.

Another fundamental reason for criticism concerns the *values* that are fostered by popular capitalism. Today, only a minority of the population plays the capitalist game, but in popular capitalism all would play it. Winners in the capitalist game are those who accumulate more wealth; thus, merit in a society of capitalists is to rank higher than the other capitalists in the wealth distribution. Already today this criterion of judgment has

trickled down to a varying extent to the non-capitalists, i.e. the bulk of the population. Which gives an aura of greatness to the super-rich, fosters consumerism in the populace, and creates a deep frustration in those poor guys who financially fail, without own fault, and then look for scapegoats in some other group of poor people. Quite on the contrary, the progressive SWF I propose would trivialize the capitalist game and undermine its symbolic fascination: no reason to revere any "new masters of the universe" if a humble public institution that resembles social security emulates their deeds.

I do not think that freedom and happiness are mainly to be found in market activities and economic competition. Rather, human flourishing is mainly to be found in "relational goods" (Gui, 2005) and "useless knowledge" (Russell, 1996). And one merely has to watch a good movie about Wall Street to get an idea about the quality of relational goods and the kind of useless knowledge that characterize people who live immersed in a capitalist environment. Popular capitalism would make those mentality standards the general ones.

If economic institutions have an effect on values, they should rather de-emphasize material possessions and human relations based on power. As Bertrand Russell wrote back in 1932: "Good nature is, of all moral qualities, the one that the world needs most, and good nature is the result of ease and security, not of a life of arduous struggle." (1996, p.25)

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