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“Real and Imagined Threats to the Welfare State”¹

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ABSTRACT

The traditionally, and wrongly, imagined vulnerabilities of the welfare state are economic. The true threats are demographic and political.

The most frequently imagined threat is that the welfare state package reduces the level and growth of GDP. It does not, according to broad historical patterns and non-experimental panel econometrics. Large-budget welfare states achieve a host of social improvements without any clear loss of GDP. The paper elaborates on how this “free lunch” is gained in practice.

Other threats to the welfare state are more real, however. Two demographic-political clouds loom on the horizon in the twenty-first century, though neither cloud reveals an economic flaw specific to the welfare state. One cloud is the rise of anti-immigrant backlash. If combined with heavy refugee inflows, this could destroy future public support for universalist welfare state programs, even though they seem to remain economically sound. The other, and more certainly rain-bearing, cloud is that population aging poses a serious problem for financing old age, either publicly or privately. Pension deficits threatens to crowd out more productive social spending. Only a few countries have faced this issue very well.

JEL codes: H10, H50, N32, N34

¹ This working paper draws in part on two previous presentations. One is a Levine Family Lecture on “Can the Welfare State Survive in a Global Economy?” given at UC Davis. The other is a chapter in the University of California Press book on How Big Should Government Be? (Lindert 2016).
I. The big picture

A. Adam Smith was on the right track

Adam Smith wrote his famous defense of the free market in an age in which governments were still tiny by today's standards, and there was nothing even close to a welfare state. Yet he devoted considerable thought to the proper role of government. Those who cite him as the ultimate champion of tiny government have overlooked, knowingly or not, much of what he wrote on this. They might want to give fresh attention to passages like this one from the 1766 edition of his Lectures on Jurisprudence --

“We may observe that the government in a civilized country is much more expensive than in a barbarous one; and when we say that one government is more expensive than another, it is the same as if we said that the one country is farther advanced in improvement than another. To say that the government is expensive and the people not oppressed is to say that the people are rich. There are many expences necessary in a civilized country for which there is no occasion in one that is barbarous.”

In that 1766 lecture, the necessary expenses he had in mind were what we would call infrastructure, both civilian and military. Within ten years, however, his Wealth of Nations had added a case for tax-funded primary education. His case rested on a basic point echoed in today's economics: If individuals failed to capture all the social

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2 Smith (1766, pp. 530-531). I am indebted to Barry Weingast for bring this passage to my attention.
3 Smith (1776, 130-134, 420-434, 443). He was certainly prescient on taxpayer financing of the bulk of primary education. Every educationally leading country followed the same formula of launching its rise of mass schooling primarily with local taxes.

Thomas Jefferson agreed with Adam Smith about the need for taxes to support public schooling (Butts (1978, 26-28). So did Milton Friedman, in his Capitalism and Freedom (1962).
gains from providing these things, then individuals could not be relied upon to provide enough of them:

> [An essential] duty of the sovereign or commonwealth is that of erecting and maintaining those publick institutions and those publick works, which, though they may be in the highest degree advantageous to a great society, are, however, of such a nature that the [social] profit could never repay the expence to any individual or small number of individuals, and which it, therefore, cannot be expected that any individual or small number of individuals should erect or maintain....

> When the institutions or publick works which are beneficial to the whole society, either cannot be maintained altogether, or are not maintained altogether by the contribution of such members of the society as are most immediately benefited by them, the deficiency must in most cases be made up by the general contribution of the whole society.\(^4\)

This is not to say that Smith liked taxes and big government for their own sake. On the contrary, he saw waste in much of the government spending of his day, especially in the subsidy to unproductive high offices handed to political favorites. He railed at length against tariffs on imported goods, such as England’s infamous Corn Laws. Yet he clearly understood that external benefits could justify tax-based social expenditure.

Remarkably, government expense has risen far above anything that had been experienced in human history up to Smith's lifetime. And, as he perceived even then, the places with the highest government spending were exactly those “civilized countries” that were “farther advanced in improvement”. In the ensuing centuries, the enormous expansion of government has been dominated by civilian social spending, the kind he barely touched on when making his case for tax-based funding of universal primary education. The rising social expenditures are defended as having the same beyond-private benefits as the ones Smith envisioned for “those

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\(^4\) Smith (1993 (1776), 413, 443).
publick institutions and those publick works”. Yet the rise in tax-based social expenditures remains controversial, in a world of clashing self-interests. This paper weighs the evidence regarding their effects on national economic growth.

B. A preview of verdicts

Since World War II, about a dozen rich countries have channeled more than a fifth of national product into social transfers, and about a quarter of national product if we include public education as part of social spending. Those countries, in order of their social transfer share of GDP in the first decade of this century, are France, Sweden, Austria, Belgium, Denmark, Germany, Finland, Italy, Portugal, and Spain, with Norway, Netherlands, and the UK near the margin. Contrasting their experience with that of other countries provides a historical test case for the effects of tax-based social spending. That historical case seems to have delivered these six clear verdicts:

(1) One imagined threat rejected by the historical facts is the widespread suspicion that the welfare state package reduces the level and growth of GDP. Global

This paper defines "social transfers" as taxpayer-funded government expenditures on health care, pensions, family assistance (Americans’ “welfare”), unemployment compensation, active labor-market spending (retraining, etc.), and public housing subsidies. My definition of social transfers nearly matches the official OECD definition of "public social expenditure". The main difference between the two is that I would, whenever the data permit, exclude the pension benefits paid to public employees. These are part of a labor contract, comparable to private labor contracts, and not redistributions from the rest of society. OECD allowed such a separation in its social expenditure series for 1960-1981, but not for its current series starting in 1980.

I define “social expenditures” as these social transfers plus public spending on education. This broader definition matches the definition used by Garfinkel et al. (2010).

My arbitrary definition of the "welfare state" is any democratic country for which social transfers, and the taxes implicitly paying for them, exceed 20 percent of GDP. Had I defined the welfare state as any country devoting more than 20 percent of GDP to social spending, including public education spending à la Garfinkel et al. (2010), it would have been easier to show (as they do) that the welfare state is not bad for economic growth. For rhetorical purposes, I prefer the more stringent test focusing on social transfers, which are more controversial, and less obviously productive, than public expenditures on education, which I separate from my discussion of the "welfare state".

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history does not show any clear overall negative effect of larger tax-financed social transfers on national product. The widespread belief in large GDP costs of the high-budget welfare state is based on theory and inappropriate tests. The real world never ran the kinds of experiments that so many have chosen to imagine. The best statistical tests underline a "free lunch puzzle": Europe's large tax-based social budgets have apparently not lowered GDP.

(2) That "free lunch" has taken the form of several fundamental human gains reaped by large welfare states. The larger welfare states have achieved lower income inequality, lower gender inequality, lower poverty rates, and longer life, again without any clear loss in GDP. Nor do they suffer any other often-imagined side effects. The large welfare states, particularly in Northern Europe, have some of the world's cleanest and least corruption governments, with lower budget deficits than the United States, Japan, and other rich countries. And, for what it is worth, their populations express greater happiness in international surveys of public opinion.

(3) What made that possible? The "free lunch puzzle" of the welfare state is easily understood when one examines how actual practice has evolved. Both sides of the Atlantic have made some mistakes when trying to draw an efficient border between governments and markets. The main mistakes on the American side relate to insufficient anti-poverty programs, inefficient health insurance, underinvestment in mothers' careers, and the under-taxation of addictive goods (tobacco, alcohol, and gasoline).

(4) Neither the timing nor the geographic location of the "European" economic crisis starting 2007 relates to the welfare state as such. The main causes of crisis in the not-so-welfare-state Mediterranean and Ireland since 2007 have been the real estate bubble and under-regulation of finance. The main institutional mistakes in Mediterranean Europe relate to excessive protection of vested interests against competition in product and labor markets, not the welfare state.

(5) Other threats to the welfare state are more real, however. One can see two demographic-political clouds on the horizon in the twenty-first century, though neither cloud reveals an economic flaw specific to the welfare state. The first cloud is the rise of anti-immigrant backlash. This could destroy future public support for universalist welfare state programs, even though they seem to remain economically
sound. Such a retreat from the welfare state is a threat mainly to Sweden and Germany, i.e. to those welfare states that continue admitting large refugee flows while refusing to discriminate against immigrants in providing social services.

(6) The other, more global, cloud is that the rapid acceleration of population aging poses a serious problem for financing old age, either publicly or privately. Only a few countries have addressed this issue with major reforms so far.

The remainder of this paper summarizes the evidence regarding these six verdicts. We turn first to the traditional imagined threat related to the welfare state, and then to the two real threats. The wrongly imagined threat is economic. The real threats are demographic and political.

II. An imagined threat:
Isn’t the welfare state bad for growth?

If having generous social insurance programs reduces the level and growth of GDP, then sooner or later this negative effect should cause a decline of the welfare state. Such a fear underlies the many books and articles written in the late twentieth century about the “crisis” and “demise” of the welfare state – that is, about an even that has still not happened. Let us survey the evidence on this imagined threat.

A. No, the data show a “free-lunch puzzle”

(1) History shows no correlations pitting the welfare state against growth. For at least three centuries many conservatives have insisted that taxed-based social spending cuts jobs and output. So strident is the opposition that one would expect it to have resulted from looking directly at some glaring evidence from history. If the negative effects of welfare state programs were so clear, then perhaps even the raw data should have shown it on a huge I-Max screen.

No such glaring evidence has ever appeared. An obvious starting point would be to glance at the broad sweep of the history of national product, which
should have been lower where tax-based social spending was higher. The glance, however, yields the big-screen evidence shown in Figure 1. Most of world history has languished in the lower left-hand corner, with poverty and no social help to the poor, the sick, or the elderly. This is the dreary world that Adam Smith called “barbarous”. In the two and a half centuries since Smith wrote, a few dozen countries have taken off into prosperity, as illustrated in Figure 1 by four of Smith’s civilized countries – the UK, the US, Sweden, and Japan. While prospering, they also channeled a greater and greater share of their national product into taxes spent on social programs. Yet they continued to prosper. One who believes that the social programs destroy initiative and progress might claim reserve causation: Perhaps it is the prosperity that bred the wasteful social spending. Yet if the social spending is nothing but a rich country’s bad habit, like obesity or recreational drugs, why don’t we see any easy evidence of its dragging down GDP per person?

One would rightly demand a closer look than this glance at the broad screen. Sticking to raw correlations for the moment, we may ask whether looking at all countries and over shorter periods of time shows a negative relationship between their growth experiences and their use of welfare state expenditures. Table 1 shows the results for as many decades (10) and as many countries (19) as provide systematic long-term data. As reported there, history again provides no significantly negative relationship between the start-of-decade social spending share and either the growth or the level of GDP per person. If we had included the many poorer countries that failed to report social spending because they had little or none of it, there would be more chance of a positive correlation across history, as Figure 1 has already hinted. From all the correlations we cannot infer such a positive causal influence of social spending on economic growth. Yet any claim of a negative historical relationship is even easier to doubt.

Within nations, as well as between them, we find no secure negative correlation between local governments’ social transfers and either the level or growth of product per capita. For all the conservative media anecdotes about companies fleeing high-tax states for low-tax states, there is no net result showing any damage to the higher-taxing and higher-welfare localities. The only time that
the anti-government Southern states in the United States rose toward the national average income per capita was in the period 1940-1973 when the South reaped disproportionate benefits from government military and aerospace spending. Such spending not only created jobs and income within the South, but it also raised Southern pay rates by attracting Southern workers to Northern and Pacific Coast cities. Since the rise of welfare payments and other social spending in the 1960s and 1970s, there has been no erosion in the relative incomes of such larger-transfer states as Connecticut and California. There is no outward evidence of massive tax flight, no “race to the bottom.”

(2) Nor is there any econometric evidence revealing any net GDP costs. One should deeper if possible, into statistical tests that really hold other things equal. We know well that both social transfers and national product have many separate, though overlapping, causal determinants. Surely social spending is not just the result of being a rich country, and a country's prosperity depends on many more things than just social spending and the incentives it may create.

Since around 1990 economists have poured great effort into developing truly randomized trials, like those now proliferating in medical science. These are statistically superior to testing from historical experience, since the randomly selected “treatment” group of observations is subject to influences clearly not experienced by the “control” group. The history of entire nations is not a randomized trial, however. It does not offer a treatment group of dozens of societies that were beset by welfare-state policies imposed on them by completely outside forces, forces not experienced by a large control group of otherwise similar societies. A few econometric studies have been lucky enough to find “natural experiments”, in which history imitates the random-trial laboratory. Yet for large complex forces like the welfare state, no such randomized historical experiment is available.

Lacking truly random trials, economists are forced to extract what causal insights they can from a messy panel of human experiences over time and space, a panel in which both the determinants or social spending and the determinants of GDP might be disentangled even though they overlap and are confounded by a host
of other forces. Elsewhere, I have surveyed the econometric studies available as of a decade ago. None has even found a significant negative effect of the whole welfare state package on GDP, at least not any that has used sound techniques and has made its underlying data available to others. Even the few that announced negative effects yet hide their data have failed to show negative effects large enough to imply the major economic damage imagined by some theorists, journalists, and politicians.

The lack of clearly negative effects of tax-based social transfers on the level and growth of GDP is all the more remarkable because the tests typically hobble the welfare state variables with two devices that should have shown a negative effect. The first is a handicap that this author has also adopted, in order to toughen the test: Exclude public spending on education from the “welfare state” bundle. Public expenditures on education have such clearly positive effects that omitting them raises the odds of finding against the welfare state. Second, all the tests on historical time-space panels hobble the welfare state with a reverse-causation bias. Safety net programs, such as family assistance or unemployment compensation, are designed so that they pay out more when GDP and jobs have slumped – and pay out less when the economy improves. Thus transfer spending will appear guilty of causing slumps, and cutting that spending will be credited with causing the recovery, unless one somehow perfectly identifies the macro-economic shocks causing any movement in GDP. The false guilt is analogous to blaming hospitals for causing deaths because so many people die there. Given these two handicaps, it is all the

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6 See Lindert (2004, Chapters 10 and 18), and the downloadable data sets available either from Cambridge University Press (see the book’s preface) or from the author’s home page.
7 For a review of rates of economic return on education around the world, see Psacharopoulos and Patrinos (2004a, 2004b), and the earlier studies cited there.
8 This second bias shows up even in the set of econometric panel tests that seems the best candidate for an objective discovery of negative growth effects. Overlapping studies by Kneller, Bleaney, and Gemmell (1999) and by Gemmell, Kneller, and Sanz (2011). The authors did not put any weight on the negative result about social spending, but that negative implication from their study should be taken seriously. With their help, I have found that even their best-practice econometric test has trouble identifying the shocks that we know were there, given our reading of recent history. For example, we know that at the start of the 1990s
more remarkable that social transfers and other measures of the welfare state do not show clearly negative effects on jobs or growth.

(3) Achievements other than GDP. While not paying any clear net cost in terms of GDP, the large welfare states achieved many other things with their social transfers.9 Here is a quick list of social goals they have served at least as well as other rich countries on the average:

(1) They have consistently enjoyed a more equal distribution of incomes.10

(2) They have lower shares of their population in poverty, whether the poverty line is defined as a share of median income or as an absolute level of consumption per person.11

(3) The welfare states tend to have longer life expectancy than other OECD countries at similar income levels. How this might relate to public health care is reviewed in Section III below.

Finland suffered a major macro-shock from the collapse of its main trading partner (the Soviet Union) and from mistakenly keeping the Finnish Mark pegged to the soaring German mark. Yet these authors’ tests have no way of picking up such idiosyncratic large macro-shocks that are neither time-fixed effects for all countries or fixed county effects for all times. The result is a misleading correlation between Finland’s huge safety net expenditures and the plummeting of Finland’s GDP. I thank Richard Kneller for making their underlying data set available.

9 Here is a rough quantification of the points listed in this section. Data from 23 countries circa 2007 show that the share of social transfers in GDP, our welfare state indicator, has these correlations with social achievements: (a.) a negative 0.56 with the share of households having less than 40 percent of median household income; (b.) + 0.39 with life expectancy, (c.) + 0.21 with Transparency International’s clean government indicator, and (d.) no overall correlation (0.01) with government budget surplus in 2007-2009. Correlations (a.) through (c.) were statistically significant at the 5 percent level. The sources are those cited elsewhere in this section.

10 See Wang et al. (2012) on OECD countries’ inequality in 2004. For a readable and balanced summary of the definition of equality in terms of “vertical equity” and the case for progressivity in redistribution, see Slemrod and Bakija (2004), especially Chapter 3.

11 On the poverty shares relative to median incomes, see OECD, Growing Unequal (2008, p. 127). International comparisons of absolute poverty are found in studies by the Luxembourg Income Study: See Smeeding et al. (2000), and Scruggs and Allan (2005).
(4) The welfare states have some of the world’s cleanest and least corrupt
governments, despite what some might have predicted from the large amounts
passing through government hands.\footnote{12}

(5) Welfare states do not run large budget deficits. There is no correlation at
all between the GDP shares of social transfers and the net budget deficit.\footnote{13}

(6) Finally, for what they are worth, international polls of public opinion find
high average expressions of personal happiness in the high-spending welfare
states.\footnote{14}

B. Some reasons why

What has made this possible? How could the large welfare states have
avoided any of the imagined net cost in terms of GDP, while making progress on so
many social concerns? A balanced tentative answer seems to be that the few ways in
which large tax-based social transfer programs reduce GDP are balanced by ways in
which they raise GDP. The heaviest weight on the negative side of the scales seems
to be unemployment compensation. Even allowing for some statistical biases
against such programs, the empirical literature seems to say that more generous
unemployment compensation does indeed reduce jobs and output somewhat. This
negative effect, however, is offset by several GDP-enhancing effects of the way in
which the welfare state has worked in practice. We turn next to three such effects.

(1) An efficient tax and transfer mix. While a critic might choose to imagine a
foolish hypothetical welfare state riddled with bureaucracy, initiative-discouraging
taxes, and transfers that subsidize a lifetime of laziness, no such fiscal system has
ever prevailed in a welfare state. On the contrary, real-world welfare states have
features that make their tax-based social programs less bureaucratic, less expensive

\footnote{13 On government budget surpluses as shares of GDP, 2007 and 2009, see IMF eLibrary.
\footnote{14 On international differences in expressions of happiness, see the World Values Survey; e.g. \url{http://www.nationmaster.com/graph/lif_hap_net-lifestyle-happiness-net}.}
in administrative terms, and less in conflict with economic theory than many have imagined.

One such feature is that universalism is efficient on the expenditure side. Universalist expenditure programs, to which everybody is entitled, are cheaper to administer because there is less bureaucratic need to investigate who should be excluded from the benefits.\textsuperscript{15}

In the case of health insurance and health care, for example, comparative studies have consistently found that administrative costs are a lower share of the health care delivery expenditures in the more public programs of Canada and Europe.\textsuperscript{16} Universalist public insurance and public provision is less bureaucratic because it does not need to spend so much resources denying coverage to patients that might prove expensive for one reason or another. Universalist health coverage is also cheaper than means-tested coverage for the poor because it avoids having to investigate the legitimacy of poverty pleas. Similarly, tax-based public assistance to the poor is in turn cheaper than private charities’ administrative expenses for raising donations.\textsuperscript{17}

Similarly, on the tax side, broader taxes are also cheaper to administer. As countries develop and prosper, they tend to shift toward the broader kinds of taxes that economists consider more efficient. The typical shift was away from customs duties and other narrow taxes that might greatly disrupt choices (taxes on high-elasticity activities) toward broad taxes on all of a person’s income or consumption. Across the first half of the twentieth century, the shift was toward broad income taxation; after that, the shift has been more toward VAT (value added taxation, a flat consumption tax) and sin taxes on addictive products causing external damages.

The same tax shift affected all prospering countries, whether they became welfare states or not. It is something that happened as government got bigger.

15 For a general discussion of this point, see Lindert (2004, Chapters 4, 10 and 12) and Pestieau (2006, pp. 81-83).
16 See, for example, the studies by Reinhardt (2000), Woodlander et al. (2003), and Kotlikoff and Hagist (2005).
17 Lindert (2004, Ch. 3; and 2014).
incentive effects of this shift, we merely note here that a broad tax treating everybody similarly, and every source of income similarly, is easier and cheaper to administer. Figure 2 shows the dramatic decline in the administrative costs of collecting taxes in Britain since the 18th century and the United States since the 19th. Broader taxation reaps economies of scale to such a degree that today the Internal Revenue Service spends on administration only half a percent of the amount collected. 18 Welfare states have reaped similar economies as their budgets expanded on the basis of broader forms of taxation.

In addition, the tax mix used by welfare states looks more efficient even in conventional theory. Relative to the smaller -government rich economies, such as Canada, the United States, and Japan, the large-budget welfare states of Northern Europe get a greater share of their tax revenue from broad consumption taxes and sin taxes on harmful-addiction products such as tobacco, alcohol, and gasoline. 19 Canada, Japan, and the United States, by contrast, get a greater share of their tax revenue from direct taxes on income and wealth. Conventional economics favors broad sales taxation and sin taxes, and the sin taxes draw added support from those concerned with public health and environmental quality. While we lack reliable econometric evidence that this kind of tax mix is really better for economic growth, 20 conventional economists and economic conservatives believe that it is better. Ironically, then, conventional theory favors the kinds of taxation used as a money machine for large welfare states.

(2) More efficient health care. More efficient public health care systems of health insurance and health care provision might have made people live longer in other countries than in the United States. Three international contrasts about health insurance and health care delivery provide some circumstantial evidence favoring the performance on countries having a more universal and publically

18 This omits, of course, the resource cost to taxpayers themselves of preparing their tax returns.
20 The closest thing to econometric support for this conventional hunch is the result of Kneller and co-authors (1999, 2011) to the effect that indirect taxes are better for growth than direct taxes.
funded health system. Two of these three facts are unknown to the American
general public, while the third has received a great deal of media attention. The
first fact, generally unappreciated, is one already cited above: America's mixed
private-public health insurance has higher bureaucratic administrative costs that a
universal government "single payer" scheme of health insurance (e.g. Canada,
Germany) or a system dominated by government provision of health services (e.g.
England and Wales). The second under-appreciated fact is about popular beliefs
themselves. While people in all countries have complaints and fears about their
health care systems, Americans for decades have had a lower opinion of their
system than do people surveyed in other countries.

The third fact, given more media attention, is that the United States ranks
behind at least a dozen other countries in life expectancy. The pattern is not a
simple one relating to social spending. The world leader in life expectancy is Japan,
a country with relatively modest social spending, though Japan's social spending
does tend to tilt toward public health. Still, it is true that people tend to live a bit
longer in the average welfare state than in the United States. The media have said so
repeatedly, and have pointed out that a significant part of the difference in life
expectancy comes in the first year of life: American babies do not survive as well as
those in over a dozen other countries.

Before reviewing the troubled history of American health care, we need to
stress two cautionary points about the international contrasts in life expectancy.
The first is that they do not just reflect the performance of the health care system.
As best one can tell, the differences in survival are not due as much to differences in
health care systems as to differences in lifestyle. The slight shortening of life in
America versus other rich countries is due primary to sedentary lifestyle and diet.
Second, the international contrasts are not between public and private systems, or
between large-spending and small-spending countries. Rather they relate to a
peculiarly vexed history of health insurance in the United States, a country that
actually spends about as much publically, and spends much more privately, on
health care than other rich countries.
At the center of America’s health insurance problems is a pair of historical wrong turns that left the United States with too strong a reliance on voluntary employer-based health insurance. The first wrong turn came in World War II and the 1950s. Employer-based plans gained popularity in World War II, when wage controls prevented employers’ competing for scarce workers by offering higher straight pay, but allowed them to offer attractive fringes. Then came a tax policy, enacted in 1943 and solidified in a 1954 Supreme Court ruling, that exempts employer contributions to employee health plans from taxation, either as corporate income or as employee income. Thus one major reform left undone by the Congressional fight of 2010 is to remove the special subsidies on employer-based health coverage, and to push the industry toward offering plans that are more portable from job to job.21

Our second costly wrong turn was taken in 1965, when the passage of Medicare confined public (alias “socialized”) health insurance to those over 65 (plus the military). The second wrong turn was caused in part by the first. The passage of Medicare in 1965 was targeted at the elderly because they rightly feared facing costlier health care with no job to offer them coverage. Some have tried to reduce this elderly bias by extending Medicare to all age groups. In 2010, The Affordable Care Act succeeded in extending insurance toward the young, with extensions of Medicaid and the State Children’s Health Insurance Program. It thus made partial steps toward making coverage more universal, while proceeding slowly enough to honor (to “grandfather”) existing insurance arrangements. Yet one’s 65th birthday still brings a jump in coverage, and this country’s deficit in life expectancy among OECD countries is still worse before the age of 65 than after that birthday22. The health insurance trap, then, was specific to the United States, and not to all countries with smaller social budgets.

(3) Better development of mothers’ human capital. The welfare states also gain jobs and productivity through public policies that invest in career continuity and skills accumulation for mothers. This matters a lot, now that such a large share

22 Eggleston and Fuchs (2012).
of women’s adulthood is career-oriented. Welfare states provide paid parental leaves and public day care with qualified providers. While the underlying rules are complex and hard to summarize, the policy differences among OECD countries are apparent in the fiscal efforts to work-life balance for parents, especially mothers, of newborns and infants. Welfare states spent 3-4 percent of GDP on supporting work-life balance for new mothers, whereas the United States, Japan, and others spend less than half this share.23

Does the extra support for mothers pay off? While it is not easy to estimate the gains in productivity from micro-data, there is at least one aggregate sign of strong gains: Women in such countries have market wage rates that are much closer to male wage rates than do women in the United States or Japan, as shown for 1967-2006 in Figure 3. While it is possible in principle that the higher female/male wage ratio in the Nordic countries and Australia might have reflected forces that lower male earnings, this seems very unlikely. Rather the differences appear to be in policies that gave mothers the extra human capital that comes from not losing a career when a baby arrives. Indeed, other data show that the wage gap between males and females is specific to policy environments and to marital status: Single women are very close to single men in their rates of pay, whereas married women, mostly mothers, are paid less in countries that support them less.

The benefits of real-world government interventions on these welfare-state fronts, combined with the better tax mix of the high-budget welfare states, may help to explain why the statistical evidence has not turned up any negative effect of social transfers on GDP.

III. An imagined threat:

What about “Europe’s” economic crisis since 2007?

23 See, for example, the international data in the OECD Family Database, http://www.oecd.org/social/family/oecdfamilydatabase.htm#public_policy. For other summaries of differences in parental leave laws and public infant care, see Lindert (2004, vol. 1, 252-257 and 282-287).
Since today’s high-budget welfare states are European, a natural mistake would be to attribute any success or failure of any European country to the "European welfare state". Such sloppiness in the use of correlations often occurs. Thus when several European economies have slumped seriously since the American-led recession since 2007, some commentators tied the problems to the welfare state. We should therefore quickly note some ways in which the recession seems to have been quite detached from welfare state spending.

The recession burst upon Europe after the private real estate market bubble burst loudly in the US, Iceland, Ireland, Spain, and Portugal. Nothing about the welfare state caused this. The bursting of the real estate bubble exposed systemic risks that had been building in financial markets since the late 1990s. Under-regulated private financial markets crashed first in the US and Iceland, later in Cyprus. The spread of the recession popped real estate bubbles, especially in Ireland and Spain, and triggered large deficits in Mediterranean countries. The leading welfare states such as the Nordic countries and Germany, however, kept their budgets under control, helped by the fact that their financial sectors had not lunged into the same financial-derivative-based systemic risks taken on by others.

The closest approximation to a link between financial disaster and a welfare state has been apparent in the case of Greece. For Greece, the problem has indeed centered on the public sector, which spent unwisely on pensions and the Athens Olympics. Yet Greece, like bankrupt Iceland, has never had a welfare state and does little for the poor, as we shall note again below.

The spread of the recession throughout the Mediterranean raises another point often missed. There is a separate reason why the Mediterranean countries have such high rates of unemployment. All Mediterranean countries, here including France, have over-protected their established senior workers with tough anti-firing laws since the 1960s. Initially, in the late 1960s and the 1970s, these employee protection laws (EPLs) may have prevented unemployment by protecting

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established workers against dismissals, and may even have induced firms to invest more in the further training of the “insider” workers they were committed to retain. Yet soon the firing problem became a hiring problem. Firms became increasingly reluctant to hire new workers who might not prove so productive, or whom they could not dismiss in a slump. Over the last quarter of the twentieth century and into this century, the share of “outsiders” in the population of labor-force age kept rising. More and more of that population lacked the insiders’ careers and their improvements in pay and training. More unemployment, less investment in human productivity. This problem has loomed larger in the Mediterranean than in Northern Europe, where similar-looking worker rights are modified into more flexibility in job turnover and retraining. Yet again, the defects of EPLs are quite separate from the level of government spending.

IV. Real demographic-political threat #1: Rising immigration and political backlash

To see the real threats to the future of the welfare state, we need to look at demographic trends and their relationship to politics. One ominous demographic trend is the continued inflow of immigrants. This section begins with a frequently asserted economic effect, namely that immigrants are a fiscal burden, for which the already-arrived “native” population must pay. Such a fiscal burden is not entirely absent.

The net fiscal effects of extra immigrants depend on time horizon. Table 2 summarizes this dependence conceptually, and Figure 4 quantifies the dependence using a plausible simulation run by Ronald D. Lee and Timothy Miller in 2000.

Suppose we take a very short-run view, in the top row of Table 2, asking “Are today’s extra immigrants a net drain on government budgets in this same year?” They could be, since extra immigrants’ families typically are a net drain through the

host country’s child-related social programs such as education. If this drain is
greater than the tax revenues collected from adult immigrants, helping to pay for
pensions and other public programs, then immigrants do indeed cause a net fiscal
drain this year. The Lee-Miller simulation in Figure 4 shows that the short-run fiscal
effect is indeed negative, as summarized by the thick black "Total" line. A typical
mix of immigrant age groups is so tilted toward the young that the costs of child-
centered social programs yield a negative net result for the first 12-15 years after an
immigrant arrival.

If one then takes a somewhat longer view, asking about the net fiscal effects
over the whole lifetimes of the first generation of new immigrants, the answer is
positive overall, as shown again by Figure 4’s thick black line. True, the immigrants
in old age probably get a net transfer from others, because the U.S. Social Security
System is designed to be progressive, giving a high rate of return to lower-income
earners, such as first-generation immigrants. Yet while that first generation is aging,
its children have already become productive adults, paying positive taxes instead of
needing school money.

Finally, when we consider the whole lifetimes of not only the extra
immigrants but also their children and grandchildren, the net fiscal effects become
clearly positive, as again suggested in Table 2 and quantified in Figure 4. We know
that the eventual fiscal results are clearly positive, because in the long run the
immigrants and their descendants pay more in taxes than they get in targeted
transfers, just like the rest of society. So the long-run fiscal effect of extra
immigration is clearly positive.26

Nonetheless, these positive fiscal effects may be politically trumped by
negative perceptions, especially in the wake of a large influx of refugees. Prevailing
opinions can still be negative about the same fiscal effects, and about the truly
negative effects on some native workers’ earning power, not to mention cultural

26 Estimates based on data from several countries around the turn of the century
yield net fiscal benefits from migrants that tend to be near zero, with more positive
net results than negative ones. See OECD (2013, Chapter 3) for the assumptions and
time horizons used. Note that the simulations run by Lee and Miller do not refer to a
large refugee influx, since their parameters were drawn from calm time periods.
phobias and fears of terrorism. That kind of backlash has been increasingly evident in Europe and the United States, where the new nativism rides the wave of anti-immigrant sentiment. Figure 5 shows the recent rise in their vote shares in Europe since the turn of the century. There is a fair chance that coalitions of such nativist parties and more established conservative parties could take power in several countries.

Will immigration backlash undermine the welfare states? The threat seems real, yet the mechanism is not so obvious. The outcome will surely depend on the form that the backlash takes. Let us first consider three kinds of cases in which there would be little threat to social spending on natives. Consider first the possibility that immigration is simply blocked. In such a case, immigrants will cease to be a budgetary burden, aside from the cost of enforcing the barriers at the border. In such a case, social spending on the native population can continue as before. A second, and nearly equivalent, possibility is that the government reacts to the anti-immigrant spirit with a combination of blocking boat people and over-border refugees, yet continues to admit the highly skilled. Such a combination is being practiced by such non-welfare-states as Australia and Switzerland. Here again, there is little threat to social programs for established citizens, since the skilled immigrants passing through the filter will quickly become net taxpayers. A third possibility is that immigrants are still allowed to enter, but the government discriminates against them in its provision of social services. If such discrimination were practiced, then social services could resemble Jim Crow schooling by race in the US South, or schooling by race under South Africa’s apartheid, -- or China’s hukou passport system, as practiced in the major eastern cities. The discrimination would make it easier to avoid dilution of benefits for natives. Thus far, however, countries accepting immigrants have been unwilling to saddle themselves with immigrants who are not entitled to basic social services.27

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27 A near approach to this case of receiving immigrants while denying them basic services threatened to arise when Californians passed Proposition 187 in 1994. The proposition called for denying public K-12 education and other public services to the families of those non-US-citizens who had entered the state without legal
The countries most likely to translate heavy immigration, plus strong opposition to that immigration, into a reduction of universal social entitlements would be the welfare-state countries that absorb large numbers of refugees, without skill requirements, yet remain unwilling to discriminate against them in the provision of basic social services. The highest likelihood of such a dilution of welfare state benefits seems to face Sweden and Germany since the mass influx of Syrian, Iraqi, Afghan, and other refugees in this decade, especially since 2014. In these two prime-target countries, a visible strain on social entitlement standards may soon appear.

The issue has already achieved prominence in Sweden. On the one hand, Sweden’s conservatives deny that cutting the welfare state is their object, knowing that the welfare state remains popular. In February 2011 the leader of Sweden’s Right-Wing “Sweden Democrats” Party, not to be confused with the Social Democratic Party that has governed Sweden most of the time since 1932, was explicit about this: “We believe in the welfare state”, while also voicing suspicions about Sweden's mosques and Islamic community groups. Still, there are hints that being impacted by local immigration undercuts people’s support for universal social insurance. In Sweden, communities receiving a large exogenous immigrant shock have become more inclined to doubt the viability of universal safety nets (Dahlberg et al. 2012). Thus the threat is real, though no reduction of universal benefits has yet occurred.

V. Real demographic-political threat #2: Aging and “gray power”

A. The curse of long life: Something has to give

Something has to give in pension policy in the twenty-first century, as many have long warned. Those over the age of 65 will go on rising as a share of the adult population, just as they have done over recent centuries. The ratios of the elderly to those of working age are rising most ominously in East Asia and Italy, but no documentation. However, Proposition 187 was struck down by the state’s Supreme Court, and has never been implemented.
country is exempt. The main cause is simply the upward march of senior life expectancy. The natural solution of having people work to later ages, to hold fixed the share of their adult lives spent at work, has been undermined by a decline in the average age of male retirement, though this has historically contributed less to the lengthening of retirement than has the improvement in life expectancy.28

Today for every 100 Americans of working age (18-64 years) there are 21 elderly Americans (65 and up), most of them retired. By the year 2050 there will be 36 elderly for each 100 Americans of working age, assuming today’s rates of birth, migration, and survival. The balance between people paying into retirement and people drawing on it is shifting. So we are warned in the media every week. In the context of Social Security, 85 percent of economic experts agreed in 2009 with the statement “The gap between Social Security funds and expenditures will become unsustainably large within the next fifty years if current policies remain unchanged”. Actually, the ratio is likely to shift even faster than that, because of a newly documented "longevity transition": The life expectancy of seniors is shooting up rapidly, presenting all pension calculations with a possible curse of unexpectedly long life.29

This demographic fact of life has a clear implication for setting pensions:

As the share of elderly rises, their annual benefits past the age of 65 absolutely cannot rise as fast as the average incomes of those of working age.30

This clear warning is both softer and louder than it may sound at first. Softer, in the sense that it does not mean your pensions have to drop in real purchasing power. Pensions should still keep up ahead of the cost of living – it’s just that they cannot

28 For historical retirement trends from the United States see, for example, Costa (1998) and Lee (1998, 2001). One should also note that the trend toward earlier male retirement has reversed itself in many OECD countries since 2000.
29 On the recent acceleration of senior survival rates, see Eggleston and Fuchs (2012).
30 This result is derived from a budget balancing equation in Lindert (2004, vol. 1, pp. 195-196).
grow as fast as earned incomes per person of working age, which historically grow at about 1.8 percent a year, adjusting for inflation.

Yet the warning should sound louder when one realizes that it applies to the future of any kind of provision for old age, no matter how private or public. The curse of longer life is not specific to Social Security or other public pensions. It is the same even if you rely only on your own savings for old age. To plan ahead, if you live to age 65, you are likely to live to 85 even at today’s survival rates. Your grandfather only had to plan on living about 14 years more, if he were to reach age 65. Even in such an individualist calculation, your annual consumption in retirement has to be a lower share of annual earnings than in the past, because you’ll live more years. So it’s not a problem of government pensions, but a problem facing any pension plans, be they individual savings, private job-based pensions, or Social Security.

Thus as long as pension subsidies per elderly person keep in step with wage and salary rates, population aging threatens to raise the share of GDP devoted to subsidizing the elderly. To avoid paying for this with an upward march in tax rates, or with cutbacks in public spending on more productivity investments in the young, society needs to trim the relative generosity of pension subsidies. That, however, is not the current direction of movement.

B. Mission drift toward an elderly bias

Since about the 1960s, the further expansion of government social budgets has changed focus, drifting away from those human investments having the greatest GDP gains and toward support for the elderly and the middle classes.\(^31\) Curiously, the shift has occurred mainly in countries that are not welfare states. This section charts the mission shift, first viewing where it occurred, then examining its fingerprints in terms of social expenditure behavior, and finally conjecturing about its efficiency consequences and implications for the future.

\(^31\) For an in-depth history of the politics of the postwar drift toward the elderly and toward less progressive social spending, see Baldwin (1990).
Since the 1960s, poverty rates have been reduced much more successfully for the elderly than for children or persons of working age. So say the averages over groups of OECD countries. In large groupings of OECD countries, we see a clear divide around age 50. All age groups up to 50 years of age experienced an increased poverty share relative to the population as a whole, while those above 50 shifted out of poverty faster than the whole population. In the United States, for example, poverty declined dramatically for those over 65 but not for children between 1959 and 2010. Over this half-century, the poverty share fell from about 34 percent of the elderly population to 9 percent, whereas it fell only from 28 percent to 22 percent among children.

The drift toward lowering poverty rates more for the elderly than for children and those in working age is clearly tied to a bias in expenditure policy, particularly in certain countries. To show this, one needs to avoid just examining social expenditures as shares of GDP, which can be driven by the age group shares of total population. A more telling kind of expenditure measure is the percentage by which poverty for each age group has been reduced by net transfers from government. Figure 6 contrasts the international patterns in such net transfers by age group.

As far as aiding the elderly is concerned, OECD countries have generally done their job, cutting the poverty shares of their elderly populations by better than half in almost all countries, as shown in Panel A of Figure 6. So say the OECD estimates for most countries in both 1995 and 2005, the exceptions being the reported retreats from pension subsidies in Ireland and Finland between these two years.

32 OECD, (2008, chapter 5, Figure 5.5), updated 12 September 2008. In all that follows, the concept of transfers toward the elderly, or “pension subsidies,” should be thought of as being measured by only the non-contributory part of pension benefits.
34 For alternative measures of the elderly bias in social expenditures, 1985-2000, see Lynch (2001, 2006). Her measures compare support ratios in the form of (social expenditure benefits / person in the age range) for the elderly versus those of working age.
Countries differed far more in their willingness to cut poverty among younger groups, both in 1995 and again in 2005, according to the remaining panels of Figure 6. Unlike the similar of all OECD countries in their pension subsidies (again, Figure 6A), the age pattern reveals the wide gap in poverty reduction for those of working age (Figure 6B) and for children (Figure 6C). By the turn of the century, the poverty-cutting results were dramatically lower for Japan, the United States, and other non-welfare-states than for the Nordics and the Czech Republic. Particularly striking is that Italy, whose large share of social spending in GDP would qualify for welfare-state status under the 20-percent rule, has directed so little of its social budgets toward cutting poverty. Again, as elsewhere in the Mediterranean (and in South America's Southern Cone), social transfers go to the elderly, largely those with privileged occupations in their earlier careers.

Has favoring the support of the elderly, and investing less in those under the age of 65, been something costly in terms of GDP? The answer depends on the social-budget counterfactual one chooses to pose. Here are the two leading candidates:

*Counterfactual A:* Take some of the government money spent on the elderly, and shift it toward the leading kinds of social programs for children and those of working age (education, preventive out-patient health care for the children, worker retraining, etc.).

*Counterfactual B:* Privatize pensions, reducing taxes and mandating individual savings accounts for old age.

Thus far, the text has implied that we are comparing actual practice with Counterfactual A, and for this comparison the answer is clearly yes, the bias in favor of the elderly is clearly costly in terms of GDP. That is evident from the simple fact that investing in human development brings a higher return, the earlier the stage of cognitive and career development. The importance of this point has recently been underlined in the writings of Pedro Carneiro and James Heckman, among others,
finding that even among children, the rate of return seems higher, the earlier the child age at which parents and society intervene.\textsuperscript{35}

By contrast, comparison of actual practice with Counterfactual B suggests no clear difference in GDP. For all we can tell from twentieth-century data, individual saving and tax-financed saving can yield the same GDP result with appropriate adjustments of parameters in programs targeting the elderly. One might note that universal programs like Social Security in the United States are administered with lower bureaucratic costs and lower default risk than private pension plans or individual investments. On the other hand, there is reason to fear that the political process would underfund public pensions. Twentieth-century panel data have not allowed us to deny that there is a zero net effect on GDP from choosing public pensions over mandated private individual pensions. Thus the historic drift toward funneling tax money to the elderly either has cost GDP or not, depending on whether one wants to consider Counterfactual A or Counterfactual B.

If there is no clear gain in GDP from shifting social insurance and assistance toward the elderly, why have so many societies done it? The answer seems to be gray power. In the postwar democracies, an ever-greater population share consists of the elderly plus those approaching old age, and the elderly have a relatively high participation rate in politics. They have succeeded in gaining intergenerational transfers, with or without a net effect on GDP.

C. Formulas that have worked for Social Security

Fortunately, there are broad formulas that can adjust our pensions to longer life spans. Here are three formulas that would make Social Security sustainable indefinitely, formulas that private savings plans should also try to emulate.

The first formula is one on which the United States has already done its homework quite well, and just needs to follow through. The formula is this:

\textsuperscript{35} Carneiro and Heckman (2003), and the sources cited there.
Keep the share of adult life spent on Social Security from rising, by extending the working age for each benefit rate in proportion to adult life expectancy.

The United States has already taken steps down this path, thanks to the 1983 Greenspan Commission on Social Security Reform. We have advanced the age of “full” retirement benefits from 65 to 67 for those born after 1960. The gradual formula adopted in 1983 wisely follows the strategy of “grandfathering”, by not hitting those of middle age with a shock to their life plans.

Yet the news about accelerating senior longevity means we must continue. Seniors are increasingly healthy, and the share of them in poverty has declined, so it is not unreasonable for them to receive full Social Security benefits only if they work the same share of their adult lives as did their parents. Fixing the share of adult life at work would mean something like this: To receive the year 2007’s retirement benefit as a percentage of average earnings at any given age, one must work 51.6 percent of one’s life expectancy for males, and 41.5 percent for females, as we did in 2007. America’s progress along this path needs to continue, with more age adjustments.

The second formula builds in an automatic adjustment of the work-retirement balance to the longevity trend. Borrowing from the “notional defined contribution” pension reform that Sweden set up in the 1990s, the formula is this:

Index the retirement benefits for each cohort to life expectancy at age 60.

That is, while every individual’s annual pension benefits are still tied to his or her lifetime earnings history, they are indexed to the senior survival odds of everybody in his or her birth cohort. Thus if you were born in 1980, and you worked from 2000 to 2045, your annual Social Security benefits would be tied to your earnings over those years divided by an index that is tied to the age-60 life expectancy calculated from survival outcomes around the year 2040. The longer your cohort of people is expected to live, the less your benefits each year, though of course your
benefits are likely to continue for more years. This helps maintain aggregate balance in the pension budget.

The third formula is also patterned after Swedish practice since the 1990s:

*Index annual pension payouts to recent GDP per working-age person.*

Pensioners’ benefits from Social Security should share in the fortunes of the economy. When there is a boom, pensioners share in it, by automatic formula. By the same formula, pensions share the pain of a recession as much as others. In an unlikely Great Depression extreme, their ultimate safety net would be the same as for the young: Public support for the poor plus medical care.

Pre-commitment to such pre-determined formulae could remove the pension parameters from the political arena. Of course, social contracts can only make political pre-commitment easier. They cannot guarantee it. Even Sweden softened its pre-set formula very slightly in response to the 2008-2009 slump. Under the original formula, the government was obligated to cut benefits for the two years 2010-2011. Afraid to follow through on the cuts in 2010, an election year for Parliament, officials changed the formula to stretch the reductions out over more years. Yet the system remains intact, and it still works.

Nonetheless, in pensions as in human investments in health and mothers’ careers, welfare state Sweden stands out as a leader in rational solutions to social concerns.

### VI. Conclusion

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36 I have oversimplified Sweden’s system, which is well described in Knuse (2010). Instead of an index tied to GDP per working-age adult, Sweden uses two other index factors that yield a similar result. The economic aggregate is wages and salaries per employed person, not GDP per person 18-64. And Sweden backs up its pension stability with an additional trigger that goes off whenever the pension fund’s “Balance ratio” BR = capitalized assets / capitalized obligations drops below 1.
The imagined economic threats to the welfare state have not materialized. No welfare state has become poor. Nor has there been any international "race to the bottom" in taxes and social spending. Productive people and their wealth did not flee from the welfare state, any more than productive people prefer a low-tax neighborhood over one with higher taxes, better schools, and more public services. The welfare state looks like a Darwinian survivor in the global economy.

As we have seen, this favorable economic outcome did not just emerge from a statistical black box. There are plausible reasons for expecting such an outcome, and real-world governments have appreciated that broad safety nets and investing taxpayers’ money in human development will raise human productivity. They have financed the universal social programs with broad taxes, at low administrative cost, using a mix of taxes that conventional economics would have preferred.

In the process, the large-budget welfare states are world leaders in achieving an egalitarian society with lower income inequality and lower poverty, while maintaining social peace. Perhaps one key to this peaceful egalitarian achievement is the fact that their progressivity was achieved not through friction-causing steeply progressive taxes but through universalism in their social expenditures. The lower- and middle-income classes that most favored social insurance in fact paid for much of it by themselves.

The real threats to the welfare state are not economic, but rather arise as political responses to demographic movements. One real threat is that political backlash against a rising influx of refugees could bring a retreat from universalist welfare programs. This threat is probably confined to countries like Sweden and Germany, i.e. countries that are welfare states and accept large refugee inflows and refuse to discriminate against immigrants in the provision of social services.

The other, more global, threat is one that is moving toward all developed countries, whether they have large or minimal government budgets. The accelerated aging of the adult population in all OECD countries means a strain on planning for old age, with or without the reliance on tax-based pensions and long-term care. The Nordic welfare states, like the United States since the 1980s, are
world leaders that have already begun doing their social homework to meet the elderly tidal wave.

References


Figure 1. The Welfare State is Young and Rich
Figure 2. Tax Collection Costs as a Percentage of the Amounts Collected By Central Governments, US and UK 1787/96 - 2011
Figure 3. Female-Male Wage Ratios in Selected Countries, 1967 – 2006
Figure 4. The Present Value of Annual Fiscal Impacts of One Immigrant, Admitted to the United States in 1998

(The immigrant in 1998 is a composite of different age and education groups.)
Figure 5. Vote Shares Received by Nativist Political Parties since c2000
Figure 6. Poverty Reduction Achieved through Fiscal Net transfers, 1995 and 2005

A. For the elderly (ages 66 and up)
B. For those of Working Age (18-65 years)
C. For Children (0-17 years)
Sources and notes to figures:

Figure 1: The real GDP per capita series up to 2007 is from the Angus Maddison internet site: http://www.worlddeconomics.com/Data/MadisonHistoricalGDP/Madison%20Historical%20GDP%20Data.efp. The social transfer shares of GDP on the vertical axis for 1880-1930 are from Lindert (1994), and those for 1960-2007 are from the OECD's Socexp series downloadable from OECD iLibrary.

Figure 2:
The administrative cost share of tax collections are documented in Lindert, Growing Public (2004, Volume 1, Chapter 12), and updated in the IRS Data Book (http://www.irs.gov/uac/Tax-Stats-2). I am indebted to Joel Slemrod for his directing me to the updated IRS series.

Figure 3:
Note: For Denmark, Finland, Norway, and Sweden, figures for 1990 and before are for the manufacturing sector. For Germany, figures prior to 2000 are for West Germany. Data for Germany for 2000 and on are for the manufacturing sector. A new series starts for France, Japan, and Switzerland in 2000.

Figure 4: The source is Lee and Miller, 2000.

Figure 5: See Milanovic (2016), Figure 4.11 and the sources cited there.

Figure 6:
### Table 1. How Social Transfers as a Share of GDP Correlate with Growth and Prosperity in 19 OECD Countries, 1880 - 2000

The coefficient of correlation between the initial share of social transfers in GDP and

<table>
<thead>
<tr>
<th>Time period</th>
<th>(a) the growth of GDP/capita</th>
<th>(b) the level of GDP/capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880-1890</td>
<td>0.10</td>
<td>-0.18</td>
</tr>
<tr>
<td>1890-1900</td>
<td>0.34</td>
<td>-0.05</td>
</tr>
<tr>
<td>1900-1910</td>
<td>-0.23</td>
<td>0.09</td>
</tr>
<tr>
<td>1910-1920</td>
<td>0.12</td>
<td>0.31</td>
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<tr>
<td>1920-1930</td>
<td>-0.24</td>
<td>0.49</td>
</tr>
<tr>
<td>1960-1970</td>
<td>-0.16</td>
<td>-0.24</td>
</tr>
<tr>
<td>1970-1980</td>
<td>0.34</td>
<td>-0.09</td>
</tr>
<tr>
<td>1980-1990</td>
<td>-0.07</td>
<td>0.09</td>
</tr>
<tr>
<td>1990-2000</td>
<td>-0.11</td>
<td>-0.04</td>
</tr>
<tr>
<td>2000-2010</td>
<td>0.12</td>
<td>-0.19</td>
</tr>
</tbody>
</table>

Simple average of these correlations: 0.02 0.02

None of the correlations is statistically significant.

**Notes and sources for Table 1:**
- Social transfers/GDP for 1880-1930: Welfare, unemployment, pensions, health, and housing subsidies, as given in Lindert (1994, Table 1).
- Real GDP per capita: Penn World Table 7.1, downloaded 1 April 2013.
- The 19 countries are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece (1960s on), Ireland (1960s on), Italy, Japan, Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States.
<table>
<thead>
<tr>
<th>The question you ask</th>
<th>Social Security effects</th>
<th>Public-schooling effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The “pay as you go” question:</strong> Are today's immigrants a net burden on native taxpayers, right now, &quot;pay-as-you-go&quot;?</td>
<td>No, immigrants pay for natives' Soc Sec. since about 1980.</td>
<td>Yes, immigrant children subsidized by native taxpayers since about 1980.</td>
</tr>
<tr>
<td><strong>The “one lifetime” question:</strong> Is one wave of immigrants a net burden on native taxpayers over the life span of the immigrants and their descendents?</td>
<td>Yes, if immigrants have lower lifetime earnings, they get an above-average rate of return on the Soc Sec, at expense of other taxpayers.</td>
<td>No, immigrants' kids repay the rest of society in productivity and taxes.</td>
</tr>
<tr>
<td><strong>The “many generations” question:</strong> Are today's immigrants, plus their children and grandchildren to 2100, a net fiscal burden?</td>
<td>No, they become heavy net taxpayers, like others.</td>
<td>No, they become heavy net taxpayers, like others.</td>
</tr>
</tbody>
</table>