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THE BURDEN OF AGING: MUCH ADO ABOUT NOTHING, OR LITTLE TO DO ABOUT SOMETHING?

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Demographers and economists agree that we are aging—individually and collectively, nationally and globally. An aging population results from the twin demographic forces of fewer children per family and longer lives. Most experts recognize the burden that aging causes as the number of retirees supported by each worker rises. This trend is reinforced by the graying of the baby-boom generation, but burdens will continue to rise even after the boomers are buried—albeit at a slower pace.

Three key statistics are commonly quoted to reinforce the extent of the demographic and economic challenges that lie ahead. First, the rising "real burden" is most directly highlighted by noting that the ratio of workers to retirees will fall from three to two during the next 75 years. Second, we can get some idea of the future "financial burden" by projecting the year in which total Social Security revenues will first fall short of benefit payments, at which time benefits will have to be cut or tax burdens on workers increased.[1] Based on current projections, benefit levels, and tax rates, that happens sometime in the 2040s.[2] Finally, in recent years it has become fashionable to estimate projected Social Security shortfalls infinitely far into the future,

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based on the argument that this provides a better idea of the financial burden of the program imposed on all future generations (Lee and Anderson 2005; Auerbach, Gokhale, and Kotlikoff 1994; Gokhale and Smetters 2003; Social Security Administration 2005). The discounted financial liability amounts to about $10 trillion.

We can agree that projections covering a period as long as 75 years (the long-range period used by Social Security's trustees)—let alone projections through eternity—are of necessity quite uncertain. These forecasts require assumptions about future fertility rates, longevity, inflation, interest rates, labor productivity, GDP and wage growth, immigration, disability rates, labor force participation and unemployment rates, and so on. As only one example of the difficulties involved, who would have imagined back in the early 1960s—when the typical family had 3.7 children and demographic experts worried about the "population bomb"—that by 2006 birthrates among native-born females would fall to about two, so low that we would have to rely on immigration (and higher birthrates among immigrants) to avoid a shrinking population? How many kids will the typical household have in 2081? What will the labor force participation rate of married women be in the 2060s? Will the rate of productivity growth in the 2070s be higher or lower than it was in the 1970s? No honest economist would pretend to know the answers. Of course, Diogenes with his lantern would have difficulty finding a single honest economist among Washington think tanks—which promote policy changes based on precise and dire predictions of program revenues and costs centuries into the future.

I recently asked one of the foremost proponents of the use of infinite-horizon calculations to assess Social Security's "sustainability" to leave to the side all of these uncertainties. I suggested that he imagine he had received divine confirmation that all of the "intermediate cost" assumptions used by the Social Security trustees in their long-range, 75-year projections will turn out to be accurate. Is there *anything* we might do today, I asked, that would reduce the *real burden* of supporting retirees in the year 2081? After a thoughtful silence, he provided an impeccably reasoned, two-word, response: "more capital." To an economist, this means a combination of more human capital (education and training), more public capital (infrastructure such as roads, public buildings, and airports), and more private capital (productive plant and equipment, farms, telecommunications infrastructure, etc.). Of course, no economist could disagree: more capital would mean greater productive capacity available to reduce the burden of providing for tomorrow's elders. But is it that simple?

Human Capital

No one doubts that the United States would reap current and future benefits from improvements to our educational system, which is presumably the main source of improvements to human capital. While our universities are widely considered to be the best in the world, and while the percent of our population that has attended at least two years of college is rising inexorably, experts concede that large segments of our population are inadequately educated for our current economy—much less for the economy of the future. High school dropout rates remain high, dooming too many young people to sporadic work in low-paying jobs—or worse, to life on the margins of society, often under the control of the criminal justice system (Pigeon and Wray 1999). The problem is that while there are innumerable proposals to enhance education and training, we are far from consensus on what works: More money? Stay-in-school programs? No Child Left Behind? More testing? Less testing? School vouchers? Integration? Community-based schools? Magnet schools? Afrocentric education? While we can agree that "more human capital" will reduce future burdens of aging, that statement tells us nothing about which policy initiatives will bring about the desired result.

More fundamentally, let us suppose that we did not have an aging society—that the age distribution would not change, or that the nation actually would become younger. Would we then oppose "more human capital"? Of course we would not. We need a more productive labor force today and into the future—whether we have more elderly people to support or not. Hence, even if we knew that the projections of the trustees would turn out to be correct, it is hard to see why that should change the *level* of human capital desired. The only difference that such divine confirmation would make is with regard to the *type* of human capital developed. For example, an aging society will presumably require more health care (specifically, more elder-care) workers. However, we do not need to know the age distribution of the population in 2081, or even in 2041, to realize that policy needs to encourage human capital investment in these areas. We already have critical shortages of such workers, which are only partially relieved through immigration. It is obvious to everyone outside the Washington Beltway that current policy in this area is woefully inadequate—irrespective of distant demographic trends.

Public Infrastructure Investment

Public infrastructure can increase the quality of life and reduce the burden on future workers by enhancing private sector productivity. Further, at least some types of public infrastructure are exceedingly long-lived. With proper maintenance, dams, highways, levees, bridges, water delivery systems, and waste management systems can remain serviceable for half a century or more. Thus, "more public infrastructure" certainly appears to be good advice for an aging society. To be sure, there is some uncertainty involved in projecting infrastructure needs for the far distant future. Will workers and seniors in 2081 still rely on individual internal combustion–propelled transportation devices that ride on rubber in contact with asphalt? Will the greatest need for expansion of water treatment facilities over the next 75 years occur in North Dakota or in Rhode Island? Assuming we will need new bridges in Florida to handle traffic flows in 2060, do we begin now, or wait until 2055?

Moreover, if the population were not aging, would we forgo increased public infrastructure investment? Again, no one would (or, at least, should) adopt that line of argument. As with the case of human capital, the aging of society doesn't change the need for more public investment, although aging changes the nature of the needed infrastructure. We need more senior housing, more long-term care facilities, and more senior citizen recreational centers—just to take care of today's seniors. These types of public investments can be rather long-lived. Further, some of the existing capital stock (hospitals, apartment buildings, schools) can be renovated as needed to accommodate growing numbers of seniors. Hence, it makes sense to increase the supply of infrastructure that serves elders through new construction as well as rehabilitation of existing facilities. And the time to begin is now.

Again, we don't need high-powered think tanks to tell us that public investment in infrastructure construction and maintenance has been inadequate for the past three or four decades—whether we are aging or not. Just ask the victims of hurricanes Katrina and Rita. The American Society of Civil Engineers provides an annual estimate of the infrastructure deficit, which now amounts to about $1.6 trillion (2005). My own crude estimate of the discounted value of that deficit from now until the sweet hereafter amounts to a gazillion dollars. It is truly amazing that Social Security "reformers" have spent so much time calculating the supposed infinite-horizon financial shortfall of that program (which currently runs huge fiscal surpluses), while ignoring the very real, obvious, and *current* infrastructure deficit that burdens everyone today.

Private Investment

Finally, we turn to private investment in plant, equipment, provision of services, and farming. Forty years ago, economists liked to pretend that investment was like "putty"—highly pliable, so that it could be adapted to any technology and produce any type of output. In truth, most private capital is fairly inflexible in both respects: hard to upgrade and designed to produce specific products or services. The longer the horizon, the more difficult it becomes to adapt plant and equipment to new technologies and new products. Thus, even if capital put in place today could continue to produce output over the next 75 years, it is highly unlikely that it would be appropriate to our needs at that time. Many of the problems I raised with regard to investing in public infrastructure today for the elderly persons of 2081 apply with much greater force to private investment.

Further, private investment is undertaken with a view to making a profit. Government could conceivably build a dam today that will not be needed until 2025. No private firm would build plant and equipment today on the expectation that it will find a demand for its output in 2025—let alone 2081. Hence, even if we removed all uncertainty over future technologies and baskets of goods consumers will demand, firms will not invest today to meet demand by seniors even a few years down the road. The problem, then, is not simply uncertainty about the future, or even the problem of finite lives of capital goods. "More capital" cannot be a recommended solution to far distant burdens, because firms will invest more today only if demand for the relevant products is forthcoming today (or in the very near future).

The benefits of increasing private investment, and thus raising productive capacity, are no less obvious than recommendations to increase human capital and public infrastructure. But, again, it is easy to support this course of action even if the society were not aging. And, again, it is very difficult to come up with actual private investment projects that will reduce the burden on workers of supporting retirees 50 or 75 years into the future. Certainly we will need greater production of pharmaceutical products, wheelchairs and other mobility devices, private eldercare facilities, aged-friendly vehicles, and so on. Indeed, we need that today. What is holding back private investment is—mostly—insufficient demand *today* for such products, which is due, at least in part, to insufficient income of today's seniors. Nor is it the *business* of business to plan for demographic events that might occur in a half century. If any institution ought to plan that far ahead, it should be the federal government.

The favored solution to insufficient private investment is "more saving." Indeed, many of the proposed "reforms" to Social Security include some sort of tax incentive scheme to promote more saving. If we lived in an economy that suffered from chronic supply constraints—say, the Soviet Union before its breakup—this might make some sense. We would want to encourage consumers to reduce their spending, thus freeing up resources that could be redirected by economic planners to produce investment goods that would lead to increased production of products needed by our aging population. But the United States is not the USSR! Investment in the private production of products for today's, and tomorrow's, seniors is rarely—if ever—restrained by inability to purchase resources, including labor. What constrains investment is demand for the output that will be produced by the new private capital as soon as it comes on line. Finally, even according to the conventional estimates made by advocates of tax-advantaged savings plans, the effects of such schemes on savings, investment, and growth are too small to make much difference. Inasmuch as today's investment has to be related to perceived demand for output either today or in the very near future, we are left with the conclusion that any proposal to resolve future burdens of aging through "more saving" will at best amount to little.

Coda

Ironically, the economist who recommended "more capital" as the solution to the rising burden of caring for the elderly also argued that faster economic growth would *worsen* the Social Security crisis! His analysis was complex, rigorous, and correct—on its own terms. To put it simply, given low birth rates, rising longevity, and the way that Social Security benefits are calculated (based on earnings), the discounted financial gap between total benefits paid out and payroll tax revenues received, calculated over an infinite horizon, will be higher if GDP and wages grow faster. This conflict between his intuition that more capital (and hence more real output) would reduce future burdens and the results from his infinite-horizon model, which implied that more growth makes things worse, should have led him to drop the model in favor of common sense. What matters is the real burden, not any "financial burden" implied by "actuarial gaps." But common sense can be a scarce resource among economists.

Elsewhere, I've made the point that the projected increase of the real burden resulting from aging is far too small to mount a serious challenge to our nation's ability to produce enough output so that workers, retirees, and other dependents will have a significant and steady increase of real living standards (Wray 2005; Papadimitriou and Wray 1999). As I've noted above, the number of workers per retiree falls from three to two; however, worker productivity will *quadruple* over the same period. Further, workers will have fewer children to support, so that the *total dependency ratio* (elderly plus young relative to working-age populations) will rise only to the level we achieved in the mid-1960s. Further, I've also made the point that the financial burden will not rise much; on current projections, the share of national GDP that will have to be shifted to Social Security benefits rises by only two percentage points. In any case, many supporters of Social Security have come up with numerous easy fixes that will allow us to maintain a balance between benefits and revenues, if such is desired.

In this policy note, I have sought only to answer a seemingly simple question: given that the real burden *will* rise, is there anything we can begin to do *today* to attenuate that increase? The answer seems to be that we should essentially follow the same policy prescriptions that would make sense *even if our society were not aging*: 1) more human capital: more years of schooling, fewer dropouts, higher quality schooling, and enhanced apprenticeship and training programs; 2) more public investment: new and improved public infrastructure, better maintenance of existing infrastructure, and reduction of adverse environmental impacts; and 3) more private investment: new and improved private production facilities to enhance growth. The last item will almost certainly require maintenance of high aggregate demand today and over the near future.

All of this is quite sensible, although it bears no relation to the ongoing debate in Washington about "reforming" Social

Security. That misguided debate focuses almost exclusively on the "financing gap" and on "financial fixes"—such as private accounts that are supposed to grow with the stock market at a pace so fast that tomorrow's seniors will have the financial wherewithal to buy what they need.

In truth, if there really were a looming crisis in Social Security's future, any financial fixes would amount to nothing more than rearranging deck chairs on the Titanic, unless they reduce future *real burdens*. However, no one has made a strong case that financial fixes can reduce future real burdens. To do so they would have to reduce the number of future elders, increase the number of future workers, or increase the productivity of future workers. I have seen no argument that proposed reforms would shorten the lives of tomorrow's seniors, nor that they would increase birthrates—indeed, most policymakers would reject out of hand any proposals to accomplish either of these outcomes. Hence, all reforms must be geared toward increasing productivity, which comes down to encouraging more capital formation. Yet, as I have argued here, that advice provides virtually no useful guidance to policymakers. Further, the types of investments that can be made today to reduce burdens in the distant future are in human capital and public infrastructure. That is to say, the investments must be undertaken primarily by government. Yet the reformers seek to reduce the role of government and increase reliance on the market—which by its very nature is focused on the here and now, not on infinite horizons.

To move forward in the discussion about aging, in general, or Social Security, in particular, each reformer should be forced to outline in detail how his or her proposals will generate "more capital" specifically suited to the projected needs in 2051, 2081, and beyond. Any reform that fails to provide specifics should be dismissed as "much ado about nothing." To be sure, we can expect our society to continue to age, and that will mean fewer workers per retiree. Although it amounts to "something," the rise of real burdens is small given projected productivity increases, and there isn't a lot that can be done, or needs to be done, in the foreseeable future.

Notes

1. Here, total revenue includes payroll tax revenues, interest earned on the trust fund, and sales of trust fund assets.
2. As most baby boomers will be dead by the 2040s, this drives home the point that the problem is the general aging of the population, not the postwar baby bulge.

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