

December 20, 2002

China and the US Social Security Crisis: The Decisions We Face

China and the US social security system seem to be worlds apart. China is grappling with the problems of rapid industrialization with a young and vigorous working population while the US will soon be struggling with an aging population that will push current Social Security and Medicare systems to insolvency.

But looks are deceiving. If you study the demographic trends around the world, you come to the conclusion that the economic growth of China, as well as other developing countries, is not only the key to solving the pending US social security crunch, but in fact is the only solution to developed world's looming pension crisis. If China, India, and rest of the developing world stumble, we are doomed to sharply higher retirement ages, declining living standards, plunging asset prices, or some combination of all three.

The Demographic Problem

Much has been written about the aging of the population in the US, Europe, and Japan. There are several important features of this trend. In most of the developed countries, fertility rates, the number of children per couple, have now fallen well below the level that keeps the population constant. Furthermore, life expectancy has been increasing and the average age of retirement has been falling. In 1950, life expectancy in the US was 69, only two years more than the median age of retirement. By 2000 the median retirement age fell to 62, while life expectancy rose to 76.5, increasing the length of retirement by almost 13 years.

Even if the retirement age does not decline further, the number of workers per retiree in the US will plummet from 3.9 today to 2.2 in 2030, in Europe from 2.98 to 1.70, and in Japan from 2.85 to 1.46. Fifty years ago, by comparison, the US had 7 and Japan 10 workers for every retiree.

Because of these demographic trends, the Social Security system in the US, as well as virtually all public pension funds abroad, are seriously underfunded. Under current projections of the Trustees of Social Security System, the cost of the benefits will exceed the taxes collected in 2017, and the Trust Fund will run out of assets in 2041. In less than four decades, the revenues of the program will only cover about 73% of the costs, and the shortfall increases

further in subsequent years.

But the crisis for the Social Security System will come well before the Trust Fund runs out of assets. The bonds in the Fund will have to be sold in ever increasing quantities to fund retirement benefits after 2017.

The critical question is how will the market absorb these hundreds of billions of dollars of government bonds that are going to be sold into the markets? The younger generation is far too few in number and has too little buying power to absorb these assets except at distressed prices. The sale of these bonds will send interest rates soaring and capital markets crashing.

But the crisis facing Social Security is just the tip of the iceberg. The bonds sold from the Trust Fund represent a small fraction of the trillions of dollars of stocks and bonds that baby boomers stashed away in IRAs, Keoghs, and 401k plans. These assets, which are supposed to be the tickets to a comfortable boomer retirement, will cascade onto a market that will be incapable of absorbing them at anywhere near the price that boomers have paid for them during the bull market of the 1990s.

Effect on Retirement

A simple solution to the aging problem is for workers to defer the age of retirement. We have developed a model that calculates, given projected population and productivity trends made by the UN Population Division, how much the retirement age must increase in the developed countries over the next thirty years in order for the workers to reap the gains of higher productivity and still produce sufficient goods to support the growing retirement population. This is shown in the accompanying figure along with historical data over the past 50 years for the US.

The picture is not pretty. Although the retirement age has dropped 5 years since 1950 to its current level of 62, it will have to increase steadily to 69 years by 2030 in order to feed, clothe, and pay for the medical care of the retiring boomers. The increase in retirement age outpaces the expected increase in life expectancy, so that for the first time in modern history future generations will not only have to work longer but will have a shorter period in which to enjoy the fruits of their labor.

Although some accept an extended working life as a natural consequence of a rising life expectancy, few realize how dramatic these changes are. From the Industrial Revolution onward, workers have steadily gained shorter workweeks and longer retirements and view these developments as inherent benefits of economic progress. In Europe, some of the public and private

pension plans start paying workers in their 50s, so that a shift to a higher retirement age would be for many a traumatic turn of events. Even if workers accepted the increase in the retirement age, there are legitimate questions whether the older workforce would be accepted in the labor market and whether they could achieve the same productivity gains that are expected from younger workers.

Researchers have correctly noted that the demographic trends in the US are still significantly better than in Europe or Japan and with increased immigration, projected population numbers are stable. But this should give Americans no solace. What is important is the total demand for goods from retirees worldwide, not just in a single country. Just as the price of oil is determined by the interaction of world demand with world supply, irrespective of which country produces or consumes the oil, the price of goods demanded by retirees will be determined by their demands worldwide, not just from any single country. Unless we close our borders to imports, a move that would devastate our standard of living, the price of goods Americans consume will be greatly affected by the aging populations abroad.

Productivity Growth

What could save us from this gloomy scenario? There is only one answer: A dramatic increase in the rate of productivity growth. Productivity growth increases the output of workers relative to the consumption of the retired and counteracts the population imbalances that will develop.

I can hear all the voices crying out: This is why we must increase saving and encourage individuals to supplement social security. Saving will make the next generation of workers sufficiently wealthy to buy the assets from the retiring boomers and productive enough to produce the goods they need.

But the increases in productivity necessary to keep the retirement age constant are staggering. We estimate that productivity growth need rise to almost 8% per year in the developed world over the next three decades to close the gap between the consumption of retirees and the output of workers in order to maintain the retirement age at 62. This is more than three times the historical average rate of productivity growth for developed world economies.

Unfortunately increasing saving, for all its virtues, cannot begin to generate this level of productivity growth. Most economists believe that if the long-run increase in productivity growth can be pushed from its historical average of 2% per year to 2.5% or at the very most 3.0%, it would be an extraordinary

accomplishment. Furthermore, most of the historical productivity growth does not even come from increased capital, but instead from technological discoveries and inventions (called multifactor productivity) that depend little on the saving rate. Even if the new information and communication technologies would boost long-term productivity by one percentage point, we would still, as the accompanying chart shows, fall seriously short of the growth needed to counteract the demographic crisis.

Enter China and the Developing Countries

If the developed world cannot grow fast enough to solve the demographic problem, what can be done? Fortunately, the developing world not only stands at the brink of rapid productivity growth but its huge population has a profile that is sharply different than that of the developed world. The bulk of China's population is young and set to be entering the prime of their working life at the same time the boomer generation in the rich countries will be retiring.

But more importantly, the productivity growth in China is awesome; the Chinese have increased real per capita real GDP at a rate of over 8% per year over the past five years. And, despite China's dramatic economic surge, their per capita income is still only onetenth that of the United States. That means that their rapid productivity growth can continue for many years without running into technological boundaries that exist in Japan and the West.

How will the productivity of Chinese workers help baby boomers? The Chinese must find an outlet for all the goods that they produce and locate assets to buy with all the dollars, euros, and yen that they will acquire through their growing trade surpluses.

We must think of the world of the future as one economy, not as separate nations each attempting to provide goods for its own citizens. No one fears that the state of Florida, with its large population of retirees will fall into an economic slump, since we know that the consumption of the elderly can be supported by the younger population in the remaining 49 states. Likewise our boomer population, as well as those of Europe and Japan can be supported the by the other 80% of the world's population, as long as they continue on the path of economic development

But there is no reason why China alone will enjoy the privilege of providing goods to the retirees of the developed countries. India has an even younger population than China and is set to surpass China in population by 2040.

India has accelerated its productivity growth in recent years but still lags China. Furthermore, there are 3 billion people outside of India and China that also share in the fortuitous demographic mismatch. In fact, if the developing world averages 6% productivity growth, which is below Chinese levels today, retirement ages will need only increase marginally despite the steadily growing retiree population.

An increase of productivity to 6% might sound too hopeful, but it is certainly in the range of possibility. From 1950 through 1973 Japanese productivity grew at 9% per year, and productivity in South Korea, Taiwan, Singapore, and Hong Kong all grew faster than 6% for a 30-year period from 1960-1990. There is no reason why the rest of the developing world, whose per capita income is only 10% of the US today, cannot grow at 6% a year over the next several decades. If they do so, they would still only reach 31% of US income by 2030.

Asset Flows and Demand

The growth of the developing countries also answers the question of who will buy the assets from the baby boomers when they retire. The assets will be bought by the workersavers of the developing world. They will be purchased willingly as the huge increase in their saving finds assets that are reasonably priced and discovers them being sold from the private and public pension funds of the developed world.

These patterns of trade will cause increasing trade and current account deficits in both the US and the rest of the developed world. But this is no cause for concern, no more than the state of Florida running a current account deficit with the other 49 states. If any country was perceived to be spending more than would be justified by the orderly liquidation of their assets, the foreign exchange market would immediately signal this through a drop in the currency and a rise in the price of imports, a signal that consumption must be slowed down.

As most of the world's output will be produced by the developing nations, eventually most of the assets the US, Europe, and Japan will be owned by investors in the developing world. Chinese, Indians, and other non-Western investors will control most of the large global corporations. This is also a trend that should not be feared and, indeed, a world market that is truly integrated would have the shares of wealth closely match the sizes of their individual economies.

Tasks before us

Once we understand how critical the developing of the world's economy is for the welfare of the already-rich nations, the tasks before us become clear. We must encourage free trade, lift tariff barriers, promote foreign direct investment, and advance the globalization of the world's economic system.

We must also strive to bring those countries that have lagged in economic development, such as the Mid East (outside of oil), and Africa back on track. Stopping the spread of AIDS, a goal supported by many organizations, and particularly the Gates Foundation, should assume new urgency. Such an objective is not only a worthy humanitarian goal, but any impediment to the growing productivity of developing nations is a threat to our welfare as well as theirs.

It is clear that our most important task for offering the aging population hope that they can maintain a prosperous retirement is to support global economic development. Economic success in foreign countries is not only good for their people, but essential to the continued prosperity of our society. As we look ahead to our and our children's welfare, there is no other economic goal that should have higher priority.