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Demography, economic performance, and financial markets

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1. Introduction

I am in an uncomfortable position being the junior economist in a panel with two Nobel Prize winners. So I decided that I would not talk about macro-economics, which is Jim Tobin's domain, and I would not talk about financial markets, which is Merton Miller's turf. I had chosen to talk about economic growth, but then Bob Solow walked into the room. The presence of these luminaries has taken away all the subjects that I can talk about knowledgeably, so I am going to do as an economist and talk about a subject that I know very little about, namely population. My central theme is that the spectacular growth of certain countries' economies, and the performance of both groups' financial markets have been heavily influenced by their changing demographics. I shall have a word or two to say as well on political structures. I will look at China, Japan, and the United States and will comment briefly on some other Asian nations.¹

Despite the fact that this discussion is sponsored by the Japan–U.S. Center and everybody knows that Asia is a rising power, few of us recognize the scale of Asia, which has about 3.5 billion people. My principal argument is that demography is destiny; a disproportionately large working-age population within a nation will lead its economy to prosper and grow. High dependency ratios, including both young and old dependents, drags down an economy.

With smoothly oiled markets, a nation's economic prospects would not affect the performance of its financial markets. Future prospects would be incorporated into current prices. However, the financial markets of China, Japan, and the United States are not well integrated. Stockholders overwhelmingly invest in their own nation, which suggests that, over the long run, equity returns and foreseeable economic growth may well be positively linked.

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¹I benefited from conversations with David Bloom. Most population statistics here are taken from his chapter with Jeffrey Williamson "Demographic change and human resource development" Chapter 3 in *Emerging Asia: Change and Challenges*, Asian Development Bank, Manila, 1997.

It would be reassuring to find a strong positive link between economic performance and political development, where such a link would provide incentives for reform. The evidence, at least the evidence from the countries I focus on, does not provide such reassurance.

2. China

My colleague (Shang-Jin Wei) recently did a study showing that, by virtually any measure, the volatility of capitalist Chinese financial markets is about twice that in developed countries, even if we look at shares that are sold to foreigners. Shares sold to Chinese have substantially greater volatility. There is extreme uncertainty about China's financial markets.

The uncertainty about the Chinese financial markets is exceeded only by its political unpredictability. Perhaps we should rejoice that there has been no convulsion following the recent death of China's long-time leader, but nobody knows what the future holds. Some research suggests that the stronger the future Chinese economy, the greater the probability of political upheaval. Evidence supporting a negative causal relationship between economic performance and political stability is provided by North Korea, where until now a stable regime has been accompanied by a long-term economic slide.

China's demographic structure has changed dramatically. China has had a relatively small population of old people; its dependency concern has been at the other end of the spectrum. But the one-child-per-family rule has finally shrunk the supply of children, producing a rapid rise in the percentage of the population that is of working age. This rise – from 35 to 46 percent of the population in 30 years – has facilitated the economy's rapid growth. (In essence, China is currently benefiting from the demographic developments that, I shall argue, helped Japan from the 1950s to the 1980s.) And if world financial markets are not fully integrated, and they certainly are not for China, it will be the working population that drives China's stock market upward, the more so due to their substantial savings rates. And at some far future date, when these same workers pass into retirement, Chinese stocks will suffer.

3. Japan

Japan presents a far different picture than its giant neighbor. Its financial markets, though far more open than China's, are still cozy. And they are depressed. For years, the Japanese government has tried to insulate financial markets from excess risk by attempting to ameliorate risk. But these attempts, I would argue, have made risk a more significant factor within the Japanese financial sector. Other nations, including the United States, have had similar experience with troubled financial institutions, but not on so grand a scale. Generally, when banks take write-downs for assets that are underperforming or are worth nothing, stock prices go up. Japan may have hurt itself very significantly by refusing to acknowledge and face up to the risks borne by its financial institutions.

Japan's current demographic structure reinforces its difficulties. Japan has had as profound a change in demography as any major country. In 1955, for example, 55 percent of Japanese households had five or more people. Today, the figure is 17 percent – a dramatic drop. Since the 1950s, Japan, in the absence of any gain in productivity, had a built-in engine for growth: the growth in the percentage of people who were in prime working ages. Today, about 12 percent of the Japanese population is over 65. Forty years ago it was just five percent – much smaller. This seems to suggest that Japan would have had a hard time. But during the same period, the percentage of the Japanese population that was in the prime earning ages increased by more than a third as a result of a dramatic decrease in the birth rate.

Such a decrease is beneficial in the short run, since it reduces the proportion of dependent children, so that a country can prosper for a period. However, when the small pool of children matures to working age, there are too few people to drive the economy into the future. And the same factor applies to the purchase of securities by a bulge of people in their twenties, thirties, or forties, and maybe even in their fifties; it's great while it's happening, but they will eventually draw down their securities and, presumably, securities prices. Changing demographics surely contributed to the slump in Japanese financial prices.

China is a decade or so behind Japan. China has also had a significant growth in the percentage of people who are in their prime earning years, and its proportion of young people has fallen precipitously. In 15 years, China too will experience Japan's climbing-dependency pattern. In sum, demographics will not bless Japan's immediate or China's intermediate future, but they do not spell doom.

Let me speculate on the future, as is often done at this annual gathering. As a personal opinion, rather than anything derived from research, the Japanese economy and financial system may be oversold. In the United States, they used to say that when a shoeshine boy tells you which stock to buy, it is time to get out of the market. There may be a parallel in today's Japan. When the bell hop and bank official both tell you Japan's economy is deeply troubled, it may be time to go long on Japan's economy and stock market.

4. The United States

Many people would say that the United States has a Pollyanna financial market. No one, including Alan Greenspan, knows whether this criticism is merited. What we do know, from the record, is that if actual earnings are near analysts' current predictions, United States financial markets will do just fine. The problem is that when earnings are very high, or when earnings disappoint by say five or 10 percent, then these markets tend to fall more significantly. So rather than predict what is going to happen with financial markets, I will make a contingent prediction: if the analysts are right, everything is great. If the analysts are wrong, I wish I had invested elsewhere. The United States has exceedingly open financial markets, not to mention a flexible and open economy. Moreover, it has a high rate of immigration. These factors together suggest that demography will play less of a role in influencing our economic and financial future than in Japan or China.

In the United States, we have a very bright economy, but an increasingly tarnished political system; substantial contributions to candidates influence policy. Interestingly, our tarnished political system appears to have little macro-effect on the economy. The causality rather seems to go from the economy to politics. Discussion in the 1996 election focused on Bill Clinton's character and Bob Dole's age, as well as the two parties' policies. But a simple regression analysis on past elections reveals that when the economy is strong, it is very unlikely that the incumbent will be defeated.

5. Comparisons across Asia

East Asia, including China, has been demographically blessed for the past quarter century, with its economically active population growing at 2.4 percent annually, but its dependent population by only 0.3 percent.² For Southeast Asia, by contrast, the numbers were 2.9 and 1.7 percent, for South Asia 2.5 and 2.0 percent. For the next 30 years, Southeast Asia will have the advantage, 2.0 and 0.8 percent, as opposed to 0.5 and 1.1 percent for East Asia, with South Asia in the middle at 2.3 and 1.2 percent.

The hypothesis that the ratio of productive-to-dependent citizens substantially affects economic performance has solid historical support. Assuming its validity, it portends quite different fates for four countries that tend to swim together in most people's minds: Japan, China, South Korea, and Singapore. Singapore's situation is bleakest. It will have a substantial decline in its prime working-age population in the years to come. Japan will also have a decline. Both China and South Korea will enjoy slight increases. Their demographics will permit higher growth rates, though China's political instability and South Korea's troubled neighbor North Korea loom as negative factors.

6. Conclusion

The political situations in the nations we have mentioned are quite different. Barring an earthquake-like event (which is quite possible in China), political structures need not be a driving force in economic performance. As China's recent success demonstrates, lack of democracy need not inhibit economic growth; and Singapore and Japan show that within an ostensible democracy, electoral competition is not required. Americans like to believe that such competition promotes a flexible economy, but many European nations provide unfortunate counter-examples. In sum, a broad range of political structures can support rapid economic development, but none will guarantee it.

Demographic developments, by contrast, play a much more consistent role across nations in affecting economic growth. It is highly beneficial to have large numbers of people in the prime working years; it is detrimental to have lots of dependent old folks; a small cohort of dependent young people provides temporary benefits, but will ultimately

²Europe, as Jim Tobin has mentioned, has not done nearly as well, with a slightly lower growth rate of dependents, only 0.15 percent per year. The performance of Europe's economy has suffered because its work force grew over a 25-year period at only 0.7% per year.

shrink the cohort of workers, as a number of Asian nations will now learn. If a nation's equity markets are mostly closed to the outside world, population structures will affect the prices of their shares. Prime-age workers saving for retirement represent a long-term persistent demand for assets. Whether in the economy or a segregated stock market, prime-age workers foster growth in value.