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*China's estimated economy by the year 2040. Be warned.

BY ROBERT FOGEL | JANUARY/FEBRUARY 2010

In 2040, the Chinese economy will reach $123 trillion, or nearly three times the economic output of the entire globe in 2000. China's per capita income will hit $85,000, more than double the forecast for the European Union, and also much higher than that of India and Japan. In other words, the average Chinese megacity dweller will be living twice as well as the average Frenchman when China goes from a poor country in 2000 to a superrich country in 2040. Although it will not have overtaken the United States in per capita wealth, according to my forecasts, China's share of global GDP -- 40 percent -- will dwarf that of the United States (14 percent) and the European Union (5 percent) 30 years from now. This is what economic hegemony will look like.

Most accounts of China's economic ascent offer little but vague or threatening generalities, and they usually grossly underestimate the extent of the rise -- and how fast it's coming. (For instance, a **recent study** by the Carnegie Endowment for International Peace predicts that by 2050, China's economy will be just 20 percent larger than that of the United States.) Such accounts fail to fully credit the forces at work behind China's recent success or understand how those trends will shape the future. Even China's own economic data in some ways actually *underestimate* economic outputs. It's the same story with the relative decline of a Europe plagued by falling fertility as its era of global economic clout finally ends. Here, too, the trajectory will be more sudden and stark than most reporting suggests. Europe's low birthrate and its muted consumerism mean its contribution to global GDP will tumble to a quarter of its current share within 30 years. At that point, the economy of the 15 earliest EU countries combined will be an eighth the size of China's.

This is what the future will look like in a generation. It's coming sooner than we think.

What, precisely, does China have going so right for it?

The first essential factor that is often overlooked: the enormous investment China is making in education. More educated workers are much more productive workers. (As I have reported elsewhere, U.S. data indicate that college-educated workers are three times as productive, and a high school graduate is 1.8 times as productive, as a worker with less than a ninth-grade education.) In China, high school and college enrollments are rising steeply due to significant state investment. In 1998, then-President Jiang Zemin called for a massive increase in enrollment in higher education. At the time, just 3.4 million students were enrolled in China's colleges and universities. The response was swift: Over the next four years, enrollment in higher education increased 165 percent, and the number of Chinese studying abroad rose 152 percent. Between 2000 and 2004, university enrollment continued to rise steeply, by about 50 percent. I forecast that China will be able to increase its high school enrollment rate to the neighborhood of 100 percent and the college rate to about 50 percent over the next generation, which would by itself add more than 6 percentage points to the country's annual economic growth rate. These targets for higher education are not out of reach. It should be remembered that several Western European countries saw college enrollment rates climb from about 25 to 50 percent in just the last two decades of the 20th century.

And it's not just individual workers whose productivity jumps significantly as a result of more education; it's true of firms as well, according to work by economist Edwin Mansfield. In a remarkable 1971 study, Mansfield found that the presidents of companies that have been early adopters of complex new technologies were on average younger and better educated than heads of firms that were slower to innovate.

The second thing many underestimate when making projections for China's economy is the continued role of the rural sector. When we imagine the future, we tend to picture Shanghai high-rises and Guangdong factories, but changes afoot in the Chinese countryside have made it an underappreciated economic engine. In analyzing economic growth, it is useful to divide an economy into three sectors: agriculture, services, and industry. Over the quarter-century between 1978 and 2003, the growth of labor productivity in China has been high in each of these sectors, averaging about 6 percent annually. The level of output per worker has been much higher in industry and services, and those sectors have received the most analysis and attention. (I estimate that China's rapid urbanization, which shifts workers to industry and services, added 3 percentage points to the annual national growth rate.) However, productivity is increasing even for those who remain in rural areas. In 2009, about 55 percent of China's population, or 700 million people, still lived in the countryside. That large rural sector is responsible for about a third of Chinese economic growth today, and it will not disappear in the next 30 years.

Third, though it's a common refrain that Chinese data are flawed or deliberately inflated in key ways, Chinese statisticians may well be underestimating economic progress. This is especially true in the service sector because small firms often don't report their numbers to the government and officials often fail to adequately account for improvements in the quality of output. In the United States as well as China, official estimates of GDP badly underestimate national growth if they do not take into account improvements in services such as education and health care. (Most great advances in these areas aren't fully counted in GDP because the values of these sectors are measured by inputs instead of by output. An hour of a doctor's time is considered no more valuable today than an hour of a doctor's time was before the age of antibiotics and modern surgery.) Other countries have a similar national accounting problem, but the rapid growth of China's service sector makes the underestimation more pronounced.

Fourth, and most surprising to some, the Chinese political system is likely not what you think. Although outside observers often assume that Beijing is always at the helm, most economic reforms, including the most successful ones, have been locally driven and overseen. And though China most certainly is not an open democracy, there's more criticism and debate in upper echelons of policymaking than many realize. Unchecked mandates can of course lead to disaster, but there's a reason Beijing has avoided any repeats of the Great Leap Forward in recent years.

For instance, there is an annual meeting of Chinese economists called the Chinese Economists Society. I have participated in many of them. There are people in attendance who are very critical of the Chinese government -- and very openly so. Of course, they are not going to say "down with Hu Jintao," but they may point out that the latest decision by the finance ministry is flawed or raise concerns about a proposed adjustment to the prices of electricity and coal, or call attention to issues of equity. They might even publish a critical letter in a Beijing newspaper. Then the Chinese finance minister might actually call them up and say: "Will you get some of your people together? We would like to have some of our people meet with you and find out more about what you are thinking." Many people don't realize such back-and-forth occurs in Beijing. In this sense, Chinese economic planning has become much more responsive and open to new ideas than it was in the past.

Finally, people don't give enough credit to China's long-repressed consumerist tendencies. In many ways, China is the most capitalist country in the world right now. In the big Chinese cities, living standards and per capita income are at the level of countries the World Bank would deem "high middle income," already higher, for example, than that of the Czech Republic. In those cities there is already a high standard of living, and even alongside the vaunted Chinese propensity for saving, a clear and growing affinity for acquiring clothes, electronics, fast food, automobiles -- all a glimpse into China's future. Indeed, the government has made the judgment that increasing domestic consumption will be critical to China's economy, and a host of domestic policies now aim to increase Chinese consumers' appetite for acquisitions.

And Europe? Europe, by which I mean the 15 earliest EU members, faces twin challenges of demography and culture, its economic future burdened by a mix of reproductive habits and consumer restraint.

Europeans, of course, won't be eating grass in 2040. Their economic decline over the next 30 years will be relative, not absolute, as technological advances and other factors should allow Europe's overall labor productivity to continue to grow about 1.8 percent annually. Yet their percentage contribution to global GDP will tumble, shrinking by a factor of four, from 21 percent to 5 percent, in a generation.

Demography is the first key issue. The population of Western European countries has been aging rapidly, and that is likely to continue over the next several decades. The basic reason: European couples aren't producing enough babies. Europe's total fertility rate has been below the level needed to replace the population for about 34 years, according to a 2005 Rand Corp. study. As a result, the percentage of women of childbearing age will decline, in the earliest 15 EU countries, from about 50 percent in 2000 (it was also about 50 percent in 1950) to the U.N. projection of about 35 percent in 2040. So we have a double whammy: Not only will reproductive-age women have sharply reduced fertility rates, but the proportion of women who are in their childbearing years will also have declined sharply. By 2040, almost a third of Western Europe's population may be over age 65.

Why are there fewer babies? One key reason is that European attitudes toward sex have evolved sharply. One-hundred fifty years ago, it was considered a sin to enjoy sex, the only legitimate purpose for which was procreation. But today, young women believe that sex is mainly a recreational activity. Behind the fertility trend is a vast cultural shift from the generation that fought in World War II, which married early and produced the great baby boom of 1945 to 1965. The easy availability of birth control and the rise of sex as recreation mean that populations are likely to shrink in many European countries. As early as 2000, the natural rate of increase (births minus deaths) was already negative in Germany and Italy. By 2040, it is likely that the natural increase will be negative in the five largest European countries, except Britain.

So what if Europeans have a little fun now and then? Well, fun has consequences. Declining fertility pushes up the age of the citizenry and shrinks the percentage of people in the workforce, and so impedes growth. Demographic changes also shape the hiring and promotion structures of individual companies, and not necessarily for the better; if the elderly cling to the best jobs well past retirement age, younger workers may have to wait an extra decade, perhaps longer, to get their turn. And because younger workers are a major source of new ideas, slowing down the ascendancy of the next generation may retard the pace of technological change. (If fertility rates remain as low as they have been, Italy's population will fall by half in 50 years. Naturally, politicians are doing everything they can. They are joining with the Holy See and telling young women: Please procreate.)

In another way, Europe's culture confounds economists. Citizens of Europe's wealthy countries are not working longer hours to make higher salaries and accumulate more goods. Rather, European culture continues to prize long vacations, early retirements, and shorter work weeks over acquiring more stuff, at least in comparison to many other developed countries, such as the United States. In my observation, those living in most Western European countries appear to be more content than Americans with the kind of commodities they already have, for example, not aspiring to own more TVs per household. Set aside whether that's virtuous. A promenade in the Jardin du Luxembourg, as opposed to a trip to Walmart for a flat-screen TV, won't help the European Union's GDP growth.

Of course, China faces its own demographic nightmares, and skeptics point to many obstacles that could derail the Chinese bullet train over the next 30 years: rising income inequality, potential social unrest, territorial disputes, fuel scarcity, water shortages, environmental pollution, and a still-rickety banking system. Although the critics have a point, these concerns are no secret to China's leaders; in recent years, Beijing has proven quite adept in tackling problems it has set out to address. Moreover, history seems to be moving in the right direction for China. The most tumultuous local dispute, over Taiwan's sovereignty, now appears to be headed toward a resolution. And at home, the government's increasing sensitivity to public opinion, combined with improving living standards, has resulted in a level of popular confidence in the government that, in my opinion, makes major political instability unlikely.

Could Europe surprise us by growing substantially more than I have predicted? It seems farfetched, but it could happen, either by Europeans curtailing vacations and siesta time to adopt a more workaholic ethos, or by more young women and their partners aligning their views of sex more closely with those of the pope than those of movie stars. Anything's possible, but don't bet on it --

Europeans seem to like their lifestyles just fine, and they've long since given up their dreams of world domination. An unexpected technological breakthrough could also shake things up, though this isn't the sort of thing economists can base predictions on.

To the West, the notion of a world in which the center of global economic gravity lies in Asia may seem unimaginable. But it wouldn't be the first time. As China scholars, who take a long view of history, often point out, China was the world's largest economy for much of the last two millennia. (Chris Patten, the last British governor of Hong Kong, reckons China has been the globe's top economy for 18 of the past 20 centuries.) While Europe was fumbling in the Dark Ages and fighting disastrous religious wars, China cultivated the highest standards of living in the world. Today, the notion of a rising China is, in Chinese eyes, merely a return to the status quo.