Population Stability and Immigration

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It is sometimes said that there is no population problem in the United States because the current U.S. fertility rate (the average number of children per woman) is approximately at the replacement level of 2.1. Yet the U.S. population of more than 260 million increased in 1992 by about 3 million people! This is a growth rate of 1.1 percent per year and it has a doubling time of about 63 years. Why is the U.S. population growing so rapidly when the fertility is at replacement level which is necessary for zero growth?

There are two major reasons: one is population momentum, the other is immigration.

Applying the Brakes on a Freight Train

Population momentum is a term that is used to describe the fact that if one has no immigration, and if one makes a sudden change in the fertility rate, the full effect of the change will not be realized until all persons have died who were living at the time the change was made. Since the normal life span is about 70 years, this means that if a high fertility rate is suddenly lowered to the replacement level of 2.1 children per woman, the population growth rate will drop gradually but will not reach zero for about 70 years, and during this 70 years the population will continue to grow.

This is a direct consequence of the fact that the fraction of a population that is young is higher in a growing population than in a stable non-growing population. If one has a young growing population and one lowers the fertility rate to 2.1, the large population of young people in the growing population all have to have their 2.1 children and die before zero population growth is reached. When these simple processes are modeled with a computer the result is that if the United States had zero immigration and maintained a fertility rate of 2.1 for 70 years, the U.S. population would grow to approximately 383 million before it finally became constant in about the year 2066.

The effect of immigration on population growth is more obvious. The larger the annual number of immigrants, the larger is the growth rate of the population that receives them. In order to have immigration *and* zero population growth, the fertility rate must be lower than the replacement level of 2.1 children per woman.

The fundamental and unavoidable arithmetic is this: to achieve zero population growth, the sum of the annual number of births plus the annual number of people entering a country (immigrants) must equal the sum of the annual number of deaths plus the annual number of people who leave a country (emigrants).

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The data for the U.S. for 1992 show that the number of deaths plus the number of emigrants totaled about 2.4 million. For the U.S. to achieve zero population growth, the annual number of births plus the annual number of immigrants must also equal 2.4 million. But the data show that there were 4.1 million births in the U.S. in 1992 and 1.3 million immigrants (legal and illegal) for a total of 5.4 million. The population increase in the U.S. in 1992 is then (5.4 - 2.4 =) 3.0 million people! To achieve zero population growth instantly in the U.S., we must adjust the annual number of births plus the annual number of immigrants so the sum of the two is 2.4 million. Any combination of births plus immigrants that adds to 2.4 million per year will give zero population growth. Three possible combinations are:

(1) zero immigration and 2.4 million births;
(2) 1.2 million immigrants and 1.2 million births;
(3) zero births and 2.4 million immigrants.

The first case would require that the annual number of births in the U.S. drop from the present 4.1 million to 2.4 million. There are approximately 5 million marriages per year in the U.S., so that the requirement of 2.4 million births per year ius essentially the same as saying "One child per family," which one recognizes as the policy of the very coercive government of the Peoples' Republic of China. The government of China has recognized that the population of China is too large to be supported adequately and that *population growth*

interferes with economic growth. They have taken draconian measures to try to stop population growth so that they can have the economic growth that will yield better lives for their people.

If the U.S. chose the option of zero immigration and one child per family, then, the U.S. could maintain zero population growth by gradually raising the one child per family to 2.1 children over the next 70 years, and by holding it at 2.1 thereafter.

Stabilization Through Immigration Reform

This brings us to the immigration debate. Currently a third to half of the U.S. population growth involves immigration, legal and illegal. Throughout the world, growing populations are living in misery. What would happen if one billion of the world's 5 to 6 billion people were free to migrate to the United States? This would increase the U.S. population by about a factor of five! Where you see one person now, you would see five people.

In the world and in the U.S. we have severe and growing social, resource, environmental and fiscal problems at every level of society. *It is clear that population growth in the past century has not solved any of these problems; in fact it has made them all worse.* The U.S. does not have the jurisdiction to solve the world's problems, but we have the jurisdiction and the responsibility to solve our own problems. Stopping U.S. population growth provides us with the best way to solve these problems humanely.

Some argue that we are a nation of immigrants: "We have always had immigration, so we should always have immigration." This is an example of what might be called the free-fall illusion. If one leaps from the top of the Empire State Building, the first five or six seconds of free fall are wonderfully exhilarating. But after about eight seconds, the free fall is interrupted by the pavement, and this interruption makes the future very different from the past. In mathematical terms, the pavement is a boundary condition which determines that the equation describing the free-fall cannot describe it forever.

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In the same way, population growth cannot continue forever. The finite resources upon which we depend for survival are the boundary condition that limits the size of the population that can be sustained. Lowering fertility rates, and stopping or reducing immigration should be seen as two essential elements of a comprehensive national survival strategy.

To have the benefits of zero population growth for ourselves, our children, our grandchildren,…we have three choices. We can:

(1) Voluntarily limit births and immigration to achieve zero population growth;

(2) Continue on the present path until our population is so large that draconian measures become necessary to stop the growth of population;

(3) Do nothing and let nature stop the growth through disease, starvation, war and pestilence. If humans do not solve the problem, nature will.

Population momentum determines that many consequences of today's reproductive choices and immigration policies will be borne by future generations. Perhaps this is one reason why we delay addressing our problem. The present generation still has the luxury of making a voluntary choice to achieve stability by stopping U.S. population growth. In a world that may have already exceeded its limits, the resource in shortest supply could well be time. ∎