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| **Transcript of IMF podcast:** **David Bloom: Demography is Destiny–Really?** |

David Bloom:

So the adage demography is destiny is among the most famous expressions in the field of demography. It's taken to mean that the fabric of the nation, its social, political and economic fabric, is fundamentally determined by its demographics. I'm David Bloom, I'm an economist and a demographer on the faculty at the Harvard Chan School of Public Health.

Jacqueline Deslauriers:

Do you believe in destiny? Today we ask, is a country's destiny really determined by its demographics?

David Bloom:

I think that the phrase demography is destiny is an exaggeration and I don't think it's ever been true. And I say that for two reasons. First because history shows that demographic trajectories are not set in stone and second, because history also shows that the consequences for economic growth and development of demographic trajectories are not set in stone either.

Jacqueline Deslauriers:

Demography is the study of life, death and everything we do in between. And throughout human history, we've seen plenty of population booms and busts and public policy both shapes and responds to all of these demographic trends. David Bloom has written extensively on the topic and his article, Population 2020, is out now in the March issue of Finance & Development magazine.

David Bloom:

Historically, Jacqueline, demographic change has shown a strong proclivity for self correction and also for spurring all sorts of behavioral, technological, institutional and policy changes that either accentuate favorable demographics or offset negative ones. And that's actually what ensued when world population was doubling from 3 billion to 6 billion from 1960 to roughly 2000. Lots of dire predictions were made in the 1960s. Books like Population Bomb and Population Explosion were written, and those books actually garnered great attention.

David Bloom:

But the reality is that many of the most distressing prognoses made in those books were not born out. Between 1960 and 2000, global income per capita more than doubled, life expectancy increased by more than 15 years globally and primary school enrollment rates approached universality in many countries. Now, that's not to say that there were no adverse consequences stemming from that period of rapid population growth, but the reality is the experiences that thanks to, I would say human ingenuity and resourcefulness, the world did manage to elude a whole slew of the most dire predictions that were being made and bandied about.

Jacqueline Deslauriers:

So as a planet, obviously we've grown in numbers, we've gotten richer, we're having less children, we're living longer, and as you argue, we're aging better in many ways and certainly better than in previous generations. Isn't this a cause for celebration?

David Bloom:

I think I would say that the fact is that the world has been and continues to be in the midst of a major demographic upheaval. And some of that is associated with fertility reduction, which has been from roughly five children per woman globally in 1950 to a little less than two and a half children per woman over the course of her life cycle today. Some of the upheaval has to do with people living longer. So life expectancy has increased roughly a quarter century, actually even over a quarter century, in the last six or seven decades, and that's a phenomenal human achievement. But on the strength of the fact that mortality declined first and then fertility, we have had this dramatic population growth.

David Bloom:

Now I'm both an economist and a demographer and I can tell you that when I wear my demographers hat, I am a member of a global community that's routinely surveyed about the most important population issues facing the world. And for decades, rapid population growth top the list. So on the strength of mortality decline that proceeded by several decades a corresponding fertility decline, world population doubled from 3 billion to 6 billion from 1960 to 2000. Let me put that in perspective for you. It took over 99% of human history until roughly the time that Robert Malthus wrote his first essay on population in the early 1800s. So it took over 99% of human history for humanity to reach a total global population of 1 billion people.

David Bloom:

But since 1960, we've added success of billions every one to two decades. As I mentioned, we reached 6 billion around the year 2000 and the current projections from the United Nations Population Division are that we'll reach 10 billion people globally before 2060. That's a huge concern. It's a huge concern for a multiplicity of reasons. For starters, it's a concern because rapid population growth creates some colossal challenges related to fulfilling the basic needs of ever large numbers of people, basic needs for, I'm talking here about food, clothing, housing, education and so on. It creates some colossal challenges related to the absorption of considerable numbers of people into productive employment and it also creates major challenges regarding environmental quality and protection.

Jacqueline Deslauriers:

So within the global story, there are different demographic stories depending on the region of the world. Walk us through what those different stories are.

David Bloom:

So let me just give you a key fact here, Jacqueline, and that is that virtually all of the population growth that is projected in the coming decades will take place in today's low and middle income countries. So the populations of today's wealthy industrial countries is projected to remain static. The fact that world population going from something under 8 billion today to let's say something on the order of 10 billion before 2060, the fact that that population growth will be concentrated in low and middle income countries is itself a major concern because that group of countries tend to be politically, socially, economically and also ecologically less robust in their high income counterparts.

David Bloom:

Within the low and middle income countries, the force of population growth is strongest in Sub-Saharan Africa, and that is a concern because that means that large numbers of people will have to be fed, clothed, housed, educated, their medical care will have to be attended to and all of that takes resources and those resources don't appear out of thin air. They have to be diverted from other uses like laying down infrastructure, building better quality schools, doing research and development and that has the prospect of slowing the measured rate of economic growth. I would also say here that a major challenge has to do with absorbing large numbers of people in those low and middle income countries, especially in Sub-Saharan Africa into productive employment. And that is a population challenge unto itself. And this is all not to mention the ecological implications of rapid population growth for air, water and the land quality and pollution.

Jacqueline Deslauriers:

Now, the productive capacity that you mentioned, so having a baby boom, having a large segment of the population young. Tell us more about what those social and economic challenges are for a government trying to figure out what are the best policies to make this all work.

David Bloom:

So Jacqueline, when there are disproportionate large numbers of young people in populations, that's a situation that happens when a population has high fertility and is growing rapidly. It happens sometimes when there are baby booms like took place in many countries following the end of world War II, it happens also as part and parcel of a phenomenon that demographers referred to as demographic transition, which is the transition from high levels of fertility and mortality to low levels of fertility and mortality. But the key feature of the transition, and this is a generalization, but it applies quite well to many countries throughout the world over long periods of time, a key feature of the transition is that mortality rates decline first and they're followed by declines in fertility. Mortality rates decline first often because of the increased access to safe water and sanitation, access to more and better quality medical care, vaccination, antibiotics and the like.

David Bloom:

It turns out that children are disproportionately the beneficiaries of those improvements and that basically gives rise to a baby boom. It's not the usual kind of baby boom that we think about where more babies are born, it's a baby room that arises because of the babies that are born, more of them survive. And that creates challenges for people, for families, communities, and sort of whole countries because those babies need to be fed, they need to be clothed, they need to be housed, they need to be educated, and that takes resources. So during the early parts of the demographic transition, when you have large shares of the population at the young ages, economic growth, as we conventionally measure it, tends to basically have some contractionary impulse imparted to it from the demographics.

David Bloom:

Now eventually, fertility rates abate. They abate because people realize that they don't need to have as many children to reach their target surviving number of children and their desired fertility tends to go down. People basically decide to move in the direction of the quality of children as opposed to the quantity of children. When that happens, the baby boom ends and there's some relief just in terms of the need for resources to take care of large numbers of children, but that's when something that I like to call the iron law of demography kicks in.

David Bloom:

And everyone listening to this podcast will know that law because it tells us that every time a year goes by, our age goes up by one. And what that means is that when 15, 20 years go by, the large baby boom cohorts born at the beginning of a demographic transition basically become 15, 20, 25 years older and they enter the prime years for work and for savings. And at that point, the productive capacity of an economy will tend to expand on a per capita basis and what comes into prospect is something that we call a demographic dividend, the prospect of rapid economic growth because you have large shares of the population at the prime ages for work and saving.

Jacqueline Deslauriers:

Now, David, as baby boomers get older and the population in general around the world is aging, do they continue to be productive and contribute to the economy?

David Bloom:

Well, first of all, population aging has now displaced rapid population growth as the number one population issue of concern among professional demographers worldwide. I mentioned at the outset of the podcast that when demographers are surveyed, traditionally they would identify rapid population growth as the major global population issue of concern. That is no longer the case. The major population issue of global concern is population aging and that is a phenomenon that is absolutely without precedent because never before in human history have such large numbers of people reached the older ages. And by the older ages, I'm going to use the chronological cutoff of 65 here.

David Bloom:

Now, I mentioned that in earlier point in this discussion that it took more than 99% of human history for humanity to reach a total population of 1 billion. Well, we now expect to add a billion older individuals in the next three to four decades and that's on top of the more than 700 million older people we have today. So we have a situation where three decades ago, so 1990, the world was populated by over three times as many adolescents and young adults as older people, but three decades from now, those age groups will be roughly on par. And I think it's important to note here that with one possible exception, every country in the world is experiencing this phenomenon of population aging. The one possible exception is the Vatican, and that's only because the Holy See doesn't publicize data on its age composition so we don't know what's happening to it.

David Bloom:

Now, Jacqueline, I think what's important here is to note that there are many economists that have actually for some years now, been expressing great concerns about population aging. And I think we need to take their concerns seriously, their concerns that relate to downward pressure on economic growth, basically due to the fact that older people don't work and save as much as their younger adult counterparts. So basically they're appealing to the lifecycle model of work and consumption and savings. And the appeal is basically, the argument is that population aging is taken as a signal of coming labor shortages and coming capital shortages, and some people even go so far as to focus on falling asset prices as older people try to support themselves in old age by liquidating their assets. So that's one major set of issues that have to do with economic growth, workforce shortages and capital shortages.

David Bloom:

Another major issue here has to do with fiscal stress due to rising pension liabilities and to costs basically of health and longterm care associated with the likely growth in the incidents and also the prevalence of chronic diseases. So I'm thinking here of diseases like cancer, respiratory and heart diseases, diabetes, dementia. These would be the chronic diseases or the so called NCDs, non-communicable diseases, that account collectively for, already for the lion's share of global deaths.

David Bloom:

One big source of uncertainty here, Jacqueline, has to do with whether the increasing longevity that I already identified as a powerful driver of population aging, whether increasing longevity is simply adding years to life, which it's doing for sure, or whether it's also adding life to years.

Jacqueline Deslauriers:

And does it?

David Bloom:

Well, this is, I would say, the major source of uncertainty in this area because if it's the case that by extending longevity, all we're doing is postponing death but not the onset of chronic disease, not the functional breakdown of our minds and our bodies and not the loss of our personal independence. Then we have a circumstance in which all we get from an increase in the lifespan is more years of severe frailty, more years of mass loneliness, more years of extreme isolation in old age facilities that are overrun by people in their 80s, 90s and 100 plus.

David Bloom:

All we get is basically more misery because we're having to spend more years unable to handle without active assistance. Normal what we call ADLs, activities of daily living, I'm thinking here of eating, bathing, dressing, going to the toilet, combing our hair, and all the state gets, all governments get are bigger and more persistent healthcare and pension liabilities without any offsetting tax receipts.

Jacqueline Deslauriers:

So the longer lives that we're living are not helping the productive economy then?

David Bloom:

Well, they're not in that scenario, but there's another scenario that we should entertain as well. And that's a scenario in which not only death is postponed, but also the onset of morbidity associated with chronic disease. This actually phenomenon has a name, it's called the compression of morbidity. It's the idea that the morbid years are compressed into a smaller and smaller part of the life cycle or they're absolutely or relatively.

David Bloom:

And in that circumstance, let's imagine that it's caused by the fact that some combination of public health interventions, pharmaceuticals, medical devices and medical treatments slow the progression of chronic disease, and let's also imagine a scenario in which the local environment and infrastructure become more friendly to people living with chronic disease. Well, in that scenario, we actually get a real increase in human wellbeing as a result of the increased lifespan and much more modest fiscal implications for the state.

David Bloom:

Now, you had asked about, well, which is the right scenario? Do we have a compression or an expansion of morbidity? I hope it's clear from what I've said that a great deal of our future and the the prospects, whether they're bright or grim in the future, right on whether we're talking about a compression or an expansion of morbidity and all I can tell you in answer to that is the evidence base here is somewhat thin. We have different bits of evidence. The different bits typically point in different directions, but the fact is that until we resolve this uncertainty, we're not going to know whether the greater longevity that is helping to drive population aging is the blessing that it seems to many of us and that we'd like it to be or whether it actually has some elements of a curse and disguise.

Jacqueline Deslauriers:

And what are the economic policies that could help us all as we age avoid this scenario you've just described?

David Bloom:

Well, one problem here is that when we look for economic policies, we often try to look for historical examples of other countries that have actually dealt with these problems before and to try to figure out what worked and what didn't. The challenge here is that there are no historical examples that we can turn to for good indications of the implications of population aging or for how to address the challenges that population aging creates and also I would say to take advantage of opportunities that population aging may offer. So we have to figure it out ourselves.

And everyone in the world has their eyes fixed on Japan at the moment because Japan is the world leader in terms of an aging population and they are trying to come to terms with an aging population. I think a lot of the efforts in Japan it seem are likely to focus on technology and basically the use of robots and I think that's one path forward. I would say one of the big challenges in all of this is that we tend to be as economists, very dismissive of the economic contributions of older people on the grounds that they are relatively unengaged in what we define as productive market activities. The failing here, Jacqueline, is that we are completely neglecting the value of older people's productive non-market activities.

David Bloom:

If you look at time use surveys, you see that older people actually spend a great deal of time doing volunteer work, working around the house, taking care of their spouses, taking care of their grandchildren especially, and these activities tend to increase when individuals retire and they actually appreciably diminish the burden of population aging because they are productive. And so in my mind, they create a great deal of value in and of themselves and also by promoting familial and intergenerational and intra-community connectivity.

David Bloom:

I can tell you that my colleagues and I have just finished a set of analysis where we've tried to calculate the value of non-market contributions by older adults and our main finding is that it far outweighs the value of their market contributions after they reach age 65. So my point here is that population aging poses much less of a shock to macro economic performance than our standard measures of macro performance would seem to indicate. And I would say that it's time to reform our national income accounting procedures and methodologies to acknowledge the value of older people's productive non-market activities.

Jacqueline Deslauriers:

Dr. David Bloom from Harvard, thank you very much for joining us today.

David Bloom:

Thank you Jacqueline. It's my pleasure.

Jacqueline Deslauriers:

David bloom is an economist and demographer at Harvard's Chan School of Public Health. To read his latest story in the March issue of Finance & Development magazine, go to imf.org. And if you like what you're hearing, please subscribe to the IMF Podcast wherever you get your podcasts. Thanks for listening.