5 Cash for Condoms?

The only thing more dangerous than an economist is an amateur economist.
Bentley's Second Law of Economics

The most unprepossessing candidate for the Holy Grail of prosperity is seven inches of latex: a condom. In the view of many of us development experts, population control is the elixir that would avoid catastrophic starvation and enable poor nations to become rich. Foreign aid to finance population control—cash for condoms—is the panacea that would bring prosperity to poor countries.

If there is a single thing that has scared observers of the Third World, it is population growth. To many, population growth catastrophically imperils the prosperity of poor nations, if not the very lives of their inhabitants. Conversely, control of population through family planning—using condoms during sex to be explicit—will promote the prosperity of poor nations.

Population is an old concern in economics. Thomas Malthus in the early nineteenth century famously saw exponential population growth outracing food production, which he said would lead to a major population correction in the form of widespread famines. The latter-day incarnation of Thomas Malthus is Stanford biologist Paul Ehrlich. Ehrlich in his famous *cri de coeur* of 1968, *The Population Bomb*, foresaw that within a decade after his writing, famines would sweep "repeatedly across Asia, Africa, and South America," killing perhaps as many as one-fifth of the world's population.[1] Worldwide disease epidemics among the crowded poor, possibly including a resurgence of bubonic plague, would add to the death rates.

The great population scare is mainly notable for what didn't happen: widespread deaths from famine. In the 1960s, when Ehrlich

penned his eloquent alert, about one out of every ten nations was having a famine at least once per decade. By the 1990s, just one country out of the two-hundred in the world had a famine. Global population did about double from 1960 to 1998, but food production tripled over the same period in both rich and poor nations.[2] Far from us seeing increasing food shortages, food prices have fallen by nearly half over the past two decades.[3]

In Pakistan, for example, one of the many places where Ehrlich anticipated famine and food riots "possibly in the early 70s, certainly by the early 1980s," food production has doubled over the past decade and a half.[4] Food production in the entire developing world rose 87 percent over the same time period. Perhaps this is why Ehrlich confessed recently that it takes him "constant effort to realize that the habitability of earth is rapidly decaying."[5]

Ehrlich was concerned in 1968 about population growth. The rate of annual world population growth peaked about when *The Population Bomb* was published, at about 2.1 percent. Since then the population growth rate has declined, with the World Bank now projecting world population growth of 1.1 percent per year out to 2015.[6] Population growth has fallen despite the fall in death rates, because birthrates have fallen even more.[7]

Still, the population scare is very much alive. A contemporary heir to the throne of population alarmism is Lester Brown of the World Watch Institute. According to the press release for his 1999 book, modestly entitled *Beyond Malthus*, "The world is now starting to reap the consequences of its past neglect of the population issue." "After nearly half a century of continuous population growth," the news release dolefully continues, "the demand in many countries for food, water, and forest products is simply outrunning the capacity of local life support systems."[8] *State of the World 2000* from the World Watch Institute warns that population growth "may more directly affect economic progress than any other single trend, exacerbating nearly all other environmental and social problems."[9] And Pakistan is imperiled again: "Pakistan's projected growth from 146 million today to 345 million by 2050 will shrink its grainland per person from 0.08 hectares at present to 0.03 hectares, an area scarcely the size of a tennis court."[10]

The organization Population Action International notes that "the capacity of farmers to feed the world's future population is also in jeopardy."[11] The Population Institute warns bluntly of "The Four Horsemen of the 21st Century Apocalypse: Overpopulation. Deforestation. Water Scarcity. Famine." As a a result, "Developed countries will be looking at staggering disaster relief budgets as a result . . . and only a few years from now."[12]

Not only that but, according to Lester Brown, population grows faster than jobs: "In the absence of an accelerated effort to slow population growth in the years ahead, unemployment could soar to unmanageable levels." As for Pakistan, its "work force is projected to grow from 72 million in 1999 to 199 million by 2050."[13]

The alarmists' response to the population scare is to call for more family planning (more condoms). Another one of those conclaves of do-gooders, the U.N.-sponsored International Conference on Population and Development in Cairo in 1994 adopted a program of action that "advocates making family planning universally available by 2015 . . . provides estimates of the levels of national resources and international assistance that will be required, and calls on Governments to make these resources available." The Cairo conference urged "the international community to move, on an immediate basis, to establish an efficient coordination system and global, regional and subregional facilities for the procurement of contraceptives and other commodities essential to reproductive health programmes of developing countries and countries with economies in transition."[14]

Lester Brown concurs that the answer is cash for condoms: "Enhanced domestic and international support for family planning services . . . will yield the dual benefits of better living conditions and brighter job prospects in the next century."[15]

A review of the Cairo Resolutions in 1999 noted hopefully that "as the demand for smaller families has increased and the access to safe and accessible contraception has improved, fertility levels have declined." However, "over 150 million couples still have an unmet need for contraception."[16] At a U.N. review in 1999 of the implementation of the 1994 Cairo Conference Resolutions, the secretary-general of the U.N., Kofi Annan, wistfully noted, "We cannot do it without funds." He recognized other budgetary priorities faced by rich and poor countries, but asked rhetorically, "What could be more important than the chance to help the world's people control their numbers?"[17]

The self-explanatory advocacy group Zero Population Growth warns Americans that they will "also be affected by political conflicts that arise from environmental refugees fleeing overpopulated and

environmentally degraded areas in search of more benign conditions, or from concerns over the rights to finite natural resources like oil fields, water resources, or land."[18]

So the elixir for promoting growth and avoiding population disaster, to oversimplify, comically is: cash for condoms. UNICEF states the creed with characteristic restraint: "Family planning could bring more benefits to more people at less cost than any other single technology now available to the human race."[19]

The U.S. aid agency USAID plays an important role in promoting family planning: "USAID manages a global system for the delivery of contraceptive supplies. Numerous countries and donors rely on USAID's contraceptive supply forecasting system, designed to ensure availability and choice of contraceptives year-round."[20] So devoted to contraceptive provision is USAID that it floods the market with condoms. In USAID recipients like El Salvador and Egypt, there are so many condoms given away that people blow them up as balloons to festoon soccer matches.

The Myth of Unwanted Births

The unlikely elixir of cash for condoms is inconsistent with the principle that people respond to incentives. All of this focus on aid for contraceptives implies that the free market left to itself would not supply enough contraceptives to meet demand. The "150 million couples" who "still have an unmet need for contraception" would stop having babies if only aid-financed condoms were available to them. But a condom is just like any other good that the free market can supply, like a can of Coca-Cola. We don't have any aid programs to 150 million couples who have an unmet need for Coca-Cola.

Defenders of cash for condoms might say that poor families cannot afford condoms, a splendid bit of illogic, since an unwanted child is far more expensive than a condom. Condoms can be purchased internationally for about thirty-three cents apiece.[21] The price of a condom is really a minor factor compared to the other incentives and disincentives to have a child.

The contraceptive aid advocates will reply that people in poor countries don't have access to condoms at any price. This answer, though, begs the question of how free markets fail to supply a cheap good that should be in hot demand if 150 million couples have an

unmet need for contraception. Free markets don't have any trouble supplying Coca-Cola to poor countries around the world.

It turns out that we can do even better than just apply elementary economic logic to the alleged unmet contraceptive demand. There have been systematic household surveys of desired number of children for many different countries. Lant Pritchett compared the desired number of children to the actual number of children in different countries. He found that in countries with a large number of actual births per woman, women also had a high number of desired births. About 90 percent of the differences across countries in actual fertility were explained by desired fertility. So much for the alleged unmet demand for contraception.[22]

Checking for Population Disasters

If population growth causes famine, water shortages, massive unemployment, and other disasters, we would expect to see it show up in overall economic performance. Countries that have rapid population growth should have low or negative GDP growth per capita. The population growth is, according to the alarmists, overwhelming the existing productive capacity's ability to generate jobs and outstripping food production, so GDP per capita should fall when population growth gets "too high."

This prediction can be—and has been—easily tested. The relationship between per capita economic growth and population growth is one of the most intensively studied in all of the statistical literature. This literature has grown so extensive that we now have surveys of surveys. One survey concludes that "most economists who have specialized in population issues" have a "distinctly non-alarmist" view. The general wisdom among economists from these studies is that there is no evidence one way or the other that population growth affects per capita growth.[23] The most well-known statistical relationship between growth and its most fundamental determinants finds no significant effect of population growth on per capita growth.[24] When the effect of population growth on economic growth is allowed to vary for plausible reasons like level of development or resource scarcity, population growth still does not matter for economic growth.[25] When I control for government policy determinants of growth in the 1960s through the 1990s, I find a positive but insig-

nificant relationship between population growth and per capita GDP growth.[26]

There are some facts about the world that make the lack of a relationship between population growth and per capita economic growth unsurprising.[27] First, we know that both population growth and per capita economic growth have accelerated over the very long run. Both population and income growth were slow until the nineteenth century for today's industrial nations; then both accelerated at the same time. Over the past few decades, both population growth and per capita economic growth slowed in industrial nations. It's hard to reconcile this fact with the idea that population growth is disastrous and that population control is a panacea for growth.

The second fact about the world is that population growth does not vary enough across countries to explain variations in per capita growth. GDP per capita growth varies between −2 and +7 percent for all countries for the period 1960 to 1992. Population growth varies only between 1 and 4 percent. Even if population growth lowered per capita growth one for one (the general view of the population alarmists), this would explain only about one-third of the variation in per capita growth. We have countries like Argentina with slow population growth and slow per capita economic growth, and countries like Botswana with rapid population growth and rapid per capita economic growth. East Asia grew much more rapidly than industrial nations, although it had higher population growth than industrial nations. Even much-maligned high-fertility Africa has not had the kind of general famine that the alarmists predicted.

Third, population growth has slowed down by about 0.5 percentage point from the 60s to the 90s in the Third World. But, as we have seen, Third World per capita growth slowed down over the same period. Moreover, there is *no* association across countries between success at slowing population growth and success at raising per capita growth (figure 5.1). Virtually all countries had a per capita growth slowdown, and the degree of the slowdown is not related to changes in population growth.

Obviously economic growth depends on a number of factors that have nothing to do with population growth. In fact, we have seen that once we control for those other factors, there is no evidence that population growth has any effect on per capita growth.

The view that increased population would lower per capita income and increase unemployment implicitly assumes that an additional

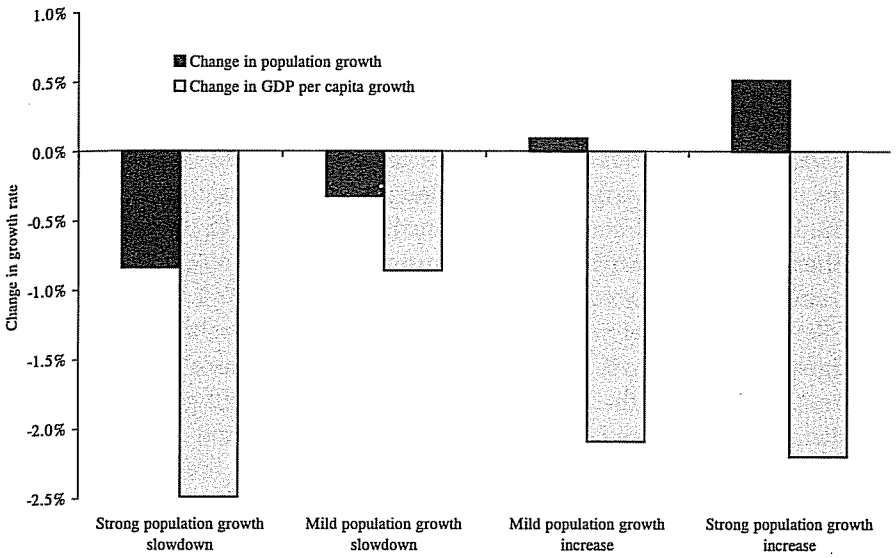

Figure 5.1
Change in population growth and per capita growth from 1961–1979 to 1980–1998. Each group is one-fourth of sample, ordered from strongest population growth slowdown to strongest population growth increase.

person has zero productivity, and so the only effect of increased population is to spread the existing GDP around more thinly. Again, besides being a rather insulting view of human potential in poor countries, this is incompatible with the principle that people respond to incentives. An additional person is a potential profit opportunity to an employer that hires him or her. An additional person has the incentive to find productive employment so as to subsist. The real wage will adjust until the demand for workers equals their supply.

Higher Population Good or Bad?

Having said all this, there still could be an argument for subsidizing population control. Parents deciding to have children do not take into account all of the effects of their decision on society. A higher population may harm the natural environment. For example, it may lead to more crowding of the land area, to the displeasure of the current inhabitants. Parents do not take these possible costs to the rest of society into account when having children.

But there also could be positive effects of additional children on society that parents do not take into account. One more baby is one more future taxpayer who can help pay for existing government programs. The main reason that social security is financially troubled in most rich countries is that population growth has slowed, lowering the proportion of tax-paying workers to benefit-receiving retirees. The better state of social security in the United States, compared to other rich countries, is that our population is growing faster (thanks to immigration, not to fertility, as it turns out).

A more ethereal reason that there could be positive effects of higher population is the genius principle. The more babies there are, the greater is the likelihood that one of them will grow up to be Mozart, Einstein, or Bill Gates. This effect, first pointed out by Simon Kuznets and Julian Simon, raises the stock of ideas that can then be used by any size population to better itself.

Since ideas can be shared with additional persons at zero cost—an unlimited number of people can listen to a Mozart aria—new ideas are used more effectively in large than in small populations. The one-time cost of implementing a new idea can be spread across more people, all of whom can use the idea at zero cost. The one-time cost of setting up the Internet will be less burdensome the more people there are to share it, and the benefit of the Internet increases the more people there are. More traditional innovations, like the conversion from hunter-gathering to farming and the conversion from farming to industry, will be more beneficial the more people there are to share the costs and amplify the benefits.

Population growth may also spur technological innovation precisely because it increases stress on available resources. As the ratio of people to land rises, for example, people are forced to come up with new ideas to get more food out of existing land. This "population pressure" principle was first stated by Ester Boserup.

Harvard University economist Michael Kremer did a simple test of the Kuznets-Simon-Boserup principle of beneficent population growth in a provocative article entitled "Population Growth Since 1 Million BC." He noted that this principle suggests a positive relationship between initial population and subsequent population growth.[28] A higher initial population means more idea creation, more people to use the idea, and more people to share the fixed cost of implementing the idea. The benefits to society then should make possible the support of more new babies, and so population growth

should increase. This prediction is in stark contrast to the Thomas Malthus–Paul Ehrlich–Lester Brown principle that higher initial population will lead to a population crash as famine sets in. So who is right: Boserup or Malthus?

Kremer pointed out that the evidence of the very long run is in favor of Boserup. World population has been growing steadily over time, from 125,000 in 1 million B.C., to 4 million in 10,000 B.C., to 170 million at the time of the Christ, to about 1 billion at the time of Mozart, to 2 billion at the time of the Great Depression, to 4 billion at the time of Watergate, to 6 billion today.[29] And population growth has been accelerating, not falling. There is a positive relationship over the very long run between initial population and subsequent population growth, as Boserup-Kuznets-Simon predicted, not a negative relationship, as Malthus-Ehrlich-Brown predicted.

If we step back from the eons of time into the recent present, this positive relationship no longer holds. Population has continued to increase since the 1960s, while population growth has started to fall. But even this does not support Malthus. Population growth is falling because of falling birthrates, not because of increasing death rates due to famine—as the Malthusians would have it.

So what is the answer on whether we should subsidize population control? First, even if desirable, it is clear that subsidizing contraceptives is not the way to go, because the price of contraceptives is a very minor factor in the decision to have a child. Second, the net benefits and costs of a larger population are very unclear. Probably each country has to decide on its own whether increased population is putting an intolerable strain on natural resources, or whether an increased population is a fertile breeding ground for new tax revenues and new ideas.

Development, the Best Contraceptive

Suppose a country does want to lower population growth, for whatever reason. There is one statistical regularity that everyone agrees on, and this is the negative relationship between per capita income and population growth. Parents in rich countries have fewer babies than parents in poor countries. The poorest fifth of countries have on average 6.5 births per woman, while the richest fifth of countries have on average 1.7 births per woman.[30] In a phrase that some might find repugnant, parents are deciding on quality versus quantity of

children. Parents in rich countries have fewer children than do parents in poor countries, but invest much more in each child in the form of schooling, nutrition, and ballet lessons.

Why is this so? Again, people responding to incentives is at work. Nobel Prize winner Gary Becker pioneered the insight of incentives as applied to family life, even if to a degree that some might find cold-hearted. He pointed out that as people become richer, their time becomes more valuable. Any time not spent on the high-paying job is income lost. Caring for children is time-consuming, as I can cheerfully attest. Richer parents choose to spend more time on the job and less on parenting, in other words, having fewer offspring. Poorer parents get less reward from working and so spend more time parenting, having more offspring.

Although the rich are having fewer children than the poor, they are investing more in each one of them. It is plausible that the payoff from investing in skill increases with the initial skill level. The return to learning geometry is higher for those who already know arithmetic. The high skill level of the rich parents is transmitted to their children partly through natural at-home learning. Investing in high-quality schooling then carries a higher return for the rich parents and children than it does for the poor parents and children. So the rich invest in more skill acquisition for their children than do the poor. For a country as a whole, depending on the average initial skill level of parents, the society can wind up with high fertility and low income—or low fertility and high income.

Both conditions are self-perpetuating. The poor society has low returns to skill, so it's not worth investing in skill acquisition. Because of the lack of investment in skills, it stays poor. Because the average parent is poorly paid, he or she spends less time working and more time rearing children—having more offspring. The rich society has high returns to skills, so it keeps investing in skill acquisition, getting perpetually richer. Because the average parent is well paid, he or she spends less time rearing children, because of having a smaller family. Jump-starting development will shift a society from high-fertility poverty to low-fertility prosperity.[31] Development itself is a far more powerful contraceptive than cash for condoms.

The Two Revolutions

Our age has benefited from two revolutions: the industrial revolution (to use somewhat out-of-date terminology) and the demographic

revolution. In the industrial revolution, there was a leap in how much production could be gotten from a given amount of natural resources. In the demographic revolution, population growth first accelerated and then decelerated again.

The interesting question is how these two revolutions are related. As already discussed, technological advance and population growth were positively associated in the initial phases of the industrial revolution. More population meant more genius inventors and a larger scale of the market, improving technology. The advance in technology in turn made feeding a larger population feasible. Both the technological frontier and the level of population have grown together for centuries, with the rate of growth of both accelerating until recently. This phase of growth is often called extensive growth because the extent of labor inputs and production expands without an increase in living standards. Extensive growth has now spread to every region of the world, which is what has scared the alarmists, but so far without the disasters that the alarmists predicted.

In the next phase of the two revolutions, the rate of growth of per capita income accelerated in the richest countries while population growth went down in those countries. This phase of growth is usually called intensive growth, because each worker is producing more output to raise living standards; industry uses each worker more intensively. Intensive growth has not yet spread to all regions, but it has taken hold in the Western industrial countries and East Asia.

Nobel Prize winner Robert Lucas argues that an increase in the rate of return to knowledge and skills, or "human capital," explains the switch from extensive to intensive growth.[32] The technological advance got to the point where it raised the rate of return to human capital higher than the rate at which we discount the future. This makes it worthwhile for us to invest in human capital that has payoff in the future. This implies two things. First, production per person will increase because each person can produce more at a higher skill level. Second, parents who care about their children's welfare will take advantage of this higher return to skill by investing more education in each child and decreasing the number of children they have (trading off quantity of children for quality of children, to use again the cold-hearted expression of economists). Thus, we will get intensive growth with rising living standards and falling population growth.

There are two caveats to make about intensive growth. First, the investment in human capital should not be taken as necessarily for-

mal schooling, which does a poor job of explaining growth. Human capital is much broader, including knowledge gained from friends, family, and coworkers, skill learned on the job, and worker training. We have a hard time measuring this broader definition of human capital but do know how to increase it: create incentives to invest in the future.

This brings me to my next caveat, which is why intensive growth hasn't taken hold everywhere. If the return to human capital increased as a result of worldwide technological progress, why haven't all countries taken advantage of these high returns to knowledge and skills? We will see in part III that some governments interfered with the returns to skill by not letting their citizens keep all their income. Countries with such governments remained stuck in extensive growth. Governments that safeguarded property rights and let free markets work (most of the time) did move to intensive growth (Western Europe and its offshoots, East Asia). We will see also that starting off at too low a level of skill may prevent realizing the high returns to skill available in the global marketplace.

The answer for those worried about population growth is to raise the incentive to invest in people. Parents will then want to reduce the number of children they have, without the international do-gooders having to hand out cash for condoms.

To try to create the right incentives, international institutions started making loans conditional on policy reforms. To see if that worked, turn to the next chapter.

Intermezzo: Tomb Paintings

Shahhat, age twenty-nine in 1981, lives in Berat on the Egyptian Nile 450 miles south of Cairo. Berat, with a population of 7,000, is divided into eleven hamlets, each near its ancestral fields. Local farmers still use the same hoes, forks, well sweeps, and threshing sledges pictured in ancient tomb paintings. Shahhat heads a family of seven and feeds a steady stream of visiting nieces and nephews as well. He owns a buffalo, a donkey, and eight sheep and about two acres of land.

Shahhat is one of twenty children born to his mother, Ommohamed, but fourteen of the children died in infancy or childhood. Ommohamed and other village women lived in terror of trachoma and other endemic diseases; they often bought amulets from the village sorceress to try to ward them off.[1] *Fever and diarrhea seemed to sweep through the village every summer at the time of the* khamsin, *the dust-carrying southerly wind.*[2] *Neither Shahhat nor his mother Ommohamed has ever been to school.*

Berat has strong traditions of male domination and violence. A father murdered his unmarried daughter, to preserve the family honor, after she became pregnant. He waited until she was washing clothes in a well, then held her head under water until she drowned. Violent threats were part of daily life in Berat; most men carried a heavy stave, a knife, or a gun. Violence would break out suddenly over questions of family honor, sexual passion, or quarrels over money, affecting a dozen lives at once. Jail sentences for murder in a feud or unpremeditated quarrel were light. But a day after a quarrel, it is common to make up and be laughing and joking as if nothing had happened.

Eleven years later, in 1992, Shahhat had left farming to become a foreman at one of the archaeological sites along the Nile. He earned about a hundred dollars a month. Now forty, he lived in a one-room mud brick house on his ancestral land. He had sold a small clover field in front of his house to take a seventeen-year-old second wife, much to the first wife's outrage, and now had six surviving children. After Shahhat started drinking more heavily, both of his wives took him to court for nonsupport of the children.[3]