



THE ROLE FOR HEALTH IN THE FIGHT AGAINST INTERNATIONAL POVERTY*

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I. INTERNATIONAL POVERTY AGENDA STATE OF PLAY

The end of the Cold War and disillusionment with aid's many failures led to widespread aid fatigue among donors during the 1990s. Total official development assistance (ODA) as a share of donor GNP fell by nearly one third over the decade (from 0.32 to 0.23 percent)ⁱ. This was particularly pronounced in the US, where a slash-and-burn approach reduced foreign economic assistance to just over one half of one percent of budget outlays, compared with over 3 percent at the time of the Cuban Missile Crisis.ⁱⁱ And US per capita spending ended the decade at only \$34, far below the average of \$67.ⁱⁱⁱ

Now the pendulum may be swinging the other way for two reasons. First, aid activists have developed a powerful 4-part recipe for mobilizing public support: the adoption of a simple, compelling goal, champions with tremendous name recognition, coalitions that transcend national borders and opposite ends of the political spectrum, and a focus on high profile international gatherings. The first big victory came in 1998, when the global rock star, Bono of U2 made common cause with the Pope in persuading leaders of the richest nations to adopt an unprecedented initiative to forgive the debt of the poorest nations. A similarly eclectic coalition, including Bill Gates and some of the economics profession's best and brightest, has helped rivet world attention on the HIV/AIDS pandemic. In 2000, even as US budget authority for development aid fell overall, President Clinton received Congressional authorization for nearly \$1 billion for debt forgiveness and the global fight against HIV/AIDS, and Congress has granted further increases during the Bush Administration.^{iv}

Second, the campaign against terrorism provides a security rationale for foreign assistance missing since the end of the Cold War. This was evident in President Bush's proposal for a \$10 billion increase in US development spending over 3 years^v. And leading Democrats have sounded a similar call, with Minority Leader Gephardt calling the case for foreign aid a "strategic rationale."^{vi}

The shift in the politics of aid and heightened public salience present an important opportunity in fighting the debilitating poverty that holds too many in its grip. But it is critical to invest taxpayer's money wisely, or risk another backlash.

First, it is important to be realistic about the case for aid. Although national security provides a compelling rationale, the record of development aid has been disappointing where geopolitics has dictated the allocation. During the Cold War, the logic of using aid to reward foreign leaders who were "with us" led to the many horror stories of corrupt leaders using aid to line their own pockets or fund pet projects. In too many cases, US aid dollars curried favor with foreign leaders without in any way advancing democracy, improving health and education, or propelling economies onto a trajectory of self-sustaining growth. The case for foreign assistance to reward allies is compelling on its own terms, but it is important not to confuse this with development aid.

Second, development aid has proven most successful in nations with strong public authorities committed to reform, transparent and accountable governance, and sound macroeconomic conditions. Where these conditions do not hold, the case for aid may be limited to humanitarian and post conflict assistance and it may be necessary to work through nongovernmental organizations, bypassing official channels.

Third, aid fails where it does not respect the power of the market. Previous “silver bullet” approaches that sought to supplant market mechanisms -- forced industrialization, filling investment financing gaps, investing in industrial infrastructure, and creating monopoly parastatal organizations in agricultural marketing and distribution -- proved disappointing. Similarly, the determined experiments in population control and mandatory education, despite sensible-seeming goals, largely failed because they established perverse incentives. The economics of development aid follows the logic of government intervention more broadly: effective policies address market failures, such as externalities, and align market returns with social returns.^{vii}

II. IS HEALTH GOOD DEVELOPMENT POLICY?

If foreign aid is back in play, what areas yield the highest returns? In recent years, there has been growing emphasis on health. Is health just the latest in the search for the development silver bullet, the key leverage point that will kick start self-sustaining growth? To evaluate how health stacks up in the fight against international poverty raises three questions:

1. *How strong is the documented connection between disease and poverty?* The evidence linking improved health to growth and standards of living is compelling.^{viii} At the individual level, health is a necessary (but not sufficient) condition for learning and job productivity and a critical determinant of incentives for individual savings and educational investments. Disease has direct effects, including lower lifetime earnings and diversion of savings to treatment. At the macro level, this translates into fewer years of productive work output for a given population and lower returns to public and business investments in education and training. There are also intergenerational effects: higher infant mortality results in more-than-compensatory higher fertility, with the consequence that parents make lower educational and health investments per child.^{ix} And at the level of businesses and communities, the spread of the HIV/AIDS pandemic is only the most dramatic example of the downward spiral associated with the spread of disease. Businesses lose competitiveness through lower productivity and the need to train multiple workers for each slot, tourism and foreign direct investment falter, skilled workers flee, government resources are increasingly diverted to cushioning disease fallout against a shrinking tax base, and education deteriorates as teachers fall ill. In Zambia, 1300 teachers, or almost two thirds of the number trained annually, died of HIV/AIDS in 1998 alone.^x

There is a raft of evidence confirming the connection between health and growth. Historically, key periods of takeoff are often associated with breakthroughs in public health and nutrition.^{xi} The early economic development of the American south owed much to the elimination of hookworm. Of course, the causal relation between poverty and disease could run in either direction. But careful empirical analysis supports a key role for disease in influencing growth. There is a fairly robust relationship between reduced infant mortality rates and subsequent economic growth, controlling for initial per capita income. And 10 percent improvements in life expectancy are associated with increased annual growth rates of 0.3 to 0.4 percent per year.^{xii} In another study, high malaria prevalence was shown to reduce growth by 1 percent a year compared with

nonmalarious countries; over time, this can lead to a 50 percent income differential between otherwise identical economies.^{xiii}

2. *What is the role for official aid in health provision in poor countries?* Experience suggests the economics of public finance transfer seamlessly to the field of development. Official intervention is effective where the market would underprovide a good relative to its social value, there are important spillovers, there is a role for standard setting, or insurance provision is incomplete. Health exhibits many of these characteristics, which is evidenced by the considerable (although varying) government involvement in health provision in the rich nations. Thus, this suggests a strong humanitarian case for development assistance to subsidize the provision of health and other national public goods in the poorest nations.

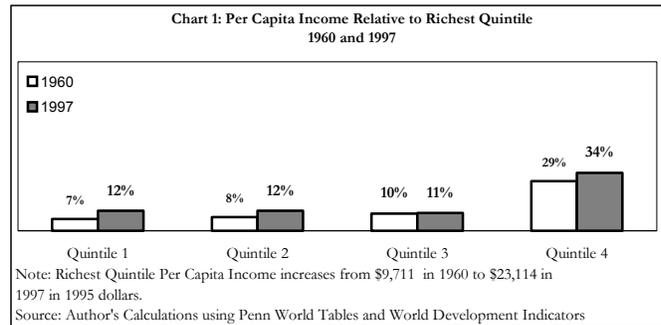
But the most compelling case for international action is where public goods are regional or global in nature so that even well-governed wealthy nations would underprovide them. In the strictest sense, global public goods are both non rival in consumption and non excludable across the globe. This sets a high bar; a good example is the complete eradication of a disease such as small pox. For the purposes of development assistance, a more practical threshold is whether a good is undersupplied because important regional or global spillovers are not taken into account. A broader class of health challenges meets this bar, exhibiting cross-border spillovers in the spread of disease and/or in the knowledge needed for diagnosis, prevention or treatment.

For many diseases, increasing the reach of immunization lowers the probability of infection even among nonimmunized populations within and across borders. Effective treatment of tuberculosis in one country reduces the likelihood of infection across borders and, contrariwise, incomplete treatment poses a threat of multi-drug resistant tuberculosis. Spillovers are important even for some diseases that are not epidemic in nature: expanding usage of insecticide treated nets to prevent malaria reduces overall infection rates both among users and nonusers.^{xiv} Infectious disease can also contribute to cross-border spillovers indirectly through political instability and economic devastation. (For instance, empirical evidence indicates that high infant mortality rates are a key predictor of subsequent state failure.^{xv}) This logic prompted President Clinton to declare HIV/AIDS a national security threat in 2000 and to call for a special session of the UN Security Council to address it. The Bush Administration has similarly assigned a high priority to addressing the international threat of HIV/AIDS.

The public goods nature of the knowledge needed to combat disease results in underprovision, which is particularly pronounced for diseases that disproportionately or exclusively affect the poorest nations. The recommendations below suggest ways to overcome this problem. But even when the marginal cost of the knowledge needed for disease prevention or treatment is negligible (the composition of a vaccine), the actual cost of operationalizing that knowledge may be considerable (including production, specialized shipment, storage, and handling, on-the-ground distribution, trained personnel, and education and mobilization of local communities).

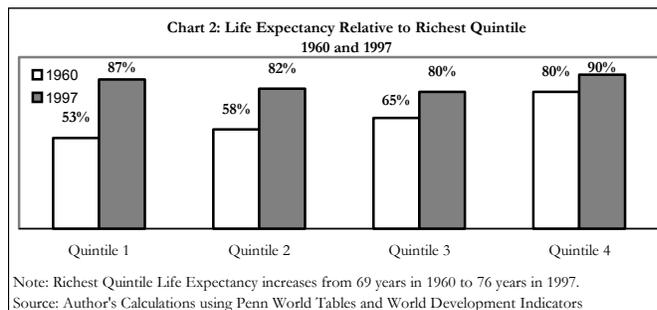
3. *What is the record on health programs in development?* Even the strongest connection between health and growth is not enough unless health programs have a proven track record of producing results cost effectively. Past experience gives good reason for optimism.

Better outcomes have been achieved on health and mortality than on income, as evidenced by growing convergence between countries. Charts 1 through 3 show that the poorest nations have considerably narrowed the gap with the rich nations on life expectancy and child survival, even though the income gap persists. The charts divide the world into five equal population groups arrayed on the basis of per capita income in 1960 (based on country aggregate income statistics), and compare outcomes in the poorer four quintiles against the “possibility frontier” represented by the richest quintile.^{xvi}



Between 1960 and 1997, the income gap remained stubbornly wide; for the poorest three quintiles, income remained less than one eighth that of the richest quintile, and even the fourth quintile barely achieved one third of the richest quintile income.^{xvii} A far more optimistic picture emerges on convergence in life expectancy in Chart 2. The poorest quintile

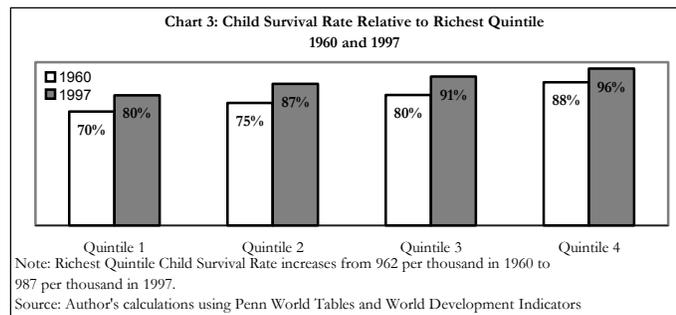
made the greatest progress, with life expectancy increasing from 53 percent of the possibility frontier in 1960 to 87 percent in 1999 – even as life expectancy in the richest quintile itself increased from 69 to 76 years. The trends in child survival in Chart 3 are similarly optimistic, although somewhat less dramatic.



These differences suggest there has been better dissemination and adoption of health technologies and know how across borders than of broader production technologies, and this is true for all initial income groups.

A finer grain is necessary to discern the role of health programs in these successes. By most accounts, immunization campaigns, child survival strategies, and education have contributed centrally to improvements in life expectancy and child survival. Improved sanitation combined with inexpensive oral rehydration therapy have led to a 2/3 drop in deaths from diarrheal disease between 1980 and 1999.^{xviii}

In one of the biggest triumphs of science and political will, small pox has been completely eradicated (although bioterrorism could threaten this remarkable achievement), and polio is well on its way to eradication. Many interventions, such as an off patent package of the “basic six” childhood vaccinations, are highly cost effective. WHO estimates that it is possible to eradicate measles – the single leading cause of death among Africa’s



children – through vaccinations costing only 26 cents per child.^{xxix} And in cases where complete eradication is achieved, the investment is finite, since success obviates the need for future vaccinations. Even for some diseases where no vaccine currently exists, such as malaria, highly effective prevention and treatment approaches are available and affordable. The potential to extend these achievements is great. WHO estimates that in low and middle income countries, almost a third of deaths (16 million per year) are attributable to preventable or treatable communicable diseases, maternal and perinatal conditions and nutritional deficiencies.^{xxx} Available vaccines alone could prevent nearly 3 million of these deaths each year.

Moreover, impressive health results have been achieved even in countries with poor institutional environments – in sharp contrast to other programmatic areas. For instance, in Afghanistan, starting in 1993, mass immunizations were carried out during the “days of tranquillity” negotiated each year. And the longest cease fire in the history of Sudan’s civil conflict, the so-called “guinea worm cease-fire” of 1995, was negotiated in order to reduce disease associated with this parasite.^{xxxi}

Overall, investing in basic health appears promising as a poverty reduction strategy. There is a strong connection between health and growth, there is a compelling case that health spending in poor countries is well below the social value, especially taking into account cross-border spillovers, and a host of health interventions has proven cost-effective in achieving measurable results – in some cases, even in weak institutional environments.

It is sobering to realize that HIV/AIDS alone could reverse the progress achieved so far. By most accounts, HIV is the most devastating pandemic in human history. Seven Southern African countries have HIV infection rates of over 20 percent, and average life expectancy for Africa as a whole has fallen by 15 years over the course of the past two decades.^{xxxii} The disease is also spreading at alarming levels in rural China, Russia, and India. One of the highest priorities on the global health agenda is to arrest the spread of the pandemic and to vastly expand the reach of available treatments. But it is critical that it not come at the expense of progress on other equally compelling and achievable public health goals.

In addition, it is important not to mistake health for a silver bullet – or risk making it the latest in a string of discredited development fads. Health programs should be designed within overall poverty reduction strategies to leverage critical connections with education, sanitation, demography, and economics. Connections between health and education are well-documented. Countries that have been most successful in combating HIV/AIDS have relied centrally on mass education programs. Research has established a connection between maternal literacy and smaller, healthier families. And in reverse, individual investments in education are shown to increase with increases in expected productive life spans. Safe water supplies and improved sanitation are critical contributors to reduced diarrheal and other childhood diseases. There are also important connections with demography: diminished fertility follows improvements in health with a substantial lag unless there is a concerted strategy to address both simultaneously.

III. ENLISTING SCIENCE AND TECHNOLOGY

Health is also a worthy target for international assistance because the knowledge central to combating disease is a classic public good. In wealthy nations, governments combine public funding for basic R&D with targeted protection for downstream intellectual property to encourage the development of scientific knowledge commensurate with its social value. But poor nations have neither adequate public resources to subsidize research nor the promise of private returns to make intellectual property investments attractive. Thus, a key challenge for international health is to establish appropriate incentives for the global production of scientific knowledge.

The nature of the challenge depends on the incidence of particular conditions in the developing nations relative to the wealthy nations. For diseases with comparably high incidence in both, such as measles, demand in wealthy nations is sufficient to ensure adequate R&D, and the main challenge is to ensure that on-patent medicines are accessible in the developing world. For a second class of “neglected” diseases, where the incidence falls disproportionately but not exclusively in the developing world, such as tuberculosis, the level of research effort is far below the global value. And for a third class of “very neglected” diseases, where the incidence is almost wholly in the poor nations, such as African sleeping sickness and river blindness, the research effort is negligible, despite very high social costs. Overcoming these gaps requires action on several fronts.

1. *Prioritize areas where research is most out of balance with the potential social value.* The Global Forum for Health Research estimates that only 10 percent of global research spending is directed to diseases afflicting 90 percent of mankind.^{xxviii} Thus, the first step is to identify those diseases where the research effort is lowest relative to the global disease burden and where there is the highest potential for breakthroughs on drugs, vaccines and diagnostics. The Global Forum for Health Research and the WHO have identified seven priority diseases where the gap is particularly wide, including malaria and tuberculosis.

2. *Mobilize development finance as a push incentive for R&D in priority neglected diseases.* The logic of global public goods suggests a high value to international funding for basic R&D into priority neglected diseases. The WHO Commission on Macroeconomics and Health, chaired by Jeff Sachs, recommended the creation of a Global Health Research Fund to support peer-reviewed scientific research on health, drawing inspiration from national health organizations such as NIH and the international agricultural research network, CGIAR. There are already several international research organizations targeted at individual diseases, which merit expanded funding and might ultimately be included in the broader umbrella organization. In parallel, there is a strong case for expanding the work of national basic medical research organizations with proven track records to increase the emphasis on neglected diseases. Downstream funding is also needed to encourage private investment in the development of appropriate drugs, vaccines, and diagnostics.

3. *Fine tune national and international intellectual property protection for pharmaceuticals.* The US intellectual property framework strikes a balance between encouraging innovation by enabling investors to internalize returns on R&D and ensuring valuable knowledge is widely accessible. In recent years, and particularly in the last round of global trade talks, the US has worked to extend these protections to the international level, in light of the rapid transmission of science and

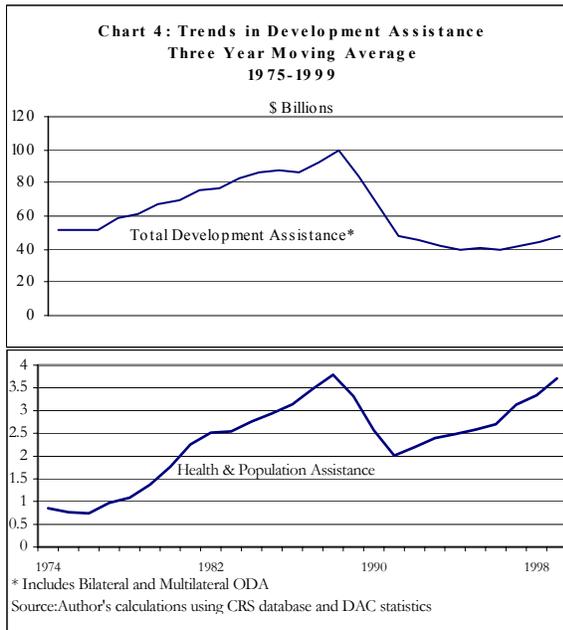
technology across borders. But these efforts are increasingly under attack for denying lifesaving medicines to the poorest nations. Indeed, there is some tension between addressing the research shortfall on neglected diseases and improving the accessibility of medicines to poor nations. Additional research effort can be encouraged by extending intellectual property protection, as is currently done for “orphan” drugs in the wealthy nations. But ensuring broad access requires pricing at cost. For a limited class of internationally agreed health emergencies, where medicines are already in production, it is not hard to reconcile these goals. Strict market segmentation would enable poor countries to get access to medicines close to cost (through local or third country production of generics or compulsory licensing) while maintaining high margins in middle and upper income markets.

Where medicines are not yet available, a broader set of policy instruments is needed. Orphan drug laws provide a useful model. To encourage research into rare diseases where market demand is not sufficient, governments in wealthy nations rely on a combination of research tax credits and research grants as push incentives and extended patent protection as pull incentives. In the case of neglected diseases afflicting the poor, additional pull incentives may be needed in the form of donor purchase commitments and sales tax credits.^{xxiv}

4. *Establish purchase precommitments as a pull incentive.* Weak effective demand in the poor nations and skepticism about the future scale of donor financing for medicines diminish the efficacy of push incentives alone. Purchase funds such as GAVI have been established on the theory that the private sector will only make the requisite investments in the presence of up front purchase commitments by international organizations and donors. These purchase funds are works in progress, and their ongoing implementation merits careful evaluation with a view to possible replication or expansion.

5. *Design new research on bioterrorism to exploit any dual use potential.* Stepped up efforts on bioterrorism are likely to result in vastly expanded research budgets for infectious diseases. The “biodefense” budget for NIAID is projected to increase from only \$36 million in FY2001 to over \$1.7 billion for FY2003.^{xxv} Several of the diseases in high priority categories mainly afflict tropical areas in normal circumstances. Thus, these efforts could direct substantial new funding into formerly “neglected” diseases that have direct applicability in the poorest nations. Moreover, many of the challenges associated with producing and storing adequate vaccines and medicines for relatively low probability disease outbreaks may have important parallels for markets with low effective demand in the developing world.

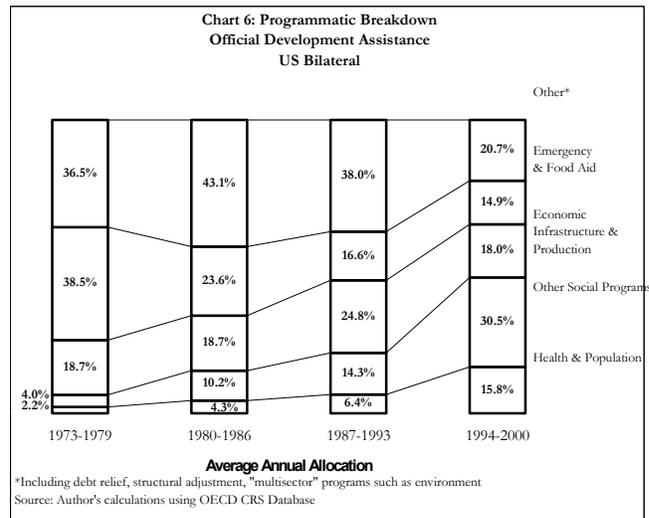
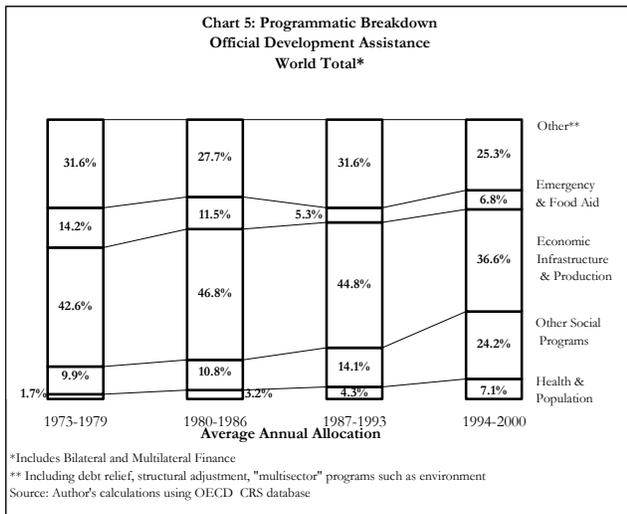
IV. FINANCING GLOBAL HEALTH

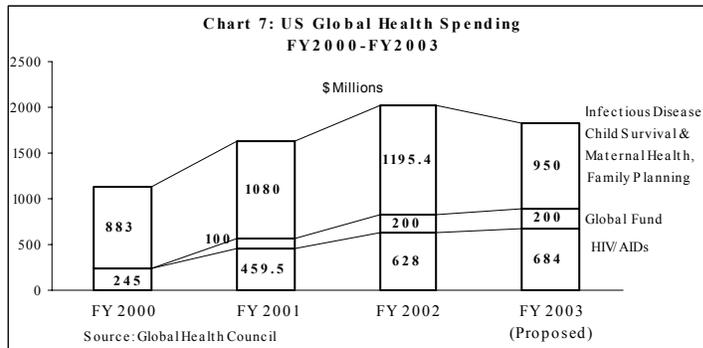


The considerable promise of health for development is reflected only weakly in actual spending. Since 1991, total health spending has grown faster than aggregate ODA in real terms, as shown in Chart 4. Even so, following a collapse at the beginning of the 1990s, by 2000, health spending had just barely regained the real levels attained in 1989.

Both aggregate ODA flows in Chart 5 and US bilateral flows in Chart 6 show a promising shift towards “social sector” spending and away from spending on economic infrastructure, services, and production. This is especially pronounced for US bilateral assistance, where health rose from 2 to 6 percent of the total between 1973 and the early 1990s and to 16 percent by the late 1990s. For

aggregate ODA, the share devoted to health rose from 2 to 4 percent between 1973 and the early 1990s to over 7 percent by the late 1990s, but this is still only one fifth as large as spending on economic programs.





Despite the positive directional indicators, the critical need to address HIV/AIDS has absorbed much of the most recent increases, underscoring the need to run simply to stay in place. A quick glance at the US budget in Chart 7 is sobering. Recent increases are almost completely absorbed by HIV/AIDS.

Indeed, the Administration's FY03 request reflects a *decrease* in spending on other infectious diseases, child survival and maternal health.

Future Projections

Although the precise numbers are subject to debate, there is little disagreement on the urgent need for significantly expanded international health assistance. The WHO Commission on Macroeconomics and Health has estimated the cost of addressing HIV/AIDS in low income countries (reaching 2/3 of the population) will rise to about \$14 billion by 2007. The price tag for also addressing a broader set of interventions to address the major communicable diseases and maternal and perinatal conditions will be roughly \$22 billion by 2007, assuming that the beneficiary nations mobilize an additional 1 percent of GDP for health. This implies per capita spending of \$35 per year, or \$14 above current levels. The Commission also recommends an additional \$3 billion per year to be devoted to R&D and \$2 billion for other global public goods such as the development of best practices and epidemiological baselines. This amounts to an additional 0.1 percent of donor GDP – roughly equivalent to the entire US budget for ODA currently. ^{xxvi}

These calculations include expected flows from debt relief. Under current guidelines, roughly one quarter of resources made available by debt relief should be devoted to health, resulting in an additional one half of one percent of GDP for the 30 eligible countries. In the absence of deeper or broader relief, therefore, debt relief will make an important but limited contribution, and substantial new flows will be required.

V. COORDINATING AND IMPLEMENTING GLOBAL HEALTH

National Commitment and Coherence.

There is substantial agreement that national ownership of health programs is a key factor for success. Aid is most effective when it supports spending priorities developed by national authorities in a transparent process involving key stakeholders. Moreover, it is important to formulate health plans within an overall national development framework so that the full range of resources is deployed in a mutually reinforcing and coherent way. This is the rationale underlying the poverty reduction and growth strategy process initiated through the World Bank in conjunction with the IMF, and the primacy of this framework should be maintained.

Part of the additional financing should come from the low income countries not only to increase total resources but also as a critical test of domestic commitment. It would be a terrible shame if donor funding were diverted from countries with a demonstrated commitment to public health, only to enable less serious governments replace budgetary resources used for agricultural price supports. But domestic resources will provide only a limited part of the increase. Currently, domestic financing of health amounts to \$23 per capita, for low income countries and \$11 in the least developed countries, with government providing roughly 55 percent.^{xxvii}

Modalities: Donor Coordination, Global Trust Funds, and Single Goal Campaigns

There is also a need for coordination among donors within programmatic areas or “sectors.” Aid is most effective when it underwrites a reform agenda directed by national authorities rather than proliferating overlapping and disparate programs driven by donors’ program priorities. This was the inspiration behind the development of Sector-Wide Approaches (SWAs) to health spending in the mid 1990s. Donors seek ways to pool assistance to underwrite overall health strategies designed and led by national authorities. This ensures donors get credit for supporting areas that reflect their domestic budgetary priorities, while remaining within an overall framework that ensures coherence and local design.

The most extreme form of coordination is the “campaign” type of initiative targeting a particular disease or set of interventions, which has delivered many of the biggest health success stories. The campaign approach has many advantages: the goal is clear, the results are measurable, the technical expertise is well-defined, and the single issue focus provides a good marketing vehicle. This model has been adapted and expanded by recent initiatives such as GAVI and the Global Fund, which also draw on lessons from global trust funds in other programmatic areas, such as the Global Environmental Facility and the debt relief trust fund. The underlying rationale for “global” trust funds is to generate incentives to increase the provision of global public goods and to coordinate and pool resources from the private and public sectors. To date, private donations, and most notably the Gates Foundation, have accounted for a substantial share of the funding.^{xxviii xxix}

Effective efforts to combat HIV/AIDS, tuberculosis, malaria and other killer diseases will necessarily rely heavily on local commitment, resources and personnel. Thus, the success of the global health programs will depend on close cooperation among different programs in on-the-ground implementation, since there is the potential for substantial overlap in terms of trained personnel, education, facilities, and equipment— or the danger of wasteful duplication. With the vast expansion of health services envisaged by the Global Fund or the WHO Commission, for instance, the dearth of skilled local health professionals is likely to be a serious constraint to scaling up. For these reasons, it is important not to neglect capacity building in broad basic health service capabilities.

The likely approach going forward is that global trust funds and campaign style approaches will dominate for particular high profile diseases and treatment protocols, while bilateral and multilateral financed country programs should be used to address complementary health service capabilities and lower profile or multidimensional conditions (such as maternal and perinatal health). But it will be important to fine tune the balance between vertical and horizontal approaches on an

ongoing basis as programs are scaled up (separately in terms of raising resources and program implementation).

For both vertical and horizontal approaches, there are several broadly agreed guidelines. The programs need to be sufficiently flexible to attract both public and private funding. The bulk of resources should be awarded on the basis of country-led strategies that are the product of an inclusive and transparent dialogue involving key stakeholders. A key sign of commitment is the use of domestic government resources at an appropriate level. There should be clear eligibility criteria and clear, quantifiable performance standards. Programs should be evaluated as to epidemiological needs, cost effectiveness, and the ability to monitor implementation and measure outcomes. It is important to have multi-year funding commitments, but equally that there be mid course assessments by outside experts with the threat of terminating funding based on poor performance or corruption.

Grants vs. Loans

Separate from the question of raising money is the question of the best modality for distributing financing. A straightforward case can be made for grant-like financing for investments in areas like basic health, basic education and sanitation that yield social returns that are difficult to capture financially since they are not mediated through the market, especially for the poorest nations. But it is important to understand that the loan vs grant debate between the EU and the US is not about the optimal financing modality from the point of view of beneficiaries (especially since IDA loans are already highly concessional). The underlying tension is whether the US can be trusted to provide additional money in the future to make up for reflows that are lost in the conversion of loans to grants.

International Organizations

The division of labor among international organizations is fairly robust for an expansion of health spending. The WHO will continue to be the premier international authority for mobilizing technical expertise on approaches to disease control and health systems, for disease surveillance, and for helping develop national health plans and epidemiological baselines, working with 6 regional centers and 100 country teams. The WHO will work in partnership with programs such as GAVI and the Global Fund to provide technical guidance. The World Bank should strengthen its role in ensuring coherence at the national level between health sector strategies and broader development plans through the PRGF process and more broadly. Together with the regional development banks, the World Bank will be a key source of concessional health financing for poor countries and loans for middle income countries. UNICEF and UNFPA have complementary roles that are narrower in focus and operational in character.

VI. IMPLICATIONS FOR US DEVELOPMENT ASSISTANCE

The US is well-positioned to take a leading role in the global health challenges confronting humankind. Unparalleled depth in the rapidly advancing life sciences and the strong tradition of private-public partnership on research create the potential for the US to contribute through

knowledge and scientific collaboration as well as through the provision of aid. Investing in global public goods is also highly compatible with US attitudes regarding the role of government. Potential synergies with the bioterrorism research agenda create dual imperatives for action, and it is critical that the research agenda be explicitly designed with this in mind from the start. Moreover, the strong bipartisan support for global HIV/AIDS financing augurs well for building durable political support for broader global health spending.

Moreover, health is a good candidate for the major expansion of bilateral assistance envisaged by the Bush Administration. Prospective investments in health fit well with the publicly enunciated design elements of the proposed Millennium Challenge Account (MCA).^{xxx} Health lends itself to concrete criteria for eligibility and to measurable results (such as targets for vaccinations and decreases in infant mortality) and is one of the most direct and cost effective ways of investing in human capital.

For maximum impact, US health spending should be leveraged through close coordination with other donors and international organizations – on criteria and evaluation as well as programmatic emphasis. Coordination can be achieved through existing mechanisms, at the sectoral level through the SWAp framework, at the national level through the poverty reduction and growth process at the World Bank, and at regional and global levels through international organizations such as the WHO and GAVI.

Despite the daunting challenges, there exists a rare confluence of capability and commitment to make a substantial difference in the global health agenda. Yet, this moment may be fleeting. Political leadership and sustained investments are vital to transform this promise into an enduring reality.

ⁱ Faure, Jean-Claude Faure, "Development Co-Operation 2001 Report," Organisation for Economic Co-Operation and Development, *The DAC Journal* 3(1), 2002. p. 209.

ⁱⁱ Isaac Shapiro and Nancy Birdsall, "How Does the Proposed Level of Foreign Economic Aid Under the Bush Budget Compare with Historical Levels? And What Would be the Effects of Bush's New 'Millennium Challenge Account?'" Center on Budget and Policy Priorities and Center for Global Development, March 20, 2002.

ⁱⁱⁱ 1999-2000 average. Faure, "Development Co-Operation 2001 Report," p. 207.

^{iv} Lael Brainard, "With Help From the Famous, Foreign Aid Resurges," *The Los Angeles Times*, June 26, 2002.

^v White House Fact Sheet, "A New Compact for Development," March, 2002.

^{vi} House Democratic Leader Dick Gephardt, "Building a New Long-Term Strategy for American Leadership and Security," The Woodrow Wilson International Center for Scholars and the Council on Foreign Relations, June 4, 2002.

^{vii} William Easterly, "Cartel of Good Intentions: Bureaucracy Versus Markets in Foreign Aid," Center for Global Development Working Paper #4, March 2002.

^{viii} For an excellent review of the evidence, see the Report of the World Health Organisation Commission on Macroeconomics and Health, "Macroeconomics and Health: Investing in Health for Economic Development," December 20, 2001.

^{ix} "Macroeconomics and Health," p.30

^x UNDP "HIV/AIDS Statistical Fact Sheet," (<http://www.undp.org/hiv/docs/Barcelona-statistical-fact-sheet-2July02.doc>)

^{xi} See: R.W. Fogel, "New Sources and New Techniques for the Study of Secular Trends in Nutritional Status, Health, Mortality and the Process of Aging," National Bureau of Economic Research Working Paper Series, Historical Factors and Long Run Growth, No. 26. 1991; R.W. Fogel, *The Fourth Great Awakening and the Future of Egalitarianism*, Chicago and London: The University of Chicago Press, 2000; Jeffrey Sachs, "The Economic Burden of Malaria." *The Supplement to The American Journal of Tropical Medicine and Hygiene*, vol.64.(1,2), January/February, 2001.

^{xiii} "Macroeconomics and Health," p.24.

^{xiii} “Macroeconomics and Health,” p.32.

^{xiv} “Brief on Insecticide Treated Bednets for Malaria Control,” *Malaria Consortium*, December, 1999. (http://www.netmarkafrica.org/keyissues/itm_brief.html)

^{xv} State Failure Task Force, “State Failure Task Force Report, Phase II Findings,” *Environmental Change and Security Project Report*, Woodrow Wilson Center, Issue 5, Summer 1999. Report findings summarized in “Macroeconomics and Health,” p.28.

^{xvi} Thus, for instance, some countries’ populations are split between two quintiles.

^{xvii} There is an extensive literature on income inequality trends; the conclusions are extremely sensitive to the data set and the unit of analysis.

^{xviii} “Macroeconomics and Health,” p.44.

^{xix} World Health Organisation “Brochure on Measles,” (http://www.who.int/measles/front/pages/dsp_factsheets.cfm)

^{xx} “Macroeconomics and Health,” pp.40-41.

^{xxi} Peter J. Hotez, “Vaccine Diplomacy,” *Foreign Policy*, Issue 124, May/June, 2001.

^{xxii} UNDP “HIV/AIDs Statistical Fact Sheet.”

^{xxiii} www.globalforumhealth.org

^{xxiv} For a discussion of “push” and “pull” incentives for promoting health research see: *United Nations Global Development Finance 2001*, chapter 5, “Effective Use of Development Finance for International Public Goods,”; *United Nations Human Development Report 2001*, “Chapter 5: Global Initiatives to Create Technologies for Human Development.”

^{xxv} “HHS Announces New Bioterrorism Research Initiatives,” Center for infectious Disease Research & Policy, December 10, 2001. (<http://www1.umn.edu/cidrap/content/bt/bioprep/news/hhsgrants121001.html>); Dr. Anthony Fauci, “An Expanded Biodefense Role for the National Institutes of Health,” April 2002. (<http://www.homelandsecurity.org/journal/Articles/fauci.htm>)

^{xxvi} “Macroeconomics and Health,” pp.53-55.

^{xxvii} “Macroeconomics and Health,” p.56.

^{xxviii} The Rockefeller and Ford Foundations played a key role in financing research in the Green Revolution.

^{xxix} For estimates of private and public contributions to global health initiatives, see: *World Health Organisation Infectious Disease Report 2002*, Chapter four, “Going to Scale.” For estimates of contributions to HIV research and treatment, see “Global Spending on HIV/AIDs: Tracking Public and Private Investments in AIDs Prevention, Care and Research,” Progressive Health Partners and the AIDs Research Institute, July, 2001.

^{xxx} White House Fact Sheet “A New Compact for Development,” March, 2002.