



Preface

The Commission on Growth and Development was established in April 2006, partly in response to two observations. We felt that the benefits of growth were not fully appreciated, but we also recognized that the causes of growth were not fully understood. Growth is often overlooked and underrated as an instrument for tackling the world's most pressing problems, such as poverty, illiteracy, income inequality, unemployment, and pollution. At the same time, our grasp of the sources of growth in developing countries is less definitive than commonly thought—even though advice is sometimes given to policy makers in these countries with great confidence, perhaps greater than the state of our knowledge would justify. Consequently, the Commission's mandate is to “take stock of the state of theoretical and empirical knowledge on economic growth with a view to drawing implications for policy for the current and next generation of policy makers.”

The 21 commissioners included 19 experienced leaders from government and business, mostly from the developing world, and two Nobel Prize-winning economists. To help assess the state of knowledge, the Commission invited leading academics and policy makers from around the world to a series of 12 workshops, held in 2006, 2007, and 2008 in Washington, D.C., New York, and New Haven. A series of thematic papers, as well as 25 country case studies exploring the dynamics of growth in specific countries, was commissioned. The Commission also met several times in Washington, Singapore, New York, and Suzhou. The workshop papers reviewed issues such as monetary and fiscal policy, climate change, inequality, growth, urbanization, education, and health—the subject of this volume. Each presentation benefited from comments by

members of the Commission and other workshop participants from the worlds of policy, theory, and practice.

The workshops turned out to be intense and lively affairs, lasting up to three days. It became clear that experts do not always agree, even on issues that are central to growth. The same is true of the members of the Commission on a number of questions. The Commission had no wish to disguise or gloss over these uncertainties and differences. Researchers do not always know the correct “model” that might explain the world they observe; and even if they know the factors that matter, they cannot always measure them convincingly.

While researchers will continue to improve our understanding of growth, policy makers cannot wait for scholars to satisfy all of their doubts or resolve their differences. Decisions must be made with only partial knowledge of the world. One consequence is that most policy decisions, however well-informed, take on the character of experiments. They yield useful information about the way the world works, even if they do not always turn out the way policy makers had hoped. It is best to recognize this fact so that policy makers can institutionalize the process of spotting failures, learning from mistakes, and correcting policies mid-course.

The workshop on health and growth was held in October 2007. We were fortunate to benefit from the wisdom and insights of outstanding researchers and experienced practitioners. We are grateful to all the participants, who are listed below. The remainder of this preface is not an exhaustive summary of the workshop or the chapters in this volume. It instead replays some highlights of the discussion and presents some of the ideas that shaped the conclusions on health in *The Growth Report*. One strong conclusion is the vital importance of investing in the nutrition, health, and cognitive development of children in their early, preschool years. This investment is not only a matter of fairness. It also ensures that individuals can develop both cognitive and noncognitive skills, such as perseverance, motivation, self-control, self-esteem, conscientiousness, and forward-looking behavior. These skills together determine a person’s lifelong earnings and health. Research by Jim Heckman, the pioneering economist in this area, suggests that the first five years of life are critical. This is one clear conclusion in a field that is otherwise often ambiguous and rapidly evolving.

The Measurement of Health

Any definition of health has its difficulties and limitations. There is no agreed-on metric. The World Health Organization has grappled with the definition and concludes that health is simply “absence of illness.” This definition is pithy and can accommodate subjective perceptions and cultural differences. But it makes health hard to measure.

Whereas education can be indexed by years of schooling and road-building by kilometers of asphalt, the aggregate health of a nation is not easily measured. This in turn makes it difficult to determine its effects on growth. Accurate health statistics are a public good that only governments and intergovernmental organizations can provide. National and multilateral agencies have spent considerable sums measuring health, and they have made substantial progress tracking individual diseases. But they have enjoyed less success in compiling aggregate, summary indicators.

Health is generally captured as the absence of negative factors, such as infant mortality, or by life expectancy, which is, itself, heavily influenced by infant mortality. But the death of a child before his or her first birthday is rare even in countries afflicted by high mortality rates, and because it only happens once, it offers an incomplete measure of health.

It is, for example, entirely possible for a country's infant mortality rate to fall even as "morbidity," or illness, among the population as a whole rises. Infants, after all, are outnumbered by adults, who might suffer from chronic diseases, such as diabetes or heart disease, which evolve quite independently of threats to infant survival. If these chronic diseases worsen, even as postnatal care improves, then the infant mortality rate will give a misleading impression of the country's health trends.

Unfortunately, general ill health can't be captured in a single measure. No single number could hope to encapsulate the range of possible ailments or the varying severity of each one. As a result, general indicators of health are inevitably fuzzy and their associations with productivity tenuous. Scholars typically choose instead to refer to specific illnesses, such as hookworm, HIV/AIDS, or diabetes. The prevalence of particular morbidities is easier to measure and their economic impact easier to trace.

Progress in Health

By any measure, the average health of the world's population has improved spectacularly over the last two centuries. This is largely because of improved agriculture, which has increased the quantity of food, and a better understanding of disease transmission, which has guided public efforts to stem infectious diseases. Together, these factors have helped lower infant mortality, reduce morbidity, and extend life expectancy, allowing more people to enjoy and even outlive their three scores and ten.

Until the late eighteenth century, even the world's richer countries suffered from inadequate food production and high malnutrition. Boosts in agricultural output, particularly in the twentieth century, led to improvements in nutrition. These nutritional gains account for roughly 40 percent of the increase in life expectancy over the last 400 years according to pioneering research by Robert Fogel, a Nobel Prize-winning economic historian.

In the nineteenth century, pioneers of epidemiology discovered the transmission paths of disease. This prompted the draining of swamps to destroy

mosquito breeding-grounds, thereby curbing malaria and yellow fever. It also demonstrated the need to separate water and sewerage, which controlled cholera epidemics. Such interventions on behalf of public health had dramatic effects on disease incidence and mortality.

In the early twentieth century, the United States led efforts in Latin America to establish disease surveillance systems and to suppress the “vectors,” the transmitters of infectious diseases. They succeeded in reducing the number of days that traded goods had to spend in quarantine, opening up trade with tropical countries.

The elimination of hookworm in the U.S. South led to higher school enrollment, attendance, and literacy. Similar malaria control efforts in Latin America resulted in higher literacy and incomes in adulthood. Such targeted efforts at disease control allow and encourage broader investments in human capital that together contribute to improved economic performance at the household level.

Technologies that emerged after World War II—such as vaccines, the use of DDT, and effective therapies for bacterial infections, notably antibiotics—have saved lives in both developed and developing countries. But these advances have made less of an impact on health and longevity than preventive measures such as exercise, healthy eating habits, and reductions in smoking.

Macroeconomics and Health

We can say with confidence that economic growth improves health. It increases the availability of food, makes health spending affordable, and raises the demand for good health. The question is whether causality works in reverse: does health lift growth? And if so, how important is it when compared with other potential factors where the empirical evidence is more solid?

The World Health Organization’s 2001 Committee on Macroeconomics and Health recommended increased spending on health as a way to promote economic growth, to raise both health status and household earnings. That committee’s findings offer a starting point for a reexamination of the validity and relevance of macroeconomic evidence.

Economists and other social scientists have made considerable efforts to ferret out the effect of health investments on economic performance. Historical research, cross-sectional analysis, and innovative ways of integrating household factors into cross-country studies have pushed the methodological envelope, but the results remain inconclusive. Research is hamstrung by lack of data and imprecise measures of health. Moreover, countries that provide effective health services are also more likely to have other institutions that function well, as well as sound public management in general. This makes it hard to separate out the marginal contribution of investments in health.

Of course, improvements in health are worth the effort even if they turn out to have little effect on growth. People rank health high on their list of priorities in life. It is an end in itself, whether or not it is also a means to the further end of greater prosperity.

Do Government Investments in Health-Care Services Matter for Growth?

Governments invest in health in various ways, providing public goods (for example, controlling disease vectors and promoting healthy behaviors), quasi-public goods (for example, vaccinations for communicable diseases and nutrition supplements), and subsidizing access to health care, either through insurance or direct delivery of care. There is a clear rationale for this government involvement. As infectious diseases spread from person to person, they become a public concern as well as a private one. And because illness is often a random event, it is best tackled by pooling the financial risks it poses. The question of particular concern to the Commission is how much public health spending contributes to growth.

The cross-country evidence is tenuous at best. While the lack of a meaningful health metric contributes to the problem, weak health-care institutions undermine the effectiveness of health-care investments. Chronic absenteeism among providers, poor budget execution, ineffective management, and virtually no accountability weaken public efforts and contribute to low returns on investment. If institutions cannot function, then public spending on health care will not improve health, let alone raise economic growth.

Early Investments in Health and Nutrition Improve Welfare and Earnings.

Although the macroeconomic evidence is muddy and inconclusive, other lines of research into the broader implications of investments in health are yielding rich and promising insights. Findings from economics, psychology, and neuroscience all reveal the profound importance of timing. Interventions in the preschool years have a long reach, improving health, schooling, and earnings even late in life. For example, a 35-year longitudinal study in Guatemala showed that men who received a protein supplement in their first two years of childhood earned an average wage 46 percent higher than men who consumed a calorie-based supplement.

Fighting malnutrition can significantly raise the survival rates of young children and relieve the burden of illness. This translates into healthier adults who can expect to live longer lives. Both biomedical and economic research point to the striking effects of early childhood nutrition and cognitive stimulation on schooling attendance, learning, adult health, and life-long earnings. Indeed, early life experience accounts for more of the variance in adult cognitive skills than does schooling.

In developing countries, stunted or anemic children suffer from fewer years of schooling, reduced productivity, and lower incomes in adulthood. Recent neuroscience findings link inadequate interventions in preschool years with some forms of cancer, mental illness, diabetes, and other chronic diseases in adults. Compensating adults for deficits early in life is more

expensive and far less successful than targeted investments in preschoolers. These investments, on the other hand, can improve the productivity and earnings of individuals and households, with strong implications for economic growth in the aggregate over the longer term. They may also narrow inequality by breaking the intergenerational transmission of poverty.

Concluding Remarks

Historically, progress in health owed much to adequate food and public-health interventions, and those important relationships persist in the modern world. Chronic illness undermines current productivity and promises future losses in output. These deprivations can be passed on to the next generation if investments in children are not made in a targeted and timely fashion. Good health improves the capacity to learn and work, which dramatically improves income and welfare at the household level even if the effects at the aggregate level may be harder to discern. The methodological problems in capturing these gains deserve attention and further work. More attention also needs to be paid to upgrading health-care institutions, as more of the same is neither affordable nor desirable.

A. Michael Spence