

# Investing in children's health: what are the economic benefits?

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**Abstract** This paper argues that investing in children's health is a sound economic decision for governments to take, even if the moral justifications for such programmes are not considered. The paper also outlines dimensions that are often neglected when public investment decisions are taken. The conclusion that can be drawn from the literature studying the relationship between children's health and the economy is that children's health is a potentially valuable economic investment. The literature shows that making greater investments in children's health results in better educated and more productive adults, sets in motion favourable demographic changes, and shows that safeguarding health during childhood is more important than at any other age because poor health during children's early years is likely to permanently impair them over the course of their life. In addition, the literature confirms that more attention should be paid to poor health as a mechanism for the intergenerational transmission of poverty. Children born into poor families have poorer health as children, receive lower investments in human capital, and have poorer health as adults. As a result, they will earn lower wages as adults, which will affect the next generation of children who will thus be born into poorer families.

**Keywords** Child welfare/economics; Investments; Education; Health status; Socioeconomic factors; Demography; Anthropometry; Cost-benefit analysis/methods; Longitudinal studies; Review literature (*source: MeSH, NLM*).

**Mots clés** Protection enfance/économie; Investissement; Enseignement et éducation; Etat sanitaire; Facteur socioéconomique; Démographie; Anthropométrie; Analyse coût bénéfice/méthodes; Etude longitudinale; Revue de la littérature (*source: MeSH, INSERM*).

**Palabras clave** Bienestar del niño/economía; Inversiones; Estado de salud; Factores socioeconómicos; Demografía; Antropometría; Análisis de costo-beneficio/métodos; Estudios longitudinales; Literatura de revisión (*fuentes: DeCS, BIREME*).

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Voir page 783 le résumé en français. En la página 783 figura un resumen en español.

## Introduction

Almost 11 million children die each year from preventable and curable diseases (1). The majority of these children live in low-income countries and belong to disadvantaged socioeconomic groups. There are several cost-effective interventions that could significantly reduce mortality among children but the use of these interventions is largely insufficient, particularly in countries where they are most needed. The Bellagio Study Group on Child Survival has called for an increase in investments in child health, basing their call on moral and public health grounds (2). We support their call and add an additional reason to invest in children's health: the potentially vast economic benefits that may accrue from these investments.

We argue that investing in children's health is a sound economic decision for governments to take, even if the moral justifications for such programmes are not considered. We also outline dimensions that are often neglected when public investment decisions are taken.

## Methods

This paper critically discusses the findings of the literature, pointing out inadequacies in existing economic evaluation studies and presenting the methodological advances made over the past decade. We searched the literature using the following online databases and web sites: POPLINE, Institut de l'Information Scientifique et Technique, Medline, LexisNexis, JSTOR (Journal Storage, a database of literature on economics and other disciplines) and EconLit (a database of literature on economics). We also reviewed publications of the World Health Organization (including the Commission on Macroeconomics and Health), the World Bank, the Inter-American Development Bank, other regional development banks, the United Nations, the United Nations Children's Fund, the United Nations Development Programme, the United States' Department of Health and Human Services and the Centers for Disease Control and Prevention. We have tried to focus on articles published in peer-reviewed journals. However, much

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of the literature on programmes and their evaluation has been produced by agencies, such as development banks, and we decided that excluding this material would significantly limit the depth and scope of our analysis. We have cited only documents that are in the public domain and that appeared with a reference number (which typically implies an element of peer review and quality control). The key words used in the search were: health, child(ren), santé, enfant(s), child health, economic(s), development, economic benefits, health benefits, growth, investment, human capital, family planning, developing country, economic costs, health care policy. For a full presentation of all reviewed articles, please see Belli and Appaix (3).

In the first part of the paper we present the findings of the early literature that studied the association between children's health and economic development. (Early literature is defined as documents published up until the mid-1990s.) We then discuss the methodological limitations of these early studies and how later researchers have addressed these constraints by focusing on short-term benefits and social benefits and by using proxies for measuring children's health. Finally, we present the most recent and methodologically robust studies.

## Early cost–benefit analyses

Most of the early studies linking interventions to improve children's health with economic benefit focused on nutrition. Three examples of such early studies are a cost–benefit study of a protein-supplementation programme for severely malnourished infants in Chile by Selowsky (4), an analysis of a vitamin A supplementation programme in the Philippines by Popkin et al. (5), and an analysis of a supplemental feeding programme targeted at moderately malnourished and severely malnourished children in Tamil Nadu, India, by Knudsen (6). All three studies evaluated the effects of nutritional programmes on children's future earning potential.

In the study in Chile, Selowsky articulated a full cost–benefit analysis by linking the effects of a nutritional intervention on 33 severely malnourished children's weight, intellectual capacity and future earnings. Comparing the rates of return of the protein supplementation programme (19–25%) with the returns on education (17% for primary education) and physical capital investments (15%) in Chile, Selowsky concluded that investing in supplementation programmes would be one of the more productive investments that the Chilean government could undertake. He also showed that the consequences of failing to provide adequate nutrition to children at an early age were irreversible.

Popkin et al. considered the social benefit of the reduction in medical treatment costs for children suffering from severe vitamin A deficiency that resulted from a supplementation programme.

Knudsen estimated the increase in earnings resulting from improvements in cognitive development and children staying in school for longer that were brought about by a supplemental feeding programme. He estimated that on average the increase in earnings potential due to the programme was 55% for severely malnourished children and 27.5% for moderately malnourished children. Knudsen also considered the impact on population growth of reductions in mortality among children and longer life expectancy. The estimated overall economic rate of return for the nutrition programme under the intermediate scenario of coverage and performance was 14.5%. It increased to 21.5%

if its redistributive impact was considered, given that the programme disproportionately benefited the poor. Knudsen also developed a sensitivity analysis and concluded that under all but the most pessimistic scenario the expected benefits of the programme exceeded its costs.

During the decade of the 1980s and until the mid-1990s, more cost–benefit studies were undertaken to evaluate the economic impact of malnutrition and interventions aimed at improving children's health, particularly nutrition interventions. These studies were reviewed by Behrman (7). This early literature clearly established that chronic malnutrition occurring during the first two years of a child's life permanently impaired cognitive ability, height and visual acuity, thus adversely affecting productivity and earning potential throughout life. It also presented some of the early attempts to quantitatively measure the incremental economic benefit associated with interventions to improve children's health. For example, Behrman utilized a "production function" that linked variables for cognitive achievement, years of schooling, productivity and salaries, and he used evidence from studies of urban dwellers in Kenya and Tanzania by Boissiere et al. (8) and from Ghana by Glewwe (9). He estimated that the lifetime present-value productivity gain from preventing blindness (through vitamin A supplementation) could be as large as US\$ 1840 per child and that an iron supplementation programme that positively affects cognitive ability (10) could potentially bring about increases in future wages on the order of 13–25%.

One good example of the methods utilized in several of the first-generation cost–benefit studies is represented by the evaluation of the economic benefits of the Integrated Child Development Project in Bolivia by Van der Gaag and Tan (11). The authors developed complex methods to estimate economic returns. Their findings are based on crucial hypotheses at three levels: first, the programme is effective in improving health outcomes; second, health gains achieved by the programme have an impact on education, and third, education yields economic returns. Their findings indicated that significant economic benefits are associated with the enhanced survival of young children (Table 1). A reduction in mortality among children younger than 5 years from 162/1 000 live births to 105/1 000 would generate an economic return equal to US\$ 65 721 in Bolivia when only the direct health benefits of the programme in terms of improved child survival were considered. When the indirect or secondary effects of improving children's survival are added, such as the increase in the number of children attending school, the expected benefits are much higher. Considering all measurable benefits, the authors finally estimated that the total benefit–cost ratio would be between US\$ 1.38 and US\$ 2.38 dollars for every dollar invested in the programme.

## Methodological limitations of early studies

The literature reviewed in the previous section has a number of limitations. First, the evaluation of economic benefit over time is often calculated on the basis of projections dependent on a host of assumptions that have not been adequately corroborated by direct empirical evidence (for example, assumptions about programme intake and performance, about the effects on schooling and the labour market, and on economic and demographic conditions). Second, the focus of these studies is mainly or exclusively on private or individual benefits rather than on social benefits. Private benefits are those accruing to

Table 1. Increase in net present value of productivity in US\$ due to improved social indicators resulting from implementation of Integrated Child Development Programme in Bolivia, 1996 (11)

Indicator	Present value of indicator	Improvement	Increase in net present value <sup>a</sup>	Increase attributed to Integrated Child Development Programme
Baseline	966 212	–	–	–
Reduction in under-5 mortality	162/1 000 live births	105/1 000 live births	1 031 933	65 721
Increase in enrolment in primary school	65% of eligible children	95% of eligible children	1 412 156	445 944
Reduction in mortality + increase in enrolment	–	–	1 508 210	541 998
Reduction in mortality + increase in enrolment + improved primary school performance	–	–	1 997 847	1 031 635
Reduction in mortality + increase in enrolment + improved primary school performance + increasing numbers progressing to post-primary school	–	–	2 901 864	1 935 652

<sup>a</sup> Unless otherwise specified units are estimates in US\$ of the less favourable of two scenarios simulated by the authors; discount rate is 7%.

the individual rather than to society at large. The social benefits, which consist of net gains in equity and efficiency in relation to the maximum welfare associated with pure-market equilibria, should in fact be central to any assessment used to justify government investment in children's health that occurs in addition to individual household investment. Third, in evaluating the effectiveness of health programmes, cost-effectiveness studies and cost-benefit studies present a series of methodologically weak points, as summarized below.

- These studies rarely control for individual-level and community-level variables (such as socioeconomic status) and therefore tend to overstate the economic impact of health interventions. For example, Behrman and Lavy (12) criticized many of the early studies they reviewed for overestimating the economic impact of children's health interventions on children's participation and success in school. In simple terms, parents who valued better education for their children also invested more in their children's health: in order to distinguish association from causality, studies need to control for the simultaneous effects of unobserved household and community factors on health, school participation and educational attainment.
- Sometimes the estimated impact is drawn from small experimental samples and the samples are not selected randomly, or both. Thus, the estimated impact is highly context specific and may be biased, or both. For instance, Selowsky (4) commented on studies of the rates of return in education and noted that the estimated rates varied widely across studies because of the different age at which children start school in different contexts and the types of economic sector used as a reference to compute those rates. Sometimes impact parameters are based on socioeconomic surveys when more rigorous longitudinal evidence is unavailable.
- The criteria utilized to cost alternative programmes are not always well specified. For example, the time profile of a study may make an important difference. What seems to be a fixed cost because it does not fluctuate within a certain time frame may become a variable cost if the time frame is extended.

- Specific to the assessment of nutrition programmes is the possibility that nutrients may be reallocated within a household (that is, taken away from those who are benefiting from the programme); this may introduce another possible bias in the results.

## Later methodological advances

### Focus on short-term benefits

In the absence of longitudinal data, studies have focused on the potential short-term intermediate channels through which improvements in children's health can create an economic impact. Fig. 1 describes the channels that link improvements in health with better economic performance. These intermediate channels include improvements in cognitive ability, increases in participation at school and enhancement of educational attainment, reductions in the cost of medical care, increases in the participation of parents in the labour market, increases in the participation of children in activities (economic or otherwise) that are useful to the household, and increases in the propensity of the household to invest in their children and save for their future. Fig. 1 also shows the circular relationship between health and growth. When investments in children's health generate a positive economic impact, this produces an effect on the underlying determinants of health, thus leading to further improvements in health outcomes.

### Improvement in intermediate channels

A large body of literature has examined the impact of various health interventions on children's cognitive ability, participation at school and educational attainment; these studies have focused on children living in the poorest countries, where infectious disease is rampant. The literature clearly indicates that chronic severe malnutrition and exposure to infectious diseases permanently impair children's cognitive ability and compromise their ability to learn. For example, Jamison studied 3 000 children in China (13). He estimated that an increase in height-for-age of 1 standard deviation (the best anthropometric predictor of performance in school) is associated with an extra 0.3 years of education. Moock and Leslie in a study from a

stratified random sample of 350 children aged 5–11 years in Nepal found a significant positive link between nutritional status and the probability of school attendance (14). A study in Sri Lanka by Fernando et al. found that a child who had more than five attacks of malaria scored approximately 15% lower on a cognitive test than a child who had less than three attacks (15).

Several studies have focused on the impact of interventions against specific infectious diseases or micronutrient deficiencies on children’s cognitive ability, school participation and educational attainment (Box 1).

### Social benefits

Other studies have responded to critiques of the methods of cost–benefit studies — which traditionally examined quantifiable benefits such as productivity, wages and cost savings — by focusing on the social benefits of improving children’s health. For example, an analysis of Early Childhood Care and Development programmes conducted by the Inter-American Development Bank identified a systematic variety of benefits and their corresponding indicators (16) to measure the future benefits of investing in children’s health (Table 2).

Clearly, some of the benefits brought about by reducing mortality and morbidity among infants and children are intangible and difficult to translate into economic terms. For instance, a reduction in mortality among children is likely to promote self-confidence and social participation among adults, communities and nations. As it does so, the cycle of poverty in which large numbers of people are caught is interrupted. Such benefits are difficult to measure, and the empirical literature has not yet attempted to measure them. Other benefits, such as those derived from demographic transition, are relatively easier to evaluate.

### Demographic changes

Significant reductions in mortality among children set in motion the so called demographic transition. Bloom and Williamson

(17) have identified three phases in this transition. During the first phase, mortality among children declines but there is no reduction in fertility. As a result there are relatively more “un-productive youths” (which is known as the “youth glut”); the dependency ratio increases; and economic growth tends to fall. This first phase is called the demographic burden.

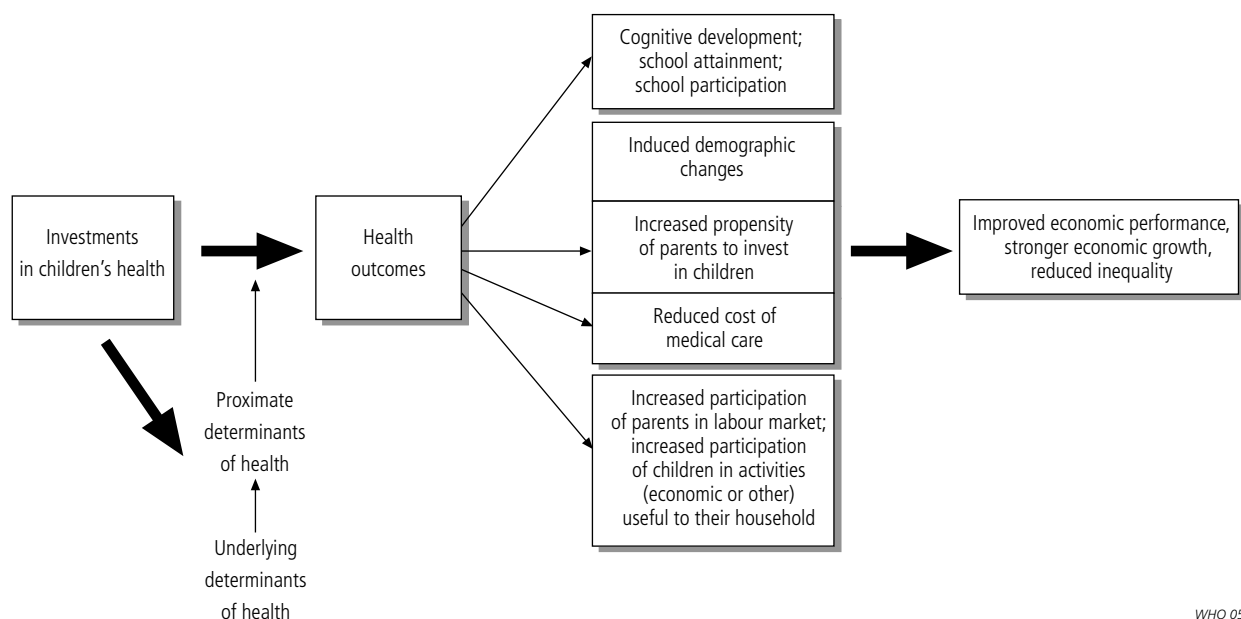
In the second phase, birth rates start declining. Since parents make decisions about the number of children to have largely based on the likelihood of their children surviving, families progressively adjust their fertility rates to accommodate lower mortality rates. Over time, lower birth rates and the progressive entry into the labour force of extra workers, due to higher child survival rates, reduce the dependency ratio. The share of the population that is of working age rises, fuelling higher potential economic growth. At the same time, mothers have fewer pregnancies and they can participate more fully in the labour market. Bloom and Williamson, in their study of economic growth in east Asia, called this stimulus to growth that is induced by demographic changes the demographic gift. Their estimates show that the demographic gift may have accounted for nearly 2 percentage points of east Asia’s average economic growth of 6% per year over the period 1965–90. South Asia and Africa, by contrast, have only recently begun to see any appreciable benefit from the demographic gift, and the estimated contribution for 1990–2025 to current growth trends in these areas is smaller than that experienced by east Asia.

In the last stage of the demographic transition, as those from the first phase start ageing, the share of the population that is working declines. The lag effect of the decline in birth rates in the second phase accelerates the fall; the dependency ratio rises again; and, as a consequence, economic growth is reduced. The initial demographic gift eventually evaporates.

### Proxies for child health

One measure frequently utilized as a proxy for measuring children’s health is height, which is clearly dependent on all past investments in health, particularly those that take place in

Fig. 1. Channels through which child health interventions affect the economy



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early childhood (18). In the absence of longitudinal evidence, cross-sectional evidence that shows a positive relationship between adult height and labour-market performance provides some credible evidence to support the hypothesis of a positive long-term economic impact of interventions that are able to improve children's health and nutritional status. As Fogel wrote, "These findings (linking mainly anthropometrical measures related to nutritional state during childhood and economic outcomes) suggest that payoffs later in life need to be factored in to the cost-benefit analyses of programs aimed at improving nutrition and health care at younger ages" (19).

A study of agricultural workers in southern India by Deolalikar found a positive relationship between their anthropometric characteristics, such as height and weight-for-height, and productivity and wages (20). Deolalikar found that the adult human body adapts more easily to short-term nutritional hazards and that it is more difficult to compensate for long periods of deprivation during childhood which result in unfavourable anthropometric structural characteristics, such as low height, especially for tasks requiring strength. A study by Haddad and Bouis in rural areas of the Philippines also showed a positive relationship between anthropometric data and wages (21). Thomas and Strauss investigated the relationship between anthropometric data and wages in a study using a sample of 34 000 adults in urban areas of Brazil during 1974-5 (22). They showed that height and weight-for-height are positively correlated with wages and that this relationship is particularly strong for uneducated adults (22).

Similarly, Dumont confirmed the robustness of the relationship between health, level of education and income. Using data collected from 3 000 urban households in Antananarivo, Madagascar, he estimated that for the adults surveyed being 10 centimetres taller than average was associated with one third of a year of additional schooling and 11% higher wages (23).

## Use of more rigorous methods

More recent studies have adopted new methods, which are designed to replicate randomized controlled trials in the real world. These new studies track the benefits of interventions to improve children's health that are phased in progressively among the populations studied. The impact is compared between a treatment group and a control group, the members of which have, ideally, been selected randomly. Whenever new children's health interventions are phased in incrementally, those who are not yet encompassed by the programme are used as the control group.

## Longitudinal evidence

A few studies, most of which are still under way, are tracking the long-term impact of children's health interventions using longitudinal evidence. Case et al. have published the only cohort study on this subject (24); it uses data from the National Child Development Study in the United Kingdom. A birth cohort, comprised of all children born during the week of 3 March 1958, was followed until middle age through interviews at ages 7, 11, 16, 23, 33 and 42 years in order to obtain medical, social, demographic and economic data. Variables controlled for included parents' income, education and social status. The results indicated that children with poor health did significantly less well in school, completed fewer years of education, and had significantly poorer health as well as lower earnings as adults. These findings are consistent with the human capital model,

### Box 1. Impact of children's health interventions

**Parasitic helminth infections:** Simeon et al. found that spelling scores were positively affected by anthelmintic treatment only for children with the heaviest burdens of parasites that school attendance improved for children who had stunted growth (28). A newer approach to evaluating improvements uses an innovative method known as "dynamic tests"; these are tests of a child's ability to learn. A study using this method found that anthelmintic treatment improved the potential to learn among children with moderate to heavy parasite burdens (E Grigorenko et al., unpublished data, 2005). However, children were only able to translate this improved learning potential into actual improvement in their cognitive abilities if they were exposed to specific educational programmes.

A study in Kenya found that attendance improved among children in primary schools where anthelmintic treatment was available, and it also improved in neighbouring schools where children did not receive treatment, pointing to a positive externality of the programme (29). After treatment, infections and absenteeism both decreased by 25%. The cost of the programme was estimated to be US\$ 3.00 per additional year of school participation and the benefit-cost ratio was estimated to be 10:1.

**Malaria:** Shiff et al. found that school attendance improved in Tanzanian villages participating in a trial of insecticide-treated bednets (30). Earlier studies found a 50% reduction in school absenteeism caused by sickness among children receiving malaria chemoprophylaxis in Accra, Ghana (31). No study has shown improvements in cognitive function or school achievement as a result of interventions designed to reduce malaria prevalence.

**Iron deficiency:** A number of studies suggest that after as little as two or three months, iron therapy produces a positive impact on cognitive function among preschool-age children and young school-age children. One example is the 1985 study by Soemantri et al. (10) that looked at children with iron-deficiency anaemia in rural Indonesia. A study from Chile found that children with anaemia who were successfully treated had significantly better scores on indexes of mental and psychomotor development on standardized tests than children who were not treated (32). A study in the United Republic of Tanzania found that preschool children taking part in an iron supplementation programme gained benefits in language and motor development (33). However, the strength of the evidence linking iron therapy to school achievement and school attendance is still unclear (34).

**Iodine deficiency:** Van Stuijvenberg et al. found that children fed fortified biscuits containing iodine, iron and beta carotene had improvements in cognitive function and school attendance (35). By contrast, trials of iodine supplementation alone failed to find any improvement in cognitive function (36).

according to which investments in human capital (health and education) have a permanent impact on growth; the findings also confirm that health status during childhood is a significant predictor of subsequent earnings.

One other example from a developing country is the study by Glewwe et al. (25), which utilized longitudinal data from Cebu, the Philippines, to estimate the cost-benefit ratio of a nutritional programme. The study concluded that every monetary unit invested in the programme could return approximately three units of additional wages through improved achievements in education.

## The impact of integrated programmes

During the past 15 years, integrated programmes — which include health, nutrition, education and income-supplementation components — have been introduced in several countries. One

Table 2. Benefits and indicators of progress associated with Early Childhood Care and Development (ECCD) programmes (16)

Beneficiary	Direct benefits	Indicators of change
Young children	Improved health, nutrition and hygiene	Increased survival rates Reduction in morbidity Improvement in height-for-age and weight-for-age
	Faster psychosocial development	Improvements in cognitive development, social development, emotional development and language skills at any age
	Improved attendance and performance in primary school	Timely enrolment in school Fewer children dropping out of school Better performance in school More continual attendance
Older children (siblings)	Reduced custodial responsibility for younger children	Siblings attend school more regularly and perform better in school Long-term earning capacity of siblings is increased
Parents and adults	Improved employment	Greater employment among caregivers (especially women) who are free to seek employment outside the house or otherwise improve their situations New employment opportunities created by ECCD
	Changes in general knowledge	Better parenting practices, measured in improvements in nutrition, health and hygiene practices and use of preventive medical monitoring.
	Improved psychological well-being	Reduced stress among parents and caregivers
Communities	Changes in physical environment	Improvements in sanitation, more spaces for play and building of new multipurpose facilities, such as recreation facilities
	Greater social participation and improved solidarity	Stronger social capital, measured as greater social participation Development of community projects to benefit all members, such as projects to improve cleanliness of shared spaces
Institutions	Improved efficiency	Reduction in number of children needing to repeat grades Reduction in drop-out rates Improvements in school curriculum
	Improved effectiveness of health-care institutions (coverage and quality of care)	Better health care outputs and outcomes Greater coverage of essential children's health services
Society	Healthier population	Reduction in number of days lost to sickness Reduction in suffering for families
	A more literate, educated populace	Reduction in violence, reduction in costs associated with maintaining security
	Cost savings	Reductions in spending on correctional, special education, and social welfare programmes
	More productive adults	Higher productivity and wages Stronger economic growth

such programme is Progresá in Mexico. This programme was launched in August 1997 and comprises education, nutrition and health components. Progresá's impact is being rigorously evaluated; results for the treatment group will be compared with those from a control group (26).

Progresá's support for investment in health and education is contributing significantly to reductions in fertility and to demographic growth among the more than 2.5 million poor rural families targeted by the programme. Behrman and Hodinott isolated the future economic benefits of the nutrition component and have estimated that this alone may trigger an increase in future wages at adulthood of 2.9% for children taking part in the programme (27). This does not include the effects of better nutrition on education, which, in turn, will create a further positive effect on future productivity and the wages of these children.

## Conclusions

The relationship between the health of the population and the economy is complex, and establishing clear links of causation is difficult. The return on investment in children's health is measurable only over the long term; the magnitude of return is context specific, being influenced by a host of factors, such as the state of the economic fundamentals (for example, the level of technological advancement and of investments), and the structure of the labour market, which are specific to each country, and determine the link between productivity and earnings.

For these reasons, few studies in the areas of nutrition or of immunization services have attempted to develop a full cost-benefit analysis or to provide a quantitative measure of the benefits attainable by investing in children's health; most empirical studies have focused on one of the several potential

intermediate benefits of investment, such as school participation and attainment. Recent contributions to the literature have questioned traditional approaches to measuring economic benefit and have proposed using more articulated and rigorous methods such as randomized controlled trials, longitudinal sampling as well as careful estimation that controls for simultaneity, unobserved fixed effects, and in the case of nutrition, the intrahousehold allocation of nutrients.

The conclusion to be drawn from the literature is that children's health is a potentially valuable economic investment. The rate of return on most programmes surveyed in this review is comparable to or superior to that estimated to be generated by investment in education. This literature has examined a dimension of benefit that is not generally considered by governments or the international community when discussing interventions in the health sector. The literature shows that making greater investments in children's health results in better educated and more productive adults, sets in motion favourable demographic changes, and shows that safeguarding health during childhood is more important than at any other age because poor health during children's early years is likely to permanently impair them over the course of their life. In addition, robust findings indicate that more attention should be paid to poor health as a mechanism for the intergenerational transmission of poverty (24). Children born into poor families have poorer health as children, carry out lower investment in their human capital, and have poorer health as adults. As a result, they earn less as adults, which in turn affects the next generation of children who will thus be born into poorer families.

We add our voice to that of the Bellagio Study Group on Child Survival and call for a significant investment in children's health programmes. This is the way forward to achieve one of the Millennium Development Goals — a reduction in mortality among children — and to potentially begin to reduce, in an innovative manner, world poverty. ■

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## Résumé

### Bénéfices économiques des investissements dans la santé de l'enfant

L'article soutient qu'en dehors des justifications morales, investir dans la santé de l'enfant constitue pour les gouvernements une décision économiquement rationnelle. Il expose des dimensions souvent négligées lors de la prise de décisions en faveur d'investissements publics. L'analyse du vaste corpus d'études examinant la relation entre santé infantile et économie conduit à la conclusion qu'investir dans la santé de l'enfant peut être économiquement rentable. Cette analyse fait apparaître, premièrement, qu'investir davantage dans la santé de l'enfant aboutirait à des adultes mieux éduqués et plus productifs et déclencherait des évolutions démographiques favorables et,

deuxièmement, que préserver la santé pendant l'enfance importe plus qu'à tout autre âge, car un mauvais état de santé au cours des premières années d'existence peut entraîner des troubles perdurant toute la vie. De plus, les résultats de l'analyse bibliographique confirment qu'une plus grande attention doit être accordée à la santé en tant que mécanisme de transmission intergénérationnel de la pauvreté. Les enfants nés dans des familles pauvres pâtissent d'un mauvais état de santé, d'un faible investissement en capital humain et d'une santé médiocre à l'âge adulte. Ils auront donc des revenus plus faibles une fois adultes, ce qui affectera la génération suivante d'enfants qui naîtront dans des familles pauvres.

## Resumen

### ¿Cuáles son los beneficios económicos de las inversiones en salud infantil?

En este artículo se sostiene que, aun sin tomar en consideración las justificaciones morales de esos programas, las inversiones en salud infantil constituyen una decisión económica sensata que pueden tomar los gobiernos. Asimismo se resumen las dimensiones que se suelen olvidar cuando se toman decisiones con respecto a la inversión pública. La literatura acerca de las relaciones entre la economía y la salud infantil permite concluir que ésta es una inversión económica potencialmente valiosa.

La literatura revela que el aumento de las inversiones en salud infantil genera adultos con mejor formación y más productivos, y pone en marcha cambios demográficos favorables, e indica que la protección de la salud durante la infancia es más

importante que a cualquier otra edad, puesto que los problemas de salud de los niños durante los primeros años de vida tienen grandes probabilidades de perjudicarlos permanentemente durante el resto de su vida. Además, la literatura confirma que se debe prestar más atención a la falta de salud como mecanismo de transmisión intergeneracional de la pobreza. Los niños nacidos en familias pobres tienen peor salud durante la infancia, reciben menos inversiones en capital humano y tienen peor salud en su vida adulta. En consecuencia, de adultos tendrán menores salarios, y esto, a su vez, afectará a la generación siguiente, que nacerá en familias más pobres.

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