# Back to the future? Health and the World Bank's Human Capital Index

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*Health Wealth and Profits*

# Back to the future? Health and the World Bank's Human Capital Index

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Over the past 25 years, the World Bank has become one the world's most influential global health institutions[1,2]. In October of 2018 the Human Capital Index (HCI), its latest major knowledge product, was launched. In this article we briefly describe what "human capital" is, before taking a closer look at what exactly the HCI measures. We then assess the indexes strengths and weaknesses for improving health worldwide. We argue that the HCI subsumes healthcare to the goals and logics of economic growth. While this makes it relevant for neoclassical economists, it is of limited use for guiding healthcare policy overall.

## 1. Introduction: What is Human Capital?

Human capital is not a new idea. It is part of a long history of discussions among economists of how to bring about a workforce that is talented, disciplined, skilled and healthy. Adam Smith was one of the most prominent figures to argue that people's productive abilities should be seen as a form of capital, one that is fixed and realised within persons[3]. That said, the term "human capital" only started to become popular from the late 1950s. At that time, Chicago School economists began employing it systematically to discuss a series of labour-related phenomena. These included income distribution inequalities[4], macro-economic growth[5], as well as unemployment rates, workplace leadership styles and workforce education[6,7]. The idea that health could be part of human capital gained traction in the early 1970s[8], and has since remained a staple of health economics textbooks.

Human capital was a political concept from the start. Developed during the height of the Cold War, it eliminated the notion of class from economic analyses by downplaying imbalances of power that arise as part of capitalist production and by postulating that workers cannot be exploited by capital because they carry capital within themselves[7,9]. Today, human capital has made its way through business and economics departments into policy circles. It is

broadly defined as all those economically productive aspects of human beings that are inseparable from their bodies.

## 2. The Human Capital Index (HCI)

The World Bank has long relied internally on the idea of human capital[10,11] but it has only recently begun to promote it externally as an explicit guiding concept for governing health and education in general[12]. World Bank staff do this by advocating the importance of human capital in public speeches and reports, carrying out research on the foundations of the concept, referring to it when working with borrower (client) governments[13], and most importantly, by publishing the HCI, an index that ranks countries according to how much human capital they are expected to generate[14,15]. The Bank's exact definition of human capital varies somewhat, as it sometimes refers to people's economically relevant skills, knowledge and health, and at other times includes their "resilience"[16]. In any case, the Bank remains convinced that health is an important part of human capital, as people are on average more productive when they are healthier.

Looking at it in detail, we see that the HCI tries to do something quite remarkable. It estimates how much economic productivity may remain unrealised around the world, due to the poor health and modest education of the labour force. To do this, the index considers three features of people's lives, assumed to constrain their productivity. They are child mortality, insufficient education and poor health. These three main components of the index are combined into a single number, known as the "HCI score".

The score ranges from 0 to 1, and is meant to reflect how much people's productivity deviates from an ideal state of 100% survival, perfect education and perfect health. Thus, a score of 0.70 is held to indicate that future workers born today will be on average 30% less productive than they would be at perfect survival, education and health. Importantly, the HCI score is easily converted into potential GDP gains. Thus, a country with a score of 0.50, is predicted to be able to double its GDP if it reached the benchmark of complete education and full health.[14]

The HCI's has three components[17].

1. Component one measures child survival, by using mortality rates of children under the age of five, using data from the United Nation Interagency Group for Child

Mortality Estimation. Since children who do not survive childhood never become economically productive adults, their productivity estimates are reduced by a factor equal to their survival rate. Thus if child mortality lies at 5%, the Bank reduces its productivity expectations for this component by 5%.

2. Component two measures education, by keeping count of "learning-adjusted years of schooling". The Bank here takes stock of the years of formal schooling that children receive between the ages of 4 and 18, by looking at international school enrolment rates. To account for differences in the quality of education, years of schooling are then adjusted, based on scores from international student achievement tests.
3. Component three is called the "health component"[18]. In the absence of a standard measure for health, it relies on two proxy measures. The first is adult survival, measured as the share of 15 year olds that survive until the age of 60, as reported by the UN Population Division. The second is the rate of stunting for children under five, as reported by the UNICEF-WHO-World Bank Joint Malnutrition Estimates. The Bank then assumes that a 10% increase in adult survival rates raises productivity by 6.5%, and that a 10% reduction in stunting raises worker productivity by 3.5%, using correlations between height and income as a proxy[19].

In sum, the HCI converts expected child survival, quality adjusted years of schooling, adult survival and stunting rates into estimates of future worker productivity. The results are then combined via multiplication into a single HCI score which can easily be converted into expected shortcomings of income and GDP. The HCI thus subsumes health and education to economic concerns. This is in contrast to other development indices, like the UNDP's Human Development Index, which combines health, education and economic productivity on an equal footing into a broader notion of development.[20]

## 3. Strengths of the HCI

In subsuming health to economic concerns, the HCI does exactly what many neoclassical economists at the Bank consider to be their job: It looks for the sources of economic growth and tries to influence policy makers around the world to bring such growth about. The HCI thereby serves those people who are particularly interested in the potential GDP effects of policy interventions. It equally foregrounds the negative economic distributional effects of insufficient healthcare. This enables policy makers interested in alleviating economic inequality to consider healthcare in their efforts. Taken together, the

HCI further establishes the Bank as an expert institution for growth-based development. It also opens up new markets for lending and advice for the bank, beyond its traditional focus on infrastructure investment[13].

Since the HCI considers health spending no longer a consumption good, but a profitable form of capital, it might bring greater importance to health considerations in overall governance debates. Indeed, the index has been explicitly designed to expand conversations about health from ministries of health to the more powerful ministries of finance and maybe even heads of government[21]. This may address the distributional problem that healthcare tends to be underfunded in many developing countries today. It may also dampen the Bank's own tendencies towards cutting public health expenditure, limiting tax rates, reducing food sovereignty and curbing worker protection[22,23].

Finally, the HCI already seems to "work" for the Bank itself internally. It contributes to the Bank's aspirations to measure not just economic growth but also planetary economic wealth[12]. It spurs further data gathering efforts around health as it relies on country data rather than IHME estimates[24]. Moreover, since "human capital" started as a concept for analysing labour, it enables the Bank to make sense of ongoing changes in the global job market[25]. Moreover, the Human Capital Project seems to generate interest from potential clients (ie borrower governments), as it found the official support of over 57 countries[26], while NGOs have been eager to adopt the term, even if some of them confusingly use it in a less economistic sense.[27]

## 4. Weaknesses of the HCI

The HCI's main disadvantages also stem from subsuming healthcare to economic concerns. Doing so ignores decades of research from scholars who have tried to arrive at more holistic understandings of development, ones that the HCI does not reflect[22,28]. In the field of health this raises three main issues.

Equity concerns are the first. Human capital, as defined by the Bank, explicitly addresses the health issues of those people who may at some point become economically productive. This excludes anyone with disabilities that limit productivity, the elderly, the chronically ill, and those who are simply unwilling or otherwise unable to work. From the perspective of government, it also excludes those who may move abroad. Moreover, human capital based healthcare systematically favours support for people who will most likely earn

the highest incomes, i.e. men rather than women, people who already hold a job and people who are affluent or well-educated and therefore have a chance at high-paying jobs in the future. Within this privileged target population, the idea of human capital addresses only those illnesses that have a clearly negative effect on economic productivity[29]. These conceptual shortcomings in terms of equity make human capital a questionable foundation for designing health policy.

Second, the notion of human capital reconfigures the responsibility for health financing in uncertain ways. Since the idea of human capital first arose, it has remained contested who should be the one "investing" in it. Should governments pay for healthcare because this increases their stock of wealth?[3] Should workers bear the financial burden, since they embody the human capital that may one day raise their incomes? Are employers responsible for employee health, because this may increase profits? Or could families be the true beneficiaries of healthcare because income tends to be redistributed within kinship groups? Historically, the idea of human capital has been used to render individual workers responsible for themselves, and it has extended their responsibility from on-the-job behaviour to their private lives.[8,30,31] This is why it has been supported by Chicago School scholars and why it remains appealing to market libertarians today. The World Bank has argued in recent years that governments are responsible for the healthcare costs of current and future workers because this increases the stock of national wealth and promises macroeconomic growth.[14,21,25] Yet, the Bank has not systematically included calls for international cooperation on taxation, tariffs or redistribution in such appeals. Instead, it has adopted a "cascade approach" to project finance in health as well as other sectors, which systematically increases the role of the private sector[32]. In this approach, Bank staff asks for every project whether the private sector can do it. If it cannot, they explore whether regulatory reforms or public support of private risk can help. Only when all these options have been tested can public finance be considered[33].

This points to the fact that human capital lends itself to unforeseen uses of private finance in health[33]. The more individual costs of health go up, the more the idea of human capital lends itself to the creation of new individualised debt instruments. We have seen this in the field of education. Here, so-called "human capital contracts", originally conceived by Milton Friedman[35] have been suggested by the World Bank as a financing mechanism for university students[36,37]. Since students assume that attending university will increase their human capital (*viz*. increase expected income), they could appeal to capital markets to "invest

in them", and own some of their inalienable capital. In return for fronting the cost of tuition fees, investors become entitled to a percentage share of the students' future income for a set number of years. Such personal debt obligations on the basis of assumed "human capital increases" are realistically conceivable in the field of healthcare, both in healthcare education and in treatment financing.

## Conclusion

We have argued that the World Bank's Human Capital Project and its associated Human Capital Index reconfigure how healthcare is understood. The notion of human capital subsumes healthcare to economic goals and frameworks that mainly aim at GDP growth. This makes health policies easer to assess for economists, highlights the interconnectedness of health and economics and strengthens the World Bank's place in global health and development. However, it also bypasses attempts at working towards a holistic notion of development, raises equity concerns in healthcare, likely re-organises the responsibility for healthcare financing to individuals, and opens the doors for further indebting patients and healthcare practitioners.

**Key messages**

The concept of "human capital" reduces human health to its effects on economic growth.

This economistic approach to health makes health policies easier to assess for economists, yet has major limitations for guiding health policy overall.

The focus on human capital raises equity concerns and it may enable a further financialisation and individualisation of healthcare costs.

Suggested Image 1 (Source: World Bank Group: Building Human Capital 2018: 23)

**TABLE 1 Measuring the productivity as a future worker of a child born in 2018**

*Maximum productivity = 1*

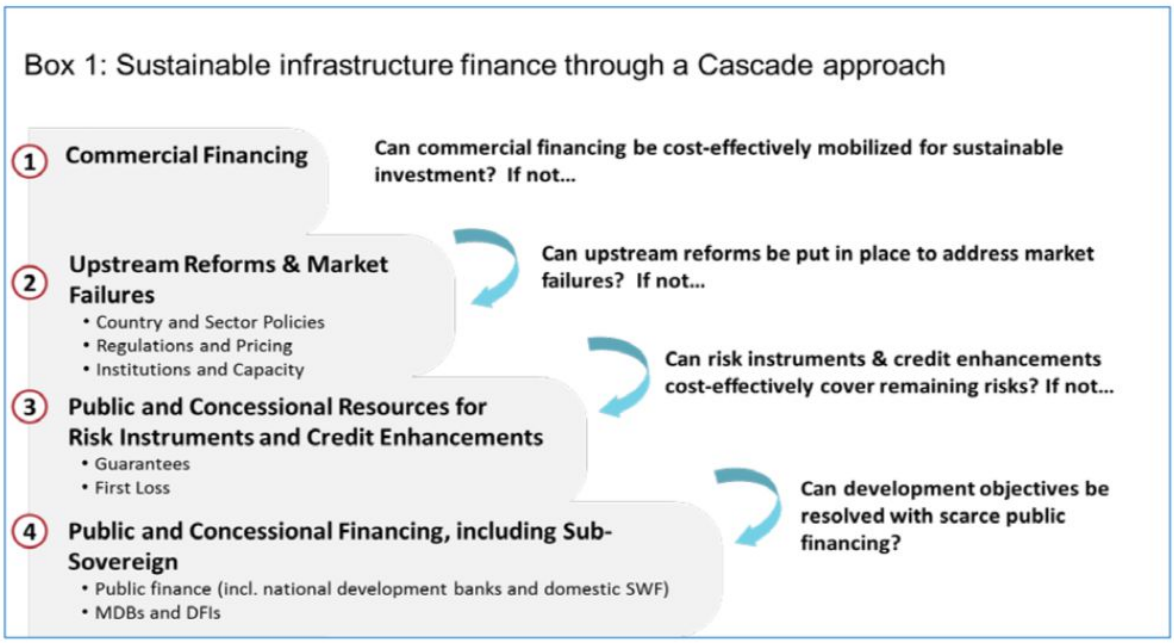
| | Component | *A country in the* 25th percentile | 50th percentile | 75th percentile |
|---|---|---|---|---|
| | | *for component X has a value of . . .* | | |
| | **Component 1: survival** | | | |
| 1 | Probability of survival to age 5 | 0.95 | 0.98 | 0.99 |
| A | *Contribution to productivity* | *0.95* | *0.98* | *0.99* |
| | **Component 2: school** | | | |
| | Expected years of school | 9.5 | 11.8 | 13.1 |
| | Test score (out of approx. 600) | 375 | 424 | 503 |
| 2 | Quality-adjusted years of school | 5.7 | 8.0 | 10.5 |
| B | *Contribution to productivity* | *0.51* | *0.62* | *0.76* |
| | **Component 3: health** | | | |
| 3 | Fraction of children not stunted | 0.68 | 0.78 | 0.89 |
| 4 | Adult survival rate | 0.79 | 0.86 | 0.91 |
| C | *Contribution to productivity*[a] | *0.88* | *0.92* | *0.95* |
| | **Overall Human Capital Index**[b] | **0.43** | **0.56** | **0.72** |

*Source:* WDR 2019 team.

*Note:* "Contribution to productivity" measures how much each component of the index, as well as the overall index, contributes to the expected future productivity as a worker of a child born in 2018 relative to the benchmark of a complete education and full health. A value of *x* means that productivity is only a fraction *x* of what it would be under the benchmark of a complete education and full health. Estimates of productivity contributions are anchored in microeconometric evidence on the returns to education and health. "Quality-adjusted years of school" equals the country's test score relative to the global best test score multiplied by the country's expected years of school.

a. C is calculated as the geometric average of the contributions of numbers 3 and 4 to productivity.
b. A × B × C.

Box 2: The World Bank's Cascade Approach (Source: World Bank Group *Forward Look: A Vision for the World Bank Group in 2030: Progress and Challenges* Washington D.C. 2017)



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16. See World Bank Group. *The Human Capital Project* 2018. Washington D.C.:2,4,14
17. For details on the arithmetic behind each component see World Bank Group. *The Human Capital Project* 2018: 34-50 and Kraay 2018:14;37-57 below.

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