Dear Dr. Stein

BMJ-2019-050782 entitled "Back to the future? Health and the World Bank's Human Capital Index"

Thank you for sending us this paper and giving us the chance to consider your work. We sent it out for external peer review and discussed it at the Analysis manuscript committee meeting (present: myself, Kamran Abbassi, Gavin Yamey).

Unfortunately we do not consider it suitable for publication in its present form. However if you are able to amend it in the light of our and/or reviewers' comments, we think this will be heading in the right direction for publication. This topic and is great and we don't think it needs huge work doing. Please read the reviewers comments carefully and address those. Please read the editors comments and address those. Where the editors comments contradict or disagree with reviewers comments, please follow the EDITORS comments and point this out on your re-submission.

The reviewers' comments are at the end of this letter.

The editors' comments are listed below:

Great topic and well written although slightly polemic in parts which means it is not hugely balanced in its arguments in parts. We would like to see the Health Supplement added in as a discussion point and this has been attached as a PDF. The explainations on the whole are clear and good. The strengths section is better than the weaknesses. The weaknesses section needs more attention to it and strengthening of the arguments, clarification and some more thought over this section. The conclusion happens quite abruptly, and feels a bit flatter than the rest of the piece. The conclusion really should offer the reader an strong opinion based on all the arguments before.

We hope that you will be willing to revise your manuscript and submit it within 2-3 weeks. When submitting your revised manuscript please provide a point by point response to our comments and those of any reviewers. We also ask that you keep the revised manuscript within the word count of 1800-2000 words.

Please note that resubmitting your manuscript does not guarantee eventual acceptance, and that your revision may be sent again for review.

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If accepted, your article will be published online at bmj.com, the canonical form of the journal. Please note that only a proportion of accepted analysis articles will also be published in print.

I hope you will find the comments useful. Please don't hesitate to contact me if you wish to discuss this further.

Yours sincerely

Greta McLachlan gmclachlan@bmj.com

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Reviewer(s)' Comments to Author:

Reviewer: 1

Recommendation:

Comments:

Need to review grammar and punctuation in the document. Tone and language needs to be tempered to be more scientific.

Additional Questions:

Please enter your name: Adrian Rabe

Job Title: Honorary Research Fellow

Institution: Imperial College London

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

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Funds for a member of staff?: No

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Reviewer: 2

Recommendation:

Comments:

This article builds on the work of Dr. Stein and Prof. Sridhar on the financialisation of healthcare to provide an important analysis of the World Bank's newly developed Human Capital Index (HCI). A clear and thorough explanation of the HCI is provided, including how the Index is calculated and a convincing, anthropologically informed case is made of the role that the Index performs for the Bank, both internally and externally. Most significantly, the article makes a strong case concerning what may reasonably be supposed will be the future uses to which the HCI might be put by the World Bank: not just subsuming health to economic concerns but reorganising the responsibility of healthcare financing to individuals, opening the way for individualised debt instruments as the Bank has already suggested in the field of education. A timely and important contribution to the analysis of the World Bank as a governor of global health, and to the topic of Health Wealth & Profits, I give my strong commendation for its publication, without further review.

Additional Questions:

Please enter your name: Kate Harrison Brennan

Job Title: CEO

Institution: Anglican Deaconess Ministries

Reimbursement for attending a symposium?: No

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A fee for organising education?: No

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Funds for a member of staff?: No

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If you have any competing interests (please see BMJ policy) please declare them here: Prof. Devi Sridhar was my doctoral co-supervisor at Oxford (submitted April 2014) and a colleague at the Global Economic Governance Programme (until 2011). Dr Felix Stein is a former M.Phil classmate from Oxford (2007-2009).

Reviewer: 3

Recommendation:

Comments:

Thank you for giving me the possibility to review this commentary considered for publication at the BMJ. The commentary looks at the Human Capital Index (HCI), the latest indicator developed by the World Bank and seeks to present the strengths and weaknesses of the index in improving health worldwide. I have read the piece with interest – the write up is very clear and the comment could be an interesting contribution since there is very little discussion about the HCI yet. However, the discussion fails to capture the measurement challenges of the HCI or contextualise the new index in the existing literature or measurement efforts in the past.

My comments:

- The main criticism put forward by the authors is that the HCI 'subsumes healthcare to the goals and logics of economic growth'. I don't see this as a criticism of HCI, but of human capital theory as an entire field of enquiry. As the authors rightfully point out, the concept of human capital is very closely link with questions around worker productivity and economic growth. Productive abilities can be enhanced by education, health, experience, skills etc. I find it hardly surprising that a measurement of human capital subsumes health to the logics of productivity; in the sense that health is part of the definition of this capital. Since the 1980s, many attempts to measure human capital has included measures of health and the World Bank HCI is in line with those. If the authors disagree with the premises of human capital theory, they should revise the commentary to reflect their concerns as such. The aim of the HCI is to basically push further investments in education and health by demonstrating to countries that there could be significant 'returns on investment'. The discussions about the weakness
- to countries that there could be significant 'returns on investment'. The discussions about the weakness of the instrument are not really fully in line with this: the HCI is criticised for things that it does not intend to do and it seems a bit unfair at points.
- o For instance, the authors compare the HCI to the human development index, stating HCI contrasts with other 'development indices'. I agree that the HDI is a much better development index, but its aim is to rank countries according to their level of development; whereas the HCI intends to capture the unrealised economic gains from loss of health and education and is therefore not a development index. o The authors also don't really compare HCI to other existing measures of human capital that are in use. They point out that human capital is one of the oldest fields of enquiry in economics. There have been numerous attempts to quantify HC.
- The OECD has worked extensively on measurement of human capital, it didn't quite include health
- Other measures would only include rough measures of health such as life expectancy
- There has been important work done by the IHME (Lim and colleagues) in the same spirit as the HCI. As a reader, it would be much more useful to try to understand what the contribution of the HCI is compared to existing work see

https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)31941-X/fulltext#%20 o The authors don't actually discuss the 'strengths' of the HCI itself, but rather praise what the Bank is trying to do with the HCI. It should be noted that the HCI is an improvement in many regards:

- It considers health not just as life expectancy and makes a first attempt to consider morbidity and mortality selection using U5m and stunting.
- It considers quality of education as well as length of education, something that researchers have struggled for a long time.

https://www.devex.com/news/opinion-2-things-the-world-bank-s-human-capital-index-gets-right-on-ed ucation-93654

- o The authors don't actually talk about the HCI itself, really. It discusses opinions about strategies of the World Bank that the authors find problematic; which many readers might not disagree with but seem slightly off topic in the context of this article. They present the mechanics of the HCI but yet don't offer constructive comment about whether those make sense:
- Is stunting a good measure of morbidity? Some may argue that it is not. Perhaps it is worth researching and raising the pros and cons of using stunting.
- How are the different components of the HCI combined into a single measure? There might be methodological issues with weighting each element of the indicator this typically influences very heavily what the final figure would be. This seems to be a potential weakness of the HCI.

The presented weaknesses seem to refer more to problems with the Bank's ethos and modus operandi.

- The authors state that the HCI will push private funding in healthcare rather than public funds: the policy documents they cite are generic policy documents that predate the HCI. It's perhaps a general position of the WB (although not sure this is correct in health given the Bank's latest engagements on UHC or the GFF), which the authors could question in a different piece, but I don't see the link with the HCI.
- The authors imply that the HCI will promote a vision of healthcare focused on productivity, at the expense of 'non productive members of the society'. It may be a problem with human capital theory more widely, not specifically a problem of the HCI. The HCI actually uses quite generic measures of health like life expectancy or stunting, so not sure why it would undermine investments for those who are not in working age.
- P6, L37-48 a link here is made about international cooperation on taxation, tariffs and redistribution
- it is not clear why there is reference to this here?
- In general, the HCI is fairly new and has not been widely used yet (as of mid-2019). The 'weaknesses' that the authors point to then seem to be 'speculative' in nature. I understand that this is a commentary, and as such, it should leave some space for discussion of ideas and opinions, but I think that ideas need to be supported by some level of evidence.
- Finally, the authors imply that the HCI 'works for the Bank itself internally'. They support this claim by stating that 'it spurs further data gathering efforts around health as it relies on country data rather than than IHME estimates'. I find this comment problematic.
- o First of all, the WDI child mortality estimate is not an indicator collected by the World Bank. It is collected by a well-established UN inter-agency Group for child mortality estimation, which also includes prominent experts from many institutions incl. UNICEF and WHO. They have worked on this for decades and decades.
- o Would the authors imply that the IHME estimates would have been better for this indicators? See other authors have pointed out:

https://www.cgdev.org/blog/known-unknown-estimating-global-burden-disease https://www.cgdev.org/blog/global-burden-disease-estimates-secret-recipes-or-spoiled-ingredients

Other comments:

- Box and figures numbering: they are screenshots from other publications, they need to be edited and numbered correctly. It is hard to assess the value of the two figures as they are not discussed at all in the text.

Additional Questions:

Please enter your name: Y-Ling Chi

Job Title: Technical Advisor

Institution: Imperial College London

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

Funds for research?: No

Funds for a member of staff?: No

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Reviewer: 4

Recommendation:

Comments:

The manuscript is well-written, and provides an interesting discussion on the strength and weakness of the "human capital index" proposed by the World Bank as a guide for policy interventions.

Comments:

- (a). On page 4, lines 9-13. Actually in the health economics literature, "health" has long been considered as durable capital stock, which may depreciate by age and increase by investment and eventually produce healthy time. The HCI further assumes that healthy time can be fully translated into economic growth. I think this can be further clarified in the analysis.
- (b). On page 4, lines 59-60. In the section "Weakness of the HCI", I feel like the second argument is quite strong. But I am a little bit confused with the first argument brought by the authors. Paying attention to human capital does not necessarily mean that the policy will be more likely to favor those advantaged in terms of their current productivity level. The human capital based healthcare may actually support more for people who can enjoy highest gain in human capital and thus highest income increment, given the same healthcare inputs. I think the authors may need to re-consider how this issue may lead to a concern towards equity.
- (c). On page 6, lines 22. There is a typo... it should be "easier" not "easer"?

Additional Questions:

Please enter your name: Mengcen Qian

Job Title: Assistant Professor

Institution: Fudan Univeristy School of Public Health

Reimbursement for attending a symposium?: No

A fee for speaking?: No

A fee for organising education?: No

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Reviewer: 5

Recommendation:

Comments:

The authors argue that the World Bank's Human Capital Index (HCI), launched in 2018, is not helpful for guiding healthcare policy. Discussion around what indicators we should use for decision making in healthcare policy is important. The indicators we use will drive investment and thus they can be very influential. The authors argue that HCI is not suitable because of its potential implication for equity, who is responsible for financing g healthcare, and mechanisms that lead to further patient debt. The piece is written well and is engaging.

The manuscript is missing the standfirst. If the first paragraph (prior to section 1) is intended to be the standfirst, it reads more as an abstract. It should be shorter and to the point.

The aim of the first section of the papers is to define human capital and describe the historical background of the concept. The definition is a bit buried in the text; it is in the last sentence of the section, in a paragraph that is otherwise about the term being a political concept. Defining the term earlier will help a non-economist reader, which the BMJ will have.

I believe the title of the paper is based on HCI going back to ideas described in this section (in addition to the movie reference), and ignoring recently developed tools that consider e.g., equity. The implications of this should be tied together in the paper's conclusion if this is a central theme. Otherwise, it is not clear why the historical background is important for the argument.

Page 2, line 31 "the HCI tries to do something quite remarkable". Is it the authors' belief that they achieve this to some extent? The tone seems to imply that their answer is no, it does not, but the

question is not explicitly addressed. Answering the question does not seem very important to the authors' argument, which implies even if it does achieve its intention, HCI is not very useful for policy. Framing the argument in this way can be done more explicitly.

Page 4, line 59. The authors mention the Bank's definition of human capital excludes those who may move abroad as part of their argument concerning equity. I am not sure this aspect is related to equity. Though, this issue does deserve further discussion. The HCI is expressed by country and can easily be converted to GDP shortcomings (page 3, line 39). Presumably, if we invest according to HCI, we may have some leakage (from population movement) that is not captured by HCI, and that leakage is likely dependent to some extent on the countries' HCI value. That could be a problem for the HCI achieving what it aims to achieve-if its aim is to increase specific countries' productivity. The implications of overcoming this methodological issue may have problematic moral implications for how one would use the HCI.

A number of examples would be stronger if the authors provide additional explanation instead of requiring the reader to delve more deeply into the works they cite. For example, page 3, line 33, what does the author mean by "make sense of ongoing changes in the global..."; make sense is quite vague here; make sense in what way?

Page 5, line 49. It is not clear what "this" refers to. Further, it is not clear that indebting patients is your third issue until reading the conclusion. The two prior paragraphs number the issues. This one does not and I interpreted potentially indebting patients as a consequence of issue 2.

It is worth noting that if indeed investing according to HCI potentially affects financial risk protection negatively, then it would not follow the principals of Universal Health Coverage and the Sustainable Development Goals. Is this the authors' view?

What is the concluding recommendation then? Should the HCI exist but only to promote more spending on health (a strength) and not be used for decisions within health budgets (due to its weaknesses)?

Page 4, line 29. The authors write only the acronym for the Institute for Health Metrics & Evaluation. Also, it is not clear why IHME is specifically mentioned as opposed to other estimates?

The images/tables are not referred to in the text.

Endnontes or footnotes seem to be mixed in with the bibliography; for example, item 18 in the bibliography.

Some of the citations seem incomplete (e.g., 28 and 29) or have additional text (e.g., 16, 17, and 33) in the bibliography.

Additional Questions:

Please enter your name: Itamar Megiddo

Job Title: Chancellor's Fellow, Lecturer

Institution: University of Strathclyde

Reimbursement for attending a symposium?: No

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A fee for organising education?: No

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Reviewer: 6

Recommendation:

Comments:

This article offers a valuable analysis of the World Bank's recently introduced (2018) Human Capital Index (HCI), which I greatly enjoyed reading. It explains what the HCI is, its historical roots in the neoclassical economic theories of human capital developed especially by Gary Becker and his student Michael Grossman, and lays out some of the potential strengths and weaknesses of the Index. I think there is great value in this kind of analysis – ie. that contextualises the often-reified numbers produced by global health knowledge brokers, like the World Bank. However, I wonder if the article takes a more polemical stance than is necessary. Given the relatively short length of the article, the claim that the HCI is 'of limited use for guiding healthcare policy overall', for example, cannot really be substantiated. While I am sympathetic to the authors' claims, I think the most valuable contribution of this article is in offering BMJ readers contextualisation of the HCI within its historical/epistemological/organisational genealogy. I would recommend saving a more thoroughgoing critique of the HCI for a longer-form article. This can accomplished quite simply by tempering some of the language and claims throughout (interestingly, the conclusion to the article already strikes a more balanced tone). This is my main concern with the article, though please also see more specific points below.

1. Introduction:

P1 Line39/40 – the description of Adam Smith's early characterisation of human capital as 'one that is fixed and realised within persons' makes it sound as though it is immutable ('fixed'). Perhaps 'embodied' or 'located' would be a better term here?

2. The HCI

P2 Line 57-60 - in the description of the HCI's three components, the first sentence is a bit awkward and would benefit from rewriting.

P3 Line 37 – I found myself wondering how the different elements of the HCI were combined, exactly, above and beyond how it is described as 'via multiplication'. I found the answer in the supplementary Table 1, but note that there is no in-text reference to Table 1. It would be good to place this relatively early in this section. And in text reference to Table 2 is also needed.

3. Strengths of the HCI

P3 Line 49-60 – These sentences seem to ascribe a lot of agency to the HCI – it 'does' (line 50), it 'tries' (line 53), it 'serves' (line 55). The first sentence also makes some assumptions about what economists at the Bank consider to be their job (this doesn't appear to be based on qualitative interviews with Bank economists, for example). Perhaps using the Bank's mission statement/vision statement etc would be a good way to make the same point without risking such assumptions about individuals' views?

P4 Line 3-7 – I'm not convinced that the HCI 'opens up new markets for lending and advice for the bank, beyond its traditional focus on infrastructure investment'. This claim seems a bit overstated/outdated given the Bank has been lending for health for a solid few decades now.

P4 Line 9-10 – I know that Becker/Grossman considered health a consumption good, but that hasn't been introduced in this article, so that sentence "Since the HCI considers health spending no longer a consumption good..." comes as somewhat of a surprise. Is there a way to rephrase/rework this?

P4 Line 29 – it might be worth spelling out who/what the IHME rather than using the acronym.

P4 Line 29-32 – In the sentence starting "Moreover..." there is a subtle invocation of causality that I'm not completely convinced by, i.e. that because of the conceptual origins of human capital in labour economics, this enables the bank to make sense of the global job market. Perhaps this can be rewritten to imply less of a causal relationship? Incidentally, the next sentence also starts with 'Moreover'...

P4 Line 35-38 – I think that NGOs eagerness to adopt the HCI could be characterised in a way other than 'confusing'. This speaks to the broader point that the HCI itself can be a very powerful tool with which to advocate for equity-enhancing health initiative that otherwise might be hard to justify in non-economic terms. This, as I see it, is one of the strengths of the HCI – that within a broader climate where economic logics carry so much gravitas (often to the detriment of equity arguments), harnessing economic logics in service of equity aims is a potential strength.

4. Weaknesses of the HCI

P5 Line 19 – this sentence references a country's 'stock of wealth'. This is a bit of a specific term that isn't really defined/explained – could it be rephrased or briefly defined?

As a final point, there is a slightly unusual/awkward use of the word subsumed throughout the article. To the best of my grammatical knowledge, things can be subsumed within and subsumed under, but can't be subsumed to. I would recommend looking into this before submitting the final version of this article.

On the whole, I think this is a really valuable explanation and contextualisation of the HCI that will be of great use to the readership of BMJ.

Additional Questions:

Please enter your name: Katherine Kenny

Job Title: Research Fellow

Institution: University of New South Wales

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Reviewer: 7

Recommendation:

Comments:

This paper has good analysis on Human Capital Index strengths and weaknesses for improving health worldwide. The concept of Human capital will help us understand the argument about the governments and personal responsibility for healthcare.

There are some improvements and clarifications needed to provide a clearer message from this paper.

Page 1 line 17: In bibliography, the second paper expresses the World Bank is one of the largest and most influential health funders worldwide. It would be better than "one the world's most influential global health institutions".

Page 4 line 32: It would be good briefly explain the relationship of "Humane Capital Project" and "Humane Capital Index".

Page5 line 40: "cascade approach" may have no strong logical relation with humane capital and the responsibility for healthcare cost. It systematically increases the role of the private sector. This seem like an organization method of health system.

Page6 line 22: "This makes health policies easer to assess for economists" maybe not the objective of subsuming healthcare to economics concerns. The component of HCI and HCI can evaluate the productivity. They are not the tools to evaluate the health system for economists.

Page6 line 24: It should be careful to get the conclusion the HCI will strengthen World Bank's place in global health and development. This paper seems no discussion about the World Bank's influence.

Additional Questions:

Please enter your name: Jian Li

Job Title: Associate Professor

Institution: Chinese Academy of Medical Science & Peking Union Medical College

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A fee for organising education?: No

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