Hypothesis

Investing into global commerce can be more cost-effective in providing quality lives than donating to effectively altruistic (EA) charities, such as those promoted by GiveWell.¹

Key assumptions

1. In a developing nation, a quality-adjusted life year (QALY) is valued at 50% of that country’s annual Gross Domestic Product (GDP) per capita.²

Advanced economy’s QALY is worth 100% of that economy’s annual GDP per capita.³

2. Each of the five analyzed trade-led development areas enjoys room for additional funding; the impact of marginal and average unit investment is equivalent.

3. The most cost-effective EA charity⁴ provides a quality life for $3,515.¹

Methodology

I used academic literature, online resources, and expert interviews in order to estimate the cost of a quality life provided by five trade-led development measures. These measures comprise of 1. trade facilitation, 2. lobbying for advanced economy’s trade policy changes, 3. non-profit support

¹ In 2015, Against Malaria Foundation provided a quality life for $3,337.06 (Weller). Based on the United States GDP deflator ("GDP deflator"), in 2018, AMF saved a statistical life for $3,515.
of disadvantaged groups’ commercial competitiveness, 4. media advocacy for corporate social responsibility (CSR), and 5. impact investment.

Results

#1: Trade facilitation: $158 per quality life

Trade facilitation provides a quality life for $158. Decreasing trade costs enables economies to utilize their resources more effectively. Further, easier commerce attracts foreign investment. This investment augments the value that is added within the industrializing nation. In addition, trade facilitation reduces domestic firms’ costs because it lowers the cost of importation of inputs. The foreign investment, in conjunction with the higher value added domestically and decreased production cost provides better jobs to the emerging country’s workers.

Assume that developing and implementing a one-stop import-export window in an emerging nation costs $1 million. This window makes cross-border trade 1% more efficient. Additionally, assume that over the next ten years, the country will export $1,000 million and import $2,300 million annually. Using the above information, the one-stop window will afford that nation $330 million of direct efficiency gains. Additionally, suppose that the one-percent efficiency improvement attracts additional 1% of foreign investment from advanced economies. This investment may bring additional $46 million to the emerging nation. Thus, the emerging economy gains a total of $376 million. However, the $46 divestment hurts the industrialized investing country by $46 million.

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*a* This work assumes that the maintenance costs of this import-export window are negligible.

**ii** A one-stop trade window may increase the efficiency of government, e.g. if paper forms are digitized, and of firms, e.g. if employees visit one instead of several customs offices.

**iii** These values are based on trade data of Malawi. In 2015, Malawi exported $1,080 million worth of products and imported goods and services valued at $2,312 million (“Malawi Trade at a Glance”).

**iv** Over the course of ten years, the nation will be able to export $1,000 million/year × 1% × 10 years = $100 million more worth of products and import additional $2,300 million/year × 1% × 10 years = $230 million worth of goods and services from foreign nations. In total, the country will gain $100 million + $230 million = $330 million.

**v** The $330 million sums the efficiency gains accrued by government as well as by producers and consumers of the traded products. Counterfactually, if the one-stop trade window is not implemented, the government as well as the nation’s exporters and importers use the $330 million in managing the inefficient aspects of customs clearance.

**vi** This paper assumes that if the advanced nation did not invest into the emerging economy, it would have spent the $46 million domestically.
A QALY in the emerging economy costs $850. In the developed nation, quality-adjusted life year is valued at $65,000. Additionally, the developing and advanced countries enjoy life expectancy of 70 and 90 years, respectively. Then, the one-stop trade window investment provides a net of 6,311 quality lives. Considering the $1 million initial expenditure, trade facilitation brings one quality life for $158.

#2: Lobbying for changes in advanced economy's trade policy: $280 per quality life

Hiring a pro-development lobbyist provides a quality life for $280. For instance, in June of 2019, the United States removed India from the U.S. Generalized System of Preference (GSP) program that reduces import tariffs for U.S. market exporters from certain developing nations. Assuming that the resulting trade costs increases are borne entirely by Indian producers, the removal of India from the GSP list does not affect U.S. consumers. However, the U.S. government gains $300 million in tariff revenue. Therefore, neglecting efficiency losses, the United States gains $300 million and India loses an equivalent amount.

Assume that India spent $1.2 million annually in order to keep its GSP status for the five years that preceded the 2019 repeal. Over these five years, India invested $6 million into U.S. government lobbying and consequently gained $1.5 billion through the decreased costs of exporting into the U.S. market. Based on India’s and U.S. GDP per capita of $2,016 and $59,532 respectively, a QALY in India is valued at $1,008 and in the U.S. costs 59,532. Thus, India’s spending on U.S. policy lobbying afforded India 1.49 million quality life-years and deprived the United States of 25 thousand QALYs. A

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\[ \text{viii} \] $376 \text{ million}/($850/QALY)/(70 \text{ QALYs/life}) = 6,319 \text{ quality lives are gained in the emerging economy.} \]
\[ \text{ix} \] $46 \text{ million}/($65,000/QALY)/(90 \text{ QALYs/life}) = 8 \text{ quality lives are lost in the advanced nation.} \]
\[ \text{x} \] $1 \text{ million}/6,311 \text{ quality lives} = $158 \text{ per quality life.} \]
\[ \text{xi} \] The Center for Responsive Politics reports that in 2017, India's U.S. lobbying expenditure totaled $2,376,403 ("Government of India"). I assume that half of this amount, $1.2 million, enabled India to maintain its GSP status during 2017 (Drutman, The Business of America Is Lobbying, 86–87; Williams, “182: I’m a Reformed Lobbyist.").
\[ \text{xii} \] $2,016 \times (50%/\text{QALY}) = $1,008 \text{ per QALY in India;} \]
\[ \text{xiii} \] $59,532 \times (100%/\text{QALY}) = $59,532 \text{ per QALY in the United States.} \]
\[ \text{xiv} \] $1.5 \text{ billion}/($1,008/QALY) = 1.49 \text{ million QALYs were gained in India.} \]
\[ \text{xv} \] $1.5 \text{ billion}/($59,532/QALY) = 25,197 \text{ QALYs were lost in the United States.} \]
\[ 1.49 \text{ million} - 25,197 = 1.46 \text{ million QALYs were gained.} \]
net of 1.46 million QALYs were gained. The $6 million investment yields a quality life cost of $280.\textsuperscript{xiii}

#3: Non-profit support of disadvantaged groups’ commercial competitiveness: $32,560 per quality life (investor’s cost), $48,160 net global economic gain per quality life provided

Philanthropic support of disadvantaged groups’ commercial competitiveness brings a quality life for $32,560. For example, One Acre Fund (OAF), uses randomized controlled trial studies to conclude a 248% social return on investment.\textsuperscript{15} For every $1,000 donated, OAF’s beneficiaries, farmers in developing countries, gain $2,480 in additional income. Assuming that the cost of a donor’s and beneficiaries’ QALY is $50,000 and $1,000, respectively,\textsuperscript{16} a donor of $1,000 loses 0.02 QALYs and a beneficiary of this amount gains 2.48 QALYs.\textsuperscript{xiv} Therefore, donating to OAF generates one QALY for a $407 cost to the investor.\textsuperscript{xv} Assuming that the life expectancy of both OAF’s donors and beneficiary farmers is 80 years,\textsuperscript{17} OAF funders provide a quality life for $32,560.\textsuperscript{xvi} However, the net global economic cost of providing a quality life through financing OAF is negative. When one statistical life is generated through funding OAF, $48,160 is gained by the global economy.\textsuperscript{xvii}

#4: Media advocacy for corporate social responsibility: $709,680 per quality life

Publishing one pro-corporate social responsibility (pro-CSR) article in a popular business magazine costs\textsuperscript{xviii} $44,000.\textsuperscript{18} I assume that this magazine enjoys 62 million readers per year\textsuperscript{19} and that every 100\textsuperscript{th} reader of this publication sees the pro-CSR article. Additionally, I suppose that the article induces every 1000\textsuperscript{th} viewer to spend additional $100 on socially responsible purchases. Further, I presume that the $100 accrues to middle-class owners of production facilities in emerging economies\textsuperscript{20} whose QALY is valued at $10,000.\textsuperscript{21} If an average reader’s QALY is worth $50,000, the pro-CSR article

\textsuperscript{xiii} $6 \text{ million}/1.46 \text{ million QALYs} = 4 \text{ per QALY.} \text{ $4 per QALY} \times 70 \text{ years/life} = 280 \text{ per statistical quality life (“Life expectancy at birth, Total (Years) - India”).}$
\textsuperscript{xiv} $\frac{0.02 \text{ QALYs}}{\$50,000 \text{ ($/QALY)}} = \frac{2.48 \text{ QALYs}}{\$1,000 \text{ ($/QALY)}} = 2.48 \text{ QALYs}.$
\textsuperscript{xv} $\frac{0.02 \text{ QALYs}}{0.02} = 407 \text{ QALYs}.$
\textsuperscript{xvi} $2.48 \text{ QALYs} \times 80 \text{ (QALYs/life)} = 32,560 \text{ per statistical quality life.}$
\textsuperscript{xvii} $\frac{2.48 \text{ QALYs} \times 80 \text{ (QALYs/life)}}{2.48 \text{ QALYs}} = 602 \text{ is gained when one QALY is provided.} \text{ $602/QALY} \times 80 \text{ (QALYs/life)} = 48,160 \text{ is generated when one statistical life is provided.}$
\textsuperscript{xviii} A company that lobbies major media to publish its clients’ CSR agenda charges $44,000 per year (“CSRwire Distribution”). I assume that this amount purchases one article in one major business magazine.
brings a net QALY for $8,871.\textsuperscript{xxi} Assuming that the life expectancy of both investors and beneficiaries is 80 years,\textsuperscript{xxii} pro-CSR media advocacy brings a quality life for $709,680.\textsuperscript{xxii}

However, this number assumes that readers of the pro-CSR publication will only alter their personal consumption. If the article influences corporate decision makers to improve their companies’ social responsibility, the pro-CSR piece will bring global economic and thus wellbeing benefits far greater than those calculated above.

#5: Impact investment: $1,882,320 per quality life (investor’s cost), $1,764,720 per quality life (net global economic cost)

Diverting investments from neutral or harmful causes into ventures that consider social and environmental wellbeing in addition to profit\textsuperscript{xxiii} generates net welfare if beneficiaries gain more QALYs than investors lose, or, as long as the ratio of the value of investor’s QALY and the risk-adjusted investor’s financial loss is smaller than the ratio of beneficiaries’ QALY value and the beneficiaries’ monetary gain. This is expressed by the following inequality: \textsuperscript{xxiv}

\[
\frac{\text{Value of investor’s QALY ($/QALY)}}{\text{Additional investor’s loss ($)}} \leq \frac{\text{Value of beneficiaries’ QALY ($/QALY)}}{\text{Additional beneficiaries’ gain ($ equivalent)}}
\]

Rearranging,\textsuperscript{xxv}

\textsuperscript{xxi} 62 million readers / 100\textsuperscript{th} reader sees the article / 1000\textsuperscript{th} reader alters their spending × $100 of altered spending/reader = $62,000 of pro-CSR divestment. This analysis assumes that the $100 is diverted from a cause that benefits solely the reader to a purchase that improves the quality of life of the investee exclusively. Because of this divestment, readers lose $62,000/[50,000 ($/QALY)] = 1.24 QALYs. Beneficiaries gain $62,000/[10,000 ($/QALY)] = 6.2 QALYs. The net QALY gain is thus (6.2 - 1.24) QALYs = 4.96 QALYs. This gain results from a $44,000 investment. Thus, one QALY costs $44,000/4.96 QALYs = $8,871.

\textsuperscript{xxii} 8,871 ($/QALY) × 80 (QALYs/life) = $709,680 per quality life.

\textsuperscript{xxiv} For an impact divestment to yield a net QALY benefit, the following inequality must hold true:

\[
\frac{\text{Value of investor’s QALY ($/QALY)}}{\Delta \text{Investor’s return ($)}} + \frac{\text{Value of beneficiaries’ QALY ($/QALY)}}{\Delta \text{Beneficiaries’ return ($ equivalent)}} > 0.\text{ Rearranging,}
\]

\[
\frac{\text{Value of investor’s QALY ($/QALY)}}{\text{Additional investor’s loss ($)}} < \frac{\text{Value of beneficiaries’ QALY ($/QALY)}}{\text{Additional beneficiaries’ gain ($ equivalent)}}
\]

and

\[
\frac{\text{Value of investor’s QALY ($/QALY)}}{\text{Additional investor’s loss ($)}} < \frac{\text{Value of beneficiaries’ QALY ($/QALY)}}{\text{Additional beneficiaries’ gain ($ equivalent)}}
\]

\textsuperscript{xxiv} If

\[
\frac{\text{Value of investor’s QALY ($/QALY)}}{\text{Additional investor’s loss ($)}} \leq \frac{\text{Value of beneficiaries’ QALY ($/QALY)}}{\text{Additional beneficiaries’ gain ($ equivalent)}}
\]

then

\[
\frac{\text{Value of investor’s QALY ($/QALY)}}{\text{Additional investor’s loss ($)}} \leq \frac{\text{Value of beneficiaries’ QALY ($/QALY)}}{\text{Additional beneficiaries’ gain ($ equivalent)}}
\]
In words, responsible investment brings net QALY benefits if the relative value of investor’s and beneficiaries’ QALY is smaller than the ratio of the additional investor’s loss and additional beneficiaries’ return.

For example, if investor’s QALY is valued at $50,000 and beneficiaries’ QALY costs $1,000, the investor can lose up to 50 × more than beneficiaries’ gain for a net QALY benefit to occur. For instance, if the investor collects a profit of $100 with a $1,000 investment into a neutral cause but only $20 by channeling this $1,000 into an impact venture that provides $5 additional gain to its beneficiaries, this inequality holds true.

Thus, on purely welfarist grounds, the described investment should be pursued. Assuming that the knowledge of making positive impact does not bring additional QALYs to the investor, the funder will lose 0.0016 of a QALY. The beneficiaries will gain 0.005 QALYs. The net QALY gain adds to 0.0034. Considering the investor’s loss of $80, one QALY provided by impact investment amounts to $23,529. 80 years of a quality life thus costs the investor $1,882,320. Considering the beneficiaries’ gain, this quality life costs a net of $1,764,720.

The above logic neglects the possible investors’ wellbeing gains that may result from the funders’ awareness of improving others’ welfare. If investors are willing to sacrifice a moderate fraction of their financial return in

\[
\frac{\text{Value of investor's QALY ($/QALY)}}{\text{Value of beneficiaries' QALY ($/QALY)}} > \frac{\text{Additional investor's loss ($)}}{\text{Additional beneficiaries' return ($)}}
\]

I define a neutral cause as a one that does not bring any additional return or loss to its beneficiaries.

This study presumes that divestment does not affect a neutral industry because an incoming profit-seeking investor always substitutes the exiting one (Halstead, 1). Conversely, an impact venture would not be supported by another profit-seeking investor because the risk-adjusted return of an impact investment is smaller than that of a commercial (neutral) investment. Thus, I assume that all gains that impact investment brings to its beneficiaries are additional.

\[
\frac{50,000}{1,000} > \frac{100-20}{5-0}, 50 > \frac{80}{5}, \text{and } 50 > 16.
\]

\[
\frac{1,000}{50,000 (\$/QALY)} = \frac{80}{5} = 0.0016 \text{ QALYs.}
\]

\[
\frac{5}{1,000 (\$/QALY)} = 0.0005 \text{ QALYs.}
\]

\[
0.005 \text{ QALY} - 0.0016 \text{ QALY} = 0.0034 \text{ QALYs.}
\]

By choosing to earn $20 instead of $100, the investor effectively loses $100 - $20 = $80.

\[
\frac{80}{0.0034 \text{ QALYs}} = 23,529/\text{QALY.}
\]

\[
23,529/\text{QALY} > 80 (\text{QALYs/life}) = 1,882,320 \text{ per statistical quality life.}
\]

\[
(80-5)/0.0034 \text{ QALYs} = 22,059/\text{QALY}. 22,059/\text{QALY} 	imes 80 (\text{QALYs/life}) = 1,764,720 \text{ per statistical quality life.}
\]
order to support impact, then investors may gain QALYs when they divest from harmful and neutral to positive causes.

Limitations

This study neglects changes in wellbeing of third parties that may be affected by the five analyzed measures. Additionally, this research hypothesizes the counterfactual outcomes as opposed to determining these scenarios by statistically robust experimentation.

Conclusion

Trade facilitation and lobbying for changes in advanced economy’s trade policy provide quality lives more cost-effectively than GiveWell’s top charity, the Against Malaria Foundation (AMF). While AMF brings a quality life for $3,515, trade facilitation and lobbying for a developed economy’s trade policy changes provide a quality life for $158 and $280, respectively.

However, non-profit support of commercial competitiveness of disadvantaged groups, media advocacy for corporate social responsibility, and impact investment are less cost-effective than AMF in providing quality lives. These three measures bring a quality life for an investor’s cost of $32,560, $709,680, and $1,882,320, respectively.

The global economy gains a net of $48,160 when a quality life is provided through philanthropic support of disadvantaged groups’ commercial competitiveness.

Implications for the effective altruism community

Effective altruists who aim for welfare maximization while regarding personal side-constraints should divert their donations from GiveWell’s charities and invest into trade facilitation and lobbying for changes in advanced economies’ trade policy. Additionally, effective altruists who emphasize impartiality in the maximization of global good should divest from GiveWell’s charities and support the commercial competitiveness of disadvantaged groups.

Further research

Since this study concluded that the funding of disadvantaged groups’ commercial competitiveness brings quality lives at a negative net economic
cost, researchers should compare the social return on investment of different programs and recommend the most cost-effective ones to the EA community.

Additionally, effective altruists should consider the hypothesis that financing global health programs beneficiaries dependent on international finance redistribution while supporting emerging economies’ commerce fosters financial autonomy of these economies by initiating a virtuous cycle of profit-motivated investment and growth. Further, the effective altruism community should examine whether it can support economically disadvantaged stakeholders by purchasing their products.

Thus, effective altruists should examine whether they can bring the largest possible additional welfare benefit to the world by providing commercial support, in the form of investments or purchases, to disadvantaged communities, especially given that global health programs are already abundant.
16 “GDP per Capita (Current US$).”
17 “Life Expectancy at Birth, Total (Years).”
21 “GDP per Capita (Current US$).”
22 “Life Expectancy at Birth, Total (Years).”
24 “GDP per Capita (Current US$).”


MacAskill, “Effective Altruism,” 2.

MacAskill, 2.
References


https://data.worldbank.org/indicator/NY.GDP.PCAP.PC.IND?
locations=IN.

https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?
locations=IN.

https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?
locations=US.


https://www.givewell.org/?utm_expid=.m8JSk-TGSX6irhVQwdnUaQ.0&utm_referer=.

https://www.givingwhatwecan.org/.


https://doi.org/10.1016/j.socscimed.2018.06.009.


https://casefoundation.org/program/impact-investing/.


https://impactassets.org/ia50_new/.


https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=IN.

https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=MW.

MacAskill, William. “80,000 Hours Thinks That Only a Small Proportion of People Should Earn to Give Long Term.” 80,000 Hours, July 6, 2015. https://80000hours.org/2015/07/80000-hours-thinks-that-only-a-small-proportion-of-people-should-earn-to-give-long-term/.


Pitney, Nico. “Elon Musk To Address ‘Nerd Altruists’ At Google HQ.” HuffPost, December 29, 2016. [https://www.huffpost.com/entry/elon-musk-google-effective-altruism_n_55a56626e4b04740a3de3130](https://www.huffpost.com/entry/elon-musk-google-effective-altruism_n_55a56626e4b04740a3de3130).


Tomasik, Brian. “Can We Set up a System for International Donation Trading?,” March 3, 2015. https://forum.effectivealtruism.org/posts/YiFdK2D8xq2YxyhNj/can-we-set-up-a-system-for-international-donation-trading#noLY96uE63vJNNMRE.


———. “How Can You Figure out Which Global Problem Is Most Pressing?” 80,000 Hours, February 2017. https://80000hours.org/articles/problem-framework/.

