ON EVALUATING SOCIALLY RESPONSIBLE INVESTMENT PROJECTS- CREATION OF AN INDEX OF "GOODNESS"

Prakash L Dheeriya PhD, California State University Dominguez Hills
1000 E Victoria St, Carson, CA 90747 pdheeriya@csudh.edu

ABSTRACT

Many philanthropists, charitable foundations, and aid agencies are interested in impact investing, a method of investing that focuses on return to society, as opposed to return on investment. Investment projects that cater to societal needs are in abundance, but there is no accepted yardstick, like a ROI, for such "impact" projects.

In this paper, we create a mechanism that can help decision makers evaluate investments with a social benefit. We develop an index of "goodness" of a project that can help investors rank projects. This index of "goodness" is easily understood, with its number representing the percentage of human population that will benefit from such an investment. By providing a comprehensive method of selecting among social projects, we help in allocating capital to its most socially beneficial purposes.

INTRODUCTION

Investing with the additional benefit of creating social good is now in vogue, with different terms being used, such as socially responsible investing, impact investing, responsible investing, corporate social responsibility, blended value and Economic, Social and governance investing. There are several academic papers on the pros and cons of such investing, as well as metrics used in measuring the "impact" or "social good." See, for example, [4] [3] [11] [10] [13] and [5], just to name a few. Many studies discuss the various metrics employed in evaluating the impact of such investments ([2] [1] [12] and [8]. However, researchers agree there is a lack of uniformity and standardization among metrics used in all investments that purport to do "good" [7].

Impact investments may have different objectives, which makes developing metrics to evaluate them a difficult task. For example, Table A illustrates various impact objectives, as defined by

Table A: Impact Objectives

Increase incomes and assets for low-income or excluded people	Improve basic welfare for people in need	Mitigate climate change
Access to energy	Access to clean water	Biodiversity conservation
Access to financial services	Affordable housing	Energy and fuel efficiency
Access to education	Conflict resolution	Natural resources conservation
Access to information	Disease-specific prevention and mitigation	Pollution prevention and waste management
Agricultural productivity	Equality and empowerment	Sustainable energy
Capacity-building	Food security	Sustainable land use
Community development	Generate funds for charitable giving	Water resources management
Employment generation	Health improvement	
Income/productivity growth	Human rights protection or expansion	

Source: IRIS. As defined at iris.thegiin.org.

Impact Reporting and Investing Network (IRIS) [9]. The Global Impact Investing Network (GIIN) [5] and IRIS [9] are widely recognized sources of measurement and reporting of impacts.

In traditional investments, net present value, internal rate of return, return on investments, payback periods are commonly used to evaluate and rank investment projects. The problem with impact investments is that the returns are not only financial, but are also socially beneficial too. This makes evaluations of such investments very difficult. If no return is expected from such investments, then they take on the nature of "charitable donations." However, many impact investors do want a financial returns as well as a social return.

In this paper, we construct an index that measures the "goodness" of impact investments. This index does not strive to evaluate investments using traditional metrics such as ROI, net present value, or profitability measures. If impact investors are only concerned with maximizing the social benefit, without regard to financial returns, then this index will give them a way to rank projects. The index captures the "goodness" aspect of investments by measuring the potential benefit to a segment of human population. The greater the potential benefit to humanity, the greater will be the ranking of such an investment among all impact investments. An index of goodness will be able to answer questions such as if it is more beneficial to find a cure for prostate cancer, help children in the African continent be literate or develop a vaccine to cure AIDS. In the interpretation and use of such an index, one has to necessarily make assumptions about the size of the "potential" beneficiaries, as well as the duration of the impact that can be for current generations or multiple generations.

This paper is organized as follows: Following the introduction is a section on index construction. This is followed by a description of real life data used in construction of index, as well as a discussion on limitations and shortcomings of the index. The paper ends with our conclusions and suggestions for future research.

CONSTRUCTION OF INDEX OF GOODNESS

It is generally agreed that any socially responsible investment do the maximum good, or help the most number of people, or touch the lives in a positive way. In this respect, given 2 investments, the one that benefits the most people deserves to be funded first. In this regard, the term "people" includes adults and children, regardless of gender, age and nationality. It is also assumed that financial returns from such investments are of secondary importance, compared to their potential benefit to humanity.

To determine the size of the potential beneficiaries of any socially responsible investment, we make use of population data available from World Bank's Data Bank, available at databank.worldbank.org

The index of goodness for any investment is computed as follows:
Potential Beneficiaries times duration of benefit/total population with duration of benefit times 100

For example, if an investment has its main goal of finding a cure for prostate cancer, then we can develop an index that can evaluate its goodness, based on certain assumptions. If we assume males may develop prostate cancer at reaching 60, and average life expectancy of a male is 75 years, then the cure for prostate cancer will lead to an expected increase in life span of 15 years

per male. If we multiply that by the total male population, and divide it by the total population, we will get a measure of what percentage of humanity will benefit from this investment.
In other words, the index for such an investment will be
(Average life expectancy of a male minus age at which prostate cancer develops (say, 60))/(total population times average life expectancy of a human) X 100

It is to be noted that the computed index in this example will be a very small % of humanity as this type of cancer affects (a) only males (b) and only males over a certain age.

Let's contrast this with another investment that focuses on children's education in, say, Africa. The benefit of such an investment will be equal to the product of number of children in Africa times (average life expectancy of an adult minus the age at which a child is inducted into the literacy program). This benefit is then divided by the total population times life expectancy of a human and multiplied by 100 to yield a percentage. In both investment examples that are listed above, the ranking of those investments will be determined by the % of humanity that will benefit, or the value of the index of goodness. Once such indices are compiled for various investments, investors can gauge an idea as to which socially responsible investments have the best "bang", and then evaluate them using traditional cost-benefit analysis.

NUMERICAL EXAMPLE OF INDEX CONSTRUCTION

Goal of investment: Finding a cure for prostate cancer in US (assuming males die of it at age 60).
Life expectancy of male at age 60 years (2012 data): 21.763 years (see Appendix 2)
Life of male with prostate cancer (assumed): 60 years
Impact of investment (assuming prostate cancer was cured, and male lived upto his average life expectancy at age 60: 21.763 years
Life expectancy at birth in US: 71 years (2012 data)
Index = (21.763 years times 155,510,557.0)/(7,089,309,348.00 times 71 years) X 100 **= 0.67 % or 0.00672 This index is useful when ranking projects from all over the world.**

Index = (21.763 years times 155,510,557.0)/(314,112,078 times 78.7 years) X 100 **= 13.69 % or 0.1369**
This index is useful when ranking projects within U.S.

Another example: (Data in Appendix 3)
Goal of investment: Reduce the number of out of school primary school children in the Arab World
Impact = Reduce the number of out of school children from 6461655 to zero.
Index = 6461655/7,089,309,348.00 X 100 = 0.0**9 % or 0.00091**

LIMITATIONS OF INDEX

Construction of indices to be used in evaluating various investments are heavily dependent on data availability, and are very data intensive. Assumptions need to be made on data reliability and during interpretation of results. Consequently, indices can be easily misused to promote certain areas of investments.

Another limitation of an index of goodness is data availability. Most data used in the examples was for 2012, the latest year for which data was available in World Data Bank resource.

Interpretation of Index can also lead to misleading conclusions. For instance, The very small value of the index may lead investors to believe that the impact of such an investment is too small to undertake. However, the benefits of reducing out of school children population to zero may have far reaching societal implications, not only for the region, but for the world. If investors take the leap of connecting the number of terrorist incidents in the world with number of out of out of school children, then this investment may not seem so bad.

Some may argue that costs, financial returns and risks must also be considered while constructing an index. It is true that those are valid factors to be considered, but if only a small segment of the population benefits from an investment, we need to question whether the investor really wants to achieve maximum "goodness" with his investment.

CONCLUSIONS

In this paper, we attempted to create a method of evaluating socially responsible investments by quantifying the impact on humanity. By using actual data, we created a yardstick through which we can measure the "bang" of the investment, and subsequently decide if investments are worth undertaking. The underlying assumption of such an index is to maximize overall "goodness" without giving importance to dollar returns, risks and costs.

Further research needs to be conducted on typical, main stream socially responsible investments, to see if they have the most reach. If they do not, then the investor needs to question if his resources are better served in some other area, where the impact can be larger. After creating indices for various impact activities (such as childhood literacy, reducing harmful pollutions, curing illnesses etc), one can then attempt to influence policy makers to adopt policies that do the most good, rather than what is trending popularly.

APPENDIX 1: GENDER STATISTICS DATA

	2011	2012	2013	2014
Life expectancy at Birth (total years)***	70.7	71	71.2	
Life expectancy at Birth (total years)-Males***	68.7	69	69.2	
Life expectancy at Birth (total years)-Females	72.8	73.1	73.3	
Life expectancy at Birth (total years)- US	78.6	78.7	78.8	
GNI PER CAPITA (PPP)***	13,379.50	13,925.80	14,373.30	14,931.30
POPULATION 0-14 FEMALE***	895,852,368.00	901,931,359.00	909,005,656.00	916,342,189.00
POPULATION 15-64 FEMALE***	2,265,482,900.00	2,292,245,153.00	2,318,807,119.00	2,344,729,432.00
POPULATION 15-64 MALE***	2,321,389,779.00	2,349,807,924.00	2,378,282,538.00	2,406,232,155.00
POPULATION 15-64 TOTAL***	4,586,872,483.00	4,642,052,979.00	4,697,089,557.00	4,750,961,575.00
POPULATION 65+ FEMALE***	299,155,716.00	306,420,100.00	314,624,353.00	323,802,185.00

POPULATION FEMALE***	**3,460,490,888.00**	**3,500,596,515.00**	**3,542,437,126.00**	**3,584,873,998.00**
Population male***	**3,546,979,913.00**	**3,588,712,833.00**	**3,632,084,233.00**	**3,675,836,679.00**
POPULATION MALE (US)	**154,259,286.0**	**155,510,557.0**	**156,764,793.0**	**157,999,184.0**
POPULATION (TOTAL) US	**311,721,632**	**314,112,078**	**316,497,531**	**318,857,056**
POPULATION TOTAL***	**7,007,470,801.00**	**7,089,309,348.00**	**7,174,521,359.00**	**7,260,710,677.00**

Source: World Data Bank (Gender Statistics Database)
Note: Life expectancy data for 2014 is not yet available.
**** APPLIES TO WORLD*

APPENDIX 2: LIFE EXPECTANCY AT AGE 60 IN YEARS IN VARIOUS COUNTRIES (2012)

Country Name	2012
United States	21.76293193

APPENDIX 3: OUT OF SCHOOL STUDENTS IN THE ARAB WORLD

Series	2011	2012	2013
Out-of-school children of primary school age, both sexes (number)-(A)	6240621	5955474	6461655
Population of the official age for primary education, both sexes (number)-(B)	42640448	43149752	43685936
Population, total- (C)	355137048	362466629	369761523

Data Definitions:

Indicator Name	Long definition	Source
A	Children in the official primary school age range who are not enrolled in either primary or secondary schools.	UNESCO Institute for Statistics
B	Population of the age-group theoretically corresponding to primary education as indicated by theoretical entrance age and duration.	UNESCO Institute for Statistics
C	Total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship--except for refugees not permanently settled in the country of asylum, who are generally considered part of the population of their country of origin. The values shown are midyear estimates.	(1) United Nations Population Division. World Population Prospects, (2) United Nations Statistical Division. Population and Vital Statistics Report (various years), (3) Census reports and other statistical publications from national statistical offices, (4) Eurostat: Demographic Statistics, (5) Secretariat of the Pacific Community: Statistics and Demography Programme, and (6) U.S. Census Bureau: International Database.

REFERENCES

[1] Baumann, B. *European Early Stage Impact Investing*, White Paper. EBAN, 2011, 5-15.

[2] Chew, E., Alvarez-Patron, S., & Smith, S. *The Impact Investor's Handbook: Lessons from the World* of Microfinance. Equilibrium Partnership & CAF Venturesome: Market Insight Series, 2011, 5-8.

[3] DiMaggio, P.J. and Powell, W.W. The Iron Cage revisited: institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48 (2), April 1983, 147-160.

[4] Freeman, R. E. & Reed, D. L. Stockholders and Stakeholders: A New Perspective on Corporate
Governance. *California Management Review*, 1983, 88-106.

[5] Freireich, J., and K. Fulton, *Investing for Social and Environmental Impact*. New York, Cambridge, San Francisco: Monitor Institute, 2009.

[6] Global Impact Investment Network *(*GIIN) (www.thegiin.org)

[7] Godeke, S. & Pomares, R *Solutions for Impact Investors: From Strategy to Implementation.* Rockefeller Philanthropy Advisors, 11-13, 69, 2010, 115 - 117.

[8] Grabenwarter, U. & Liechtenstein, H. *In search of gamma – an unconventional perspective on Impact Investing.* Family Office Circle Foundation & IESE Business School University of Navarra, 2011, 7-9.

[9] IRIS (Impact Reporting & Investing Standards) Registry. (iris.thegiin.org/registry), Accessed January 2016.

[10] Mulgan, G., Reeder, N., Aylott, M. et. al. *Social Impact Investment: the challenge and opportunity of Social Impact Bonds.* The Young Foundation, 2011, 4-7.

[11] Rogers, E.M. *Diffusion of innovations (4th edition)*. The Free Press. New York, 1995.

[12] Ruttmann, R. *Investing for Impact: How social entrepreneurship is redefining the meaning of return.* Credit Suisse Research Institute, Schwab Foundation, 5-22, 2012, 31-58.

[13] Thornley, B., Wood, D., Grace, K., Sullivant, S. *Impact Investing: A Framework for Policy Design and Analysis.* Insight at Pacific Community Ventures & the Initiative for Responsible Investment at Harvard University, 2011, 1-30.