

Global Innovation Fund

Prospective Impact for 2023 Impact Report:

Technical notes on methodology

Revised April 9, 2024

Note: GIF reports on achieved impact and prospective impact. This note relates to prospective impact.

I. Summary

GIF expects its innovations to generate a total attributable value of **\$3.7 billion** in net economic benefits within ten years of their investment. Those benefits include higher incomes, better health, and improved education. Using a 7% discount rate, that works out to **\$43 in benefits for each dollar invested**.

But there is more to the story. By placing an explicit value on women's agency, GIF has successfully pursued transformative investments in empowering women and girls. These investments are now rapidly scaling. For instance, we expect that within 10 years of our initial investments, No Means No Worldwide will reach 1-3 million girls, preventing 80,000-120,000 sexual assaults of adolescents, and Breakthrough will have measurably changed the gender attitudes of 8 million girls and boys. Translated into GIF's universal measure of impact (the impact-adjusted life year or PYI), inclusion of these agency benefits boosts GIF's expected impact by 63% above the purely economic benefits.

II. Calculating net benefits

Measurement of impact

We use two different ways to measure impact.

The **PYI (person-year of income-equivalent)** captures the change in a beneficiary's wellbeing. The premise is that people experience a change in well-being by comparing it to their current standard of living. So a 20% increase in consumption "feels" the same to people starting from different baselines.

If we manage to boost a person's annual consumption by \$100, starting from \$500, that's a 20% increase, so we say that we've conferred a benefit of 0.2 PYI units. We can add these units across a population. For instance, if we increase annual per capita consumption from \$500 to \$600 for 10,000 people, that's a total of $10,000 \times 0.20 = 2000$ PYI of benefits created.

Our measurement system has conversion factors for non-monetary benefits. For instance, an extra year of education is valued at 1 PYI, and a life saved at 50 PYI. We have conversion factors also for health benefits. Crucially, GIF has also introduced PYI measures for women's and girls' agency and safety. Our gender strategy recognizes that such benefits have intrinsic value.

Agency is valued in itself, beyond its instrumental value in boosting wages. Likewise, the value of safety goes beyond reductions in medical costs or avoidance of lost wages.

Dollar values of impact follow standard practice in benefit-cost analysis (BCA). There is established practice for monetizing the benefits of improved education, and for calculating the value of a statistical life (VSL). However, there is no standard practice for monetizing the intrinsic value of safety and agency.

PYI is GIF's preferred metric. It focuses attention on poor people, since it places five times more value on a dollar benefit to someone living on \$1/day, compared to someone living on \$5/day. Unlike VSL, it places the same value on saving a life regardless of location. (The VSL for Norway is \$19 million; for the Democratic Republic of Congo, just \$80 thousand.) And PYI is often easier to estimate, for instance when we have information on the proportional change in income, but lack an absolute measure of income. Finally, as noted above, we can quantify impact on women's agency in PYI, but not in dollars.

However, dollars are easier to communicate than PYI. So we present estimates both in dollars and PYI. We can easily convert between dollars and PYI because a PYI is defined as the average annual consumption per person of an investment's beneficiaries. For many of our investments, impacts are appraised in PYI terms and converted to dollars using our best estimate of the average consumption per person for the beneficiary population. In our PYI calculations, we only include benefits to people living on less than \$6.85PPP/day (in 2017 PPP, corresponds to \$5/day in 2011 PPP).

Scope

Prospective impact is the undiscounted sum of:

- Achieved impact through 2023
- Cumulative projected risk-adjusted impact from 2024 through the 10th year after investment

We exclude 15 out of 68 innovations for which we did not make impact estimates. Twelve of these cases were pilot or very early stage innovations for exploration of potential impacts was a goal and where it was impossible to make a meaningful estimate. In three cases, we believe there was or is impact, but lack solid enough data or parameters for an estimate. We include unsuccessful innovations for which the projected total impact is zero.

For dollar estimates of impact, we also exclude innovations whose benefits mostly consist of agency benefits.

Risk adjustment and impact projection

GIF projects impact, as single year snapshot, in the tenth year after investment. The risk-adjusted impact in year 10 is estimated as:

- X Probability that innovation will meet investment period goals
- X Probability that innovation will successfully scale, given success during investment period
- X Impact in year 10 if successful

These estimates are made at the time of investment. They are updated from time to time based on innovation performance and the resolution (or not) of the risks affecting success.

To compute cumulative impact over the 10-year period, we interpolate annual values between 2023 and year 10 of the innovation.

Discounting

Total benefits are the undiscounted sum over ten years, because it doesn't make sense to discount already-achieved benefits. To compute the portfolio benefit/cost, the impact and cash flows are aligned so that all start in investment year 1. Benefits and costs are discounted at 7%.

Net benefits

These are the benefit enjoyed by beneficiaries, less their outlays, less any subsidies.

Attribution

GIF's attributable share of impact over the ten-year period is based on its share of total contemporaneous investment. For grants, this is GIF's share of total innovation funding provided during the period in which 90% of GIF's commitment was disbursed. For risk capital and social enterprises, this is the share of round co-funding or contemporaneous commitments at the time of GIF's investment.

Why this is an underestimate of benefits

As noted, impact forecasts could not be made for some potentially impactful innovations – either because the innovation is still nascent or for lack of data. In addition, for most of our successful innovations, we expect impact to increase beyond the ten-year limit of calculation.

Calculating Benefit/Cost

To calculate the benefit/cost ratio, we line up the cash and impact flows of all the innovations, realized and prospective, so that all flows start in year 1. For grants, costs consist only of disbursements. For risk capital, outlays are costs, and inflows (loan repayments or sales of equity) are negative costs. Current valuation is also considered a 'negative cost.' GIF operational costs are not included.

Both costs and benefits are discounted at 7%. This is well above emerging standard practice of about 3% and represents a conservative buffer against overoptimism in the growth rate of benefits. The benefit/cost ratio is the ratio of discounted benefits to discounted costs.

Changes from the previous year

** shows changes compared to the 2022 Impact Report.

	2023	2022	Change
Total GIF-attributable value of net social benefits in \$ (only for monetizable benefits)	\$3.7 billion	\$3.4 billion	+9%

Benefit/cost @ 7% discount (only for monetizable benefits)	\$43 benefit for each \$1 of investment	\$40 benefit for each \$1 of investment	+8%
Total GIF-attributable agency and safety benefits for women and girls in PYI	6.2 million PYI	1.8 million PYI	+244%
Total GIF-attributable benefits in PYI	16.1 million PYI	10.4 million PYI	+55%

The monetizable part of the portfolio made only modest gains in prospective impact. This represents a combination of impact markdowns (where impact has been slow to materialize) and mark-ups (including Viamo, a promising new entrant this year.)

However the portion of the portfolio focused on women's and girls' agency has exploded. Some innovations are expanding much more rapidly than anticipated.