

Guide to Lifetime Donations per Member Spreadsheet

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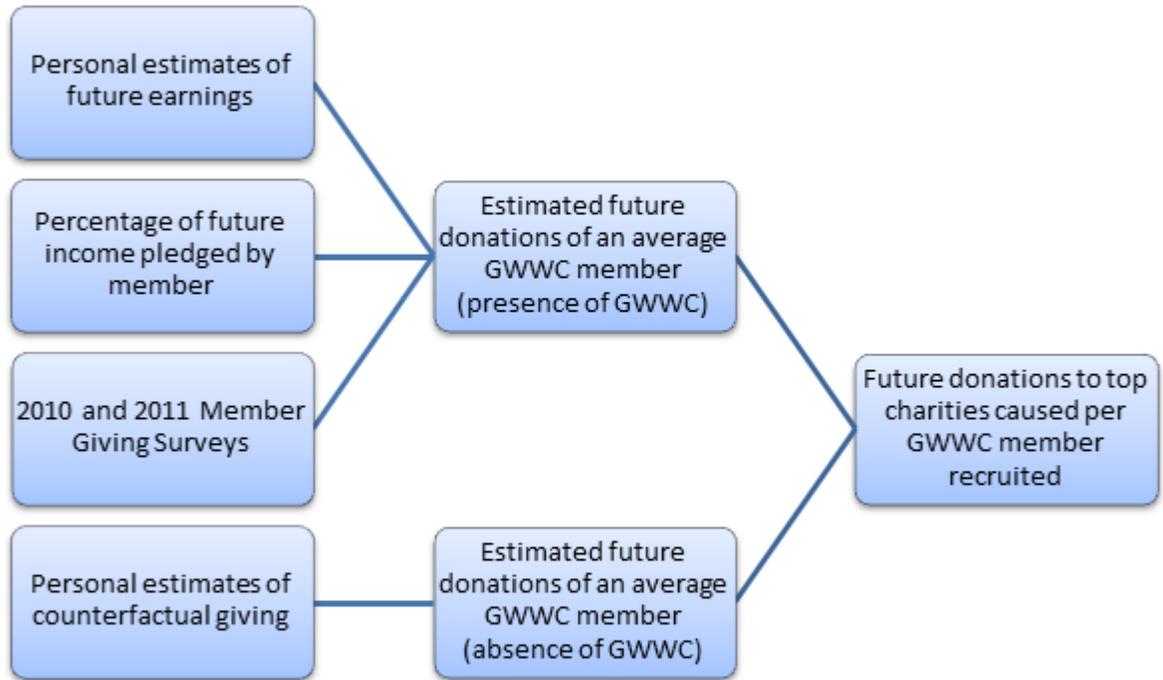
July 3, 2013

1 Introduction

This is a guide to our May 2013 spreadsheet estimate of the counterfactually-adjusted, time-discounted lifetime donations per GWWC member. This is a highly speculative estimate that makes predictions about what people will do, and would otherwise have done, over the next few decades. But, since GWWC is trying to change people's long-term behavior and much of the benefit of GWWC's efforts will not come until later, it was important to roughly calculate this number. I don't really believe the calculation because too many of the inputs are speculative, but based on the returns GWWC has had so far and intuitive plausibility checks, I do think it is possible to be fairly confident that each GWWC member recruited results in, on average, at least several thousand dollars of additional donations.

2 What data does this model rely on?

The following graph explains what data this estimate relies upon:



If some lines go into a box from left to right, then the contents of the box on the right were determined by an estimation procedure that used the contents of the boxes on the left. All of the hard data is from surveys: a “Member Giving Survey” which we send out annually, and a joining survey that all new GWWC members take when they join GWWC.

3 Model and parameter assumptions

3.1 Notation and parameter assumptions

The major inputs to our calculations are below:

1. P = total amount pledged by members, in USD, this figure is based on the personal estimates of future earnings of all individuals who have joined GWWC. 184 of 313 (58.7%) individuals estimated their future earnings * percentage pledged, for a total of about \$73 million. We assumed that people who did not estimate their total amount pledged would be giving at the average rate for those who did estimate. This yields a total of about \$125 million.
2. s = survival rate. A value of 0.6 is equivalent to 40% of all GWWC members giving 0% of their pledged totals and the rest giving 100%. We do not have a lot of data to base this figure on. In our 2010 member giving survey, 106 of 184 members responded, and 96 of them (90%) said they were up to date on their giving. In our 2011 member giving survey, 155 of 250 members responded, and 140 of them (90%) said they were up to date on their giving. This has to be adjusted for what will happen in the future, about which we know little. Our model used estimates of .2, .35, and .7 for s . Rough relevant analogies that come to mind include: average number of years a vegetarian remains a vegetarian, average number of years that someone converting to a new religion participates in the religion. [citation for how long people stay veg
3. t = proportion of donations going to top charities. We define a charity as a “top charity” if it is recommended by GWWC or GiveWell. In our 2010 and 2011 member giving surveys, we calculated what percent of the donations went to the top charities in our surveyed population. It was about 50% in each year. This has to be adjusted for what we expect to happen in the future, which we can only speculate about.
4. N = number of GWWC members. This is a solid number.
5. a_c = % of donations which members would make, without the influence of GWWC. When anyone joins GWWC, we ask them 1) what percent of their income they are pledging to donate and 2) what percent they would have donated if they had never heard of GWWC. 129 of 313 (41%) did not estimate their future earnings, 103 of 313 (33%) did not estimate their counterfactual donation percentages, and 21 of 313 (6.7%) gave vague estimates. On average, these members said that they would have donated about half of their pledged amount anyway.¹ We did not weight this by individual incomes, though that probably would have been a step in the right direction.
6. t_c = % of counterfactual donations which would go to top charities, without the influence of GWWC. We have no hard data to base this number on. It is a guess based on the experience and intuition of the author.

¹In one case, a person gave a counterfactual giving level above his pledged giving level. We assumed that GWWC was not *decreasing* his amount donated in this case, and used his counterfactual giving level as his pledged giving level.

3.2 Estimate without temporal discounting

We use the above parameters to calculate:

1. F = estimated lifetime donations to top charities of all 250 GWWC members who signed up before 22 October 2012.
2. F_c = estimated counterfactual future donations to top charities

Total donations to top charities, F are estimated using the formula:

$$F = Pst.$$

One potentially objectionable feature of this formula is that we are assuming no correlation between being a member that keeps the pledge and being a member that donates to a top charity. It is likely that this formula underestimates the true value of F , since GWWC members who give to top charities may be more likely to keep the pledge.

Total counterfactual donations to top charities, F_c are estimated using the formula:

$$F_c = Ps_c t_c a_c.$$

This estimate assumes that people who say they would have donated a lot without GWWC's influence are just as likely to stop giving as people who say they would not have given a lot, except for GWWC's influence. This may underestimate counterfactual donations to top charities. The estimate also assumes that the survival rate is the same regardless of whether GWWC is present (so that $s = s_c$). This seems to be a conservative assumption, since people would be more likely to keep giving at a pledged rate than to perpetually give at a counterfactually estimated rate in a counterfactual scenario.

Finally, we calculate the counterfactually-adjusted, time-discounted lifetime donations per GWWC member using the formula:

$$\frac{F - F_c}{N} = \frac{Ps(t - t_c a_c)}{N}.$$

3.3 With temporal discounting

To time-discount these figures, we would need to have calculated the aggregate figures by making some assumptions about the distribution of member donations over time. We do not have data on this question. If we assume that the donations will be evenly distributed over the next 40 years, we get that F_Δ , after discounting, equals

$$\frac{F - F_c}{40} \sum_{n=1}^{40} \frac{1}{(1+r)^n},$$

where r is the discount rate. Using a 5% discount rate would bring the value of the donation stream down by a little over 50%. Since many GWWC members are students who will be making more money in the future, it is likely that this method of time-discounting overestimates the value of their donations.

4 Major limitations of this analysis

The major limitations of the model are as follows:

1. There is very little hard evidence upon which we can base our counterfactual estimates. It really boils down to the personal judgment of the author, based on some experience with the organization and some intuition.
2. It will take several more years to get meaningful feedback on whether our estimate of F is in the right ballpark, and it seems unlikely that we will ever get strong evidence about whether our estimate of F_c is in the right ballpark.
3. The span between the lower and upper estimates is on the order of 100x.
4. Because we lack data necessary to do the temporal discounting properly, our method of applying a discount rate is very crude.