

GIVINGTUESDAY DATA COMMONS

GivingPulse Methodology Report

2023



Table of contents

Research Background_____	2
Goals_____	2
The survey_____	3
The sample_____	3
Sample reporting_____	4
Questionnaire Design_____	4
Generosity taxonomy_____	5
Analysis methodology_____	7
Indices_____	7
Principal component analysis (PCA)_____	7
Index 1: Generous Action_____	8
Index 2: Attitudes_____	9
Clustering methodology : Generosity Profiles_____	9
How are the generosity profiles defined?_____	9
Motivation and interpretation_____	10

Research Background

Our approach looks beyond standard giving metrics that focus primarily on tracking financial donations to registered nonprofits, which exclude most giving and givers. Instead we have begun mapping the giving ecosystem in its true abundance, by looking into many more kinds of giving (including time, items and social advocacy in addition to money) and in many more contexts (including, giving to community groups and non-family individuals in addition to nonprofits), revealing a complex and nearly universal culture of giving.

With a view toward expanding the social sector's notion of what generosity is and how it should be measured, GivingPulse was designed to investigate a broad range of giving behaviors and sentiments through weekly surveys on a sample of 100 respondents. Responses from these surveys provide a unique set of timely insights into the state of generosity through nearly real-time monitoring and analyses. They will allow the sector to explore how various events, interventions, crises, and demographic factors impact or correlate with generosity.

This unique survey-based study expands on prior GivingTuesday studies of American giving:

1. To assess a wider range of acts of generosity, covering the giving of money, items, volunteering, and/or advocacy, whether it is for registered charities, non-profit organizations, and/or for individual people in need.
2. To continuously track changes in these behaviors and attitudes as they shift due to world events, activities, triggers, and/or seasonality.

Goals

Through this project, GivingTuesday is actively seeking to understand and share insights around the nature of generosity in all its forms and to expand the collaborative research environment in the social sector. This data will contribute to understanding various dimensions of these behaviors, such as:

- What these behaviors are;
- How they are managed;
- The extent to which they are emergent;
- The form they take in different communities;
- How they evolve in real time.

The survey

The sample

The sample consists of 18 to 85 year olds who have lived in the US for at least the past 12 months. The geographic coverage of the sample includes all 50 states, plus the District of Columbia. The sample quotas match age, gender, and geographic distribution to the US population, according to the most recent US census.

The sample is recruited online from a IPSOS pre-recruited panel of respondents developed for the purposes of conducting market research studies. This panel owner selects a number of respondents according to prescribed demographic (age, gender, and region) quotas, who are then invited to participate in GivingPulse. This ensures better representation of the actual American population. Because this is an online survey, it likely under-represents populations without regular Internet access. These are known to be older Americans and poorer, less educated folks.¹ The weekly sample size is approximately n=100.

Once the sample is delivered, our vendor reviews the distribution of key demographics of the respondents in it, and adds respondent-level weights to account for any discrepancies between the sample and US census population distribution (which may occur due to bias and small sample size). Typically, the weights are not so significant because we target a representative profile right from the start with the panel provider. Respondents are not included or excluded based on past giving behavior, so as to capture a wider range of behaviors in GivingPulse responses. Inaccurate responses are excluded after data collection ("speeders" – e.g. respondents who rush through the survey, inconsistent or extreme respondents). The average time to complete was 10 minutes.

GivingPulse has been in the field weekly since February 14, 2022. Over a ten week period between October 2022 and January 2023, the weekly sample size was increased from 100 to 600 to track #GivingTuesday related behaviors as well as end-of-year giving patterns, broadly speaking. As of October 2023, the total sample size is approximately 14,000 respondents.

Surveys use a sample of the target population. Such a sample may not perfectly reflect the full population. Conducting another survey, with a different sample may produce

¹ <https://www.pewresearch.org/politics/methodology/collecting-survey-data/internet-surveys/>

slightly different results. These variations are referred to as “sample error” and may vary or be different between studies by several percentage points for any reported measure.

Sample reporting

Data is reported on two different basis:

- Aggregated across many weeks for a larger overall sample to bring greater robustness and to offer the opportunity to review key sub-samples with sufficient base sizes
- Trended over time, using a rolling 4-week window to provide a balance for the affordability of the overall sample, for providing a stable reporting base, versus carrying out-of-date information too long.
 - We combine the first 4 weeks and plot the first data point.
 - In each subsequent week, we add the latest data and drop the data from three weeks prior (i.e. add week 5 and drop week 1, add week 6 and drop week 2, and so on)

All behavior is self-reported. Respondents are not perfect rational machines, and results may not exactly reflect factual reality. It is important to look at comparative differences between results and over time to understand the implied insights. If a business decision depends or hinges on a precise number, extra caution should be used.

Questionnaire Design

The questionnaire is divided in the following sections:

- For the first 80% of the questionnaire, we have a fixed, standard questionnaire, focusing on generosity behaviors and attitudes.
- For the next 10%, we have a “flexi-section”.
- The last 10% is the standardized demographics and classification questions.

For tracking, it was important to keep the questions the same to allow for comparison of results over time. However, we have some flexibility with the end of the survey. This “flexi-section” near the end, cannot affect the answers already collected per respondent before. Thus, in the flexi-section, we can add and remove ad hoc questions which are relevant for the time, and/or represent a quick interest (which may not warrant on-going tracking). Currently, the GivingPulse dashboard contains information pertaining only to non-flexi questions.

Generosity taxonomy

The GivingPulse generosity taxonomy is divided into giving types and recipient types. This taxonomy is the basis of the questionnaire; it is used to identify generosity behaviors and attitudes of respondents. Giving types include:

1. Monetary: donating dollars
2. Items: giving things, other than money
3. Time: volunteering their time
4. Advocacy: recommending, encouraging, endorsing or socially publicizing a recipient's activity

In addition to the above core categories, GivingPulse also asks respondents about other types of giving including donations of blood or other body parts, as well as financial contributions specifically to politicians or political groups.

Those who are at the receiving end of these giving behaviors are:

1. Registered charities: formal organizations that are legally established in the eyes of the government
2. Organized or structured community group: informal organizations that are not legally established (e.g. student associations, community associations)
3. Individuals: these are individuals who are not part of any organized or structured fundraising (e.g. a neighbor, a person on the street)

Each of these giving combinations can have local or global geographical scope of interest.

The chart below summarizes the GivingPulse's giving taxonomy.

MONETARY

Monetary donation to registered charity

Monetary donation to organized or structured community group which is not specifically a registered charity

Monetary donation to someone (other than family) which is not part of any organized or structured fund-raising

ITEMS

Gave things other than money to a registered charity.

Gave things other than money to help others via organized or structured community group which is not specifically a registered charity

Gave things other than money to someone (other than family) which is not part of any organized or structured fund-raising

TIME

Volunteered time to or served a registered charity.

Volunteered time to an organized or structured community group which is not specifically a registered charity.

Volunteered time to help support someone (other than family) which is not part of any organized or structured fund-raising

ADVOCACY

Recommended, encouraged others, endorsed, or socially publicized an activity of a legal formally-structured charity.

Recommended, encouraged others, endorsed, or socially publicized an activity of an organized or structured community group which is not specifically a registered charity.

Recommended, encouraged others, endorsed, or socially publicized some ad hoc independent activity to help others, which is not part of any organized collective initiative.

Analysis methodology

We aim to track giving behaviors and attitudes by creating clusters and establishing indices.

Indices

We present two indices to help track generosity over time, one for generous action and one for generous sentiment. For the generosity action index, each week is scored on how “generous” respondents were overall, based on their survey responses. The generosity sentiment index is an indicator of how “positive” towards generosity and philanthropy respondents’ attitudes are in a given week.

Principal component analysis (PCA)

PCA is a technique that is used to reduce the number of dimensions in a data set while capturing the most amount of variation in the data. The GivingPulse survey data has many questions and therefore many dimensions. It is likely that certain question responses are related to each other, or are relatively consistent among all respondents. We wish to come up with a way to better differentiate relatively generous respondents from those who are less generous. PCA finds combinations of question responses that best capture the differences between respondents, and uses these to reweight the data to produce a “feature” for each individual according to their survey responses.

PCA produces a series of “principal components” that can be thought of as weights for each survey response. Weight values can be either negative or positive. The questions that are weighted more heavily are the questions that are more variable between respondents. We use the first two principal components resulting from PCA to produce our indices (these are the two components that capture the most information).

We take the data from the time period we wish to study, normalize it, multiply each individual’s responses by the corresponding weight, and then sum up each weighted response to get a single value or “feature” for each respondent in a given time period. This means that certain questions’ responses are emphasized more heavily than others, and high responses to questions that are

negatively weighted will take away from the total overall value. This is how PCA captures the most amount of information possible for each respondent using a single value.

For each week, we take the mean respondent feature value from the scores as transformed by principal components one and two as our Index 1 and Index 2 values, respectively. This means that the index measures the approximate center of the distribution of individual generosity “scores” for the time period.

Index 1: Generous Action

The first component places heavy weights on questions that relate to generous action (the “what” of generosity). This index increases when people exhibit higher frequency and amounts of generous behaviors. Specifically, a survey respondent’s score will increase when they report the following behaviors (in descending order of importance):

- Using more methods to donate money
- Supporting more causes (any type of support)
- Volunteering for a registered charity
- Initiating or organizing a collective effort to support an organization or someone in need
- Participating in a workplace or employer-led drive for items, money, or volunteering
- Volunteering time to help an individual
- Socially publicizing or advocating for the activities of a registered charity
- Giving money to a registered charity
- Giving money from their paycheck
- Volunteering a large number of hours in the past 7 days

A survey respondent’s score will decrease when they report the following behaviors (note that the magnitudes of these weights are very low compared to the pro-generous behaviors):

- Ignoring solicitation or deciding not to help
- Ignoring a crisis or deciding not to help
- Being unsure whether or not they will help in response to a crisis

Index 2: Attitudes

The second component places heavy weights on questions that relate to a respondent's attitudes or sentiment (the "how" of generosity). This index increases when people exhibit higher frequency and amounts of generous behaviors. Specifically, a survey respondent's score will increase when they express the following attitudes or behaviors (in descending order of importance):

- Enjoying giving to non-profits
- Generally trusting non-profits and the services they provide
- Feeling everyone has a responsibility to give and help those in need
- Feeling it is so easy to make a donation to a non-profit these day
- Recently supporting a group or individual in their local community or neighborhood
- Recently offering support without solicitation
- Recently supporting a group or individual beyond their local community, but within the USA

A survey respondent's score will decrease when they report the following attitudes or behaviors:

- Generally feeling non-profits are not very efficient
- Feeling that donating money to non-profits places financial strain on them
- Feeling that giving to non-profits is full of unknowns
- Sometimes giving due to peer-pressure or to fit in with others
- Hearing something negative about charities from friends or in media

Clustering methodology : Generosity Profiles

How are the generosity profiles defined?

We use a clustering analysis technique method called "k-means clustering" to group respondents in our dataset into distinct groups based on shared characteristics.

With the GivingPulse survey data, clustering is hard to visualize since we cluster based on many survey questions and it therefore takes place in a very high dimensional space. The algorithm generates three cluster centroids that move through the space containing data points until each data point is assigned to the centroid that is closest to its mean. The result of this process is three cluster centroids each representing a distinct group of points and their attributes.

The survey questions used for the clustering are those that relate to respondents' behaviors and attitudes towards generosity. These are the same questions that are used to generate the generosity indices. Once the clusters have been determined, we can examine the similarities and differences between the clusters in terms of behavior, attitudes, and demographics based on the position of the cluster centroids and by observing the distribution of demographic traits within each cluster. This is how we generate "profiles".

Motivation and interpretation

In the GivingPulse survey, we define the clusters primarily by their behavior and attitude characteristics, and then examine their demographic breakdown. From a practical perspective, clustering analysis can help us determine which types of people behave similarly and therefore may respond similarly to different types of crises, events, or solicitations. This could be useful for fundraisers who wish to target specific demographics, groups wishing to engage more volunteers, or journalists looking to augment a narrative relating to generosity or crisis response.

From a research perspective, clustering analysis helps reveal underlying behavioral patterns in the survey sample and indicate broader trends in the target population. In the case of novel or unexpected results, it can help raise additional questions for social science researchers about motivations for generosity, civic participation, and relationships between individuals' attitudes and their behaviors, to name a few possibilities.

If the behavior, attitude, and demographic composition of each cluster is stable between months/time periods, we can examine how the proportion of respondents in each cluster shifts from month to month. For example, if the number of people who are exhibiting an "average generosity" profile decreases between months, we can look at the changes in relative size of the other two clusters to see if the sample has become more or less generous overall

If the behavior and attitude composition of the clusters is stable while the demographic composition is not, we can examine which sub-groups appear to have changed behaviors over the time period and how this may be related to recent events. For example, if the religiosity of respondents does not appear to vary much between clusters in one month but appears to be higher in a high generosity cluster the following month, we may want to look into events over the relevant time period that would push more religious people to be more generous, such as a holiday or period of religious observance.

From a practical perspective, clustering analysis can help us determine which types of people behave similarly and therefore may respond similarly to different types of crises, events, or solicitations. This could be useful for fundraisers who wish to target specific demographics, groups wishing to engage more volunteers, or journalists who wish to highlight trends among specific populations in times of crisis.