

Detroit Metro Area Communities Study (DMACS) Panel Description

Updated September 2024

The Detroit Metro Area Communities Study (DMACS) is a University of Michigan initiative designed to regularly survey a broad, representative group of Detroit residents about their communities, including their expectations, perceptions, priorities, and aspirations. Since 2016, the DMACS survey has provided valuable insights on the perceptions and attitudes of Detroit residents.

Panel Recruitment

DMACS initially contracted with the UM Institute for Social Research's Survey Research Operations (SRO). Panelists were first recruited in Fall of 2016 using an addresses-based sample of households in Detroit. Sampled households were mailed information about the study as well as a web address for respondents to access and complete the survey. Paper versions of the survey were made available to participants upon request. DMACS contracted the University of Michigan Institute for Social Research's Survey Research Operations (SRO) to also do household canvassing; canvassers visited a subset of sampled households and left paper surveys for respondents. The paper and pencil survey option was discontinued after Wave 3. Beginning in 2018 (Wave 3) DMACS enhanced its outreach methods by adding door-to-door canvassing. Trained canvassers equipped with tablets visited select households to assist individuals who needed or preferred an alternate means to complete the survey. Door-to-door canvassing was discontinued after Wave 6 due to restrictions on face-to-face interactions due to COVID-19 and have not been resumed. In every wave, panelists who have previously provided an email address and/or mobile number (and have given us permission to send text messages) receive invitations and reminders via these methods; others receive invitations and reminders via U.S. mail.

Panel Refreshment

To offset panelist attrition, DMACS aims to “refresh” the panel approximately once per year by sampling new households. The panel was refreshed in 2018 (Wave 3) using a stratified two-stage cluster sample which oversampled census block groups that were at least 70% Hispanic (according to the 2016 5-year ACS estimates). In 2019 (Wave 6) the panel was refreshed using a stratified two-stage cluster sample which oversampled households from each of Detroit's 10 [Strategic Neighborhood Fund \(SNF\) neighborhoods](#). In waves 3 and 6 a clustered design was used to ensure walkable routes for canvassing teams.

In March 2020, DMACS initiated a series of rapid response surveys (Waves 7-11) focused on Detroiters' experiences with COVID-19. Due to restrictions on face-to-face human subjects interactions during the pandemic, we limited our outreach to the subset of panelists for whom we had previously obtained email addresses and/or phone numbers as contact information.

In 2021 (Wave 12) the panel was refreshed using an oversample of households in Census block groups that were at least 70% Hispanic (according to the 2018 5-year ACS estimates) as well as an oversample of households that were located within Detroit's SNF neighborhoods. Households were selected at random from 13 different sampling strata. The first 11 strata were derived from Detroit's Strategic Neighborhood Fund (SNF) neighborhood boundaries. Each SNF neighborhood was treated as one stratum with the exception of Southwest/Vernor. Southwest/Vernor was divided into two strata: one stratum was comprised

of block groups that were more than 70% Hispanic based on ACS estimates and one stratum was comprised of block groups that were less than 70% Hispanic. Likewise, non-SNF neighborhoods were divided into two strata: block groups that were 70% or more Hispanic and block groups that were less than 70% Hispanic. The COVID-19 pandemic precluded face-to-face interactions and so in-person canvassing was not used in Wave 12. As a result, clustering was not used in W12 sampling design. New participants who enrolled in the panel at Wave 12, as well as previously established panelists, were invited to participate in Waves 13 and Wave 14.

Since 2022, including Wave 15, 17 and 20, the panel was refreshed using an oversample of households in Census block groups whose population was at least 50% Hispanic.

Weighting

DMACS staff construct sample weights using a two-stage process that accounts for multiple stages of sampling and nonresponse bias that occur at different points in the survey process. In the first stage, we use post-stratification to account for the differential selection probabilities based on sample strata. In the second stage, we applied raking to adjust the weights to match the estimated distributions on gender, age, race, education, and income based on the U.S. Census Bureau's 2022 1-year estimates from the American Community Survey (ACS)¹.

We intend to provide data users with a simple and consistent way to analyze the data across all waves. The weights for each wave are intended to be used as cross-sectional weights. Thus, we recommend ignoring stratification and clustering when conducting analysis. We believe this approach is justified for the following reasons:

- 1) Post-stratification roughly accounts for unequal selection probabilities due to stratification. The additional variance reduction made possible by incorporating stratification on the DMACS sample seems small compared to the complexity of harmonizing different stratifications across waves.
- 2) The effect of clustering is very small. Only W3 and W6 refreshment samples were recruited with a clustering design. Thus, for any given wave, only a portion of the sample was influenced by clustering. Due to additional attrition, the number of cases in clusters is generally small.

¹ Valliant, R., Dever, J. A., & Kreuter, F. (2018). *Practical tools for designing and weighting survey samples* (2nd ed). New York: Springer.