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Report on Findings from Contact Experiments from the First CPS Field Test

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[1] The information in this paper is being released for research purposes only. It is to inform interested parties and to encourage discussion of work in progress. All views expressed in this presentation are those of the authors and do not necessarily reflect the views or policies of the U.S. Bureau of Labor Statistics. Thank you to Rebecca Morrison for reviewing this paper. Email: yu.erica@bls.gov

Introduction

The Current Population Survey (CPS) is a monthly household survey sponsored by the U.S. Bureau of Labor Statistics and administered by the U.S. Census Bureau. The CPS provides a wide range of information about employment, unemployment, hours of work, earnings, and people not in the labor force of non-institutionalized U.S. residents age 15 or older (U.S. Census Bureau & Bureau of Labor Statistics, 2019). The average interview takes 10-15 minutes, depending on the size of the household (Bureau of Labor Statistics, 2025). Households that are selected for the CPS are interviewed using a 4-8-4 rotational panel design: they are interviewed for four consecutive months, dropped out of the sample for eight consecutive months, and interviewed for an additional four consecutive months (U.S. Census Bureau & Bureau of Labor Statistics, 2019).

The CPS currently collects data from approximately 60,000 households each month using both Computer Assisted Personal Interviewing (CAPI) and Computer Assisted Telephone Interviewing (CATI). Interviews in month-in-sample (MIS) 1 and 5 are typically conducted in-person to establish initial contact and to re-establish contact after respondents are dropped out of sample for eight months. However, MIS-1 and 5 interviews may be conducted over the phone if in-person interviews are not successful after several attempts. In the remaining months – MIS-2, 3, 4, 6, 7, and 8 – respondents are interviewed over the phone if the respondent is eligible and agrees to do so (U.S. Census Bureau & Bureau of Labor Statistics, 2019).

Following years of increasing costs and declining response rates, the CPS is transitioning from interviewer administration to mixed-mode administration, including a web response mode. In 2025, the agencies conducted a field test of a mixed mode design, including a self-administered web mode option for completing the CPS. The primary purpose of this test was to assess the feasibility of the web mode and understand the respondent experience in the web mode.

Research objectives

Research was conducted to develop a contact strategy that optimizes the tradeoff between cost and response in the unique context of the CPS. Whereas established methods for pushing respondents to web rely on a prescribed series of contacts over multiple weeks, such as outlined by Dillman, et al. (2014), the CPS data collection period is only ten days. Additionally, the CPS is a longitudinal panel and e-mail contact information collected at MIS-1 can be leveraged to quickly invite respondents to the web in subsequent MIS. With this field test, we aimed to identify how postal and email contacts could be used effectively to motivate web response that was quick enough to still allow interviewers time to contact web non-respondents. In this report, we summarize findings from two experiments.

Postal Reminder

In one experiment, we tested the effect of sending a postal reminder on web response rates. Currently, the CPS mails introductory letters before MIS-1 and MIS-5, but does not send any subsequent reminders in those months, nor any letters in other interview months. Research shows that postal reminders can increase response rates (e.g. Crawford, Couper, & Lamias, 2001). However, the findings in support of using postal reminders to increase response rates for web surveys is weak. For example, Millar and Dillman (2011) found that sending mail follow-up contacts was associated with a higher response rate compared to email contacts alone, but the difference was not significant. Similarly, Porter and Whitcomb (2007) found an increase in response rates and URL click through rates for postal reminders compared to email, but the difference was also not significant. Kaplowitz, Hadlock, and Levine (2004) found that adding a postal reminder to a contact strategy that already included a postal contact did not increase response rates. In contrast, Schaefer and Dillman (1998) tested the effect of email and postal mail reminders and found that response rates were lower with postal reminders, though not significantly so.

A postal reminder may add authenticity in support of emails coming from the Census Bureau or be seen by people who miss the email reminders. Beyond encouraging overall response, the reminder may increase self-response via the web mode since it includes web log-in information. However, the printing and mailing of postal reminders is costly and, given the short fielding period of the CPS, the postal reminder must be sent before data collection opens and must be sent to the full sample, rather than only nonrespondents. Further, the postal reminder would be received by people at the same time as reminder emails. Given these limitations, more evidence is needed to determine whether a postal reminder should be sent for a mixed-mode administration of the CPS.

To explore the effectiveness of a postal reminder, we investigated four research questions:

> Research Question 1:
> What is the impact of a postal reminder on response rate compared to not receiving a postal reminder?
>
> Research Question 2:
> What is the impact of a postal reminder on the proportion of cases completed via web?
>
> Research Question 3:
> What is the impact of a postal reminder on time to respond?
>
> Research Question 4:
> What is the impact of a postal reminder on cost per complete?

Email Contact Sequence

In a second experiment, we tested the effect of sending emails on web response rates. Currently, the CPS does not send any emails to respondents. There is little literature examining the impact of email contacts on response in a short time period. Some previous research shows that email contacts are effective in surveys of university students (Van Mol, 2017; Crawford, Couper, & Lamias, 2001). Unlike postal mail, emails can be timed to arrive at specific times and on specific days (e.g., Sundays and holidays) to ensure that the sample receives the survey invitation and reminders on schedule as intended. It is unknown in this context whether a high number of email contacts will increase response or backfire and lower response. In this test, we sought to evaluate the timing and frequency of email contacts for a compressed collection period.

To evaluate email contact sequences, we investigated three research questions:

> Research Question 5:
> Does the timing/frequency of email contacts affect response rates in a compressed collection period?
>
> Research Question 6:
> Does the timing/frequency of email contacts affect the proportion of cases completed via web?
>
> Research Question 7:
> Does the timing/frequency of email contacts affect speed of response?

Methods

Data Collection

The field test was conducted from May to September 2025. The sample size was designed to be approximately 16,000 cases overall. The data collection window was the week of the 12th each month starting on the Sunday of that week. This was the week before production CPS data collection week each month. Unlike production data collection where interviewers which takes places over 10 days, field test data collection was an abbreviated seven days.

As in production data collection, field test households were initially interviewed by personal interview for MIS-1. In subsequent months (MIS-2, 3, and 4), households that met eligibility criteria were invited to respond via the web mode; participation in the interviewer-administered or web mode was not randomly assigned. Web mode eligibility criteria included reporting a telephone number, an email address, usable names and the respondent gave permission for the interviewer to talk to others in the household; eligibility was updated after each month so that more households were invited to the web mode over time. Respondents eligible for the web

mode had at least three days to respond via the web mode before the case was recycled and they were contacted by an interviewer to respond via personal interview.

Experimental Design

Postal Reminder

This test included a control group and one treatment group. Assignment to these conditions was random and independent of the other experiments in this field test, including emails. The control group did not receive a postal reminder. The treatment group received a postal reminder, designed to be sent on the Friday before the data collection period and arrive by Day 4; however, due to the variability of postal delivery, respondents may have received the reminder earlier or later.

The postal reminder referenced the earlier invitation from the advance letter, the importance of response to "ensure the accuracy of the national unemployment rate" and helping to "measure how the economy and labor force are doing across the country and your community." The reminder also included the website link, respondent's User ID, and instructions on how to log in to the online survey instrument.

Email Contact Sequence

This test included a control group and one treatment group. Assignment to these conditions was independent of the other experiments in this field test. The control group received three emails (Days 1, 3, and 5) while the treatment group received five emails (Days 1, 2, 3, 4, and 5). The content of the emails varied for each contact, as outlined in Table 1 below.

Table 1. Summary of content of email contacts, by condition

Day	Content	Condition
Day 1	Convenient way to start, reference to mailing	Control, Treatment
Day 2	Employment stats, appeal to Not-In-Labor-Force	Treatment
Day 3	Last chance before interviewer, link to CPS site	Control, Treatment
Day 4	Reminder of previous participation, saving government money, interviewer visit next	Treatment
Day 5	Mode choice, privacy reminder	Control, Treatment

Sample

Cases in MIS-2, 3, and 4 were in-scope for these experiments. Cases with final response codes (HUFINAL) representing completed and sufficient partial interviews were considered in-scope respondents. Cases with final response codes representing insufficient partial interviews or otherwise eligible but not completed interviews were considered in-scope but non-respondents. All other cases were considered out-of-scope, or ineligible. Respondent demographics are summarized in Table 2.

Table 2. Demographics of respondents, by experiment and month-in-sample (unweighted)

	Postal Reminder Experiment			*Emails Experiment*		
	MIS-2 (n=1,500)	**MIS-3 (n=2,200)**	**MIS-4 (n=1,200)**	**MIS-2 (n=1,300)**	**MIS-3 (n=1,800)**	**MIS-4 (n=1,400)**
Sex						
Male	47.9%	49.0%	46.3%	50.5%	49.6%	49.7%
Female	49.2%	52.9%	50.2%	49.5%	48.9%	53.4%
Age						
16[2] to 29 years	10.6%	10.1%	8.4%	10.7%	9.6%	9.8%
30 to 49 years	28.0%	29.0%	26.8%	30.8%	28.9%	30.9%
50 to 64 years	24.5%	26.7%	24.5%	26.0%	27.1%	27.3%
65+ years	34.0%	36.1%	36.7%	32.7%	32.8%	35.2%
Ethnicity						
Non-Hispanic	89.7%	93.4%	88.1%	92.2%	91.3%	96.3%
Hispanic	7.5%	8.5%	8.3%	7.6%	6.8%	6.7%
Race						
White only	82.5%	87.3%	82.5%	85.5%	85.2%	90.6%
Black only	7.7%	7.2%	6.9%	7.5%	6.3%	5.7%
Asian only	4.4%	4.4%	4.3%	4.2%	4.5%	4.4%
Other	2.5%	2.7%	2.8%	2.9%	2.5%	2.4%
Education						
High school or less	28.0%	29.8%	28.8%	26.2%	24.4%	26.8%
Some college	28.7%	29.3%	26.7%	29.8%	29.3%	29.6%
College deg or higher	40.5%	42.9%	40.9%	44.1%	44.7%	46.8%
Employment status						
Employed	51.9%	53.0%	48.8%	56.0%	54.3%	56.5%
Unemployed	2.5%	1.9%	2.8%	2.8%	1.9%	3.2%
Not in labor force	42.7%	47.0%	44.8%	41.0%	41.8%	43.3%
Household size						
1 person	30.0%	32.1%	31.4%	26.9%	27.3%	26.5%
2 people	36.9%	38.2%	36.4%	41.9%	39.5%	39.9%
3 people	12.8%	13.0%	12.4%	14.0%	13.4%	12.9%
4 people	9.9%	11.7%	11.2%	10.8%	12.1%	11.5%
5 or more people	7.6%	6.9%	5.0%	7.5%	6.6%	5.9%

* *Proportions are based on rounded counts to avoid disclosure*

[2] Although 15 year olds are eligible to respond to the CPS, compulsory schooling and child labor laws for those under 16 years of age mean that the BLS typically publishes data only for those 16 or older.

Due to operational issues, the experimental treatments were not administered as designed in some months of data collection. For the postal reminder experiment, the months of June and September were excluded; July and August cases were included and approximately 12,000 cases were in the final analytic sample. For the email contact sequence experiment, the month of June was excluded; July, August, and September web-eligible cases were included and approximately 12,000 cases were in the final analytic sample.

Analysis

Analyses are split by MIS to investigate how effects may change over time in the panel. Python was used to apply base weights and replicate weights with the balanced repeated replication (BRR) variance estimation method, using samplics, scipy, and itertools packages. Where appropriate, Rao-Scott Chi-square tests and follow-up t-tests were used for significance testing.

Throughout the report, we do not statistically compare the eligibility or completion mode groups because membership to these groups was not randomly assigned and the groups are not independent.

Results

Research Question 1: What is the impact of a postal reminder on the response rate compared to not receiving a postal reminder?

To calculate response rates, we identified complete and sufficient partial complete cases out of all eligible cases. In Table 3, we present response rates by experimental condition for each eligibility mode. Respondents in the web eligible group were contacted by interviewers to respond via CATI/CAPI if they did not complete the survey within the first few days of the field period. Response rates for the group that were sent the postal reminder were nominally higher than for the control group, with a larger nominal increase for the web-eligible group.

Weighted omnibus tests confirmed that the differences in response rate by eligibility mode were present in MIS-2 and MIS-3 but the effect was no longer significant by MIS-4 (MIS-2: $X^2(1)=58.80$, $p<.001$; MIS-3: $X^2(1)= 1178.23$, $p<.001$; MIS-4: $X^2(1)=2.70$, ns). However, follow-up pairwise comparisons focusing on the effect of the postal reminder in MIS-2 and MIS-3 found no significant differences. The postal reminder was not associated with a significant change in response rate.

Table 3. Response rates across all month-in-sample, by eligibility mode and condition (unweighted)

	Control (n=6,000)	Treatment (n=5,900)	Difference
CATI/CAPI only Eligible	51.4%	53.6%	2.2%
Web Eligible	36.2%	39.2%	3.0%
Overall	*40.1%*	*42.9%*	*2.8%*

Research Question 2: What is the impact of a postal reminder on the proportion of cases completed via web?

From the overall response counts for the control and experimental treatment groups, we calculated the proportion of response that was completed via web mode. As shown in Table 4, the majority of completed cases were completed with an interviewer across all MIS. However, there was also a nominal difference by experimental condition whereby the proportion responding via web was initially higher for the group receiving the postal reminder. Over MIS, that difference tapered off. The postal reminder appears to have had a nominal positive effect on encouraging web response initially.

Table 4. Proportion of cases completed via web by month-in-sample and condition (unweighted)

	Control (n=2,200)	Treatment (n=2,300)	Difference
MIS-2	41.2%	43.6%	2.4%
MIS-3	40.3%	40.5%	0.2%
MIS-4	40.8%	39.6%	-1.2%
Overall	*40.7%*	*41.2%*	*0.5%*

Research Question 3: What is the impact of a postal reminder on time to respond?

To investigate time to respond, we plotted cumulative response rates over the course of the data collection period. In Figure 1, the black lines represent respondents who were only eligible for personal interviewing. Within the black lines, the dashed lines represent respondents who were not sent the postal reminder while solid lines represent those who were sent the postal reminder. The dark gray lines represent respondents who were eligible to complete via web and did complete via web. The light gray lines represent respondents who were eligible to complete via web but ultimately completed with an interviewer[3].

[3] Embedded in this data collection was a separate experiment where some cases were recycled to interviewers on Day 4 versus Day 5 of collection. By separating the web eligible group responses by completion mode, we are able to distinguish between the effect of cases being recycled to interviewers for follow-up (web-eligible cases that complete with an interviewer) from the effect of the postal reminder (web-eligible cases that complete on the web). However, completions on the web may be partly due to interviewer contact.

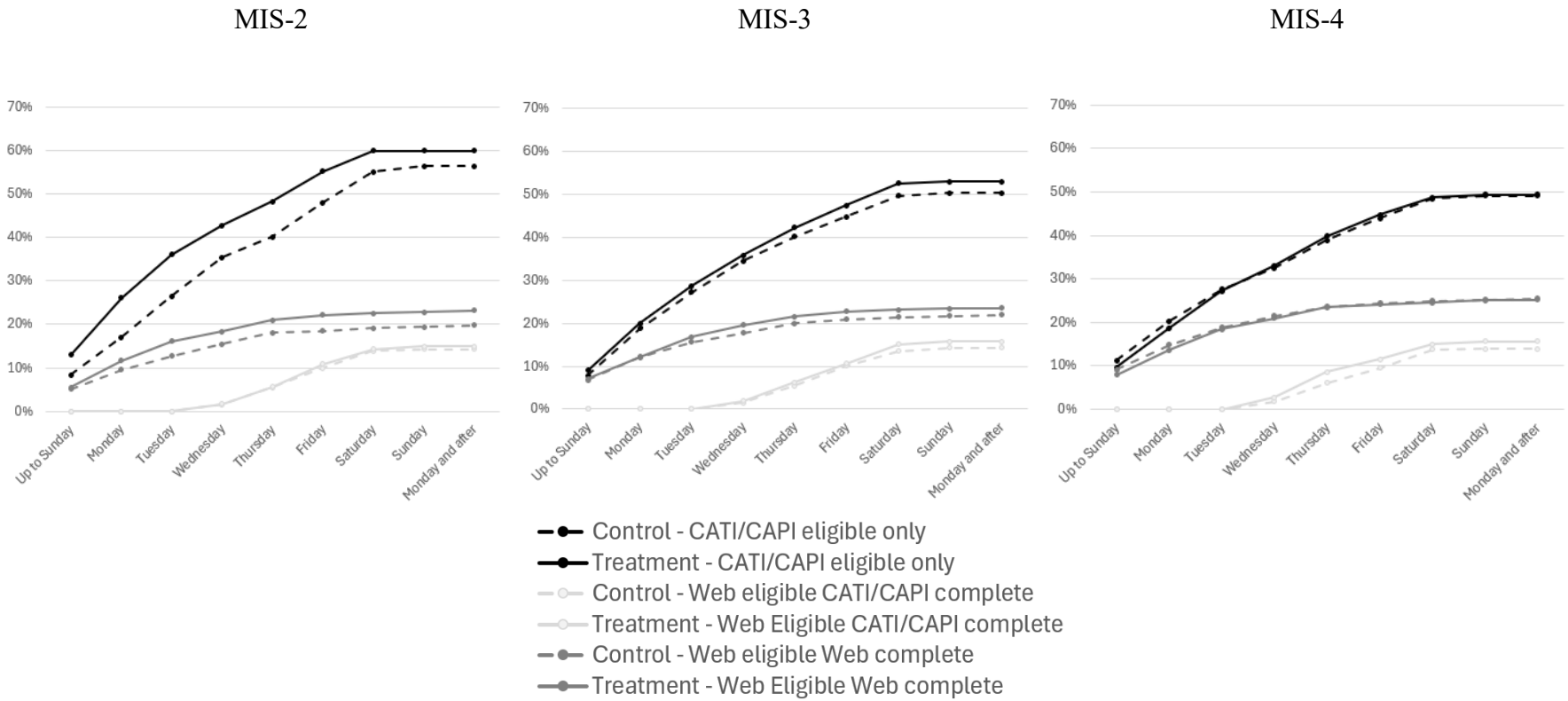


Figure 1. Cumulative response rate by experimental condition, eligibility and completion modes, and by month-in-sample (unweighted)

Focusing on the experimental treatment (comparing dashed and solid lines), Figure 1 shows that response rates among those who received the postal reminder were nominally higher than among the control condition in MIS-2, though this difference tapers off over time. Looking at daily response, there was no meaningful boost to response rate on or around the day that households were expected to receive the postal reminder (Day 4) and the treatment group's response rate appears higher starting from the first day of collection in MIS-2. The daily response rate plateaus after approximately Day 5, likely reflecting the effect of interviewers starting to follow-up with web non-respondents. This early increase suggests that the postal reminder delivery dates were spread more widely than expected.

The postal reminder did not appear to affect respondents who were web eligible but ultimately completed with an interviewer (light gray lines). We speculate that this reflects that the postal reminder, which was likely received before the recycle date for most households, did not motivate respondents to log on to complete via web self-response; they only responded when persuaded by an interviewer.

Research Question 4: What is the impact of a postal reminder on cost per complete?

To calculate cost per complete, we used Census-provided cost estimates[4] that an average interviewer-completed case cost $112.00 and an average web-completed case cost $10.00. The printing and mailing of a postal reminder cost $1.05 per case. Using these simple cost assumptions, along with the number of completed cases in the interviewer and web modes and the total number of eligible cases, we calculated cost estimates for the group receiving the postal reminder compared to the control group.

An illustration of cost calculations is shown in Table 5. These estimates use the data from MIS-2 to calculate the costs associated with each experimental condition. In MIS-2, the cost of the postal reminder was effectively $0.01 per completed case. In MIS-3, the cost increased to $2.29 per completed case, and in MIS-4 the cost increased to $3.73 per completed case. The change is due to the shift in proportion of web cases over MIS; the overall survey cost is lowered when the proportion of respondents using the less-expensive web mode is higher.

Table 5. Survey cost calculations for second month-in-sample

	Control	**Treatment**
Cost of interviewer-completed cases	$47,600.00	$48,048.00
Cost of web-completed cases	$2,980.00	$3,320.00
Cost of postal reminders	$0.00	$1,879.50
Total cost	*$50,580.00*	*$53,247.50*
Cost per complete	*$69.96*	*$69.97*

[4] These estimates do not include all fixed costs, such as instrument development.

Research Question 5: Does the timing/frequency of email contacts affect response rates in a compressed collection period?

Two email timing and frequency protocols were tested for web-eligible cases. To calculate response rates, we identified complete and sufficient partial complete cases out of all web-eligible cases. Because all web-eligible respondents were able to complete in either mode due to web nonresponse cases being recycled to interviewers for follow-up, the same denominator was used for response rate calculations for both groups. In Table 6, we present response rates by experimental condition for each completion mode. Respondents sent five emails responded via the web mode at nominally higher rates.

The field test's design led to complexities with analysis: because respondents could choose their mode of response and all respondents who did not respond via web were recycled to interviewers starting Day 4/5, there were no non-respondents in the web completion mode group; it was not possible to calculate response rates by completion mode. Weighted t-tests comparing the control group to the experimental treatment group (without regard to completion mode) confirmed that there were no significant differences in response rate based on number of emails sent (MIS-2: $t(3682)=-1.56$, ns; MIS-3: $t(4754)=0.31$, ns; MIS-4: $t(3805)=1.02$, ns). Additional emails were not associated with a significant change in response rate.

Table 6. Proportion of cases completed across web-eligible cases in all month-in-sample, by completion mode and condition (unweighted)

	Control (n=6,100)	**Treatment (n=6,200)**	**Difference**
CATI/CAPI complete	15.7%	13.9%	-1.8%
Web complete	21.2%	23.5%	2.3%
All Web eligible	*36.9%*	*37.4%*	*0.5%*

Research Question 6: Does the timing/frequency of email contacts affect the proportion of cases completed via web?

To investigate this research question, we calculated the proportion responding via web by MIS, summarized in Table 7. These data show that, among the web-eligible group, most respondents completed the survey via the web mode in all MIS, regardless of the timing or frequency of emails. The gap between treatment groups is largest in MIS-2 for the respondents that eventually completed the survey. This suggests that the extra emails may have pushed respondents to respond via web mode early on, however, this difference tapers off over MIS.

Table 7. Proportion of web-eligible cases completed via web by month-in-sample and condition (unweighted)

	Control (n=2,200)	Treatment (n=2,300)	Difference
MIS-2	55.3%	62.2%	6.9
MIS-3	57.1%	61.4%	4.3
MIS-4	59.9%	65.1%	5.2
All MIS	*57.5%*	*62.8%*	*5.3*

Research Question 7: Does the timing/frequency of email contacts affect speed of response?
To investigate time to respond, we plotted cumulative response rates over the course of the data collection period. In Figure 2, the black lines represent respondents who ultimately completed by personal interviewing. Within the black lines, the dashed lines represent respondents who were in the control group and sent three emails while solid lines represent those who were in the experimental treatment group and sent five emails. As expected, the series representing those who completed by personal interviewing stays at zero response until the recycle date when interviewers were able to contact respondents.

Focusing on the experimental treatment (comparing dashed and solid lines), Figure 2 shows that, in each MIS, the gap between treatment groups is widest at approximately Day 4, when the experimental treatment group received their second extra email. This message was notable because it referenced an interviewer coming to visit.

We see a different effect among the group that ultimately responded via CAPI/CATI. Among this group, respondents receiving five emails responded at a lower rate than respondents receiving three emails. Given that the five emails increased early response to the web mode (gray lines in Figure 2), there were fewer cooperative respondents remaining for interviewers to follow-up with after the recycle date. Although the additional emails did not impact overall response rates, they appear to have encouraged earlier response via the web mode.

Discussion
In this field test, two contact strategies were tested for encouraging response and pushing respondents to the web mode. Both the postal reminder and the additional emails had similar effects: both had a nominal effect on increasing response via the web mode. However, this did not increase overall response, rather only shifting it from interviewers to the web mode. This effect was most pronounced in MIS-2, and tapered off in MIS-3 and MIS-4.

Interpretation of these data is limited, however, due to two factors that contributed to the complexity of the test's design. Eligibility for the personal interviewing and web modes was not

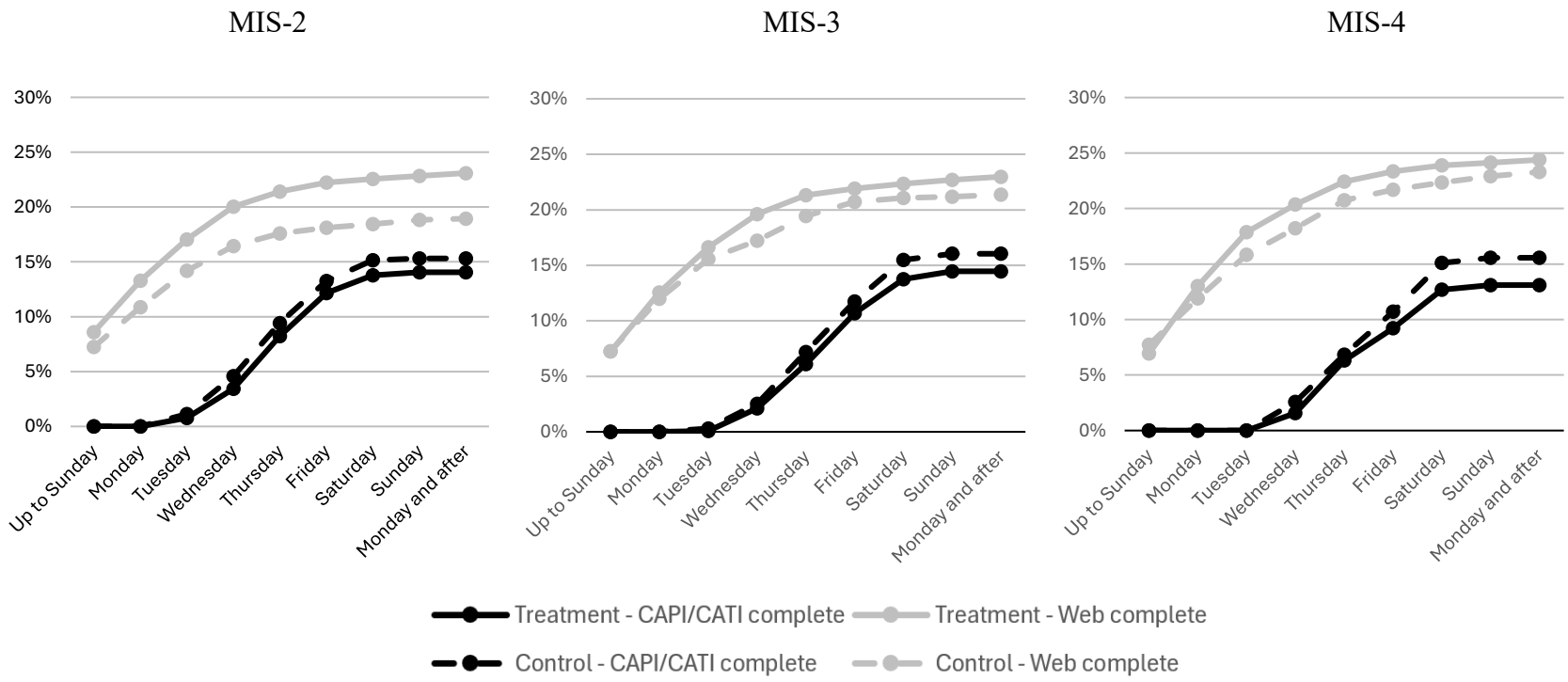


Figure 2. Cumulative response rate by experimental condition, completion mode, and by month-in-sample (unweighted)

randomly assigned; the most cooperative respondents were made eligible for web with only less cooperative respondents remaining to be worked by interviewers. Further, within the web mode, completion via personal interviewing and web modes was not randomly assigned; the most cooperative respondents completed first by web with only non-respondents being contacted by interviewers.

Overall, the data suggest that postal reminders should be further explored as a possible method of encouraging web response in MIS-2. A postal reminder may also be cost-effective in MIS-5, when households return from their temporary rotation out of sample. Emails, which are inexpensive to send, may encourage earlier web response and thus require less interviewer follow-up and ultimately reduce overall survey costs. We recommend extending these findings through research into modeling propensity to respond by web to improve the efficiency of field operations, including mode assignment and interviewer workload during a short field period

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