



Assessing Nonresponse Bias by Permitting Individuals to Opt Out of a Survey

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Taylor Lewis

I. Background

- Federal Employee Viewpoint Survey (FEVS)
- Review of Methods Used in Practice to Assess Nonresponse Bias

II. 2017 FEVS Opt Out Experiment

- Motivation and Experimental Design
- Key Findings

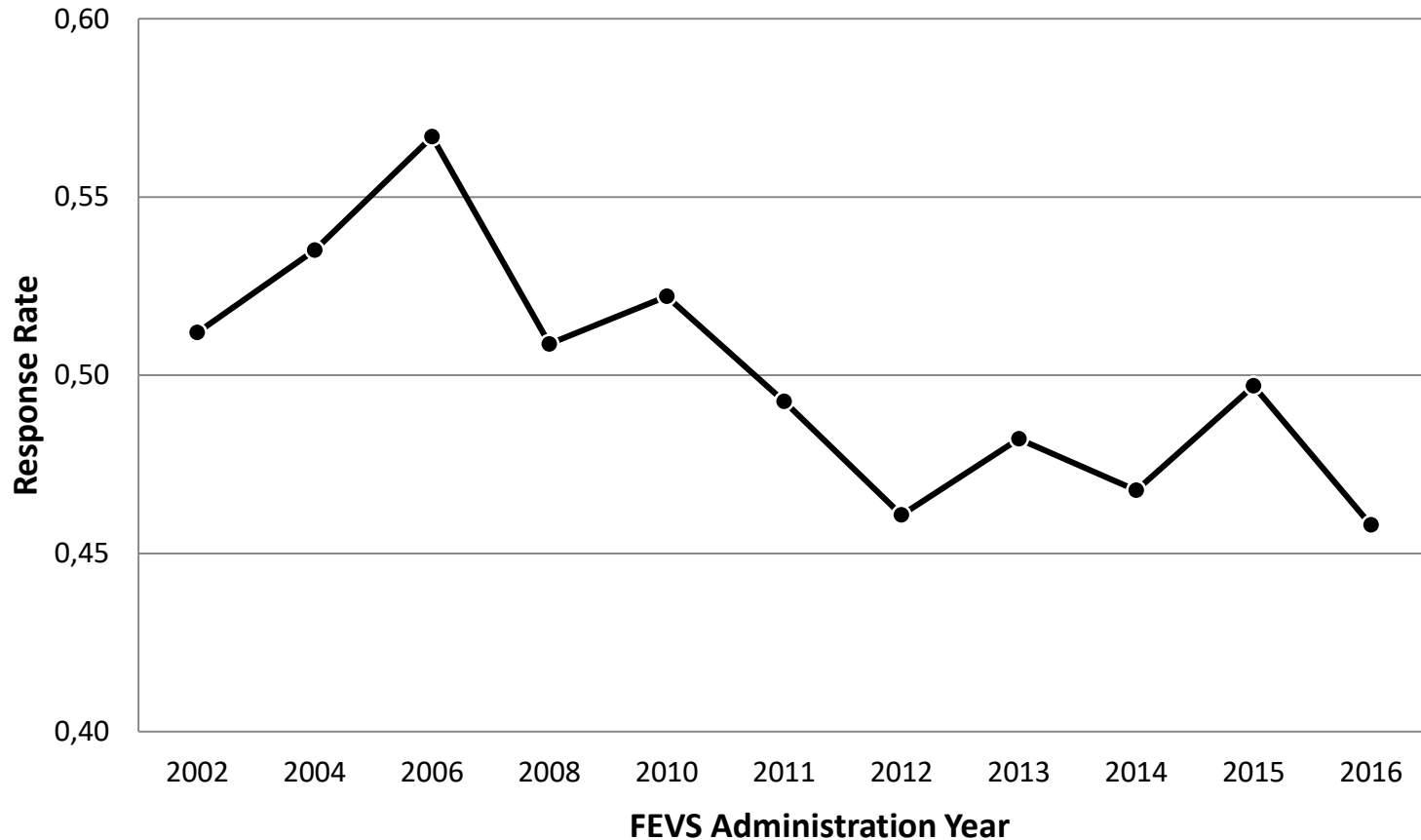
III. Summary and Ideas for Further Research

Background on the FEVS

- The Federal Employee Viewpoint Survey (FEVS) is an annual, Web-based survey of full- and part-time, permanent federal employees administered by the U.S. Office of Personnel Management (OPM)
- As of 2017 FEVS: stratified, single-stage sample design of ~1.1M individuals from over 80 agencies → response rate around 45%
- Personalized survey link sent via email, with five weekly reminders sent to nonrespondents – six-week field period in all
- Instrument consists mainly of attitudinal items (e.g., perceptions of leadership, job satisfaction) on a Likert-type scale, but also captures about a dozen demographics

FEVS Response Rate Trends

- Like many other surveys, the FEVS has experienced a gradual response rate decline since its inception in 2002



Nonresponse Bias Assessment Methods

For self-administered surveys, popular strategies include:

- Comparing response rates across subgroups – equivalence suggests MCAR (Little and Rubin, 2019)
- Computing one of the many flavors of nonresponse bias indicators – see Nishimura et al. (2016) for a review
- Comparing point estimates of respondents to known sampling frame quantities (e.g., Kennickell and McManus, 1993; Bolstein, 1991; Lin and Schaeffer, 1995)
- Benchmarking point estimates to other sources, such as comparing demographic distributions of respondents relative to distributions published by official statistical organizations (e.g., Duncan and Hill, 1989; Purdie et al., 2002).
- Following up with nonrespondents using a different mode/protocol (e.g., Criqui et al., 1978; Dallosso et al., 2003; Ingels et al., 2004; Stoop, 2004; Voogt, 2004; Groves et al., 2005)

2004 FEVS Nonrespondent Follow-Up Study

Following the 2004 FEVS administration (referred to at that time as the Federal Human Capital Survey), a follow-up study was conducted:

- Systematic sample of 6,410 nonrespondents from six agencies were contacted by telephone, recruited for a shortened, Web-based version of the survey
- No substantive differences found in attitudinal item distributions
- Follow-up survey also included an open-ended question about why the individual did not initially respond
- Most often cited reason: being too busy (46.9%)

Factors hindering inference from this study: (1) follow-up survey RR was only 44%; (2) reasons for not participating may have changed over time

Offering a Way to Opt Out

- Argument in literature (e.g., Sudman, 1985; Mullen et al., 1987) that offering the respondent a way to opt out engenders trust and empathy with researcher, has potential to *increase* likelihood of participating
- In similar vein, Anderson (2015) argues administrators of online panels should abide by CAN-SPAM Act of 2003 requiring unsolicited emails to contain a visible unsubscribe link
- Idea: offer the opportunity to opt out of FEVS via link in email invitation that launches a short survey with two purposes:
 1. Ascertain why the individual chooses not to respond (today's talk)
 2. Attempt a last-moment appeal (i.e., refusal conversion) based on the nonresponse reason cited (*Field Methods* manuscript in press)

Opt Out Experimental Design

- Approximately 10% of 2017 FEVS sample (small/independent agencies excluded) was designated for opt out, with a link in initial invitation and reminders labeled “Click here if you are considering not participating in the FEVS”

Your opinions matter! Let your leadership know how you feel about your job, your supervisor, and your agency. The Federal Employee Viewpoint Survey provides a safe and confidential way for you to voice your opinions.

[Click here to access your survey](#)


If the link does not take you directly to the survey, copy and paste the following into a browser window: <PERSONALIZED URL HERE>

[Click here if you are considering not participating in the FEVS](#)

Please DO NOT forward this e-mail, as it contains your personalized link to the survey. Answering the questions will take about 25 minutes, and you may use official time. While participation is voluntary, your feedback is important.

- Opt out link absent for those not designated for experiment

Opt Out Experimental Design (2)

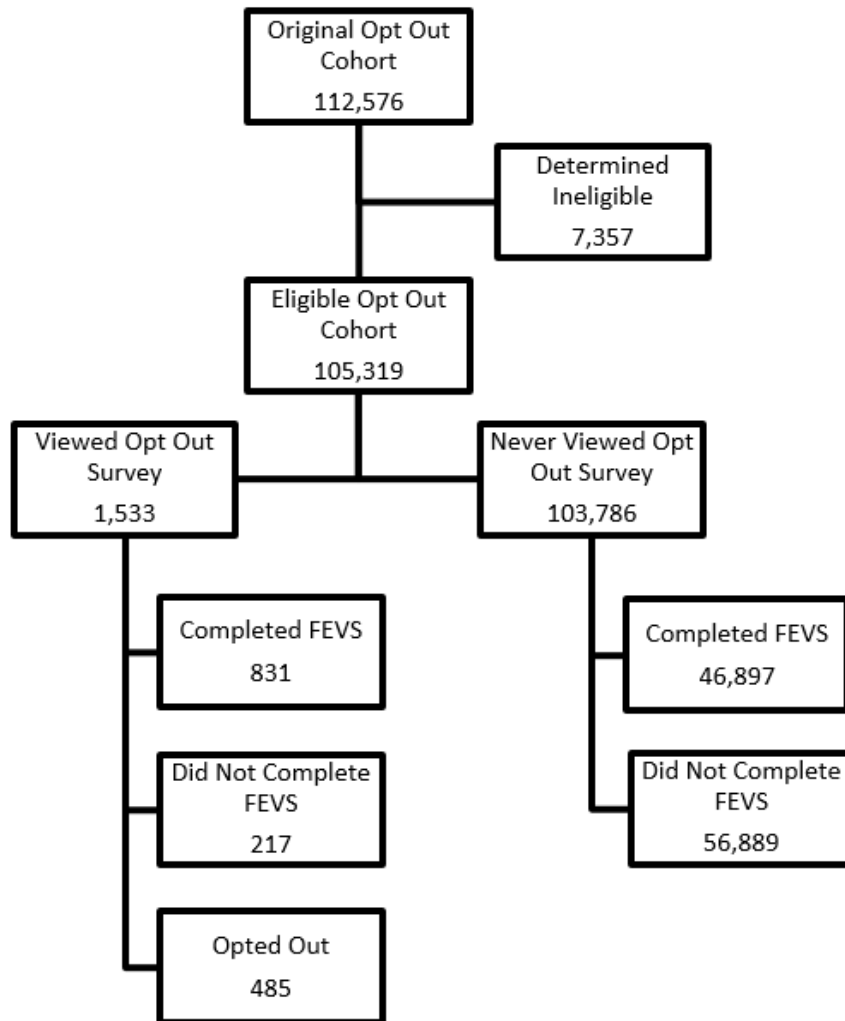
2017 **Federal Employee Viewpoint Survey** *Empowering Employees. Inspiring Change.* 

We would like to understand why people choose not to take the FEVS. Before we remove you from the survey participation list, could you please respond to the following question? Which of the reasons below MOST influenced your decision not to take the survey?

- I am too busy to take the survey
- I receive too many requests to take surveys
- Survey results are not used to change anything in my workplace
- I am concerned about the confidentiality of my responses
- Participation in the survey is not supported by leadership in my agency
- Survey results are never shared with employees
- Other, please specify:

- After answering this question, a predetermined 25% of individuals received a confirmatory message that official FEVS emails will stop
- Complementary 75% of individuals given last-moment appeal tailored to the response given, but still permitted to opt out
- “Other, please specify” responses received generic appeal, and write-ins were independently coded by two FEVS team members; 128 differences reconciled

Opt Out Experiment Results



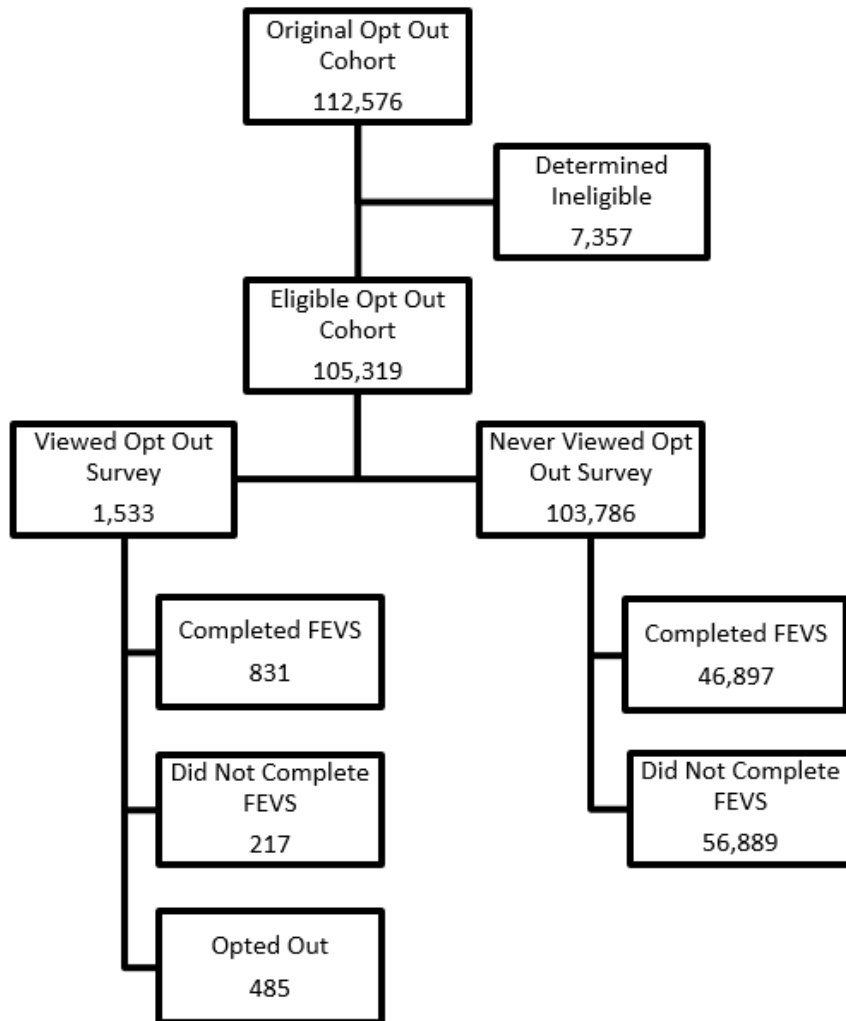
- Surprisingly low rate of individuals clicked on opt out link (~1.5%)
- Individuals who launched the opt out survey were about twice as likely to respond to FEVS than opt out
- RR 9 percentage points higher for those who clicked on the opt out link relative to those who did not: 54.2% vs. 45.2%

Nonresponse Reasons: 2017 Opt Out vs. 2004 Follow-Up

2017 Opt Out Survey		2004 Follow-Up Survey	
Reason	Percentage	Reason	Percentage
Survey results are not used to change anything in my workplace	29.2	Results will not be used to change anything	9.0
I am concerned about the confidentiality of my responses	24.0	Concerned about confidentiality, legitimacy of survey	6.7
I am too busy to take the survey	15.2	Too busy	46.9
I receive too many requests to take surveys	10.3	Hate surveys / receive too many survey requests	6.0
Dislike format / technical issues	4.4	Dislike survey content / format / technical issues	12.5
Recent employment change	3.7	--	--
Survey results are never shared with employees	3.1	--	--
Participation in the survey is not supported by leadership in my agency	1.6	Participation was not required	3.3
Indifference	1.2	--	--
Believed completed the survey	0.9	Thought they had returned the 2004 FHCS	7.5
Other	6.5	Other	14.4

- New #1 reason: survey results not used to change anything (29.2%); confidentiality concerns (24.0%) and being too busy (15.2%), and receiving too many surveys (10.3%) also major factors
- Technical issues (i.e., access to Web) less of a factor nowadays

Do Opters Out Represent Nonrespondents?



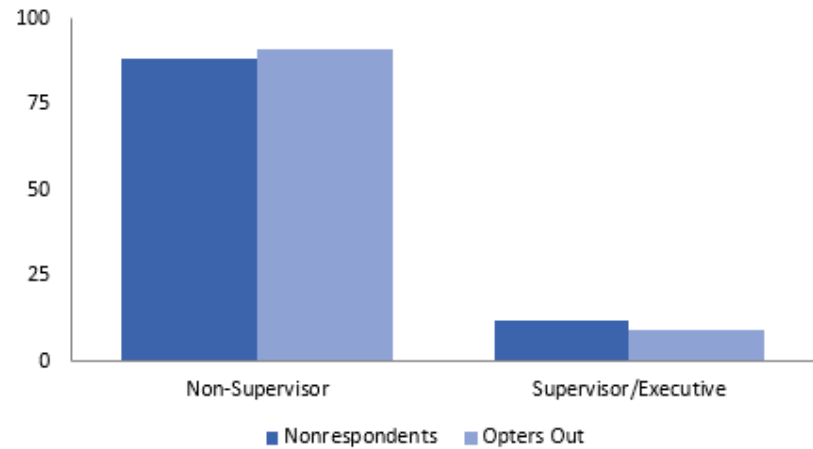
- Objective: compare demographic distributions from sampling frame of the 485 opters out relative to the $217 + 56,889 = 57,106$ nonrespondents

Do Opters Out Represent Nonrespondents? (2)

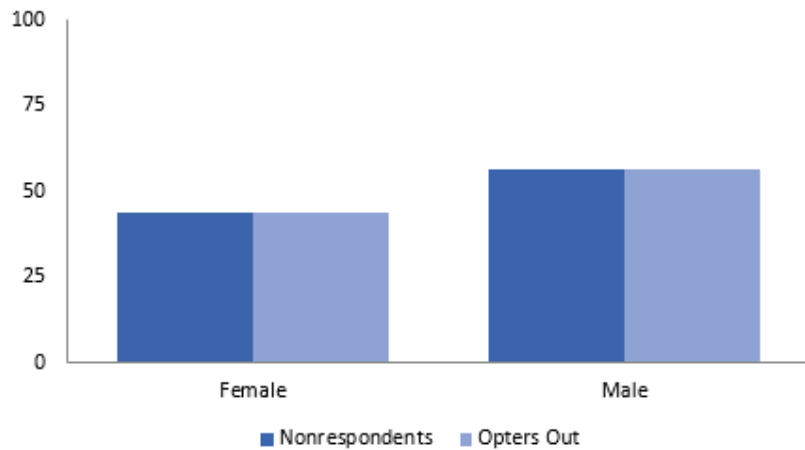
Work Location



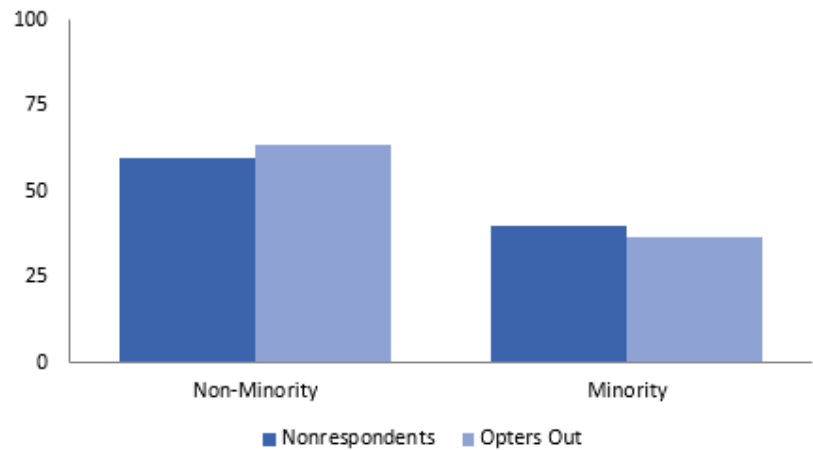
Supervisory Status



Gender

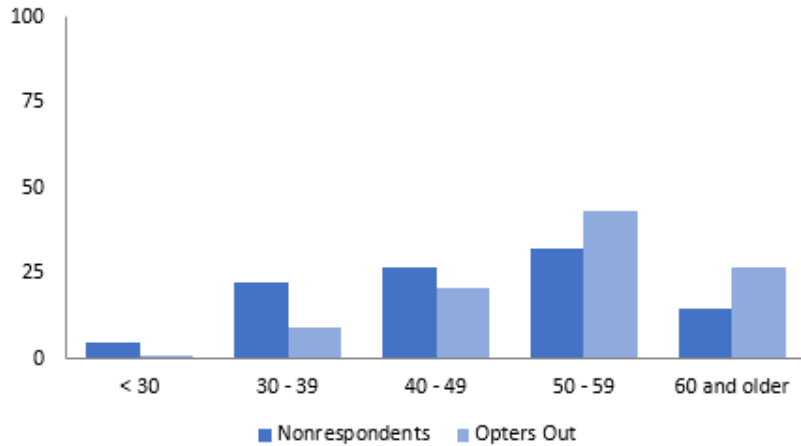


Minority Status

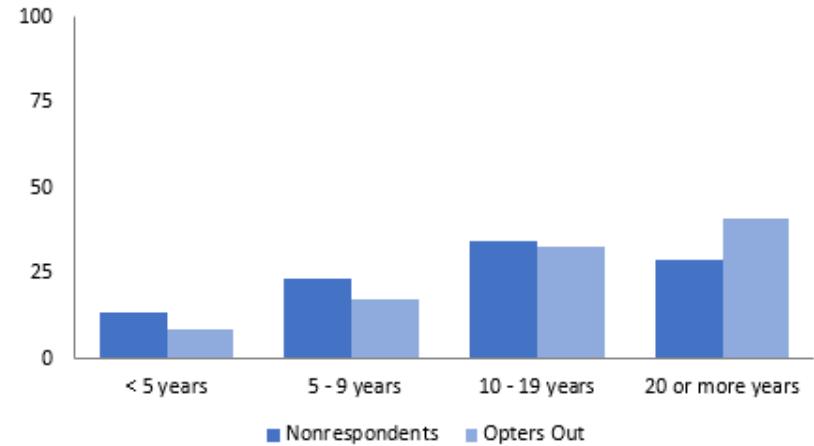


Do Opters Out Represent Nonrespondents? (3)

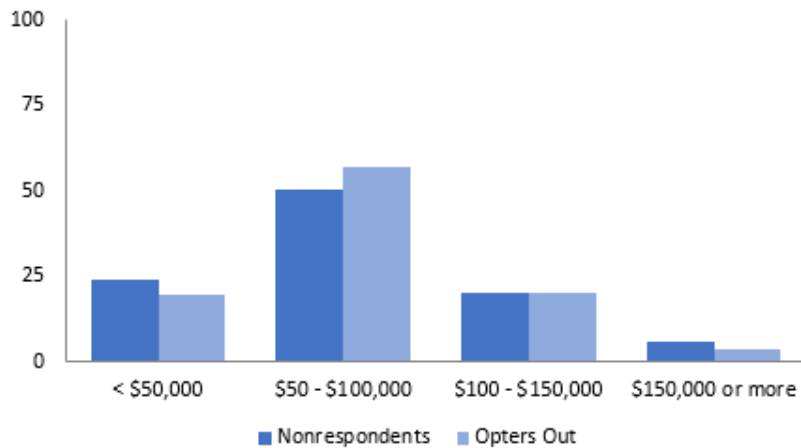
Employee Age



Federal Tenure



Income Level



Do Opters Out Represent Nonrespondents? (4)

- To test for statistical significance, a logistic regression model was fitted with an indicator variable of opting out versus not responding as the dependent variable:

F Tests of Model Effects			
Variable	df	Wald Chi-Square	<i>p</i> -value
Work Location	1	1.78	0.18
Supervisory Status	2	4.28	0.12
Gender	1	0.03	0.86
Minority Status	2	3.95	0.14
Employee Age	4	90.45	< 0.01
Federal Tenure	3	1.50	0.68
Income Level	3	15.44	< 0.01

- Only age and income level were significant, indicating balance on 5 of the 7 demographics considered

Summary

- Including opportunity to opt out was a net positive feature: led to increased response rate and a glimpse into distribution of nonresponse reasons
- Surprisingly low rate (~1.5%) of individuals clicking link to opt out
- Based on a comparison of demographic distributions from the sampling frame, opters out appeared to represent nonrespondents well

Questions for Discussion

1. How could the design/execution be modified to increase the rate at which respondents click on the opt out link? Or is the low rate not so much a concern?
2. Are there other analyses or cuts of the data that would help bolster the argument that opters out can represent sentiments of the larger pool of nonrespondents?
3. Given the target population and data available, are there other nonresponse bias assessment methods that could be pursued as a comparison against the opt out approach?

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