7.1 Comparing impact of respondents to the full sample

Figure1 shows the distribution in impact estimates (in dollars) between respondents and the full sample, by response rate.[1] Although there is considerable variability in the estimates, the average difference in impacts between the respondent and the full sample is approximately zero for most response levels. For example, even at a 40 percent level of response, the average difference across the sites is approximately zero, though there is a fair amount of variation by site (site fixed effects are controlled for in the regression analyses).

Figure 2 shows the difference in earnings impacts between the respondent and full research samples, by site. In several sites, the difference in impacts across these samples is approximately zero at both low and high levels of response. In some sites (such as Eugene, Houston, and Los Angeles EJC), the difference in impacts across the two samples grows as response rates increase. In other sites (such as Corpus Christi and Fort Worth, Texas) the difference in impacts decreases as response rates increase. Overall the pattern across sites suggests a weak and statistically 'noisy' relationship between response rates and this measure of bias.

Table 1, Cumulative Difference shows the result of the regression models. The relationship between response rate and the difference in earnings impacts is not statistically significant (p=0.35). The coefficient on response rate implies that the estimated difference in annual earnings impacts changes by $2.79 for a percentage point increase in the response rate. The effect size is equal to 0.004. The bootstrapped 95% confidence interval also shows that the estimated relationship between the response rate and bias in impacts is not different than zero

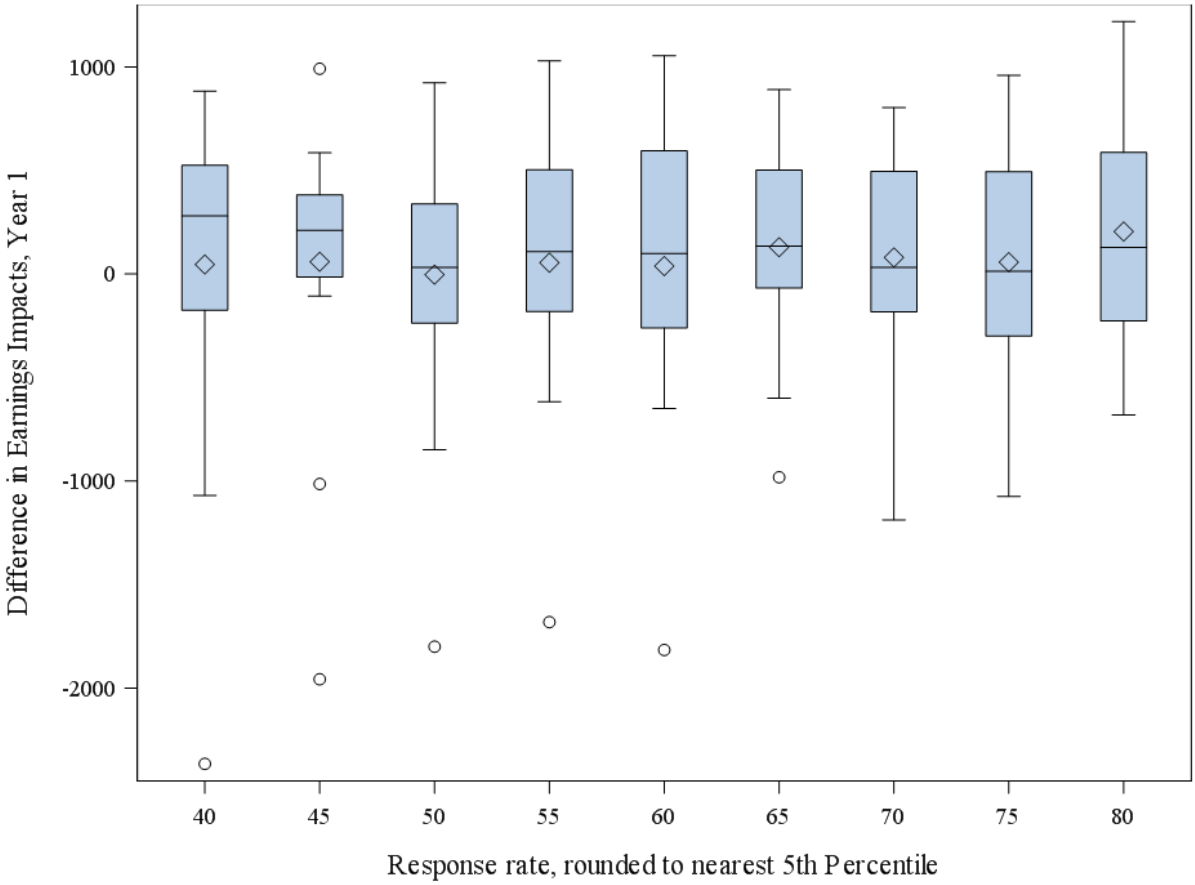
[1] The impact estimate for the full sample (including respondents) is subtracted from the impact estimate for respondents.

(which is determined by observing that the lower and upper bound estimates after 1000 bootstrap estimates includes zero).[2]

Tables and Figures

Figure 1

Difference in Earnings Impacts for the Respondent Sample Versus the Full Research Sample



[2] From a practical point of view, the "cumulative" measure of bias most closely approximates the situation faced by evaluation researchers in the field and is therefore the key estimand of interest. It could be argued, however, that a measure which evaluates bias *at the margin* (that is, at every additional 5 percent of respondents, without repeated measures) is preferable statistically because it does not include previously assessed sample members allowing for a better determination of trend. The results from this different estimator, however, are the same. If anything, the effects at the margin are even weaker (P=.61; effect size = .003).

Figure 2

Difference in Earnings Impacts for the Respondent Sample Versus the Full Research Sample, By Site

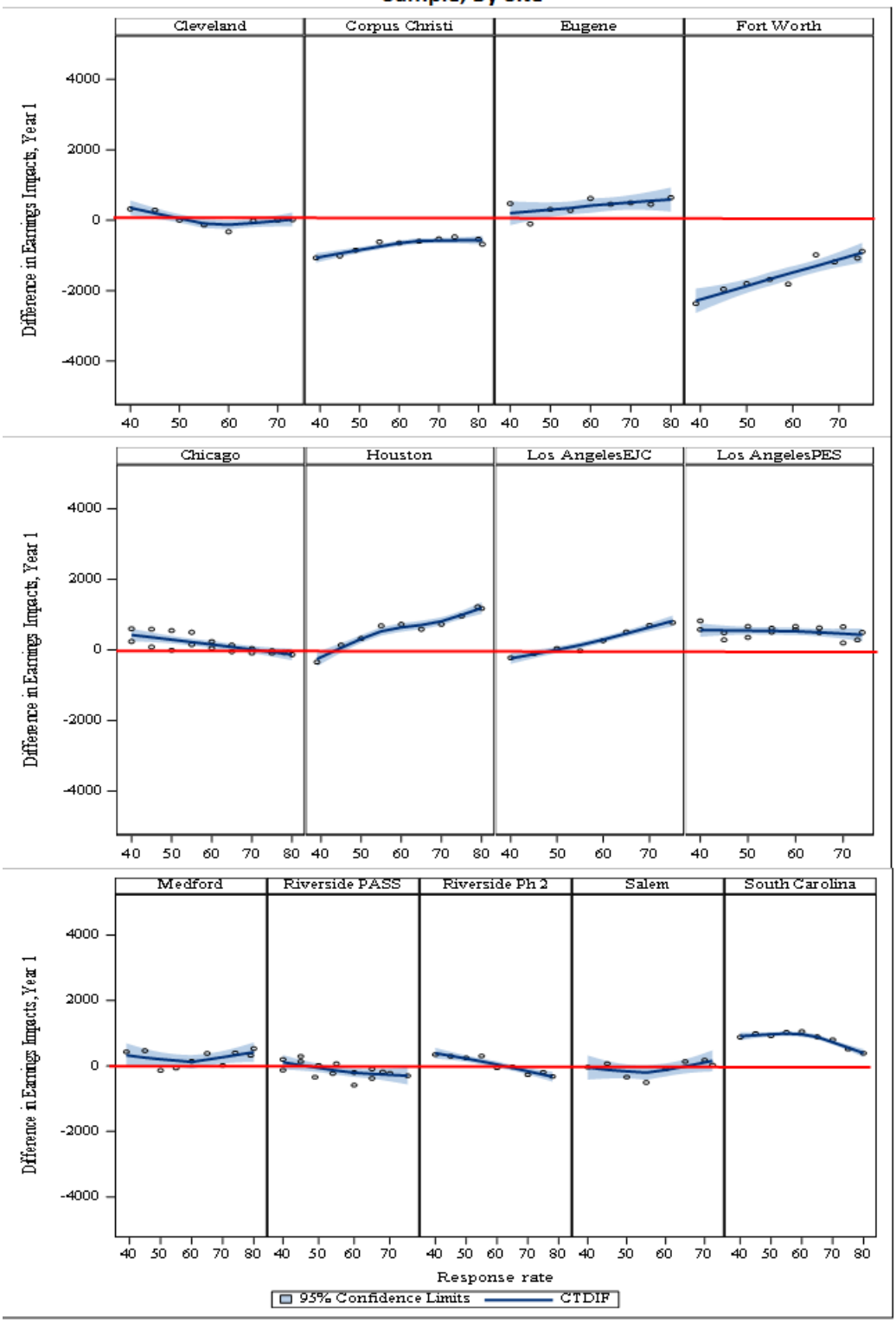


Table 1

Estimated Regression Coefficients for the Relationship Between Response Rate and the Difference in Impacts on Administrative Records Outcomes Between Survey Respondents and the Full Sample

	Cumulative Difference		Marginal Difference	
Characteristic	Parameter Estimates	P-value	Parameter Estimates	P-value
Response Rate	2.790	0.3586	10.360	0.61
Standard error	(2.97)		(19.97)	
Effect size	0.004		0.003	
Bootstrapped 95% Confidence Interval	[-2.32, 6.79]		[-38.95, 62.33]	
Site fixed effects	129.180	<.0001	4.050	0.003
R-squared	0.806		0.112	
Mean of dependent variable	70.480		170.981	
F statistic	132.500	<.0001	3.890	0.003
Sample Size	140 (21 clusters)		140 (21 clusters)	

Notes: The regressions controlled for site fixed effects and clustered by response rate. For the bootstrap estimates, 1000 replicates were created using unrestricted random samples with replacement. The cumulative differences show the difference in impacts as of a given response rate. The marginal differences how how the differences change at each incrementile 5 percent increasae in response rates.

Appendix Figure 1

Scatterplot of Difference in Earnings Impacts By Site and Response Rate