Certification Tests as an Indicator of Interviewer Productivity

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Abstract: The Survey of Income and Program Participation (SIPP) is currently undergoing redesign to incorporate an Event History Calendar (EHC), reducing cost and a change to respondent burden through annual data collection. As this evolution continues, the quality of data collected is being assessed, as is interviewer training effectiveness, through an incorporation of an interviewer certification test administered at the end of the classroom training. Using OLS regression, this research assesses the effectiveness of this certification test as a predictor for interviewer productivity with respect to length of interview, person non-response, and item non-response. Recommendations for the future direction of interviewer training will be made from these research implications.

The redesign of the Survey of Income and Program Participation (SIPP) is striving to collect the same high quality detailed data as collected by current SIPP, while reducing respondent burden and saving taxpayer dollars. To accomplish this, the re-engineered SIPP will institute a data collection method that is relatively new to CAPI interviewing, and is known as the Event History Calendar (EHC). The EHC has emerged from the Life History Calendar method (Freedman, Thornton, Camburn, Alwin, & Yound-DeMarco, 1988). Data from the first automated test of the SIPP EHC (the 2010 SIPP EHC), revealed that the percentage of person non-response in this test was significantly higher than that found in the first wave of data collection by the production 2008 SIPP panel. This data quality result could be attributed to either a survey effect or an interviewer effect (O'Muircheartaigh & Campanelli, 1998). The purpose of this research is to assess the role of the interviewer in the new data collection method. In addition to the new interviewing method, the interviewer training for the EHC has incorporated a certification test to be used as a predictor of interviewer productivity and training effectiveness.

Theoretical Focus

Experimental design comparisons initially found EHC interviewing methods to be superior to conventional questionnaires when measuring social and economic behaviors over a reference period of one to two years (Belli, 1998). The use of retrospective memory reporting and landmark events aids respondents in accurately reporting time-sensitive information while enabling the interviewer to enhance rapport (Callegaro, Belli, Serrano, & Palmer, 2007). The use of the full calendar year as the reference period has been found to be the most effective use of the EHC method, specifically with respect to accurate recall and the reduction of the effect of

seam bias present in panel surveys with multiple waves of data collection as used in the current SIPP (Callegaro & Belli, 2007).

The theoretical frame for EHC interviewing suggests that this method may be a way to collect detailed monthly data from respondents over a one year reference period. However this frame does not account for interviewer effects. EHC interviewing is a new method of data collection for the US Census Bureau and interviewer effects have not been evaluated in this context. SIPP-EHC interviewers will be given a formal assessment of their comprehension of SIPP-EHC interviewing concepts at the completion of training. Certification test scores determine future supervisory time needed for each interviewer's professional development in preparation for field data collection. A lower certification test score may require supervisor intervention in a greater number of subsequent interviews. To assess the predictive relationship between test scores and interviewer productivity, several models will be developed.

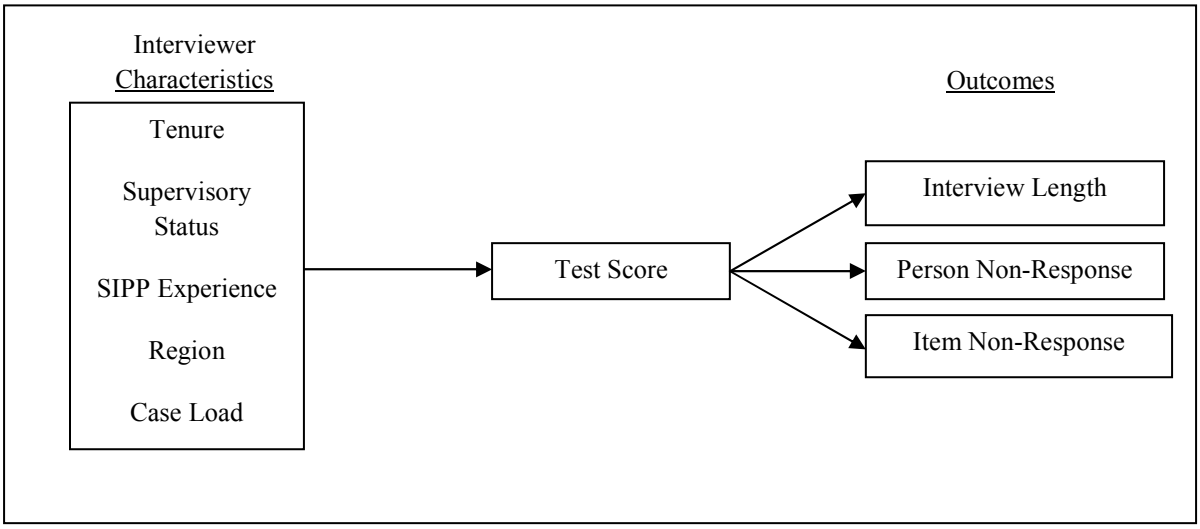
Data & Methods

Data from the 2010 SIPP-EHC CAPI Field Test US Census Bureau internal use files are being evaluated. Regional office will be included as a control covariate when evaluating interviewer productivity, as displayed in Table 1. For interviewer identification confidentiality, Regional Offices have been assigned letters for identifiers, and interviewer identifiable information, such as interviewer demographics, will not be used in this analysis. Levels of experience are essential to any analysis of productivity. Therefore interviewer tenure, status as supervisory or nonsupervisory field representative, as well as experience with SIPP will be included as control variables, as in Figure 1 (Huffcutt & Woehr, 1999). Caseload, or number of

cases assigned to an interviewer, may also impact levels of interviewer productivity and will be included as a covariate (O'Muircheartaigh & Campanelli, 1998). An additive OLS regression model will be used to assess the amount of variance in interviewer productivity attributable to interviewer certification test scores.

There are three available measures of interviewer productivity—interview length, person non-response, and item non-response. The models to be run are outlined in Table 2. The first model will include the interviewer characteristic control covariates only. The second model then adds the first of the non-outcome measures, with the other taking its place in the third model. The fourth model adds both these covariates. The fifth model includes the interviewer characteristics and the test score. The sixth and final model will include all interviewer characteristics, both measures of interviewer productivity not being used as the outcome variable, and the test score. Interaction terms will be introduced where applicable.

Figure 1. Conceptual Framework



Expected Findings

Preliminary results are indicative of a negligible predictive power of the certification test. Additional time is required to properly examine the covariates. Also, interviewer training emphasized that the 2010 SIPP-EHC was a test, rather than a production instrument. This may have altered the interviewer approach to data collection, significantly adding difficulty to the assessment of all of the outcomes. Also, the survey instrument contained inefficiencies that resulted in lengthy interviews. All these effects are currently being evaluated and improved for the 2011 test. If, as preliminary results demonstrate, the certification test has no strong predictive power, additional supervisory field observations based on interviewer test scores may be unwarranted. The training time devoted to developing and administering the interviewer certification test may be more effectively spent in supervisory observation of new interviewers.

Table 1. Sample Distribution Descriptive Statistics by Regional Office.

Site	Respondent Distribution	Missing Cases[1]	Completion Rates (%)	Interviewer Test Score Average (%)
Site A	1826 (12.39%)	200 (10.95%)	85.89	75.52
Site B	2944 (19.98%)	305 (10.36%)	86.23	79.86
Site C	399 (2.71%)	98 (24.56%)	70.97	78.86
Site D	1302 (8.83%)	220 (16.90%)	81.23	70.83
Site E	2946 (19.99%)	237 (8.04%)	87.96	80.55
Site F	5321 (36.10%)	739 (13.89%)	83.55	75.69
Total	14738	1799 (12.21%)	85.89	76.57

[1]Percents are calculated using the number of missing cases divided by the total respondents in that specific area.

Table 2. OLS Regressions for Length of Interview.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Tenure	*	*	*	*	*	*
Supervisory Level	*	*	*	*	*	*
SIPP Experience	*	*	*	*	*	*
Region	*	*	*	*	*	*
Case Load	*	*	*	*	*	*
Missing Respondent Rate[1]		*		*		*
Question Completion Rate[2]			*	*		*
Test Score					*	*
R^2	*	*	*	*	*	*

*indicates findings will be reported in this cell.

[1/2] In subsequent analyses, these covariates would be replaced such that each of the three possible outcomes is regressed with the other two (i.e. in Table 3 Missing Respondent Rate would be the outcome while Question Completion and Length of Interview would be covariates).

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