The Impact of Interviewers’ Personality on Measurement Error

Findings from the SOEP “Interviewer Survey”

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Causes of Measurement Error

- Item sensitivity
  - Social Desirability
  - Privacy
  - Respondent is unwilling to give accurate response

- Lack of Respondent's Cooperation
  - Missing motivation
  - No feeling of obligation
  - Respondent makes no effort to give accurate response

- Respondent’s Mood
  - Certain concepts may be sensitive to mood changes (e.g., life satisfaction, psychological items in general)

- Interviewer Conscientiousness
  - Adherence to interview protocol, appropriate probing, accurate keying

Five-Factor Model of Personality (“Big Five”)

- Neuroticism
  - Emotional instability, lack of ability to cope with stress, nervousness

- Extraversion
  - Sociability, enthusiasm, outgoing, unreserved, gregarious character

- Agreeableness
  - Gentle and kind character, seeking consultation instead of confrontation

- Openness to Experience
  - Open for new ideas and intellectual stimulation, sensation-seeking

- Conscientiousness
  - neat, orderly and meticulous approach to tasks, systematic

Theoretical Assumptions

- Agreeableness and Openness reduce social desirability effects because interviewers are understanding and non-judgmental
- Extraversion increases social desirability effects because interviewers have strong opinions
- Conscientiousness reduces privacy effects because interviewer can be trusted with confidential data
- Extraversion increases motivation because enthusiastic and sociable interviewers are able to convince respondents of benefits of participation
- Conscientiousness increases feeling of obligation because interviewer invokes consciousness in respondent
- Neuroticism threatens good temper of the respondent because interviewer is moody

Data and Model Description

The SOEP Interviewer Survey

- In 2006, all interviewers of that SOEP wave were asked to take part in a mail survey
- Response rate=94%
- Data for N=552 interviewers
- Update (in comparison to bookkeeping data) on demographics and other characteristics
- Systematic feedback on interviewers’ work experience: motivation, workload, etc.
- Interviewer data on self-rated measures of attitudes, values, beliefs, etc.
- Same question format as in SOEP questionnaires for respondents
- Data were linked with individual-level SOEP data on respondents from the 2006 wave

Indicators of Measurement Error

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicates</th>
</tr>
</thead>
<tbody>
<tr>
<td>rounding error</td>
<td>body weight</td>
</tr>
<tr>
<td>item missingness</td>
<td>net income</td>
</tr>
<tr>
<td>point estimate</td>
<td>life satisfaction</td>
</tr>
<tr>
<td>item missingness</td>
<td>Overall (across all variables)</td>
</tr>
</tbody>
</table>

“Big 5” in the SOEP

- Shortened Big Five Inventory (BFI) part of interviewer survey and SOEP 2006
- 15-item measure (three per factor)
- Factor scales are standardized based on 2005 GSOEP respondent results with mean=50 and std=10

Hypotheses

H1: Agreeableness and openness are negatively related to occurrence of rounding errors in body weight question
H2: Extraversion is positively related to rounding errors in body weight question
H3: Conscientiousness is negatively related to a) item missingness in net income question and b) in the whole interview
H4: Neuroticism is negatively related to life satisfaction

Model Specification

- Two-level hierarchical regression models
- Face-to-face interview cases only
- Dependent variables: ME indicators
- Independent variables: Big 5 variables
- Other covariates: Key demographics (interviewer and respondent level), experience with SOEP and interviewing

Results and Discussion

Results

- H1: Openness is positively related to the occurrence of rounding errors in weight variable (OR=1.011, p-value<0.01; rho=0.017). Agreeableness is not related to rounding errors.
- H2: Extraversion is not related to rounding errors in weight variable.
- H3: a) Conscientiousness is negatively related to item missingness in net income (OR=0.972, p-value=0.10) and b) also negatively related to item missingness overall (OR=0.985, p-value<0.50, rho=0.238)
- H5: Neuroticism is weakly negatively related with respondents’ life satisfaction (regression coefficient: -0.007, p-value <0.10; rho 0.114)

Discussion

- Conscientiousness in interviewers significantly reduced the occurrence of item missing data, both in the net income question as well as in the whole questionnaire. This is reassuring, as one would expect a successful interviewer to have this trait.
- Neuroticism is slightly but significantly correlated with respondents’ life satisfaction. This suggests that interviewers’ neuroticism can potentially bias mood-sensitive questions.
- Openness is highly significantly related to the occurrence of rounding errors in the body weight variable, but in the opposite direction of what was expected. This finding needs further investigation and explanation.
- Contrary to our expectations, neither extraversion nor agreeableness had any effect on our measure of social desirability (rounding error in weight question).