Using Technology to Conduct Questionnaire Evaluations with Hard to Reach Populations

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National Agricultural Statistics Service

• Conducts surveys about all facets of agricultural including production, economics, land values, and prices
• Collects data from farm and ranch operators
• Farm operations are considered establishments, but many more closely resemble households
• Rural population
Challenges to Questionnaire Evaluation at NASS

• Rural population makes travel to research lab difficult
• Geographical dispersion makes travel to respondents difficult
• Extremely costly to conduct interviews
• When travel is possible, work is often done in a field, barn, or on a tractor!
Current Questionnaire Evaluation

- Limited questionnaire evaluation
- Quantitative methods
- Expert review
- Cognitive interviewing
  - Very few studies, most using small samples
  - Field enumerators used for CIs
    - Minimal training in questionnaire evaluation techniques
    - Very good at getting an answer to questions, but not as good at evaluating the actual questions
Expanding Questionnaire Evaluation

• Exploring alternative ways to conduct questionnaire evaluation

• Increased input from respondents
  – Use of technology (iPads, CARI) to perform behavior coding
  – Telephone cognitive interviewing
Use of iPads

• Currently used to collect survey data
• Can also be used to audio/video record data collection for questionnaire evaluation for behavior coding in CARI
• Currently using a second person and iPad to video record interview for training and usability purposes
• For behavior coding, no need for second person and iPad
Experiences with iPads

• First hand account of the interaction between the field enumerator and the respondent.
• Quick transmission of interview recordings from the field to research staff
• Behavior Coding
  - Audio and video record face-to-face interviews
  - Code and analyze using CARI system
Telephone Cognitive Interviews

- Reach a wider population
- Shorter amount of time
- Less cost
- Research staff can conduct interviews
Experiences with Phone Cognitive Interviews

• 2012 Census of Agriculture form
  – Establishment survey
  – Self-administered - Mail questionnaire
  – Evaluated the first two pages of form (known to have problems)
• Selected forms that were filled out incorrectly
• Mailed respondents a copy of their completed form with a cover letter
• Interviews limited to 30 minutes
• Completed 6 interviews
• Telephone interviews supplemented w/in-person cognitive interviews
Lessons Learned

• Constrained by time limit
• Difficult to convey intent
• Difficult to keep respondents focused
• Mode of original survey hard to administer over phone
• Setting affects quality of interview
Alternatives to Traditional Cognitive Interviews

• Important for several reasons
  – Cost
  – Distance to our respondents
  – Time constraints

• Feedback?

• Comments?

• Questions?
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