

# A Comprehensive Reassessment of Establishment Surveys



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*Fourth International Conference on Establishment Surveys*

*Approaches to Improving Data Quality*

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*June 14, 2012 | Montreal, Canada*

# Overview

- The Problem
- The Solution
- What is a comprehensive reassessment?
- How does a comprehensive reassessment work?
- Case Study: 2011 Petroleum surveys
- Is a comprehensive reassessment worth it?

# The Problem

- In the U.S. Federal government, survey production and survey research are conducted in two separate offices
- Production is rarely conducted by a survey methodologist and survey methodologists are rarely subject matter experts
- This requires non-survey methodologist to identify survey issues and then elicit help from survey methodologists
- Survey methodologists are often consulted at random intervals, issues are addressed in isolation, and findings are often incomplete and considered subjective

# The Solution

- Production offices and survey methodologists must work collaboratively on an ongoing basis
- This provides survey methodologist with the opportunity to better address issues of Total Survey Error
- ❖ This can be accomplished with a comprehensive reassessment of survey forms

# What is a comprehensive reassessment?

- This isn't a new idea but a more holistic framework to survey reassessment
- Collecting information from the production office and from the respondents. Compare information for common patterns
- Patterns are used to make informed decisions about how to best change the survey form to reduce survey error
- ❖ This results in a systematic and comprehensive method that is unconstrained by the cycle of data collection

# How does a Comprehensive Reassessment Work?

# Step 1: Determine what we already know

- Production Offices have anecdotal information about respondents which survey methodologist often consider subjective
- Instead of disregarding information, conduct exploratory semi-structured interviews to gather this information in a standard manner
- This allows us to find out what we already know internally about survey issues and create a partnership between the production office and the survey methodologists

## Step 2: Receive Respondent Feedback

- Use information from the production office interviews and survey methodological expertise to understand the respondent experience and their response process
- Conduct exploratory semi-structured interviews with respondents
- This allows us to compare respondent feedback to the information learned from Step 1



## Step 3: Assess Gathered Information

- Compare information from the production office, respondents, and survey methodologists and look for common patterns
- Once patterns have been identified, make an informed decision about how to best change the survey form in order to reduce survey error
- Weigh decision against current resources in order to determine what can be realistically implement

## Step 4: Implement Findings

- Conduct a comprehensive redesign of the entire survey form and not just one question or one section of survey form
- Apply fundamental survey design principles, existing agency standards and best practices for establishment survey form design to the survey form
- Note that this process is resource intensive and it is key to maintain momentum

# Step 5: Test Redesigned Form

- Important to test redesigned form including both cognitive testing and usability testing
- If both are needed, cognitive testing should occur prior to usability testing

# Case Study: 2011 Petroleum surveys

# Background on U.S. Energy Information Administration

- Primarily collect mandatory, self-administered establishment data
- Measures the flow of energy through out the U.S. including petroleum, natural gas, coal, electricity, and alternative energy sources
- Collect mostly operational data pulled from records
- Large units are sampled with certainty
- Reporting often involves more than one respondent at a single location to complete one survey form

# Case Study: 2011 Petroleum surveys

- In 2011, the Survey Development Team (Survey Research Office) collaborated with the Office of Petroleum and Biofuels Statistics (Production Office) to redesign their survey forms
- Package includes 26 surveys divided between Petroleum Supply and Petroleum Marketing
- Together these surveys track the flow of petroleum related products across the United States

# Step 1: Determine what we already know

## Process:

- Conducted 24 in-person internal early-stage scoping interviews
- Interviews conducted separately for survey managers and analysts
- Each interview was about one hour
- Operationalized TSE concepts into easily asked questions

# Step 1: Determine what we already know

## Findings:

- Created organized list of issues
- Provided bird's eye view of issues across surveys
- Identified low hanging fruit
- Highlighted the disconnect between analysts and survey managers knowledge



# Step 2: Receive Respondent Feedback

## Process:

- Two key surveys were selected
- Conducted 17 telephone external early-stage scoping interviews across both surveys
- Each interview was about 45 minutes
- Respondents were selected to represent both problematic reporters and non-problematic reporters, and based on company size
- Production Office present for all interviews and provided time to ask non-protocol questions

# Step 2: Receive Respondent Feedback

## Findings:

- Production Office found process useful for surfacing issues both known and unknown
- Confirmed what we learned in Step 1
- Learned how respondents map their records to our data request
- Learned respondents organizational challenges to completing the form

# Main Findings

- Many issues would be easily resolved if respondents read the instructions
- Mismatch between concepts on Petroleum Marketing and Petroleum Supply forms
- Finding the correct respondent is difficult
- Asking the respondent for information they can not provide

# The Next Steps

- Assess Gathered Information: Discuss the results of the internal and external interviews with the Production Office and decide what findings to implement
- Implement Findings: Decision will be based on feasibility and resources including staff time and money
- Test Redesigned Form: Once we have decided what to change, form mock-ups will be designed and tested

# Is a Comprehensive Reassessment of Establishment Surveys Worth it?

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Evidence: Reducing respondent and Agency burden

- Fewer telephone calls/emails about similar issues
- Fewer edits triggered on the form
- Fewer clarifying comments on the form
- Fewer occurrences of previously identified issues during testing
- Less data processing/ data transformation

# Is a Comprehensive Reassessment of Establishment Surveys worth it?

## Consequences:

- Resource intensive when operating in a live survey context
- Organizational change could lead to organizational memory loss
- Potential interruption in time series

# Is a Comprehensive Reassessment of Establishment Surveys worth it?

## Benefits:

- Documents known issues in an organized format
- Documentation acts as a reference for the survey lifecycle
- Builds rapport between Production and Research Office/ Respondents
- Start the conversation about the survey's original research objectives



# References

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