

And Now Over to Massachusetts: Developing Standardized NTG Approaches

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Agenda

- Background
- Methodology study objectives
- Study activities
- Study benefits
- Questions

Background

- Variety of methods to estimate what would have happened in absence of EE programs
 - Net effect
 - Program-attributable savings
 - Program attribution or Net-to-Gross (NTG) ratio
- Extensive debate across country regarding need for this measurement

Background (cont'd)

- Many reasons why this measurement is important
 - Understand program/portfolio cost-effectiveness
 - Improve portfolio design/resource allocation
 - Refine program design
 - Understand market transformation
 - Align Program Administrator's (PA) financial interests with societal interests

Background (cont'd)

- Prior to 2003, MA PAs independently quantified
- 2003--PAs promoted standardized techniques for estimating program attributable savings
- 2010—PAs funded study to re-look at different methodologies for C&I programs

Methodology Study Objectives

- Develop standardized methodology for self-report approach (SRA)
- Develop decision framework and guidelines for when SRA is not appropriate

Study Activities

- Program review and taxonomy
- Best practice review of attribution research
- Develop and test revised SRA methodology
- Final recommendations for a revised SRA methodology

Program Review and Taxonomy

- Classify existing C&I programs
- Use this taxonomy to select appropriate methodology for each type of program

Best Practice Review

- Examined existing methodologies
 - Customer and vendor self-report
 - Market sales data analysis
 - Retailer/contractor surveys
 - Pricing and elasticity analysis
 - Stated preference analysis
 - Revealed preference analysis
 - Structure expert judging
 - Historical tracing (case study)
 - Billing analysis
 - Shelf and stocking observations

Best Practice Review (cont'd)

- For each method, summarized:
 - Research design factors affecting method validity
 - Applicability of methods for programs with particular features
 - Custom measures
 - Few diverse participants
 - Prescriptive measures with large number of similar participants
 - Measures with substantial upstream influence
 - Typical cost or complexity

Method Selection Factors

- Driven by program structure and type of information available
 - Availability of market sales data and meaningful comparison group
 - Homogeneity of the measure and the customers
 - Likelihood of substantial upstream effects unknown to end-use participants
 - Cost/value trade-offs

Method Characterization

- Describe each survey based method in terms of:
 - Who are the respondents or data providers?
 - What types of information are they providing?
 - How are the data analyzed?
- For each method, describe key factors affecting methods' validity and key data issues

Not all Self-reports are Equal

- Most Maligned:
 - Asking participants what they would have done hypothetically absent the program
- Much of the information we base market studies on is self-reported
 - Vendor sales data
 - Participant & nonparticipant preferences (stated/revealed)
 - Participant and nonparticipant actual purchases
- Some is more easily corroborated by records and direct observation than others

Survey-Based NTG Methods

Surveyed Group	Types of data collected	Data Description	Analysis
Participating End Users	Post Hoc counterfactual	Self-reported likelihood of buying absent program assistance	Scoring and averaging
Participating and nonparticipating end users	Revealed preferences	Actual purchases, prices, and customer characteristics	Discrete choice analysis or simple average adoption rates
Nonparticipating end users	Stated preferences	conjoint or double bounded exercises	Conjoint or double bounded specialized analysis
Nonparticipating end users	Stated preferences	likelihood of purchase at varying conditions	Scoring and averaging
Manufacturers & Regional buyers and distributors	Market sales data	Sales of efficient and standard equipment in program and non-program areas over time	Sales change in program vs non-program area
Retail store managers and contractors	Sales data	Sales of efficient and standard equipment when program is and isn't present	Weighting and/or averaging
managers and contractors	Sales and counterfactual	Promotional activity and sales with and without program	Weighting and/or averaging
managers and contractors	Customer-specific influence	Customer-specific influence of program and supplier	Weighting and/or averaging
Retail store	Shelf and stocking observations	Observed shelf volumes and prices	Modeling or averaging

Develop and Test Suggested SRA

- Identify best practice elements for survey design, data collection and analytic methods
- Suggest revisions to 2003 standardized methodology
- Hypothetical scenario testing
- Formal pretest of survey instrument with participants

Final Recommendations for SRA

- Based on hypothetical scenario and formal pretest, recommend final SRA approach

Study Benefits

- Achieve consistency in regulatory reporting of program results
- Eliminate need for PAs to revisit what method to use
- Provides cost efficiencies
- Allows more time for spillover to occur
- Guide decision-making for future evaluations

Questions





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