Consumer Perceptions of Tap Water, Bottled Water, and Filtration Devices [Project #2638]

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OBJECTIVES: The objectives of this project were (1) to measure consumer satisfaction with tap water quality, (2) to investigate demographic trends in consumer satisfaction and consumption of tap water alternatives, (3) to identify the factors that cause consumers to purchase and use bottled water and POU/POEs, and (4) to develop a list of recommendations for water utilities that can improve consumer satisfaction and help bridge gaps between perception and reality.

BACKGROUND: Recently, much attention has been given to the consumption and use of tap water alternatives such as bottled water and point-of-use/point-of-entry (POU/POE) devices. Significant growth in public/private partnerships, intense marketing of bottled water and POU/POE devices, and the recent increase in media attention to water issues have contributed to a shift in public attitudes toward tap water. Despite new drinking water regulations every few years, more people are turning to tap water alternatives.

HIGHLIGHTS: The following are highlights from the research project:

- Consumption rate of tap water alternatives is highly dependent on geographic location (20% usage rate in the Midwest vs. 80% on the West Coast).
- Tap water drinkers are more satisfied (20% on average) than tap water alternative drinkers concerning various aspects of tap water (e.g., overall quality, taste, appearance, smell, safety, healthiness).
- Tap water quality had limited influence on consumer satisfaction. The highest level of correlation (between satisfaction and water quality) was found to have an R2-value of 34%-64% for hardness and total dissolved solids.
- Safety was the primary motivator for filtered water drinkers. Bottled water drinkers were divided between taste, safety, and healthiness.

APPROACH: The general approach of this project was to identify customer attitudes and perceptions of tap, bottled, and filtered water in several geographically diverse markets. This was accomplished by first gathering physical data (e.g., finished water quality) for each of 12 target markets across the United States. Next, the researchers conducted a telephone survey to investigate public perceptions of bottled water, POU/POE devices, and tap water in the target markets. Approximately 200 persons (100 tap water drinkers and 100 bottled or filtered water drinkers) were surveyed in each market. Lastly, the researchers summarized and compared the survey results between markets and between utility management. Similar survey questions were given to the local water utility managers in order to enable a direct comparison between actual and perceived (on the part of managers) public perception.

RESULTS/FINDINGS: Consumption of tap water alternatives was significant with an average of 48% of the American public using either a POU/POE device or bottled water while at home. However, satisfaction among tap water alternative drinkers was still high. Of six tap water features, satisfaction with tap water safety was the lowest (3.1) but still above average (3.0 for the 1 to 5 scale that was used). Thus, it naturally followed that safety was the
number one motivator cited by filtered water drinkers and a co-equal motivator (along with healthiness and taste) for bottled water drinkers.

Water utilities’ perception of the issue revealed that utility managers tend to overestimate consumer satisfaction and underestimate the level of importance consumers place on tap water safety. For three basic areas of consumer satisfaction (tap water quality, overall customer service, and complaint resolution), managers overestimated satisfaction by 14% to 20%. In regards to motivators behind the use of tap water alternatives, managers cited taste as the primary motivator for bottled and filtered water drinkers. One area where managers did understand consumer patterns was in regards to consumer confidence reports (CCR). Only about 1/3 of the consumers remembered receiving a CCR; likewise, only 3 of the 12 market area managers (25%) believed their consumers would remember receiving one.

**IMPACT:** This project provides a survey database of nearly 2,400 responses to over 50 questions in 12 U.S. market areas. With the wide availability of desktop computers, sorting data and running correlations and/or cross tabulations is no longer a daunting task. Rather than relying on survey data from a national study, utility managers can examine results from 1 of the 12 areas that best represents their consumer demographics.

Future implications of this research could be significant if current trends in tap water consumption do not slow down. Overall, there is a growing level of distrust by Americans in regards to their tap water safety. Without reversing this trend, the reputation of being the public provider of clean, safe water will slowly erode away.

**MULTIMEDIA:** The report includes a CD-ROM.

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