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Assessing the Validity of CivicScience Data

--PROPRIETARY AND CONFIDENTIAL--

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Executive Summary

The NPD Group, Inc. has sponsored a rigorous examination of the quality of the data generated by CivicScience, Inc., an organization that has developed a novel way of collecting survey responses online via short questionnaires that are well integrated into participating publisher webpages. NPD retained Joel Rubinson, President of consulting firm Rubinson Partners, Inc. and faculty member of the NYU Stern School of Business to help evaluate the survey approach. Before establishing his consulting firm, Joel Rubinson was Chief Research Officer at the Advertising Research Foundation. His credentials as a research methodologist and background with advanced analytics are well known throughout the marketing research profession. His biography is attached as Appendix 1.

CivicScience data was evaluated on a series of data quality questions across three product categories for which market share and demographics of purchasers are known. This effort was directed at evaluating the five questions below.

Question: Does the rotational and routing procedure produce good balance in interviews across brands (or is there a sizable and unintended bias?)

> *Answer:* Yes. In each of the categories, the number of interviews for each brand and the balance of interviews across demographics were extremely well balanced.

Question: Do the respondent demographics reflect the demographics of the websites from which the surveys are taken?

Answer: Yes. In the case of one of the sources of interviews, the age and gender profile of respondents was compared to Quantcast estimates of the demographics of website visitors. The skews (e.g. male and younger) are well reflected in the respondent profile.

Question: Do top box brand liking scores correlate with market share? As a corollary, for restaurants, NPD also provides customer experience rating data so we are able to compare brand liking data to customer experience data.

Answer: Yes. For each of the three product categories analyzed, the correlations to market share of the percent of respondents giving top box brand liking responses mostly met or exceeded 0.8, which is comparable to the correlations claimed by brand equity measurement systems. In addition the percent saying "I love it" regarding a given restaurant was significantly correlated to NPD respondents rating their dining experience as excellent.

Question: Do the demographics of those loving a brand match the demographics of purchasers?

Answer: Yes. When both NPD and CivicScience data sets are converted to indices, the array of indices across age and gender groups, brand by brand, are highly correlated.

Question: Do brand liking scores trend in a way that suggests they can be used for brand trending and tracking purposes?

Answer: Basically, this is true. There is some evidence that scores declined a bit over time but these declines almost completely stabilized after weighting the data by age and gender and controlling for the source of the interview.

The bottom line is that Rubinson Partners, Inc. concludes that CivicScience data can be validly and reliably used for brand marketing measurement purposes.

Introduction

Brands use the internet for marketing research in a variety of ways such as using online internet panels (where respondents have agreed to answer surveys on a regular basis), river survey techniques[1] or pop-up surveys (with code that produces a pop-up window when a visitor opens or leaves a web page). Respondent cooperation in terms of response rates and diligence at filling out a complete survey are always concerns for marketing research. Hence, any novel method that addresses declining respondent participation, especially among hard to interview groups such as young males, is intriguing.

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[1] River sampling recruits via banner ads, pop-up ads and similar instant "capture" promotions. Individuals who volunteer to participate are screened for their reported demographic characteristics and then "randomly assigned" to the appropriate survey.

CivicScience has created a unique methodology that keeps the survey strictly limited to three questions at a time per respondent and allows a database of demographic and profile information to be compiled for any given respondent. Survey questions are placed across several websites at the same time rather than just one single website. While each individual respondent is exposed to only three questions, data for a longer survey is collected by breaking up the survey across multiple data collection efforts. A cookie is created for each respondent, and an overall database stores all survey and demographic information for each respondent for every survey they complete thereby creating a longitudinal profile of each respondent.

A question frequently used by CivicScience that is of interest for data quality evaluation is the "brand liking question":

Q. How much do you like [brand/product]?
- Never heard of them
- I love them
- I like them
- I don't really have a strong opinion
- I don't like them

While the "never heard of…" response is always in the first position, the order in which the other possible answers are presented to respondents is sometimes as shown and sometimes flipped (e.g. "I don't like them" appears first). The reason for the answer order is purported to emanate from behavioral economics principles.

Rotation and routing procedures

CivicScience's survey rotation and routing procedures use algorithms to deliver survey content that is adapted to the survey respondent. Each survey respondent answers only three questions with no more than 8 answer options per question. The first question is an "engagement question" designed to attract and engage the respondent; it usually relates to an item of interest on the website being visited. The second question is a "value question" used to gauge the respondent's sentiment or attitudes regarding a brand or personality. The third question is a "profile question" which collects demographic, psychographic, and profile information. After a particular survey respondent has completed enough CivicScience surveys to have answered all the profile questions, they will receive two value questions per survey session.

The survey questions provided to a given respondent are blocked so that the respondent does not receive repeat questions within an ineligible time period. There is also a pre-determined priority ranking of questions, daily quotas, check of completeness of answers, and relevancy of the question to the locale (website or publisher). Quotas and routing algorithms are used to deliver a proportionally equal number of answers to each question in the feed during a 24-hour cycle and to ensure even distribution of answers by time-zone.

Each survey respondent is internally identified by aliases that are built from sources such as login user ID (e.g. social network) or a cookie ID. Attributes are attached to the aliases and stored along with a timestamp enabling tracking of a respondent's changing opinions over time.

Given the uniqueness of this methodology, The NPD Group, Inc sought to ensure the data quality and validity of survey data collected in this manner. NPD commissioned an independent outside consultant, Joel Rubinson, to conduct a study that reviews the methodology and tests the resulting survey data in comparison to actual sales or traffic data.

Methodology

For the purposes of this analysis, mostly, survey data gathered via the CivicScience platform was compared to The NPD Group's market data to assess CivicScience data validity.

Survey data collected by CivicScience was analyzed from August 2010 to May 2011 and utilized two website publishers.

NPD sales data is continuously collected. The NPD Group collects sales tracking data using two primary methods: 1) point-of-sale from 900 retailers including department stores, specialty retailers, national chain stores, etc. covering a variety of categories including fashion, entertainment and food service; and 2) continuous interviewing of hundreds of thousands of survey respondents.

The CivicScience survey data was provided from two different sample sources – Source 1 and Source 2[2]. These two sources comprised major sources used by CivicScience during the time covered by the research study.

Source 1 is a global online panel source typically used for market research. Source 2 is a specialty website with social aspects that appeals primarily to young males.
Three product categories were studied – footwear, video games, and restaurants – for which NPD data are viewed as the industry gold standard for sales, market shares, and buyer demographic characteristics.

Evaluating the Quality of the Data

Market research seeks to help businesses achieve their goals. The ARF marketing research standards state "Research may have either decision-oriented purposes, e.g., address specific business requirements, or it may seek to provide more fundamental consumer/customer understanding. All research should address particular business requirements."[3]

For audience measurement research or political opinion polling a sample that reflects the population is critical in order to assure that projections made from the research data accurately reflect the composition or opinions of the total population. Since there are many variables that are known about census population or the voters that comprise a given political region, probability samples can be drawn using either random or stratified sampling.

For marketing research, often the key variables are psychological and attitudinal – attitudes, personality, predispositions. Since these variables cannot generally be quantified outside of a survey, it is not possible to ensure that

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[2] Sample source names are masked for confidentiality.

[3] (The ARF, *Guidelines for Market Research* 2003)

a given sample absolutely reflects the population that the product or service seeks to reach. Furthermore, the final survey sample consists of those who have agreed to complete the survey itself. By definition, these consumers may differ from those that have not completed the survey (they may be more frequent visitors to a website or have a higher engagement with the brand). However, it is not possible to measure these differences among non-responders, and understanding the key differences remains a challenge in the market research field.

Nonetheless, over the history of the market research field, survey results have led to business conclusions that helped businesses to improve products and services and increase sales, providing a strong "face validity" at a minimum (that the data appear to be reflective of the information they sought to gather).

For the purposes of this review, we hold data collected via the CivicScience methodology to the marketing research standard for data quality: does it have validity and usefulness regarding marketing and business purposes?

From Trochim, W. M. (2006). *The Research Methods Knowledgebase, 2nd edition. Internet Version*[4] there are key types of validity that need to be considered:

> • **External validity:** relates to generalizing findings to or across target populations or environments.

> • **Predictive Validity**: In predictive validity, we assess the ability of our test or research to predict something it should theoretically be able to predict.

> • **Construct Validity**: Does our method measure what it purports to measure? This is achieved through a planned and consistent research program based on theory that accumulates evidence over time.

> • **Convergent Validity**: To what degree is our study *similar* to (converges on) other studies that it theoretically should *be similar* to in results? High correlations would be evidence of convergent validity.

In addition, we are concerned with the concept of "reliability" described by Trochim as follows:

> "In research, the term reliability means "repeatability" or "consistency". A measure is considered reliable if it would give us the same result over and over again…"[5]

These dimensions of validity and reliability were translated into a series of data quality questions for this evaluation:

Does the rotational and routing procedure produce good balance in interviews across brands (or is there a sizable and unintended bias?)

Do the respondent demographics reflect the demographics of the websites from which the surveys are taken?

Do top box brand liking scores correlate with market share? As a corollary, for restaurants, NPD also provides customer experience rating

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[4] (Trochim, 2006)

[5] (Trochim, 2006)

data so we are able to compare brand liking data to customer experience data.

Do the demographics of those loving a brand match the demographics of purchasers?

Do brand liking scores trend in a reliable way that suggests they can be used for brand trending and tracking purposes?

Since the demographics of respondents coming from Source 1 vs. Source 2 are different from each other and neither match U.S. demographics perfectly, data are weighted by age and gender to U.S. census targets. In some cases the data quality assessment is based on weighted data and in some cases, unweighted data are more appropriate, which will be indicated. Data weights using RIM or "Iterative Proportional Fitting" weighting is typical and recommended for survey-based marketing research where the same measure from different surveys is intended to be compared across brands and across time periods.

In order to ensure that the CivicScience data is reliably "predicting" market share with the liking scores, monthly survey data points were examined from 8/10-5/11. If the trends are reasonably stable in what are essentially stable markets then we will consider the CivicScience data to be reliably useful for trending purposes.

The brand demographics of both the CivicScience data and the demographics of the populations purchasing the brands have also been trended over several months. If the demographics exhibit the right patterns for both the survey and the

market data, we will consider the CivicScience data to have convergent validity.

The survey data collected through the CivicScience methodology will be compared to "true" sales and traffic data provided by NPD. With a direct comparison to external industry accepted data collected at approximately the same time but in a completely unrelated fashion, external as well as convergent validity can be confirmed if the CivicScience data lines up with the actual sales volume and traffic data.

The CivicScience survey collects "brand liking scores". Here we are making the assumption that brand liking acts as a brand equity measure, which usually functions as a surrogate for market share. As such, CivicScience brand liking data should correlate with the volume of purchase of a brand or traffic in the case of restaurant visits. If the CivicScience liking data indeed correlate with market share data we can consider the survey data to have predictive validity.

Rotation and routing

In each of the categories, the number of completed interviews across brands and by demographic group remained consistent and balanced throughout the study, indicating that the routing procedures operate almost perfectly as intended. This is illustrated by the numbers of interviews for various restaurants brands and the balance with certain key age groups (see Tables 1-2).

Table 1	*Percent Share of CivicScience Survey Completes (Unweighted data)*
Applebees	5.2%
Burger King	5.2%
Cheesecake Factory	5.2%
Five Guys	3.1%*
Hard Rock	5.2%
Houlihan's	5.2%
In-and-Out Burger	3.1%*
Jack in the Box	5.2%
KFC	5.2%
McDonald's	5.3%
Olive Garden	5.2%
Outback	5.2%
Popeye's	5.3%
Red Lobster	5.3%
Ruby Tuesday	5.6%
Sonic	5.2%
TGI Fridays	5.2%
Tony Roma's	5.2%
Wendy's	5.2%
White Castle	4.6%
Total	*100%*

*Five Guys and In-and-Out Burger share is slightly lower mostly because tracking for these two brands began two months later than the other brands shown.

Table 2	*Percent Share CivicScience Survey Complete by age (Unweighted data)*	
Age Range	*18-24*	*25-34*
Applebees	40.5%	12.5%
Burger King	40.5%	11.8%
Cheesecake Factory	39.6%	13.1%
Five Guys	40.7%	13.6%
Hard Rock	40.6%	12.5%
Houlihan's	38.5%	14.0%
In-and-Out Burger	40.2%	13.7%
Jack in the Box	41.0%	13.2%
KFC	38.6%	13.6%
McDonald's	42.2%	12.6%
Olive Garden	39.2%	13.7%
Outback	39.5%	13.7%
Popeye's	41.9%	12.6%
Red Lobster	40.1%	13.0%
Ruby Tuesday	41.7%	13.7%
Sonic	40.9%	13.9%
TGI Fridays	40.9%	12.2%
Tony Roma's	41.2%	12.2%
Wendy's	40.7%	13.2%
White Castle	41.5%	11.6%
Total	*40.5%*	*13.0%*

Survey demographics vs. website demographics

We focused on Source 2's site profiling to analyze if the demographics of the CivicScience survey respondents generally reflect the male and under age 24 skew of the visitors to the website (see Table 3) from Quantcast. This explains why survey respondents from this site tend to be younger males.

Table 3		
Source 2	*CivicScience Data (Unweighted)*	*Quantcast data as of June 2010*
Male	76%	57%
Female	24%	43%
Age:		
17 and under	47%	41%
US census	8%	

On a positive note, this also indicates that CivicScience is able to complete interviews among young males, who are typically hard to recruit as research respondents.

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Product category data availability for analysis

NPD data on 26 footwear brands, 7 video gaming platforms, and 20 restaurants (quick serve and casual dining) were used for this data quality assessment.

Comparison of brand liking to market share data

Survey data collected via the CivicScience methodology included a "liking question" that asked respondents to rate a given brand on a five point scale.

Q. How much do you like [brand/product]?
- Never heard of them
- I love them
- I like them
- I don't really have a strong opinion
- I don't like them

The percent top box ('I love them") from weighted data was compared with market share data from NPD. Across categories (footwear, video games, restaurants) top box ratings of liking correlate highly to unit market shares across brands at a level that is comparable to brand equity models.

This suggests that CivicScience data have desirable properties for comparing results across brands and that the data can be said to have construct validity.

Table 4	
Category	*Correlation*
Footwear	85%
Video Games	79%
Casual Restaurants (correlation of "love it" among have heard of it to satisfaction)	81%
Casual Restaurants (correlation of "love it" compared to NPD traffic data)	49%
Quick Serve Restaurants (correlation of "love it" among have heard of it to satisfaction)	58%
Quick Serve Restaurants (correlation of "love it" compared to NPD traffic data)	73%

In the footwear category, top box liking tracks with NPD unit sales with a correlation of 85% (on an unweighted basis the correlation is 79%).

As is often the case with attitudinal brand equity measures, there is indication that liking is measuring something in addition to market share as the line is a little flatter vs. market share (e.g., as awareness or consideration would be.)

Figure 1 : Footwear Top Box liking vs. unit market share
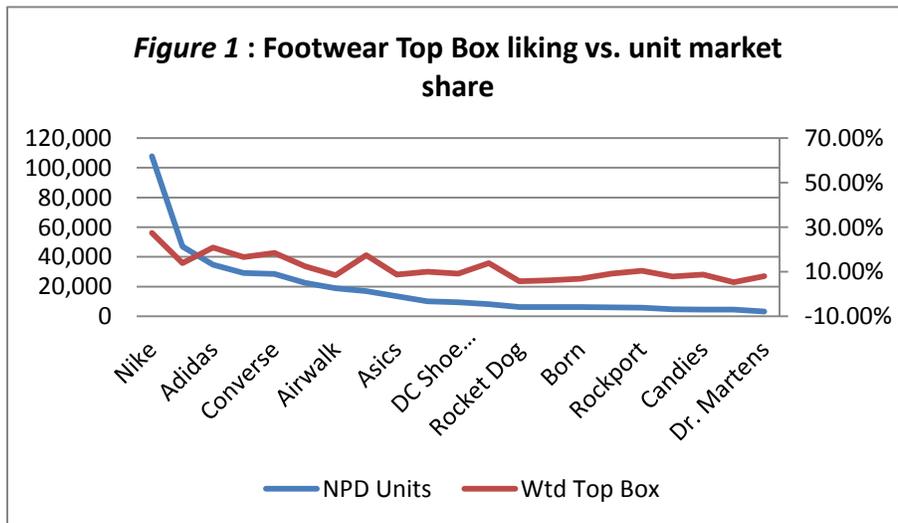
Demos of brands vs. NPD demos

A brand that is positioned to a particular demographic group should demonstrate its positioning via a high index (above 100) in terms of its source of sales (NPD). If the CivicScience data are valid, they should show similar indices in terms of top box liking.

Indices were created based on gender and age on a weighted basis to compare the demographic results of the survey completes and NPD market data.

Footwear Category Results

The correlation of the age and gender indices across all 26 footwear brands analyzed is 86%, indicating a high correlation and providing external validity that the CivicScience demographics of individual brands in the footwear market reflect the demographics observed in the market place.

As an illustration, two footwear brands examined – Converse and Skechers – both skew female and did so consistently across CivicScience and NPD data. Converse skews younger towards consumers younger than 45, and this skew is observed in both the CivicScience and NPD data. Alternately, the Skechers brand skews older toward consumers age 25 and older. This skew is reflected in both the CivicScience and the NPD data.

Converse

Table 5	NPD index	CivicScience index
13-17	1.83	1.49
18-24	1.56	1.42
25-44	1.21	1.19
45-54	1.09	0.88
55-64	0.49	0.60
65+	0.04	0.42
Male	0.75	0.77
Female	1.24	1.23

Example of how to read this: the percent of sales coming from 18-24 year olds is 56% higher than that age group's incidence in the U.S. population. This is compared to the average percent of 18-24 year olds saying they love the brand which is 42% higher for that age group than it is for the total weighted sample.

Skechers

Table 6	NPD index	CivicScience index
13-17	0.179	0.702
18-24	0.350	0.815
25-44	1.461	1.194
45-54	1.093	1.379
55-64	1.294	1.113
65+	0.590	0.798
Male	0.555	0.800
Female	1.422	1.200

Footwear brand Adidas skews younger (primarily under age 45) and slightly male. (Table 7) The Nike brand also skews younger – under age 45. (Table 8) Again these skews were reflected in both the CivicScience and NPD data. The only brand where the gender index did not follow this pattern was Nike.

Adidas

Table 7	*NPD index*	*CivicScience index*
13-17	1.10	1.32
18-24	1.34	1.38
25-44	1.43	1.40
45-54	1.11	0.81
55-64	0.43	0.50
65+	0.17	0.59
Male	1.08	1.09
Female	0.92	0.91

Nike

Table 8	*NPD index*	*CivicScience index*
13-17	1.04	1.43
18-24	1.12	1.20
25-44	1.56	1.16
45-54	1.05	1.02
55-64	0.47	0.61
65+	0.15	0.58
Male	0.89	1.08
Female	1.11	0.92

Trending

To assess the stability of brand liking trends, an Analysis of Variance (ANOVA) test was run on the top box liking percent (response variable) within the age categories across months (treatment) separately for each CivicScience sample source across time.

For Source 1, the data are stable across months as evidenced by a low F statistic for virtually all age groups. For Source 2, there is indication of differences across time but this pattern is not consistent. Overall, we can conclude

that the data are stable across time and can be useful for brand trending.

Table 9 *ANOVA Table - Source 1 Footwear*		
Age	F Statistic	Significance
18 - 24	0.108	0.991
25 - 29	1.739	0.122
30 - 34	2.017	0.073
35 - 44	1.590	0.159
45 - 54	0.292	0.917
55 - 64	1.237	0.289
65 or older	0.858	0.509

Table 10 *ANOVA Table - Source 2 Footwear*		
Age	F Statistic	Significance
13 - 15	5.547	0.000
16 - 17	4.192	0.000
18 - 20	7.242	0.000
21 - 24	6.244	0.000
25 - 34	4.876	0.000
35 or older	1.336	0.212

Note that even though the 25-34 year olds exhibit a significant F statistic, the differences in liking across months are not meaningful (Table 11).

Table 11	*Source 2 Footwear data, all brands*
Month	% I Love it
10/01/10	12%
11/01/10	13%
12/01/10	14%
1/01/11	13%
2/01/11	13%

Month	% I Love it
3/01/11	12%
4/01/11	13%
5/01/11	13%

Video Game Platforms Category Results

Video game platforms were also examined on indices of gender and age comparing CivicScience demographic results to NPD market share data.

Nintendo DS and Wii skew female and younger. This is reflected in both CivicScience and NPD data. PlayStation 3 and Xbox 360 brands skew male and younger. Xbox 360 in particular has a higher proportion of buyers in the 13-17 year old age group and this is mirrored in the CivicScience index.

Wii

Table 12	*NPD index*	*CivicScience index*
13-17 Years Old	1.34	1.08
18-24 Years Old	0.71	1.07
25-44 Years Old	1.19	1.11
45-54 Years Old	0.78	0.88
55-64 Years Old	0.57	0.87
Male	0.98	0.84
Female	1.02	1.16

PlayStation 3

Table 13	*NPD index*	*CivicScience index*
13-17 Years Old	1.79	1.18
18-24 Years Old	1.54	1.18
25-44 Years Old	1.19	1.15
45-54 Years Old	0.45	0.77
55-64 Years Old	0.24	0.71
Male	1.54	1.14
Female	0.48	0.86

Xbox 360

Table 14	*NPD index*	*CivicScience index*
13-17 Years Old	2.39	1.39
18-24 Years Old	1.40	1.22
25-44 Years Old	1.06	1.07
45-54 Years Old	0.47	0.76
55-64 Years Old	0.27	0.56
Male	1.46	1.15
Female	0.57	0.82

Nintendo

Table 15	*NPD index*	*CivicScience index*
13-17 Years Old	1.70	1.31
18-24 Years Old	0.72	1.19
25-44 Years Old	1.21	1.14
45-54 Years Old	0.67	0.85
55-64 Years Old	0.53	0.52
Male	0.88	0.83
Female	1.11	1.17

The correlation of the age and gender indices across the 7 video game platform brands is 84%, indicating a high correlation and providing external validity that the CivicScience demographics of video games reflect the demographics observed in the market place.

An Analysis of Variance test was run on the age categories by CivicScience sample source. For Source 1 the F statistic was mostly low for each of the age groups over time. For Source 2, there was some indication of differences in liking across months but, considering the results achieved across the pooled data sources, this was not thought to be a substantial problem.

Table 16

ANOVA Table - Source 1 Video Games		
Age	F Statistic	Significance
Under 18	2.096	0.027
18 - 24	2.927	0.002
25 - 29	1.431	0.169
30 - 34	1.504	0.140
35 - 44	2.057	0.030
45 - 54	2.343	0.012
55 - 64	5.415	0.000

Table 17

ANOVA Table - Source 2 video game		
Age	F Statistic	Significance
13 - 15	4.261	0.000
16 - 17	4.251	0.000
18 - 20	5.558	0.000
21 - 24	5.482	0.000
25 - 34	2.166	0.021
35 or older	1.040	0.405

The 25-34 year olds for Source 2 exhibit some downward trend (Table 18); however, there is an argument to be made that this is natural as the novelty might wear off on a gaming platform given as a holiday gift.

Table 18

	% I Love it
Date	Mean
10/01/10	23%
11/01/10	23%
12/01/10	24%
1/01/11	20%
2/01/11	23%
3/01/11	22%
4/01/11	20%
5/01/11	21%

Restaurant Category Results

In the restaurant category, CivicScience interviews were completed across a broad range of casual and quick serve restaurants.

The restaurants were sorted into casual food chains (such as Applebee's or Houlihan's) versus quick serve chains (such as McDonalds or Burger King).

NPD market data for restaurants is based on traffic (numbers of customers who visited the restaurant in a given month) and customer survey ratings (on an Excellent to Poor scale). Therefore the CivicScience survey data (rated on the Love it – Don't like it scale) was compared to NPD data in two ratios. One is a rating of "love it" among people who had heard of the restaurant. The second is a rating of "love it" based on total respondents to be compared to the traffic volume.

The results indicate moderate to strong correlations between CivicScience survey data and NPD market data for all four groups reviewed.

Table 19

	Correlation of CivicScience Survey results with NPD Market Data
Casual Restaurants – "Love it" among those who have heard of the restaurant	81%
Casual Restaurants – "Love it" based on restaurant traffic	49%
Quick serve – "Love it" among those who have heard of the restaurant	58%
Quick serve– "Love it" based on restaurant traffic	73%

In the restaurant category, top box liking remained mostly stable across the months studied with a preponderance of insignificant F-statistics.

Table 20		
ANOVA – Source 1 – Liking by Age over time		
Age Range	F statistic	Significance
Under 18	2.314	0.042
18-24	1.120	0.348
25-44	2.948	0.007
45-54	1.560	0.154
55-64	1.793	0.096
65+	2.598	0.017

Table 21		
ANOVA - Source 2 – Liking by Age over time		
Age Range	F statistic	Significance
Under 18	13.388	0.000
18-24	11.070	0.000
25-44	5.630	0.000
45-54	1.512	0.137
55-64	0.529	0.854
65+	1.009	0.431

Influence of Website Sources

The data were tracked over a period of ten months from August 2010 to May 2011. Trend analysis on Source 2 data started with October, 2010 as the data appeared more stable after the first few months of data collection. This type of "burn in period" is not unusual with new sources of interview data.

As was seen by the ARF as part of its data quality initiative, even with identical research protocols, different data sources can produce significantly different results even after accounting for demographic differences. As such, consistent with ARF data quality recommended practices, CivicScience controls for the mix of responses coming from different sample sources to minimize the possibility that data trends reflect an artifact of different proportions of interviews coming from the different data sources from month to month.

References

Directors, Board of (2003). *Guidelines for Market Research.* New York: The ARF.

Trochim, W. M. (2006). *The Research Methods Knowledgebase, 2nd edition. Internet Version.* New York: Cornell University.

Appendix 1

Biography of Joel Rubinson

Joel Rubinson is President of Rubinson Partners, Inc. Marketing and Research Consulting for a Brave New World and a member of the faculty of NYU Stern school of business. Prior to that, as Chief Research Officer at The ARF, Joel interacted directly with hundreds of research leaders and drove the organization's initiatives regarding:

• Research transformation (designing the future of the profession)
• Online research data quality
• 360 media and marketing
• Social media and listening
• Shopper insights

Prior to joining the ARF, Joel was Senior Vice-President, Head of Advanced Solutions for Synovate North America where he was their leading branding resource and was also the global thought leader for shopper research. Before joining Synovate, Joel was managing director of research and analytics for Vivaldi Partners, a top branding and innovation firm.

Joel was at The NPD Group for many years, leading the creation of modeling approaches for brand equity management (BrandBuilder), new product forecasting (ESP), category management and designed many of their data collection and sampling methodologies as NPD changed from paper diaries to online research. Joel started his research career at Unilever.

Joel is also a published author of numerous papers in professional journals and a frequent speaker at industry conferences. He has taught the official American Marketing Association advanced tutorial on brand loyalty and teaches an MBA class "Social Media for Brand Managers at NYU." He has also lectured at Columbia, Wharton, Amos Tuck School, and University of Rochester, among others. Joel holds an MBA in statistics and economics from the University of Chicago and a BS from NYU.