

THE RELATIONSHIP OF SCREENS AND READS AND THE ROLE OF SCREENING IN READERSHIP MEASUREMENT

Daniel T. Mallett, Jr. - Daniel Mallett Associates

Abstract

In 1992, the Magazine Publishers of America commissioned a study to examine the relationship between screen-in rates and readership levels in two major U.S. commercial magazine audience measurement services -- Mediamark Research, Inc., which uses the Recent Reading method, and Simmons Market Research Bureau, which uses Through-the-Book. The study had an essentially descriptive purpose. To what degree are year-to-year changes in screen-in rates reflected in changes in readership?

For MRI (Recent Reading), the study found a nearly one-to-one relationship. Relative year-to-year changes in screen-in rates are reflected in readership on a very nearly pro-rata basis. For SMRB (Through-the-Book), there is a much weaker relationship. Less than half of year-to-year changes in screen-in rates are reflected in readership.

It is clear that screening interacts with the two readership questioning methods in different ways. Why does this difference arise and what does it suggest about the role of screening in the readership measurement process?

Introduction

For the past decade two commercial research services -- Mediamark Research, Inc. (MRI) and Simmons Market Research Bureau (SMRB) -- have dominated syndicated magazine audience measurement in the United States.

The two services use different questioning procedures to establish magazine readership. MRI uses Recent-Reading, in which the respondent is asked if he or she read or looked into any issue of the title in question within the last publishing cycle (e.g., 7 days for a weekly, 30 days for a monthly, etc.). SMRB uses Through-the-Book, in which the respondent is taken through a stripped-down copy of a recent issue, and then asked if he or she read or looked into that particular issue before.

Considerable industry attention has focussed on the relative merits of the Recent-Reading and Through-the-Book methods. Since the late 1970's there has been an on-going industry effort to better understand the strengths and weaknesses of each method, and in trying to establish absolute validity standards against which either service might be measured (e.g. ARF Magazine Validation Committee [Lysaker, 1991]).

While so much attention has been paid to readership questioning per se, relatively little attention has been paid to the larger context in which the readership questioning procedures are applied.

Before readership questioning in either service, the respondent is first asked which of 100+ titles he or she may have read or looked into in the past 6 months. The key readership questioning is then applied only for those titles on which the respondent screened in. Until recently, this screening process was generally viewed as a benign means of making a 100+ title interview a do-able burden for interviewer and respondent alike, with little or no impact on reported readership.

This assumption has recently come under attack [Appel, 1991], and there has been growing concern that screening may be an important readership research issue.

In the Spring of 1992, the Magazine Publishers of America (MPA) commissioned a study to examine the relationship of screen-in rates and readership [Mallett, 1992]. Does screening affect readership estimates? Are Recent-Reading and Through-the-Book affected differently?

This paper provides a discussion of the MPA study and results, and offers some hypotheses about the meaning of study findings.

Study Data

MRI and SMRB provided MPA with data for 9 years (1982-1990) and 7 years (1985-1991), respectively. For each title in each service, the data included circulation and projected screen-in and readership levels in total and by sex, age and race/ethnic sub-group.

In the case of SMRB, screen-in and readership data were based on the SMRB Phase I interview only. SMRB attempts to obtain a second measure of readership from each respondent in a second or Phase II interview, 2 to 3 months following the first or Phase I interview. Phase II data were omitted from this study to simplify analysis, because not all respondents complete the Phase II interview.

Both services provided information for all titles in the service that year, for a total of over 200 net titles across all service/years. To assure comparable results for the two services, the study was limited to a common set of 67 titles -- 47 monthlies, 13 weeklies, and 7 with other publishing frequencies -- which appeared in both services for all years.

Two data-related limitations such be noted. First, MRI and SMRB provided total sample screen-in and readership projections (not respondent-level records), which limited the kind of statistical tests possible. As it turns out, this was not a serious limitation because most study results stand out clearly. Second, SMRB does not generally release screen-in data (or Phase I-only data). MPA agreed that study results would be reported in summary form only. Individual title data cannot be shown.

Analytic Approach

In all analyses reported here, screen-in rates and readership levels have been scaled to a per-copy basis, by dividing projected screen-ins and readers by circulation.

This scaling was used as a matter of convenience. To check that this choice did not affect study results, all analyses were repeated using projected screen-ins and readers (i.e., no scaling by circulation), with no change in results.

The analytic goal was to quantify the relationship between Readers-Per-Copy (RPC) and Screen-ins per copy (SPC), on a title by title basis.

The approach was straightforward. Simple regressions were fit to year by year data for each title/service/demographic group, relating RPC to SPC on an index or proportioned-to-mean basis.

Each regression provides two criterion measures. One is the regression B-value, which is a measure of the sensitivity of RPC to changes in SPC -- e.g., a B-value of .70, for example, would imply that 70% of relative year-to-year changes in SPC were reflected in RPC.

The second measure is the percent of RPC variance explained by SPC, which is a measure of the predictability of RPC by SPC. All percent-of-variance-explained values shown here have been corrected for degrees of freedom, because the number of observations for any individual title is small (e.g., 7 or 9) and simple R-Squares would be misleading.

Results

Table 1 (below) shows median values of the Sensitivity and Percent-of-Variance Explained measures, for each service and demographic group.

Table 1
Median Title Values

Group	SMRB		MRI	
	Sensitivity Index	% RPC Var explained	Sensitivity Index	% RPC Var explained
Total Adults				
All Titles	46%	38%	91%	67%
Monthlies	44%	39%	94%	63%
Weeklies	44%	11%	74%	63%
All Titles				
Men	43%	18%	111%	70%
Women	54%	37%	79%	64%
Age				
18-24	84%	48%	104%	67%
25-34	58%	34%	97%	61%
35-49	58%	44%	74%	61%
50-54	72%	38%	103%	56%
55+	56%	37%	88%	58%
Race				
Black	87%	50%	79%	46%
Spanish	89%	47%	106%	81%

For MRI (Recent-Reading), the median Sensitivity Index for total adults for all titles is 91%. For the typical title, relative changes in SPC are reflected in RPC on a very nearly pro-rata basis. If there were a 10% change in screen-in rates, one would expect about a 9% change in readership levels. SPC is also a good predictor of RPC, explaining 67% of the variance in RPC. The same pattern holds for monthlies and weeklies, and for demographic sub-groups.

For SMRB (Through-the-Book), the picture is very different. For total adults for all titles, the median Sensitivity Index is 46% and SPC explains only 38% of the variance in RPC -- values that are about half those of MRI. The same holds for monthlies and weeklies, and for men and women.

For the smaller demographic groups in SMRB, the pattern starts to change. While the Percent of RPC Variance Explained does not exceed 50% for any group, Sensitivity Indices generally increase, with the greatest increases in the smallest groups. As described earlier, the data available for this study did not allow quantifying potential sources of variation without assumption. In the opinion of this author, the SMRB small group phenomenon is likely due to sampling error that jointly affects screen-in rates and readership, and the real relationship between screen-in rates and readership levels is no stronger for demographic sub-groups than for total adults.

Table 2 provides a frequency distribution of Sensitivity Indices for total adults. For SMRB, 50 of the 67 titles have Sensitivity Indices between 11% and 70%. For MRI, there is a somewhat wider distribution, with 40 of the 67 titles between 71% and 130%.

Table 2

Frequency Distribution of Sensitivity Indices,
Total Adults

Sensitivity Index	Number of Titles	
	SMRB	MRI
10% or less	5	1
11% to 30%	12	4
31% to 50%	22	5
51% to 70%	16	9
71% to 90%	7	14
91% to 110%	4	15
111% to 130%	0	11
131% or more	1	8
	67	67

To illustrate the difference between MRI and SMRB in more concrete terms, Table 3 provides actual year by year SPC's and RPC's (and associated index values) for total adults, for the average of all 67 titles.

Table 3

Total Adult SPC's and RPC's,
Average of 67 Titles

Year	SMRB				MRI			
	SPC		RPC		SPC		RPC	
	#	Index	#	Index	#	Index	#	Index
82	-	-	-	-	11.1	109	5.5	111
83	-	-	-	-	10.6	104	5.2	106
84	-	-	-	-	9.8	96	4.9	100
85	8.1	94	3.8	96	10.2	101	5.0	101
86	8.0	93	3.8	96	10.4	102	5.2	105
87	10.1	118	4.1	105	10.0	98	5.0	102
88	8.6	100	3.9	99	9.1	90	4.3	88
89	8.9	104	4.0	101	10.0	99	4.7	95
90	8.6	100	4.0	102	10.2	100	4.6	93
91	7.7	90	3.9	101	-	-	-	-
Average	8.6	100	3.9	100	10.2	100	4.9	100

There are two extreme years for each service. For MRI, 1982 was the year with highest SPC -- 9% above average -- and RPC was 11% above average. The year with lowest SPC was 1988 -- 10% below average -- and RPC was 12% below average. In these two years, the relative change in RPC was slightly greater than the relative change in SPC.

In contrast, RPC in SMRB is much less strongly affected by changes in SPC levels. For SMRB, 1987 was the year with highest SPC -- 18% above average -- and RPC was only 5% higher than average. The year with lowest SPC was 1991 -- 10% below average -- while RPC was actually slightly above average.

Interaction of Screening and Readership Measurement

It is clear that screening interacts with Recent Reading and Through-the-Book questioning (at least as practiced by MRI and SMRB) in very different ways. Why does this occur?

The traditional concern about screening is the exclusion of real readers -- some respondents who would have been classified as readers if asked the readership question may incorrectly screen out.

Given the readership questioning "cost" to the interviewer for each title screened in, this is not a trivial concern. Even with genuine good faith effort, it would be surprising if veteran interviewers did not subtly discourage fence-sitting screen-in candidates from screening in, while newer interviewers pushed the other way.

The data in Table 3. indirectly support this notion. There is a good deal of year-to-year variation in screen-in rates for both services, even though each service has used the same screening procedures throughout the entire period under study. Given the large sample sizes, random sampling error can only explain a small fraction, and it seems unlikely that there were "real" changes because the variations in MRI and SMRB are not related to each other.

Interviewer effect is the most reasonable explanation left. SMRB's explanation for the unusually high screen-in rates they experienced in 1987 -- a shift of field operations from New York to Florida and consequent large staff turnover -- essentially concedes this point.

Assuming this sort of interviewer effect, one would expect a relationship between screen-in rates and readership levels of the kind found for SMRB, where year to year changes in readership are smaller than year to year changes in screening.

Respondents who are certain about a screening response, either yes or no, are generally beyond interviewer influence. Those who are unsure -- infrequent readers -- are potentially subject to interviewer influence. Year to year changes in screen-in rates are driven by how many of these uncertain respondents interviewers "allow" to screen-in. The impact on readership levels is less than proportionate, because the respondents affected have lower reading incidence than all screen-ins as a whole.

For MRI, screen-in rates are presumably driven by the same sort of interviewer-related phenomena. Something more, however, appears to be happening at the readership measurement stage.

MRI screening and readership questions are very nearly the same, except for the time interval of interest. At the screening stage, respondents sort a deck of logo cards into "yes", "maybe", and "no" piles, based on reading (or looking into) in the past six months. At the readership stage, respondents are asked to re-sort the cards in the "yes" and "maybe" piles into new "yes", "maybe", and "no" piles, based on reading (or looking into) in the past publishing interval.

The hypothesis offered here is that these procedures partially force respondents to answer screening and readership questions in a "consistent" manner. A respondent who screened in on six or eight monthly titles, for example, may become increasingly uncomfortable as he or she continues to put cards into the "no" readership pile. He or she just claimed to have read several publications in the last six months. How can he or she now claim to have read none of them in the last month? If there is any uncertainty on the respondent's part, it would not be surprising if there was some evening-out across the readership card piles as the respondent nears the bottom of the deck.

Combined with interviewer effects at the screen-in stage, this hypothesis offers a reasonable explanation for the strong relationship between screen-in rates and readership in MRI.

Interviewers drive screen-in rates. Respondents' needs for screen-readership consistency tend to maintain stable read-to-screen ratios, and hence lead to a strong relationship between screen-in rates and readership levels.

This hypothesis could not be tested with the aggregated data available for this study. A simple partial test would be to compare the variation of respondent level read-to-screen ratios for MRI and SMRB. A respondent need for screen-read consistency should result in lower respondent-level read-to-screen variation in MRI than SMRB. A stronger but more complicated test would be to examine readership responses as respondents approach the end of the deck, to determine if there is an evening-out effect.

Conclusions

The relationship between screen-in rates and readership levels differs for MRI and SMRB.

For SMRB, a little under half of year to year changes in screen-in rates are reflected in changes in readership levels. This is consistent with traditional views of screening. Some respondents who screen out may be actual, albeit infrequent, readers. Readership levels move in the same direction as screen-in rates, though by smaller amounts. The primary screening issue is inclusiveness -- to assure that all readers have appropriate chance to be counted.

For MRI, there is a stronger, almost one-to-one relationship between screen-in rates and readership levels, which suggests some kind of interaction between the screening and readership measurement processes.

The hypothesis offered here is that there is a tendency for respondents to be "consistent" in their screening and reading answers, because of the similarity of the questions in the Recent Reading method. While inclusiveness is still a screening issue, a second issue -- minimizing the screen-read consistency trap, by offering respondents a reasonable exit or out -- takes on increasing importance.

References

Appel, V. "Anatomy of a Magazine Audience Estimate: The ARF Comparability Study Revisited", paper presented at Worldwide Readership Research Symposium V, Hong Kong, February 1991.

Lysaker, R. "The Search for the Gold", paper presented at Worldwide Research Symposium V, Hong Kong, February 1991.

Mallett, D. "The Relationship of Screen-in Rates and Readership Levels in MRI and SMRB", MPA, August 1992