



First Opinion

**An ARF Research Review
of Marketing Evolution's
Return on Marketing Objectives
(ROMO)
Methodology**

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INTRODUCTION

This is an ARF Methodological Review of the Return On Marketing Objectives (ROMO) methodology as developed by Marketing Evolution. The purpose of the methodology is to provide a complete, holistic, in-market measurement of marketing effectiveness. The methodology is patent pending. The research has popularly been called “XMOS” because the main thrust of the research has been cross media optimization – (XMOS is an abbreviation of Cross Media Optimization Study). We will refer to the methodology with the proper name “ROMO” (though ROMO and XMOS methodologies are one in the same).

A dozen ROMO studies have been publicly made available in detail, and the ARF researchers have been discussing with Marketing Evolution the research design, analysis and findings prior to the research and studies being made public. This review is based on the representations of Marketing Evolution and the ARF researchers’ review of those public studies. Since the ROMO methodology has advanced over time, the review is based on the most recently completed six studies. This review does not represent an ARF or MRC audit.

The purpose of this review is twofold:

1. To review the objectives, design, methodology and reporting of the service in the context of ARF guidelines.
2. To render an opinion of the adequacy of the design, methodology and reporting to meet the stated objectives, both in theory and in practice, insofar as that practice is represented to the ARF by Marketing Evolution.

The ARF opinion is based on the years of experience of the ARF staff and the body of ARF principles and guidelines currently available.

OBJECTIVES

The objective of ROMO is to advance cross media planning by measuring each medium on a common measure of advertising response or, in more recent studies sales response. This cross-media measurement departure from the traditional planning focus on one medium at a time media delivery is argued to be necessary to address today’s demands for marketing accountability.

DESIGN

ROMO is designed to measure the impact of advertising campaigns over a period from several weeks to several months in duration.

In ROMO research Marketing Evolution typically uses online surveys to assess the impact of online and traditional media. Where the target audience is judged not to be well represented by the online population, telephone surveys are conducted to supplement the online surveys.

Experimental Design

Randomized Controlled experimental designs are widely recognized as offering valuable accuracy and power, or efficiency, particularly in complex settings such as those found in

marketing. The use of randomized controlled designs enables the researcher to establish causality with greater assurance than by any other research technique.

Randomly determining which individual, group or market receives advertising exposure or not can eliminate the effects of uncontrolled influences, such as a change in competitive spending, which often contaminate and bias studies comparing exposed and unexposed consumers, or simple marketing mix analyses. ROMO is one of the few advertising measurement approaches that uses experimental design to isolate the effect of media in the advertising mix.

The survey design uses continuous tracking to capture the overall effects of the advertising together with experimental design to isolate and the effects of each individual media channel. Where media exposure can be affordably controlled on a market-by-market basis, markets are randomly assigned to advertising-exposed and randomly matched advertising-unexposed (control) treatments and surveys are administered in both sets of markets. To date, Marketing Evolution has only rarely used randomized test-control design for assessing Television or Magazine advertising. The effect of Television has been estimated by comparing the measures of impact during and following the campaign with measures obtained prior to the campaign launch, when TV advertising was not on air, after the combined impact of the other media has been subtracted out.

METHODOLOGY

Project Initiation. Scenario planning meetings are conducted by Marketing Evolution leaders along with their client and agency partners to formalize the objectives and expectations of the advertising campaign under study and the ROMO research initiative. A list of key business questions that must be answered by the research is developed and agreed upon. Decision trees are used to clarify the marketing options and action plans are drafted as to how the client will respond to a range of potential research outcomes.

Survey Design. Continuous tracking is used with surveys administered throughout the course of the campaign. In addition, a survey is conducted prior to the start of the campaign to provide a pre-campaign baseline for a pre-post comparison. Surveys taken are primarily online surveys, but telephone surveys are used when necessary to achieve good representation of the campaign's target. Surveys gather attitudinal and behavioral measures related to the campaign objectives and marketing needs. Purchase intention measures and reported purchases have become the prevalent in the ROMO tracking and baseline surveys as the emphasis on Sales Response has grown.

Campaign Measures. To provide fair comparisons across various media and to aid analytic transparency, Marketing Evolution uses a straight-forward cost per impact measure of media effectiveness. The analysis has been designated Return-On-Marketing-Objectives (ROMO) Analysis. Depending on the marketing campaign objectives, one or more measures are selected for the ROMO analysis to assess the impact of the campaign. For each medium the difference on the metric(s) is(are) calculated between exposed and control respondents. The gain in the impact measure between exposed and control is divided by the cost of the media buy to calculate the "cost per impact" or "Return on Marketing Objectives".

$$\text{Cost per branding effect} = \frac{\text{Total Cost of Media}}{\text{Total Effect}}$$

$$\text{Total Effect} = \text{Number of people exhibiting effect} = (\text{branding \%} - \text{baseline branding \%}) * \text{target population size}$$

Advertising Spending Measures. To support the ROMO analysis the media spending is converted to dollars spent per channel. Post-buy estimates of the media spend are used, rather than the plan spending levels, in calculating ROMO.

Creative Quality. Advertising pre-testing and/or relative quality measures are obtained from the client by Marketing Evolution for the ads used in ROMO projects, but are not standardized across ROMO studies.

Experimental Design. With the exception of network TV and magazine advertising, ROMO studies apply experimental designs as a core approach to isolating individual media effects. The population base for the experimental design ranges from respondents to market level.

In theory, Test-Control Designs are as applicable to Television and Magazine advertising as to other media. In fact, much of the long, and generally successful, history of in-market testing has involved comparing TV advertising effects at varied spending levels. However, with the exception of split-cable scanner test markets run by Information Resources and ACNielsen, spending-level tests have typically compared a national base level to cells receiving additional advertising spending. Attempts to cut spending for a period of several months often face strong resistance, even if only in a small number of markets is involved. Furthermore, critics of test markets frequently question the projectability of the individual markets to the national level and/or the advertising schedules used in the reduced-spending markets.

When the advertiser is using local or cable spending in addition to a national network schedule, it can be argued that the advertiser has even greater flexibility in experimentally manipulating the TV advertising exposure in combination with the other media in the study, but to date, advertisers have opted for the less costly, though less efficient, analytic approaches instead.

For example, radio advertising is randomized among a list of markets where 80% receive the advertising and 20% of the markets are held out as control. The frame of reference is the entire market – ROMO avoids trying to determine who within the market is exposed and who is not (since measuring radio with self-reported data is less reliable). By analyzing the entire exposed market compared to the control markets, a proper experimental design is achieved. ROMO projects the effect to arrive at the total incremental impact of radio.

$$\text{Total number of people impacted} = (\text{Branding \% Exposed} - \text{Branding \% Control}) \times 10,000,000 \text{ pop. (entire exposed markets)}$$

Online advertising uses individuals rather than markets as the units of experimental control. The moment before the ad is delivered, the individual is assigned to an exposed or control cell based on a random number generator. If the individual has already been assigned to the exposed or control group, that assignment is maintained. A cookie is placed and that person is designated to receive the advertising for the brand under study (exposed) or a public service placebo ad (control). When individuals are selected for the survey, the presence of the cookie and its numeric value are noted and responses from “ad-exposed” individuals are assigned to the “ad-exposed” cell and those from public service placebo ad are assigned to the “control” cell. Those not exposed to either are assigned to the “not reached” cell.

In evaluating online campaigns, the random assignment of “exposure” or “non-exposure” is made at the individual respondent level, while for radio or newspaper the control is exercised at the

market level. When using an individual-level design, adjustments must be made to the individual data to match the actual level of reach that would have been achieved in a market, while the reach level is measured directly in the market-level design.

Since randomization and measurement of those reached in radio is not possible in radio, the market level analysis is used.

Magazine measurement uses a respondent level calculation of exposed and control. While selective binding (experimental design among subscribers or regions) is offered in ROMO, only one of the public studies has used this approach. The rest have opted for a less costly quasi-experimental design. For each magazine used in the advertising campaign, Marketing Evolution compares the effects of (potential) exposure to the campaign among readers of the issue(s) in which the campaign ad(s) are placed with readers of issues in which the ad(s) did not occur.

Marketing Evolution measures magazine ad impact with the method:

1. All those who read ANY issue of the magazine (by showing consumers the current issue and two previous month issues, or five previous weeks issues in the case of weeklies using the actual magazine covers) are classified as “readers”.
2. The number of issues read is calculated to arrive at a total number of issues read.
3. The media plan data is then overlaid and readers are divided into “exposed” and “unexposed” based on whether they happened to read an issue containing an advertisement or not.
4. “Exposed” and “unexposed” respondents are balanced based on total number of issues read, demographics and median date of survey completion.

Because many people read or look through some, but not all issues of a magazine, and because marketers buy ad insertions in some, but not all issues of a magazines, the respondents grouped into “exposed” and “unexposed” can be compared with a low likelihood of bias or contamination.

The accumulation of reach and frequency is not explicitly modeled in the ROMO analysis because, unless the duration of the study is too short, which we advise against in this review, the pre-post, repeated-survey design should capture the majority of the cumulative print impact as well as it does TV. Therefore modeling reach and frequency is unnecessary.

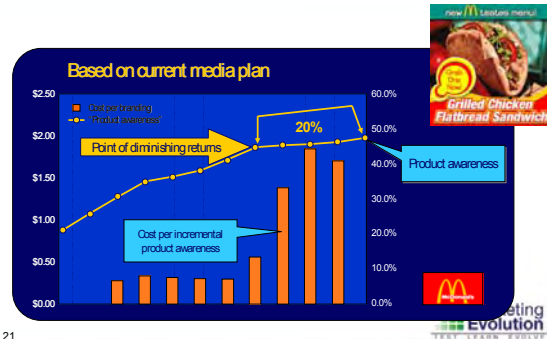
Television

"Television is measured in much the same way that a continuous tracking study measures the impact of a TV campaign. Wherever possible, a baseline measure is gathered prior to the launch of a brand, or new campaign for a brand. This allows for pre- and post-advertising comparisons, as well as analysis of flighting, change in creative and competitive spending effects.

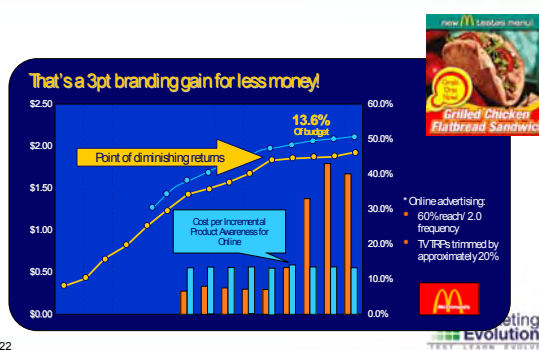
To separate out the effects of television, other media that can be isolated through experimental design are subtracted leaving the underlying effect of television to be assessed. To separate out the effects of television, other media that can be isolated through experimental design are subtracted leaving the underlying effect of television to be assessed."

McDonald's Cost per impact calculations of diminishing returns (ROMO Analysis)

Product Awareness All media produce diminishing returns
last 20% of offline spend only moved product awareness +2pts



The addition of Online is more efficient When Optimized, There are Major Gains
13% of budget to move product awareness +5pts



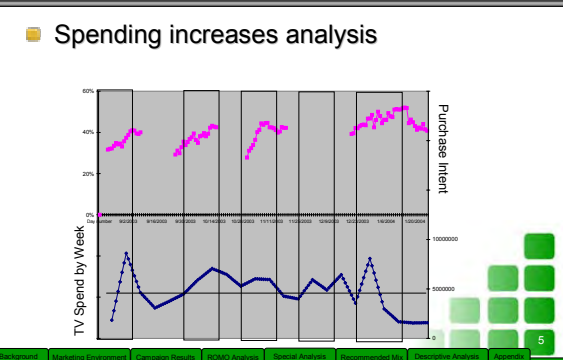
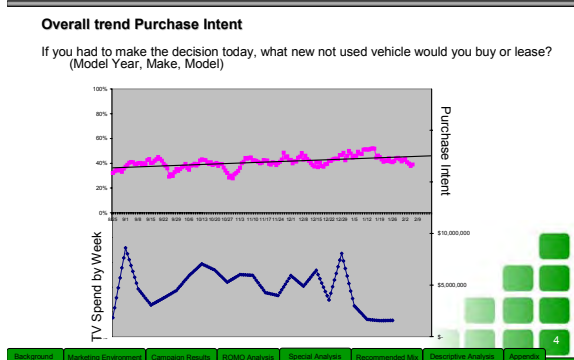
TV is the most cost-efficient media, up to the point of diminishing returns

In this case, diminishing returns set-in at approx 550 GRPs in two weeks

Thereafter, it is optimal to diversify the mix by putting additional dollars in Online advertising, which adds incremental value

Reporting Example – Ford F-150 Television Flying Analysis

Marketing Evolution TV Flying Effect and Decay curves Marketing Evolution TV Flying Effect and Decay curves



Competitive Spending. If competitive media spending changes during the course of the campaign, the ROMO estimates are adjusted by means of a share-of-voice-by-medium factor. This requires tracking of competitive media spending from the pre-campaign survey through the campaign measurement period.

Reporting. ROMO reports the overall effectiveness of the campaign and, where effects can be separated by the research design and/or analysis, ROMO uses the cost-per-impact analysis to measure the effectiveness of each media channel used in the campaign and to compare the relative cost effectiveness with the other media, and with non-media marketing activities, such as PR, events, etc.

ROMO reports also give recommendations based on the findings of the study for future marketing campaigns. These recommendations typically require analysis beyond the ROMO modeling. Based on regression analysis of the tracking results, advertising spending (adspend) effectiveness curves are estimated, and optimum spending levels calculated and reported for each media channel.

ARF OPINION

Overview

In several key areas the ROMO service employs methods which are supported by theory and may be considered to represent "best practices" for cross-media measurement. Among these we would include the use of: in-depth planning with a broad-based client and agency team aided by scenario planning; randomized test-control designs; pre-campaign baseline together with through-campaign tracking; pre-evaluation of creative quality; and post-buy evaluation of media spending.

Relevant ARF Principles and Guidelines

The Guidelines for Market Research published by the ARF in 2002 provide a valuable guide for researcher regarding surveys, behavioral measurement, and data analysis and reporting.

While the FAST/ARF Principles dealt only with online media audience measurement, and the objectives of ROMO extend to all media, we find that several of those principles are relevant to a review of the ROMO methodologies.

Methodological Principles/Guidelines

ROMO Compliance

Comparability across Media. All measurement systems should use best media research practices... to ensure... estimates that are:

- objective/independent
- accurate/unbiased
- relevant and timely
- precise and reliable

Objectivity:

Marketing Evolution, with financial support from the IAB, and guidance from the ARF, ANA, and NAA, have put forward a research collaboration in which several million dollars worth of research on cross-media effectiveness has been widely shared among media companies, advertisers and advertising agencies. The ROMO methodology has been carefully scrutinized, and it has been refined over the last three years. A review of the methodology from the last six studies has revealed no evidence of a lack of objectivity or media fairness. While the IAB has widely touted the fact that most of the ROMO studies have confirmed that shifting more media dollars to internet advertising would increase the effectiveness of the campaign, they have also acknowledged when other media were more effective than the internet.

Clients have received performance measures for all the media.

Accurate/Unbiased:

The measurement methods used in ROMO show no evidence of systematic distortion or bias as regards comparing media channels. The input measures and the calculations used in the ROMO estimates for each media channel are fully reported, if someone questions the findings of an ROMO study.

It is important to note that the simple ROMO comparison is based on the assumption that the advertising in each channel has the same objectives. If the TV ads have as an objective to build brand awareness and to persuade, but the newspaper and online ads have a different objective, such as driving a standalone promotion, a common measure is not valid and the contribution of each channel has to be weighed differently. Every ROMO study has used an array of metrics. VeriSign, Target and VW each had a range of objectives and therefore optimization was based on the clients' pre-determined needs.

Even though ROMO studies are generally longer in duration than cross media studies conducted by others, they may still underestimate total campaign effectiveness

because they are assessing only the short-term effects of the advertising due to the limited duration of the test.

Relevance & Timeliness:

Client feedback has been quite positive about the relevance of ROMO studies to the marketing and research. The scenario planning meetings which Marketing Evolution conducts with their client and agency partners seem to offer an excellent way to identify business issues, set objectives and manage expectations for the study and the timing of deliverables.

Precision/Reliability:

The use of Randomized Test-Control (RTC) and factorial designs adds to the efficiency of the ROMO study and should provide an acceptable error range for the study.

Since TV advertising measurement does not use an RTC design, measurement of TV is subject to coincidental variation, such as a change in competitive advertising levels or competitive advertising creative. These should be monitored carefully as should other marketing activities such as sponsorships, PR, or trade channel activities that could influence the pre-post changes in sales which are attributed to TV advertising effects.

Measurement of a category placebo brand, as in McDonald's ROMO study is the most effective control on coincidental variation. The addition of co-variance components to regression models to tease out such influences reduces the precision of estimates and the efficiency of the study design. Analyzed properly, there should be no bias in the television measurement.

However, the use of experimental design for all media can produce higher quality information (less opportunity for error bias and tighter error ranges around estimates). Consequently, we recommend that, when affordable, spot TV be added to a national or regional schedule to assess the TV effects experimentally, we encourage that TV be manipulated experimentally in concert with Online or other media spending levels.

<p><u>Decision metrics.</u> It is important that:</p> <ol style="list-style-type: none"> 1. Management, researchers and relevant others agree in advance on the metrics and measurement techniques 2. The metric(s) be relatively simple and not overly expensive to develop and use 	<p>The high level of engagement of the client through the ROMO consortium meetings together with the Marketing Evolution led scenario planning can achieve good alignment among the marketing team on the metrics and their interpretation.</p> <p>The simplicity of the ROMO metric and the transparency of its calculation should offer clarity of understanding by a broad client and agency participants.</p>
<p><u>Media metrics</u> The best available market and media measures should be used and the source and description of those measures should be documented in the report.</p>	<p>To support the ROMO analysis the media spending is converted to dollars spent per channel. Post-buy estimates of the media spend are used, rather than the plan spending levels, in calculating ROMO.</p>
<p><u>Creative Quality.</u> To assess the distinct contribution of media and creative effects, independent, accurate measures of each are critical to a proper analysis.</p>	<p>Advertising pre-testing and/or relative quality measures are obtained from the client by Marketing Evolution for the ads used in ROMO projects.</p>
<p><u>Survey Design.</u> When conducting surveys it is generally preferable to perform behavioral measurements, conduct interviews, etc., on a continuous basis, rather than in periodic waves of interviews.</p>	<p>ROMO has adopted continuous tracking where budget and client needs permit it. All studies to date have used continuous tracking. We recommend that they strive to maintain continuous tracking wherever it is feasible.</p>

Policies and Positions of ROMO Stakeholders

Marketing Evolution is a privately held research and consulting firm with offices in New York (Manhattan) and California (El Dorado Hills). The CEO is Rex Briggs.

The Marketing Evolution client list includes over 20 major advertisers.

Marketing Evolution has been a leader in combining brand tracking and experimental design for cross-media campaign measurement. They have conducted cross media measurement and optimization in a broad sphere of media involving Television, Magazine, Radio, Out-of-home, direct mail, internet, email, wireless, Newspaper, events, and cinema.

The 17 Public ROMO/XMOS studies completed to date have involved 17 major advertisers and 22 online media companies. Interactive Advertising Bureau (IAB) who conceived the consortium program and abbreviated “Cross Media Optimization Study” as XMOS owns the XMOS trademark. The IAB has supported Marketing Evolution in their work with the projects, and honored the following requirements, contractually stipulated by Marketing Evolution:

1. Advertiser **MUST** be identified. The ads available and shown so that the public can evaluate the creative and the brand.
2. Advertiser must be identified to the ARF **BEFORE** the campaign and data collection so that the ARF can ensure that all public data is released
3. ARF reviews the report/analysis **BEFORE** the client sees it. That way, the ARF can ensure that the public version reflects an accurate view of the analysis.
4. ARF has complete open access to data, media costs and other relevant inputs in the model.

With support from the ARF and ANA, the IAB has led the knowledge sharing activities built on the body of knowledge accumulated through the studies.

The IAB is a trade association founded in 1996 and located in New York, NY. Its membership includes every major online publisher and totals 125 General Members (companies that sell any form of interactive advertising) and 85 Associate Members (companies whose business supports the sale of interactive advertising and marketing). The President and CEO since 2001 is Greg Stuart, a senior executive with more than twenty years of experience in the interactive and advertising industries. Greg is a member of the Board of Directors of the ARF.

Ethical Principles

ROMO Compliance

<p><u>Privacy policies.</u> Researchers must respect the rights of the individual to anonymity and privacy.</p> <p>Researchers must also reasonably ensure that any confidential information provided to them is protected against unauthorized access.</p>	<p>Marketing Evolution and its research providers have published privacy statements and procedures to ensure both anonymity</p>
<p><u>Fully disclose methodology.</u> Complete information about research methods and practices used, as well as all the data collected, and its ownership, should be revealed to all research subscribers and prospective subscribers. ...all methods used should be as "transparent" as possible, thereby permitting critical evaluation and replication.</p> <p>The details of disclosure should include the following at a minimum:</p> <ul style="list-style-type: none"> - a precise definition of the intended measurement universe - a detailed description of the sampling frame - if sampling is used, descriptions of sample design, selection, incentives, recruitment and screening procedures - a detailed description of how measurements were made - empirical evidence of the validity of the measurement method, if available - a complete description of the data processing (e.g., qualification, editing, weighting, ascription and the calculation) 	<p>Marketing Evolution has provided ARF senior researchers with clear, complete and detailed descriptions of the ROMO definitions, methods, and validation findings. Marketing Evolution has stated that this information is also made available to clients and prospects.</p> <p><u>Recommended addition</u></p> <p>We recommend that the ROMO technical documentation be compiled into a formal Technical Guide covering the details of disclosure noted in the left column here and that Marketing Evolution update that Technical Guide annually or sooner if methodology changes are made.</p>
<p>Research companies must <u>take steps to ensure the responsible use of their data</u> in the public domain – among clients, the press, and others likely to cite their results in public contexts.</p>	<p>The knowledge building and sharing activities which the IAB has established as the core of the ROMO program provide strong support for clear and accurate interpretation of ROMO findings by advertisers and the publisher participants.</p>

Summary

It is likely that the reader may find this review touching on some unexpected issues. We believe that it is not possible to evaluate a cross-media measurement service such as ROMO using a framework developed for a syndicated measurement service focused on a single media channel. That is not to say that the principles and guidelines for those research studies do not apply to cross-media at all, but that they may need to be adapted and interpreted differently, as the marketing objectives and media combinations relevant to a given ROMO study may well differ in some important way from prior studies. Furthermore, since advertising response and sales response measures are part of an ROMO study, it is likely that guidelines not applicable to syndicated single media currency/audience size research should be applied to a cross-media methodology.

We note that the ROMO service employs several methods which we consider to “set the benchmark for cross-media measurement.” We believe that a research study that invests the time and effort in up-front, in-depth planning with a broad-based client and agency team aided by scenario planning, as Marketing Evolution does in ROMO studies, will be rewarded with higher quality research and greater actionability. While not all media are measured using randomized test-control designs in ROMO, we commend the use of true test-control designs for as many of the media as is affordable – not only because it reduces bias, but because it increases the efficiency of the design and makes the study more precise and the measures obtained more reliable over time.

When quasi-experimental and non-experimental designs are used for print and or TV, as they typically are in ROMO studies, the research provider is under obligation to provide the client with estimates of the error of the measures of media effects and tradeoffs; and the method of calculation and interpretation should be thoroughly documented in clearly written appendices to the report. The co-mingling of models in ROMO can result in confusion and misinterpretation unless special care is taken to display and explain the steps involved.

The variation in methodology that has been a part of the ROMO series of studies has contributed to the relevance of the studies, and it is likely to be an ongoing characteristic of cross-media research. However, it creates a challenge to set down in a single review document an assessment of the methodology when the methodology varies from study to study.

In the typical syndicated media study, one or two research companies are responsible for all the data collection and data processing. With ROMO studies the advertiser client and related agencies are asked to provide critical data on the media spending, advertising quality and advertising scheduling details. This broader participation mandates a higher level of client team commitment to the project. This fact of cross-media research also demands a more extensive documentation process by the provider.

Once Marketing Evolution completes the Technical Guide that we’ve recommended in this review, it will be valuable to clients and to those attempting to learn from the body of knowledge accumulated to have a brief technical document included in each report that carefully details any variations in the methodology of that particular study. The sources of supporting data provided to Marketing Evolution on coincident marketing activities, media spending, scheduling, etc., should also be documented in that Technical Appendix, which is in progress within Marketing Evolution.