Representing PR in the Marketing Mix
A Study on Public Relations Variables in Marketing Mix Modeling

by

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Submitted to the Institute for Public Relations
For the 2007 Ketchum Excellence in Public Relations Research Award

INTRODUCTION: WHY IMC?

A recent report from the Council of Public Relations Firms revealed that the disciplines of corporate communications are converging (Rand & Rodriguez, 2007). Past norms rendering public relations departments separate from marketing departments are no longer appropriate in this age of consumerism in which consumers aggregate all messages from a company in making a decision to interact with the company (Schultz, 1996).

Integrated marketing communications (IMC) is an emerging concept (Kim, Han, Schultz, 2003) that is meant to address the rising level of consumer awareness of all company communications. In fact, early on, Schultz (1996) argued that integration actually happens at the consumer level, and that it behooves the company to synchronize communications accordingly.

In spite of this emerging need to coordinate all communication activities (including advertising, sales, promotion, and public relations) few studies have empirically examined this interplay of communication activities (Stammerjohan, et. al, 2005) and the investigation of integrated marketing communication has received little attention in public relations scholarship. The purpose of this study is to explore companies' use of IMC, and the evolving roles of public relations and marketing in the movement to integrate communications.

In particular, this study addresses one critical area of this integration, the issue of measurement and evaluation. As public relations and marketing are further coordinated, the question of measurement, especially the issue of public relations' contribution to organizational objectives (i.e. sales, revenue), will become one of prime importance, and

this study will examine one emerging area of growth—marketing mix modeling—and PR's representation in such measurement and evaluation.

LITERATURE REVIEW

Integrated marketing communication (IMC) is a strategic approach to corporate communication that entails the coordination of all company communications to present a harmonious and consistent message to consumers and publics.

Borne of the issue that communications affect both the product brand and the corporate brand (Kitchen, Schultz, Kim, Han, Li, 2004), IMC prescribes a strategic mix of communication activities (Stammerjohan, Wood, Chang, & Thorson, 2005), particularly corporate communications and marketing communications (Schultz & Kitchen, 2001), targeted specifically to the audience or issue in question (Kitchen, Brignell, Li, & Spickett, 2004; Reid, 2003; Schultz, 1996; Schultz & Kitchen 1997).

Driven by "the development of new media technologies that have weakened the power of traditional mass media as an advertising channel" (Kitchen, et. al, 2004, p. 33), IMC enables companies to address this "diversified media sector…widely varying consumers' needs and tastes, and clients' desires to develop a cost-efficient and effective marketing strategy that quickly responds to the changing market environment" (p. 33).

Through IMC, companies use multiple promotional tools to garner a positive response that is "greater than the sum of separate expected responses" from each communication tool. (Stammerjohan, et. al, 2005, p. 55). As its name indicates, it entails the "recognition of a holistic, systemic process of communication in which there are all

types of synergies that will inevitably drive the acceptance and use of integrated marketing" (p. 143).

Duncan, one of the early proponents of IMC, explained that synergy is created through the communication of company vision and that it motivates consumers "to self-select and identify them selves as being interested in a brand" (1993, p. 18). In this way, integration of communication actually happens at the public level, necessitating strategic management of communication at the corporate level (Schultz, 1996).

A relatively new approach to marketing communications, IMC has been labeled a management fad because it lacks a theoretical foundation, measurability, and accompanying research to define concepts leaving much ambiguity surrounding the process (Cornelissen & Lock, 2000). However, Schultz and Kitchen (2000) rebuffed the idea, arguing that a lack of definition and measurement does not preclude a concept from being a theory, but rather it provides an opportunity for growth.

IMC Activities

Integrating marketing communications prescribes a strategic coordination of all communication within the communications mix, which are often segmented into four categories: product, price, promotion, and place (otherwise known as the four Ps) (Keh, 2007). IMC prescribes the coordination of multiple media across the four Ps in a campaign (Stammerjohan et. al, 2005) into a "single persona and voice" (Hallahan, 2007, p. 310) that is "strategically driven by the most relevant communication function" (Duncan, 1993, p. 18). Early on, Duncan (1993) argued that all communications functions should be considered equal and that companies must "lead with the marketing communication function that most effectively addresses your number one problem and

use a marketing communications mix that utilizes the strengths of various communications functions that relate to your brand's particular situation" (p. 18).

Several case studies have demonstrated the application of Duncan's (1993) original prescription that IMC matches communication strengths with company brand situations to establish a strong positioning. In one of the earliest recognized integrated campaigns, Grey Advertising (Ward & Cline, 1978) working with Canada Dry, sought to increase market share by researching and segmenting target audiences and honing messages appropriately. An integrated marketing campaign for Dewar's (Silk & Klein, 1997) emphasized brand positioning and communicating a consistent and desirable positioning across all communication media that was appropriately matched to the target market. BMW Films (Moon & Herman, 2005) demonstrated innovation in expanding the communication mix and achieving synergy by creating a series of short films promoting BMW vehicles in an indirect way. The company's vice president of marketing, Jim McDowell, explained that BMW's efforts reflected the need to "achieve a balance, to create a synergy across a bunch of different media" (Moon & Herman, 2005, p. 61) and led to a surge in sales. Integrated communications at Suave (Albion, 1994) employed market research to profile users and gauge awareness, while tracking the GRPs (Gross Rating Points) earned by the company's extension of messages across the gamut of communication mix activities. Chevron (Quelch, 1993) used public opinion monitors and regression to determine the right messages for the right audiences, tracking the growth of consumer movements and targeting messages appropriately. Schwab (Quelch & Winig, 2007) employed IMC to revitalize its brand and used research to evaluate communication mix investment and client segmentation to target communication activities appropriately.

Overall, this review of cases demonstrates that not only is there a limited number of case studies exploring IMC, but there is a critical need for recent studies, as there are only a few quality case studies published recently. Mark Weiner, former senior vice president for Ketchum Global Research Network (personal conversation) said this is because companies that have honed their IMC efforts are hesitant to reveal their competitive advantage, especially because such efforts represent large investments in resources.

Research and Evaluation: Marketing Mix Modeling

Marketing mix modeling, or econometric modeling, provides a tangible situation in which to explore IMC, and the evolving overlap between public relations and marketing, because it pulls statistical information from all communication activities, including public relations, and leads to the strategic coordination of both public relations and marketing activities. One of the underlying issues, however, is pinpointing what to measure.

Kitchen (2000) and Schultz (1996) argued that measurement should be based on the effect initiatives have on a company rather than on traditional message evaluation or attitude research. "For the most part, marketing and communication measurement still suffers from an attempt to measure 'outputs,' that is, what is sent out, not 'outcomes' or what impact the marketing or communication activity or investment had" (Schultz & Kitchen, 2000, p. 19). Similarly, other reports and papers have called for a shift to gauging PR effectiveness by measuring outcomes. Weiner and Bender (2006) argued that with marketing mix decisions linked to sales, "it won't be long before media relations

campaigns are planned on the basis of what drives sales rather than what drives ink" (p. 46).

In this way, one emerging "outcome" area of public relations measurement is tying activities to sales through an evaluation process known as marketing mix modeling. Through market mix modeling, or econometric modeling, companies use sales and marketing data to "evaluate the contribution each element of a marketing program makes to improve sales or share" (Hughes, 2002, p. S4). Marketing mix modeling "uses regression-based techniques to estimate the impact marketing activities are having on sales, and then builds forecasts for future sets of promotional campaigns" (DemandGen, n.d.). Models are built with rich, granular, historical data for regression analysis to correlate factors affecting sales (Doyle, 2004). In short, marketing mix modeling is used to figure out "which part of the ad budget is being wasted, what their optimal spending level is, and what minimum marketing exposure levels should be. Marketing mix modeling demonstrates what is working and what is not (Nardone, n.d.), and modeling variables used run the gamut from pricing decisions and packaging considerations to the weather, economy, and seasonality (Doyle, 2004).

Marketing mix modeling is primarily a time-series based evaluation used to predict future performance (Frances, 2005; (Marketing Management Analytics, n.d.), enabling companies to answer "what if" questions about consumer response to brand situations. Frances (2005) argued that good modeling requires consistent data and estimation of data, good forecasting record, incorporation of consumer response and expectations, and both controllable variables (i.e. price, advertising spend, etc.) and uncontrollable variables (i.e. seasonality, day of the week, household size, etc.).

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There is an increasing interest by marketing decision-makers to evaluate their marketing communications using econometric modeling (Hughes, 2002), and marketing mix modeling is becoming a larger part of marketing budgets at companies like Proctor & Gamble (Neff, 2007). In fact, Proctor & Gamble is "uniquely situated to benefit from today's marketing model because it uses its operating efficiency and unmatched clout as the world's biggest marketer to massively outspend its rivals and meticulously measure everything it does, so it knows what is working" (Neff, 2007, p. 1).

Proctor & Gamble's extensive use of marketing mix modeling may reveal why modeling has yet to receive sufficient coverage in reports, few companies are doing it because it is cost-prohibitive and requires succinct coordination. In fact, a recent report argued that modeling stands to benefit the biggest spenders in marketing (DemandGen, n.d.). Most analysts suggest a marketing budget of at least $10M, but some suggest upwards of $50M as a starting point for modeling to be efficient (DemandGen, n.d.). As Hughes (2002) explained, "Econometric models require clients to invest large amounts of data and time. Modelers need to learn what each client's business challenges are and which questions the model should answer. Modelers then form a theory, build a model that processes data from the client's historical marketing programs and sales results, and use statistical methods to find patterns" (p. S4).

Very little research has detailed IMC from a public relations perspective and ongoing overlap between PR and marketing, and the purpose of this research is to explore these developments by investigating the variables used in marketing mix modeling.

RESEARCH QUESTION

Research Question: What factors do practitioners use in marketing mix modeling? How is Public Relations represented in marketing mix modeling?

The main purpose of this study is to gather and classify the varying factors used in marketing mix modeling, and to explore how public relations is represented therein. Guided discussions under this heading involved questions about marketing mix decisions and how public relations is integrated into the communications mix.

METHODOLOGY

In order to explore the evolving roles of public relations and marketing in integrated marketing communication, and its corresponding representation in marketing mix modeling, I gathered information from two sources: 1) in-depth interviews with public relations and marketing professionals and 2) company documents and previous research. The in-depth interviews provided me a broad look at the public relations and marketing environments, including the variables used to measure communications efforts in marketing mix modeling, and the company documents and other research validated and expanded upon the issues discussed by the participants.

Following getting approval from the Institutional Review Board (IRB), I conducted in-depth, telephone interviews with five marketing communication professionals from five different companies that provide research and consulting on marketing mix modeling and integrated marketing communications. My research also involved four separate meetings with marketing mix executives. Three with a marketing measurement firm, and one with a media monitoring firm. The meetings lasted between

30 minutes to an hour and featured discussion on the representation of public relations in marketing mix modeling. I used a purposive, convenience sample for selecting participants, starting with a Google search of companies on the terms "public relations," "marketing mix modeling," and "public relations measurement". After speaking with each participant, I used a snowball technique to recruit more participants, asking interviewees for referrals. In the end, participants were among the most respected and recognized professionals working in IMC and marketing mix modeling.

Participants were senior directors and executives from marketing and public relations firms, as well as media measurement and monitoring providers, and spoke to the gamut of IMC processes and marketing mix modeling variables used across the spectrum of clients with which they worked. Inasmuch as client-specific work is proprietary, I encouraged participants to discuss issues in general and I assured them that their identity and that of the companies they discussed would remain confidential. Telephone interviews lasted between 30 to 45 minutes and involved a semi-structured interview format based on the aforementioned research questions. Participants were asked about their approach to marketing and public relations, their priorities in integrating communication, and the variables used to measure public relations and marketing, particularly regarding marketing mix modeling.

Interviews were tape-recorded, per the permission of each respondent, and were transcribed. Whereas the meeting with four executives was not tape-recorded, I took extensive notes and coded the information along with the interview transcriptions. For the final results, I coded the interview transcriptions and meeting notes, and integrated the information from the literature review and the company documents discussed below.

In addition to the in-depth interviews, I also conducted an extensive literature review of scholarly articles as well as company white papers, case studies, and promotional material explaining the variables organizations use to measure public relations. Several companies publicize their measurement variables through case studies and white papers, and I obtained such documents through company websites and requests for information made directly to companies engaged in marketing mix modeling and public relations measurement.

RESULTS

Research Question: What factors do practitioners use in marketing mix modeling? How is Public Relations represented in marketing mix modeling?

The critical question for the development of integrated marketing communications may very well be how organizations measure the impact of integrated programs. A recent study on marketing measurement and investment (Nail, 2002) found that measurement is both the top priority in marketing communications and the top challenge. The question, however, is what to measure.

What to measure

Consistent with the findings in the literature review, this study revealed a tendency to evaluate PR based on attitudinal measures (outtakes) and media content analysis (outputs), rather than results (outcomes).

One respondent said that the objective of public relations determines what is measured. "If you think PR at a simplified level is about exposure and influence, then you've got to measure those things….So, you've got to get out there and do pre- and

post-studies to find out what are people thinking today, what do we need to tell them, what messages do we need to deliver, in what context, and with what authority and tone." Similarly, one interviewee who managed public relations and marketing for a non-profit organization also explained that they use media content analysis to evaluate their effectiveness. In fact, it was apparent that some clients measure media coverage for coverage sake.

Overall, there may be a confusion of terminology. Respondents said that clients often confuse the terms outputs, outtakes, and outcomes; and there is a lack of consistency about what should and should not be measured to evaluate a program. One executive said this confusion impedes the ultimate goal of PR to get a seat at the table. "PR whines and complains they don't have a seat at the table. They want to sit with the big boys at the C-suite. Well, until you can get your terminology straight and synch it up with what's important to them, you ain't going to get a seat at the table, so stop whining."

The problem may be the level of sophistication and investment that measuring outcomes requires. As one professional explained, "If you're talking about outcome research—not just content analysis—it's much more expensive and sophisticated and most people don't have the money or place enough importance on it." Or, it may just be a matter of development. One marketing measurement executive argued, "PR is where marketing was five to six years ago, which is 'Oh yes, measurement is really important, how can we avoid doing this? We don't understand it. We don't know what it's about. It's really a distraction. What we want to do is do another cool press conference!'"

Either way, companies want to measure their success, and interviewees discussed a growing recognition among their clients of the need to measure outputs. For one

interviewee, this represents a shift in thinking. "Getting articles in the media is our strategy, it's not the objective. That's a fundamental shift. I think there's a lot of power in that simple shift, because getting the article out there is not the end, it's the strategy. The objective is to create exposure or influence." Similarly, a recent study among marketing communications professionals revealed a need for "correlative measurement to cut through marketplace noise and link multi-channel marketing stimuli to business metrics" (Nail, 2002, p. 7). The purpose of this correlative measurement is to better understand the consumers' path to purchase, and prescribes tying public relations to factors such as brand awareness, brand consideration, point-of-sale data, loyalty programs, and financial gains.

What is more, this demand for measurement of results is not just quantitative. Clients also want to know the "why" behind the numbers. "We can show our clients all the numbers we want," said one executive. "Their first question is 'why?' So you have to go into that next level down and look at the messages or attributes they're talking about and start to understand that."

Overall, the current study revealed that there is an ongoing development to measure behavior, rather than attitudes.

The impact of public relations

Within this framework of tying communication activities to financial gains, there is an emerging recognition of the impact of public relations.

Public relations has a peculiar effect on other marketing communication activities. "If you advertise in a time when you're getting bad PR," explained one executive, "it doesn't work. Conversely, if you advertise in a time of really good PR, there's a

leveraging effect—it actually has more impact than it would, all things being equal." PR, operationalized as press mentions, has a powerful effect on the company reputation. The impact of a negative mention can be as much as 10 times as powerful as a positive mention, the respondents explained, and often unpaid media can affect sales. "Anything that comes from a respected third party, like consumer reports or Cnet," said one executive, "we tend to see those things pop in sales pretty dramatically."

Measuring public relations has often accounted for missed sales forecasts, as one study discussed in the current study revealed. A major consumer packaged goods company missed its sales forecast by 9.5%, leaving millions wasted on production. It was discovered that the problem was that the company had ignored unpaid media in its measurement, and that factoring in unpaid media would have solved the forecasting dilemma. Whereas public relations cannot always be tied to sales, one respondent explained that "to the extent there is nothing else that can explain a sales spike…[the PR event in question] will essentially take credit for whatever the other variables can't account for." According to the interviews, PR often represents five percent to seven percent of sales.

One of the difficulties in tying public relations to results is the lagging effect that media coverage can have. According to interviews and discussions, editorial coverage usually leads a business outcome. The lead/lag time between coverage and sales can be as short as the next weekend for retailers and as long as 12-13 weeks for pharmaceutical companies. Nail (2002) argued that a simple ad-response-sales tracking mechanism can fail "when Tide's promise of brighter colors causes a consumer to buy it three weeks later when she runs out of her current brand" (p. 8).

Part of the value of public relations comes from its low costs vs. other marketing activities. Nail (2002) argued, "On a cost-per-impact basis, high-priced media won't be able to compete with virtually free tactics like PR" (p. 12). For this reason, "PR does incredibly well vis-à-vis advertising," said one interviewee. "It's not abnormal to have 200-300% ROI in PR." Furthermore, another interviewee said that when Procter and Gamble went public with its measurement results, it proved that PR was the most cost-efficient way to drive sales. "Though it doesn't cost much to do PR," he said. "The added credibility of the PR mention factors in as well."

Not all of the respondents are in favor of tying public relations to sales. One professional argued that public relations cannot help financial performance because you cannot assign a dollar value to PR. "You can't calculate ROI from impressions, you can't get there from share of discussion, net positive coverage, or any of those things that are interesting metrics," he said. "ROI has to be financial. Unless you have a dollar amount, you can't calculate ROI."

Rather, this professional said public relations gives value to three areas: 1) marketing, by generating exposure for products, 2) branding, by increasing awareness, and 3) reputation. "If you're deficient in those three areas," he argued. "PR can help…Let's track competitively how we're doing to close gaps and increase leadership across those dimensions."

Marketing mix modeling

In spite of this dissenting opinion, the movement among professionals in an integrated marketing communications environment is to tie public relations to sales by

using the statistical modeling process known as marketing mix modeling, or econometric modeling.

Driven by technological developments that provide greater gathering and statistical evaluation of sales data, marketing mix modeling links marketing spending to sales results by quantifying the impact of each marketing communications activity (Nail, 2005). Marketing mix modeling "reveals marketing's incremental sales impact" by integrating historical data to analyze "geographic, media, or brand-level budget allocations" (p. 2) and predict results from marketing communications decisions. Marketing mix modeling enables a company like "General Mills to answer a question like, 'Did using a coupon affect consumer trial" (Nail, 2002, p.7).

The first question in marketing mix modeling is identifying the variable against which to measure. Whereas companies commonly measure public relations and marketing communications against sales, the current study revealed several other dependent variables under consideration. In a meeting with an econometric modeling firm, executives discussed measuring communications against corporate reputation, stock price, net promotive score (or likelihood to recommend a product or service to a friend), imagery dimensions from consumers, and brand trust in addition to sales. Executives even considered account openings at a national bank as a potential variable against which to measure communications. The key is to find the right metric to represent organizational objectives and ensure that the chosen metric can be tracked over time. For example, "Comcast would measure against loyalty and retention," said one modeling specialist.

Nevertheless, tying communications to sales seems to be the Holy Grail for

measurement. Nail (2002) argued, "Sales is the sine qua non of correlative measurement and its value will only increase as more marketers crave it and as store loyalty cards generate more consumer-level purchase data" (p. 12).

Modeling necessities

Once a company has chosen the relevant dependent variable against which to model communications activities, several other elements are necessary to build the model. This study revealed that the quality of the model depends on the quantity and continuity of coverage. One respondent indicated that the definitions of the variables selected must be applied consistently, and that there must be variance from week to week. The meeting conducted with a marketing modeling provider revealed that a good model needs continuous data because modelers take the data set and aggregate it by weeks to recreate a weekly tracking of budget and revenue. Furthermore, Nail (2002) stated, "Models thrive on teasing out the results from different combinations of elements" (p. 11), so the quality and richness of historical data is essential. The level of granular data allows modelers to "run what-if scenarios for different mixes and spending levels" (p. 11).

Proxy data, and getting the representations right, plays a critical part in putting together a cohesive model. One professional said, "What we often wind up having to do is thinking about what kind of proxy data can represent something." He went on to explain a recent dilemma the firm faced with the Atkins phenomenon and two of their clients. Both the dieting company and the consumer packaged goods company he worked with were affected by the Atkins diet in different ways—the CPG company positively, because it led to eating more cheese and the dieting company negatively, because it was

an alternative diet. In order to capture and represent the impact of the Atkins in the model, they used Google searches as the proxy for the amount of consumer buzz around Atkins. Using the Google Trends service, the modelers input keywords related to dieting, tracking how many times the keywords were searched on by week and by month, and enabling the modelers to statistically represent PR effect. The interviewee went on to explain, "We often use Google Trends as a proxy for what's on the minds of consumers, if you will. One of the interesting things is when there are spikes, the trend on Google will reference major PR issues."

Modeling challenges

This challenge to impute numerical values and create proxy data to represent the effects of public relations is just one of the many challenges modelers face when creating accurate models. Data can be unstable and inconsistent, especially when dealing with unique website and blog visits, explained one respondent, and getting solid, stable data can be a challenge.

One respondent said, "The hardest thing from a modeling standpoint is dealing with local vs. national PR." He explained that he does work for a fashion retailer that emphasizes local events-based marketing communications over mass marketing on a national scale. When the company sponsors a local race or other event, the PR is usually only noticeable in and around the region where the event takes place. The challenge is representing such small local-based impressions vis-à-vis more widespread national data because "even if national publications pick up local-based impressions, that's not going to have an impact on sales if you're building a national model…it won't be enough to move the needle if you're looking at the brand at a national basis." In the end, the firm

had to adjust the model for the individual store level, setting up a mile diameter around the stores in the areas that would likely be affected by the PR of the events to capture the impact of the local PR. Through this adjusted modeling, the firm found that the local PR was a really important driver of sales—a result that would have been missed had the model not been devised correctly. "If you don't have the wherewithal to build models at that level of granularity, chances are, you'd build a model and say PR didn't work," said the respondent.

Other challenges revolve around organizational structure, where coordination issues, uncertain ROI, and budget considerations for an expensive and time-consuming modeling process often keep companies from doing marketing mix modeling. According to interviewees, many organizations have little knowledge about marketing mix modeling, and organizational structures are often too flat (one interviewee described organizations as fiefdoms in which each communication function has to prove its value independently). Furthermore, marketing communications specialists often fret about the cost of calculating ROI (Nail, 2002) and the most difficult elements of the marketing process, according to a recent study, are measuring multi-media campaigns and measuring sales impact (Nail, 2002).

One unique challenge surrounded the use of marketing mix modeling, itself. Intended for projection and budget allocation considerations, one respondent said that modeling needs to shift from emphasizing projection to covering early response to product launches. "The new marketing mix modeling is going to have to really start to make some assumptions about how much can the brand improve upon the launch strategy leveraging early signals," he said. Real-time response is a critical area for marketing

measurement, and another respondent similarly argued that marketing mix modeling needs to "transition from a backwards look at 'how we did' to a hypothetical, 'let's see what happens if we raise this or lower that.'"

PR measurement variables

Throughout the interviews and meetings, white papers, and case studies in this study, there seemed to be an endless list of variables considered in marketing mix modeling, encompassing online, print, and broadcast media, as well as environmental and lifestyle variables, though media-related variables carried the most weight throughout the research[1].

Media variables

"90% of all measurement is focused on the media component of PR," said one interviewee. Marketing mix modelers dissect media impact into several different levels. On the most basic level, modelers include raw clip counts, which yield the lowest correlation to outcomes.

On the next level of media measurement, modelers include media content in their metrics. Several respondents discussed quality of message as a basic component, measuring message type and message tone on numerical scales. Common considerations under this heading include headline mentions of the organization, the inclusion of a visual or photo, the exclusivity of a company mention in an article, the size of the article, a mention by a key influencer, and the placement of the article itself (front page placement, etc.). According to research cited in the interviews, the difference between media factors is marginal, and accruing scores in just one category (article size, placement, exclusivity,

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1 A table of PR variables from this research can be found in Appendix A.

etc.) can yield a correlation with sales. One media monitoring provider measures this as an impact score—which mixes media value (or the average market value of a space, also known as advertising value equivalency), message tone (positive, negative, or neutral), and prominence (location of article, circulation, impressions, etc.).

Whereas traditional media variables include such factors like the credibility of the publication, article placement, and message (as outlined above), one practitioner discussed the importance of a proactive vs. a serendipitous press mention, weighing the coverage differently if it was the result of media outreach or whether it was picked up on its own.

At the same time, the problem with relying on basic content analysis, according to a media monitoring provider, is that "if the news stories aren't saying anything unique— if there is no key message—there is also no value." In response, many firms measure the inclusion of a strategic message as part of this analysis. The media monitoring firm that participated in this study found that including strategic messaging as a metric yields significant correlation with sales, especially for pharmaceutical companies, where key messages correlate strongly with prescription volume sales.

Participants said that measuring the inclusion of strategic messages can be effective, but discussions with media agencies revealed some issues. For example, a direct reprint of a press release would yield a higher score than a legitimate news story featuring strategic messages (and the corresponding credibility that follows). Furthermore, media measurement agencies rarely measure the compound effect of multiple strategic messages, which can be either negative or positive.

On a deeper level, measuring share of discussion can yield a more representative correlation with business metrics. Share of discussion, defined as client story counts divided by story counts for the company and all of its competitors, yields a higher correlation to sales volume and other outcomes than raw clip counts, according to one media measurement firm. One executive said that share of discussion is a three-level process. First he analyzes the brands in the company's competitive set, then conversation about each company by favorability, segmenting audiences inasmuch as it is possible, and finally, he measures the main strategic messages.

One of the problems with relying on media is that some companies do not generate enough news coverage to correlate against sales, as was pointed out in a discussion with a marketing modeling provider. Furthermore, the value of some of the metrics can be ambiguous. For example, exclusivity of an organization may be considered beneficial, but in crisis situations, it may not be, and basic media metrics may not distinguish between the two.

Impressions

On the other side of the media coin is the measurement of impressions. One media measurement firm indicated that impressions represent a better correlation to outcomes than story counts, but is comparable to the share of discussion metric. Impressions can be considered within a number of different scenarios. One respondent indicated that he calculates impressions based on potential reach of a publication by multiplying circulation by the average number of times the publication will change hands. Others use strict circulation numbers for print and unique web visits for blogs and

websites, though these numbers can be somewhat unstable and even misleading, respondents said.

Online impressions are of particular interest to practitioners, and measuring public relations through websites and consumer-generated media represents an emerging area for marketing mix modeling. One interviewee indicated that rather than separating out website page views, ad exposure, and click-throughs as separate metrics, he uses one "digital points" category to represent online coverage.

Online impressions are an important emerging area for consideration in modeling because the Internet is where buyer behavior begins. One interviewee said, "The first moment of truth, A.G. Laffley would say, is where buyer behavior begins. Now we've got a first moment of truth that's taking place outside of the store shelf, but on a different shelf—Google, Wikipedia, message boards and forums."

However, online media and consumer-generated media like blogs, online forums, and social networking sites can be tricky to measure because they often feature fleeting page views and impressions, which can be difficult to gauge. One executive said measuring social media can be difficult "because one person could post one hundred times," but he found that the average ratio is about two posts per person, so he looks at both total number of posts and total number of people posting. Others evaluate the level of website traffic generated per impression, the quality of each site, and the number of different sites where clients get hits.

One respondent explained that his firm evaluates the spill-over effect of online media crossing over into print and broadcast media. "Most consumers are using the internet as a resource platform, but they're buying offline. So, we'll look at things like,

'did a blog entry spill over into the traditional media?'" According to this executive, dispersion, or "evidence that an online comment amplified itself beyond the original post…or jumped from one particular forum to another" is a critical factor for measurement.

Impressions in marketing mix modeling are also considered as an equivalent to Gross Rating Points (GRP). Used as an advertising metric, GRPs are a numerical representation of reach multiplied by frequency, and several respondents discussed GRPs as a critical variable in marketing mix modeling. Respondents indicated that GRP calculations are not representative for public relations, though one executive discussed building a richer model by creating a modified GRP for public relations that builds off of reach and frequency, but accounts for the public relations effect.

Environment and consumer engagement variables

At a more profound level than media coverage and impressions are environmental-level variables, which are more difficult to represent in marketing mix models. A primary example of an environmental-variable is the Atkins phenomenon discussed earlier, which posed challenges to modelers who sought to statistically represent an external or environmental trend that had a critical impact on sales.

Environmental variables tend to be those under which corporate public relations, defined earlier as financial communication and investor relations, crisis communication, and issues management, would oversee. For example, one study (Marketing Management Analytics, n.d.) demonstrated that for pharmaceutical companies, formulary and regulatory issues have an inevitable effect on sales.

Seasonality is a particularly important environmental variable. Several respondents discussed the impact of seasons on sales, and one interviewee explained that he works with a weight-loss company, and the seasonality of dieting plays an important part in the company's marketing mix models.

Competitive landscape also figures in to environmental variables. One measurement specialist discussed the importance of assessing variables in the model against competitor data. This would include figuring in volume of coverage, opportunities to view, ad value equivalency, coverage by publication, tonality and quality of coverage, share of voice, and message and issue tracking against competitor data in the same areas.

Consumer emotion and engagement is another consideration among environmental variables. Several interviewees discussed gauging consumer feelings towards a company. One interviewee explained that buzz and counter-noise (or noise running counter to the desired position of the company) should be considered in modeling efforts. "Consumers have megaphones with untold reach and smaller sub-segments of the market are disproportionately driving everyone else," he said. "This requires a whole new ROI emphasis where you start to focus attention on who are these outspoken, highly engaged consumers, and what is my liability if they make counter-noise early on?" This executive went on to explain that such noise creates a multiplier effect, in which commentary is pulled into Wikipedia and high-ranking Google search results.

Consumer engagement is an important consideration for modeling because, according to participants, research has shown that media coverage has higher value based

on how much people get involved. Engagement reflects personal values and the public tends to set different impressions of coverage based on the media outlet. According to marketing statisticians who participated in this research, a recent study showed that the engagement of television media is an important influencer of sales, and companies have created an engagement-weighted GRP.

Consumer engagement is perhaps best represented online in blogs, and, according to one executive, blogs are one of the "inputs that need to be revisited [because they] have become the primary input to traditional news media."

Also related to consumer engagement are consumer reviews, evaluations, and ratings. Whereas these factors could be considered under media impressions, there is a need to properly represent the metrics against arguably less-credible mentions like press releases. Additionally, a recent report on best practices in marketing mix modeling (Nail, 2005) revealed that some companies take into consideration product demand and customer objectives.

At this level of consumer engagement, customer service becomes an important metric to consider within marketing mix modeling. "We could always get away with crappy customer service," explained one executive. "You can't anymore because the consumer culture is now magnifying the screw ups. My guess is that marketing mix modeling until now probably didn't assign 'getting it right with customer service' as it needs to be right now."

Finally, one classification that seemed to fall outside the fields of media relations, impressions, and corporate environment variables was the issue of product placement. One interviewee explained that if a celebrity wears a client's product, it can have a

powerful effect on sales, and is represented in the model as a public relations variable. Up until this point, however, product placement has not been fully developed in models. As one interviewee said, "I just know it happened, and I put that into the model as an event."

Overall, public relations is represented in marketing mix modeling in varying ways, from basic level press mentions to deeper issues of consumer engagement and environmental variables.

DISCUSSION

This study demonstrates that public relations in the marketing communications mix is gaining prominence, as represented by the extensive set of PR variables entering marketing mix modeling. Furthermore, this study shows that as companies continue to integrate all communication activities, marketing and public relations among them, the onus is on public relations professionals to prove the worth of their activities.

Yet, this is a challenge that public relations professionals should welcome and meet head on. As Weiner recently argued:

> New technology and methods are permitting marketers and marketing PR people to scientifically demonstrate that PR is even more powerful than advertising…Rather than PR disappearing, I see it augmenting the great things for which we're already recognized by showing how dominant we are in the field of marketing. I would suggest that everyone in PR learn more about marketing mix modeling because it is the future of marketing and everything that falls under that umbrella, including marketing public relations. Those who choose to include

media relations-based marketing in the mix find that PR delivers a return that is better than any other marketing tool (Grunig & Weiner, 2007, p. 28).

This study demonstrates that public relations variables are prominently featured in marketing mix modeling, particularly typical media-relations variables, and therefore from a measurement perspective, public relations is fully integrated into the marketing communications mix. The future of public relations, then, relies on public relations professionals to accept this integration and seek to prove the value of PR through measurement initiatives like marketing mix modeling. This is the opportunity for public relations to earn its seat at the management table, and professionals can either coordinate

Much debate has been on whether public relations should be under the umbrella of marketing communications or vice-versa, but I submit that this debate is irrelevant, for the time being. With further integration of public relations and marketing communications (including advertising, promotion, and sales), the reality is that coordination is inevitable, and further research should explore the ways in which the two functions are coordinating and integrating their activities. Theoretical frameworks that have long been absent from integrated marketing communications activities (Kim, Han, & Schultz, 2004) will be forged through greater understanding of the methods, initiatives, and frameworks within which these processes are carried out. IMC theory needs to be forged out of deeper application of management theory and relationship theory, as companies seek unencumbered coordination and stronger relationships with its entire gamut of publics, including consumers, stakeholders, and investors.

This research is merely the cusp of greater empirical understanding of the integration of public relations and marketing communications. As public relations is

further integrated with marketing, evaluation of PR against marketing outcomes is

inevitable, especially as measurement processes like marketing mix modeling gain even

more notoriety. As PR roles consequently evolve, further research is vital.

APPENDIX A

Public Relations Variables Represented in Marketing Mix Modeling

Variable	Category	Details	*Challenges/Opportunities*
Raw Clip Counts/ Story Counts	Media	The number of times organization mentioned in media	Yields lowest correlation to outcomes. Client may not generate enough news coverage for tracking.
Message Quality	Media	Incl. type, tone, visual, headline, exclusivity, influencer, size, placement, prominence.	One level higher in correlation than raw clip counts. If clip not saying anything unique (no key message), no value.
Message Quality: Type	Media	Press release, editorial, etc.	Press releases reprinted without editorial/revision get highest article score, though not most effective.
Message Quality: Tone	Media	Tone includes: positive, negative, neutral, tongue-in-cheek, etc.	Tone is difficult to discern, especially tongue-in-cheek references.
Message Quality: Visual	Media	The inclusion of a photo or visual in a press clip	Can be positive or negative, difficult to automate coding.
Message Quality: Headline	Media	Organization mention in headline	Can be positive or negative, difficult to automate coding.
Message Quality: Exclusivity	Media	Media only mentions organization in question	Can be positive or negative, difficult to automate coding.
Message Quality: Influencer	Media	Quote from sponsor, opinion leader, or influencer	Can be positive or negative, difficult to automate coding.
Message Quality: Size	Media	Size of the article	Can be positive or negative, difficult to automate coding.
Message Quality: Placement	Media	Location of the article within publication	Front-page mentions rated highest. Differing scores based on serendipitous vs. media outreach

Message Quality: Prominence	Media	Publication type (Print, broadcast, web, etc.) Ranks based on media credibility, circulation, impressions.	
Message Quality: Strategic Message	Media	Inclusion of key org. message	Significant correlation with sales (esp. Pharma). Compound effect of multiple messages not measured.
Impact Score	Media	Score of: advertising value equivalency, tone, prominence	Considered representative score of all media.
Share of Discussion	Media	Client story counts divided by total story counts for client and competitors	Yields higher correlation w/sales than message quality.
Impressions	Media	Incl. potential reach of publication, circ. numbers, unique web visits, ad exposure, click-throughs, online coverage, etc.	Yields higher correlation than story counts. Similar correlation as share of discussion. Numbers may be misleading, web impression consistency presents difficulties.
Digital Points	Media	Incl. online impressions (above), quality of site, web hits, back links, etc.	Web visit consistency may present difficulties.
Dispersion/Spill-over effect	Media	Amplification of online media, "spill-over" into traditional media.	Potential to measure compound effect.
External / Environmental Trends	Environment	External issues that affect sales (i.e. Atkins phenomenon,)	
Competitor Landscape	Environment	Competitor data	
Seasonality	Environment	Effects of	

		weather, time of year, etc.	
Consumer Emotion / Engagement	Environment	Consumer feelings (incl. public opinion, buzz, counter noise, etc.)	Often has multiplier effect associated with web coverage. Media has higher value based on consumer involvement with publication/media outlet.
Consumer Reviews	Environment	Incl. consumer reports, product demand, etc.	Blogs are emerging opportunity.
Customer Service	Environment		Real-time blogging provides forum for customer concerns
Product Placement	Environment	Placement of client product in broadcast media	Difficult to track

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