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What (Not) to Expect When Surveying Executives

A Meta-Analysis of Top Manager Response Rates and Techniques Over Time

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The authors developed hypotheses about the effectiveness of response rate techniques for organizational researchers surveying executives. Using meta-analytic procedures to test those hypotheses, the authors analyzed response rate data from 231 studies that surveyed executives and appeared in top management journals from 1992 to 2003. They found mean response rates to be declining over the period, yielding an overall 32% rate. Of the various methods suggested to increase response rates in other populations, none were found to be effective for executives. However, topical salience and sponsorship by an organization or person in the executive's social networks did bring about response rate increases. The authors provide recommendations about what (not) to do when trying to collect original data from members of a firm's upper echelons.

Keywords: *executives; response rates; mailed surveys*

Much of the information required to understand organizations must come from the people who lead them: top managers or executives. That executives are important to organizations has long been recognized by management researchers (Barnard, 1938; Penrose, 1959). Executives are the most knowledgeable sources of firm-level information (Norburn & Birley, 1988). They can function as key informants regarding the processes used to make decisions (Boyd & Falk, 1996; Venkatraman & Prescott, 1990), as well as craft and implement strategies (Huselid & Becker, 2000; Kumar, Stern, & Anderson, 1993). For researchers seeking process information, the CEO or other members of the organization's upper echelons are not just the best but might be the only sources for some variables. However, the willingness or ability of these executives to share such evidence with researchers is another matter.

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Mailed Surveys

There are several vehicles for collecting direct evidence from executives, including face-to-face contact (e.g., Gibson & Zellmer-Bruhn, 2001), telephone interviews (e.g., Thompson & Bloom, 2000), and mailed surveys (e.g., Steensma, Marino, Weaver, & Dickson, 2000). Although the latter strategy for getting organizational-level data is often criticized as lacking realism of context, it has the advantage of asking highly structured questions with easily quantifiable answers. It also has the potential to reach a much broader population at a lower cost per response. In addition, mailed surveys can easily preserve the confidentiality of organizational information (Leong & Austin, 1996), which is often a primary concern for executives (Falconer & Hodgett, 1999).

As a broad data collection strategy for studying what happens in the field, mailed surveys are perhaps the best-researched method in the organizational sciences, especially in terms of techniques for enhancing participation rates and minimizing nonresponse bias (Roth & BeVier, 1998; Viswesvaran, Barrick, & Ones, 1993). Dillman (1991) noted that more than 500 published studies examined correlates and causes of response rates prior to 1990. Findings from these studies have been summarized in several meta-analyses (Church, 1993; Fox, Crask, & Kim, 1988; Roth & BeVier, 1998; Yammarino, Skinner & Childers, 1991; Yu & Cooper, 1983). Many of these summaries document the effectiveness of Dillman's (1978) total design method (TDM; now referred to as the tailored design method; Dillman, 2000). They establish a benchmark of expected response rates for mailed surveys in consumer or employee populations.

Response rate enhancement techniques for mailed surveys, including the TDM, have also been widely adopted in research targeting executives. Yet it is not clear that these techniques are effective for such populations (Cycyota & Harrison, 2002). Some researchers have suggested that there are differences between executives and other groups in response rates (Baruch, 1999), in respondent characteristics such as individual knowledge level and organizational characteristics such as size and culture (Gupta, Shaw & Delery, 2000), in appropriate survey techniques (Dillman, 2000), and in reasons for nonresponse (Tomaskovic-Devey, Leiter, & Thompson, 1994). There might be fundamental differences between the social-psychological contexts and participation mechanisms for an executive responding on behalf of his or her organization versus an individual consumer or employee responding on behalf of himself or herself.

Moreover, little evidence exists as to what might be a reasonable response rate for a survey of an executive population. Some methods texts tell researchers that a 50% response rate is a normative minimum (Babbie, 1990; Dillman, 1978). A common trend is to cite other research with similar response rates without establishing a summary expectation or average level (Cycyota & Harrison, 2002). Although this approach is reasonable in the absence of more systematic information, it would be helpful to have a benchmark value as well as data documenting that response rate enhancement techniques work for surveying top managers. Evidence regarding norms for executive survey responses would benefit those who evaluate such research in the review process and those who consume it once it is published.

In this article, therefore, we try to answer two questions about executive response rates in mailed surveys. First, what are the typical response rates that executives researchers have received in the past? As a corollary to that question, we also investigate trends over time to see if expected response rates are diminishing, that is, to evaluate whether the same response

rates should be expected in the future. Second, is there something unique in surveying executives that could be exploited by researchers or that could provide for more efficient data collection? Specifically, are there features of the topics covered, or techniques used, that might be used to more effectively get insider data about organization-level phenomena? We address these questions by deriving hypotheses from the organizational research methods and social networks literature and then test those hypotheses via a meta-analytic summary of 231 nonoverlapping articles that report mailing surveys to executives in the time period from 1992 to 2003.

Executive Temporal Capital

Based on their own research experiences, some researchers have suggested that executive response rates are declining (Hambrick, Geletkanycz, & Fredrickson, 1993). Supporting this contention, Baruch (1999) found that mail survey response rates in management research declined from 1975 to 1995 (no test was given for more specific drops in executive response rates). Baruch's summary of reasons for the decline included the idea of target saturation: increasing numbers of questionnaires being received by executives from academic scholars, students, vendors, internal surveys, market research, and so on. This lowers the distinctiveness of each particular survey and reduces the motivation as well as the time available to complete them. Cooper and Payne (1988) also asserted that executives under the current pressures of running an organization simply have less time and energy to spend on pro bono, low-priority behaviors such as survey completion.

A third possibility may be that the first two reasons have prompted formal company policies to reject survey requests, limiting the demands on executives and employees as well as preserving confidential information. Falconer and Hodgett (1999) found that organizational constraint or unwillingness to release strategic data was a reason for nonresponse to surveys in 11% of their survey population overall and 16% of large organizations. Taking a cue from Roth and BeVier (1998), who urged methodologists to propose more substantive bases for differences in response rates, we refer to these higher survey demands on executives, their dwindling supply of time, and firm-level policy barriers for protecting it as the temporal capital hypothesis.

Hypothesis 1: Response rates for mailed surveys in executive populations are declining (monotonically) over time.

Topical Salience

Executives are continually involved in evaluation of the environment, including their internal organization, their external competitors, their product or service market, and legal or regulatory constraints (Sutcliff, 1994; Venkatraman & Prescott, 1990). Their responsibilities to gather information and interpret issues (Dutton & Jackson, 1987) make it more probable that they will respond to surveys that capture their personal or firm-specific interests regarding such issues. The salience of the issue addressed in a mailed survey has been consistently associated with higher response rates in prior studies of other populations. In mailed consumer and public opinion surveys, Heberlein and Baumgartner (1978) found that topic

salience had the strongest relationship with survey return of any response rate enhancement technique they studied. Roth and BeVier (1998) found topic salience to be important for all employee surveys and especially critical for mailed surveys. In surveys mailed to executives, topic salience may be even more vital (Baruch, 1999; Gupta et al., 2000; Tomaskovic-Devey et al., 1994).

Salience is a joint characteristic of survey content and the current or continuing interest of the target population. That is, survey recipients are more likely to respond to surveys on subjects that are timely (in terms of current events or trends), relate directly to their responsibilities, or deal with a potential feature of their organization and its task environment. For example, information technology executives would likely have greater interest in surveys that address adaptive Web strategies than in surveys that ask questions about general business issues. Carrying this argument to the broader executive population, we propose the following:

Hypothesis 2: Topic salience will be positively related to response rates from executives.

Response Rate Enhancement Techniques and Social Exchange

Social exchange theory suggests that building a relationship between the researcher and the potential participant in survey research can decrease psychological costs and increase rewards for respondents (Kelley & Thibaut, 1978; Roth & BeVier, 1998). Researchers frequently rely on this phenomenon in mailed surveys of consumers, voters, employees, and other individual-level populations. Meta-analytic reviews in these populations have found four specific manipulations of the implicit exchange in mail survey administration to be effective. They include monetary incentives or gifts (Church, 1993; Hopkins & Gullickson, 1993; Yammarino et al., 1991), advance notice (Fox et al., 1988; Yammarino et al., 1991; Yu & Cooper, 1983), follow-up (Fox, et al., 1988; Yammarino et al., 1991; Yu & Cooper, 1983), and personalization (Roth & BeVier, 1998; Yammarino et al., 1991; Yu & Cooper, 1983). The latter three are part of Dillman's (1978, 2000) TDM. Indeed, these techniques are regularly used by researchers in surveys mailed to top managers (Boyd & Reuning-Elliott, 1998; Lane & Lubatkin, 1998), yet there has not been a systematic investigation showing that they are effective for executive populations or that a similar, implicit type of social exchange is working. As part of our efforts to gauge the effectiveness of these techniques, we propose the following:

Hypotheses 3a-d: Inclusion of (a) an incentive, (b) advance notice to executive, (c) follow-up contact after mail date, and (d) personalization of the survey and cover letter will increase the likelihood of executive response to mailed surveys.

We considered including other response enhancement techniques suggested by Dillman's (1978) TDM method such as postage-paid return envelopes and professional survey appearance. However, these are now regarded as "givens" in organizational research (Roth & BeVier, 1998). That is, they have become part of the baseline requirements for management researchers conducting mailed surveys instead of selected enhancements applied by some researchers and not others. In fact, they are so taken for granted that they might not be men-

tioned in authors' descriptions of their survey methods. As such, they were not included in our investigation.

Consent Screening and Negotiated Samples

Management scholars who want to obtain data from executive populations often face difficulties in determining the appropriate organizations to be involved in research efforts and the appropriate executive within the organization to whom questions should be addressed. One method researchers have used to resolve this issue is to contact potential respondents in advance to determine if they qualify for the study based on predetermined criteria such as size, industry, or transaction type. At the same time, researchers gauge willingness to participate in the survey. Surveys are then sent to only those executives who meet the established criteria and who agree to participate (e.g., Weiss & Kurland, 1997). The first portion of this screening process is a standard component of survey sampling procedures, especially in phone contact (Rossi, Wright, & Anderson, 1983). It ensures that the sample is indeed a part of the target population. The second portion, however, is nonstandard and potentially troublesome. It defines the population to be only those executives who would have consented to be involved in the study. If this choice is the result of a participant's idiosyncratic opinion on a particular topic or about a particular practice, it may generate systematic error variance and produce distorted results. This procedure introduces sampling bias to the study in that lack of interest in the study excludes them from the sample (Dillman, 2000). We refer to this as a "negotiated sample," whereby only those executives who qualify and have agreed to participate prior to the study are included in the researcher's calculation of the response rate. This prior agreement generates a stronger sense of obligation to respond when the mailed survey does arrive and establishes a social exchange relationship (Kelley & Thibaut, 1978; Roth & BeVier, 1998), which is a variant of "foot-in-the-door" techniques for encouraging research participation (Dillman, 1991). Yet if researchers use only those who have self-selected or given prior consent in their calculation of response rates, the denominator is necessarily (but artificially) smaller. Response rates will appear larger. But more potential for biased responses relative to the broader executive population are introduced.

Hypothesis 4: Prior consent screening of executive samples will generate higher reported response rates.

Social Networks

As we indicated at the beginning of our article, widespread adoption of many of the techniques covered in the previous hypotheses rests on a simple but perhaps mistaken premise: Executive response mechanisms are the same as voters, consumers, or employees (see Dillman, 1991, 2000, who discusses customization of TDM elements to fit particular populations but in the former article expresses implicit expectations of >50% response rates in any population, as long as TDM practices are meticulously followed; p. 234). Also underlying those previous hypotheses is an implicit recommendation that researchers should attempt to forge new social exchange relationships with potential respondents, through techniques such

as incentive, advance notice, follow-up contact, and personalization (Dillman, 1978; Roth & BeVier, 1998).

Our final hypothesis suggests that stronger connections are required, ones that capitalize on extant social exchange relationships held by executives. That is, our argument relies on the assumption that getting executives to respond about themselves and their firms requires different avenues of access—avenues that capitalize on an executive's existing network structures rather than relying on generating social ties through unsolicited mailings from unknown parties (Brass, 1995; Nohria, 1994). In this approach to data collection, researchers have tried to reach executives via survey sponsorship or legitimization by an organization to which the executive or the executive's firm has some previous social connection (e.g., Cordano & Frieze, 2000).

Researchers have sought to take advantage of extant and enduring ties that the executive or the executive's firm has with social networks—sometimes an executive colleague and often a professional organization (e.g., Society for Human Resources Management: Klaas, 1999). Memberships in such associations provide executives and their firms with information services, managerial advice, current news on regulations and litigation, a collective voice in industry policy, and additional social contacts. These kinds of ties typically are not strong, deep, or multidimensional links that might characterize relationships with family members, friends, or even competitors. Yet these weak ties are widely recognized as being more likely to provide top managers access to nonredundant knowledge (relative to strong ties; Granovetter, 1973; Nahapiet & Ghoshal, 1998).

More important for our current article, when management researchers affiliate themselves with such a third-party organization—as a survey sponsor—they gain some of the legitimacy and confidence inherent in the social tie that the executive's respondent already had with the sponsor (Granovetter, 1985; Kilduff & Krackhardt, 1994). Because of that preexisting social tie, a mailed survey from a member of the executive's or firm's network is also less likely to be discarded and more likely to make its way through administrative buffer systems or gatekeepers. Furthermore, responding to a survey mailed under the auspices of a sponsor in his or her social network could serve as way for the executive to reciprocate information sharing with that sponsor. In addition, sponsorship by a professional organization adds an implicit statement of organizational trust (Fombrun, 1996) that the survey itself is important and deserves the executive's attention. Finally, executives also might be more willing to disclose proprietary operating practices or strategic insights with a researcher who is endorsed by someone in their current social network (D'Aveni, 1995; Falconer & Hodgett, 1999), especially relative to "cold call" mailings. These arguments lead us to our final, trust proposition.

Hypothesis 5: Sponsorship (and therefore access) by a member of the executive's or firm's social network will increase the likelihood of response to mailed surveys.

Method

Overview

Our general approach to testing these five hypotheses started with reviews of top-rated management journals that publish research relying on executive populations (e.g., Trieschmann, Dennis, Northcraft, & Niemi, 2000; Podsakoff, MacKenzie, Bachrach, &

Podsakoff, 2005). We identified the studies that used mail surveys to reach executives. We then coded methodological information from the studies that were relevant to our five hypotheses and correlated or regressed study-level response rates on those codes. We use a variant of meta-analytic procedures for accumulation of response rates as opposed to analysis of effect size (Viswesvaran & Ones, 1995).

Journals

Our analysis included articles selected from widely cited journals in management that are most likely to publish studies relying on surveys mailed to executives rather than employee or general populations (Extejt & Smith, 1990; Franke, Edlund, & Oster, 1990; Starbuck, 2003). Although it was not feasible to examine all published journals and unpublished works for response rates (Rosenthal, 1979), the top-ranked empirical journals (according to the Social Science Citation Index) present a comprehensive view of outlets seen as having especially high standards of rigor. They serve as a normative signal to organizational researchers as to what is acceptable, methodologically. The journals examined were *Academy of Management Journal*, *Administrative Science Quarterly*, *Journal of Applied Psychology*, *Journal of Management*, *Journal of Organizational Behavior*, *Organizational Behavior and Human Decision Process*, *Organization Science*, *Personnel Psychology*, and *Strategic Management Journal*.

All articles in the nine journals published from 1992 to 2003 were reviewed for inclusion in our analysis. We selected this 12-year time period as a reasonable summary of current research as well as recent history. Articles were selected for coding if they met four criteria: (a) The article reported the results of a mailed survey, (b) the target population was organizational executives or top managers serving as key informants in providing data about their organizations (Kumar et al., 1993), (c) the author(s) provided enough information to calculate a response rate, and (d) the collected data were used in only 1 article. A total of 231 articles met our criteria. The coded studies reflected a total of 256,215 survey recipients. Executives in the studies held titles such as CEO and vice president or were other "C"-level or higher members of the top management team or other members of the upper echelons of an organization (including those on boards of directors). A listing of all coded articles is included as the appendix.

Coding Procedures

Coding of relevant variables was performed by a coauthor and a research assistant who were blind to the hypotheses at the time. Articles were selected and coded by both coders, with an average interrater agreement of 92% (Zegers, 1991). Specific agreement rates for dependent and independent variables were response rate, 96%; survey year, 100%; intended recipient, 92%; salience of topic, 92%; advance notice, 80%; follow-up, 100%; personalization, 91%; consent screen, 100%; and social network, 75%. For the dependent variable, each coder recorded the stated response rate or calculated it from information given about survey administration and resulting sample sizes. For the independent variables, coders made judgments about the presence, absence, or indeterminate nature of the specific independent variables. Inability to determine the presence or absence of an independent variable included situations such as when the original researcher(s) implied a use of additional efforts to increase

responses but did not state the details. Inability to determine the presence of an independent variable was coded as “NA.”

Coding for Hypothesis 1 was straightforward. We recorded the year in which the survey was mailed. We also coded the potential salience of the survey topic (salient topic) for the intended respondent to test Hypothesis 2 using a scale ranging from 0 to 4. This was a two-step process. The first step was to code the target or intended recipient of the survey. All of the surveys in our sample were directed to executives. In this population, however, there were specific subsets. We defined these subsets based on the primary characteristics the authors used to define their target. The categories used to organize primary survey targets included size of the organization (Fortune 500), geographic location of the organization (European managers), industry (construction industry managers), and executive functional responsibility (human resource manager). If the target met more than one of those criteria, we coded the subset to most likely align with the questions asked in the survey. For example, if the subset was defined as hospital vice presidents of human resources and the survey asked questions about human resource practices, the target was labeled as a *human resources executive*.

Our next objective was to establish whether the topic was likely a salient one to the defined target. Our approach to coding topic salience was to break it down into distinct elements and apply coding as a cumulative scale. If none of the elements of salience was present, the article was coded as 0. Presence of one element received a 1, two elements received a 2, and so forth. The details of the elements include 1 = fit to target, that is, is the survey topic something that the target has direct a relation/connection to, given their position (e.g., human resources [HR] executive about HR practices); 2 = industry relevance, that is, is the survey of particular interest to someone in the industry/sector whose firms are being sampled (e.g., implementation of changes to ISO9000 for manufacturing plant managers); 3 = timeliness, that is, is the survey asking about a current issue, something that was particularly “hot” at the time of the survey (e.g., ethical breaches in post-Enron years); and 4 = organizational effect, that is, is the survey asking about a topic that would suggest changes in the way the organization does business (e.g., online tax filing to practicing certified public accountants).

For the response rate enhancement techniques that make up Hypotheses 3a to 3d, coders looked for specific mentions of promised or enclosed incentives (3a); prenotification or advance notice of a survey to follow (3b); follow-up with postcards, telephone calls, or a second copy of the survey (3c); and the personalization of survey cover letters or survey materials (which is more than a mailing to a specific address, 3d). In each case, presence of the technique was coded 1, and absence was coded 0. When no mention was made of a technique, our coding defaulted to 0. When authors specifically stated that they followed Dillman’s (1978, 1991) TDM prescriptions, incentive, advance notice, follow-up, and personalization, all were coded as 1.

We also sought to determine whether the researchers contacted the potential respondent in advance to gain their agreement to participate in the study (Hypothesis 4). In most cases, consent screening was clearly identified by authors. When such prior consent occurred, we coded whether the response rate denominator (total number of participants) was based on the number of initial contacts (absence of consent screening or 0) or the number of contacts willing to participate in the study (presence of consent screening or 1). As we implied earlier, this process creates a negotiated sample that does not exist outside the survey research context.

Researchers’ use of social network sponsors was also coded in a two-step process. First, coders looked for specific mention of sampling via a broader organization in which firms or

Table 1
Means, Standard Deviations, and Correlations for All Variables

Variable ^a	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Response rate	.34	.17							
2. Year of survey ^b	6.67	3.61	-.13						
3. Topic salience	1.74	1.23	.14*	.03					
4. Advance notice	.17	.38	.12	.08	.04				
5. Follow-up	.56	.49	.08	.09	.06	.21**			
6. Personalization	.34	.47	.17*	-.17*	-.05	.20**	.23**		
7. Consent screen	.27	.45	.29**	.08	-.01	.22**	.10	0.44**	
8. Social network	.29	.46	.25**	.04	.04	.12	.16*	.06	.19**

a. *ns* range from 195 to 231.

b. Ordinal, from 1992.

* $p < .05$. ** $p < .01$.

their executives held memberships or if executives were asked to give names or pass surveys to other executives. For example, Cordano and Frieze (2000) sampled members of the Air and Waste Management Association. Dooley, Fryxell, and Judge (2000) gathered an additional sample of executives personally nominated by members of an initial wave of data collection. Second, coders looked for mention of sponsorship or other involvement by the association identified in the first coding step. If such sponsorship was apparent, social network was coded as 1; if not, it was coded as 0. If snowball sampling was used, in which executives specifically used their interpersonal networks in nominating others to receive the survey, we coded it as 1.

Results

Means, standard deviations, and correlations of response rate and coded independent variables are included in Table 1. Figure 1 shows a histogram of the number of studies coded by year of publication. Figure 2 shows a histogram of executive response rates from the 231 studies.

Normative Response Rate

The first question we sought to address in this research was, What response rate should management researchers expect when surveying executive populations? We found that the mean response rate over the 231 studies we reviewed was 34% ($SD = 17\%$). Given the positive skew in Figure 2, a better index of central tendency and “typical” response rate among executives is the median: 32% (interquartile range = 20%-46%). This is substantially lower than the 51% median response rate reported by Roth and BeVier (1998) for mailed surveys sent to employees and raises concern about nonresponse bias such that respondents differ significantly from those who do not respond (Dillman, 2000). Perhaps what is most striking about Figure 2, however, is the variance in response rates across studies. With a median target sample size of $n = 550$ (which is more conservative than the mean target n of 1,000), the theoretical standard deviation in response rates across studies should be only 2%. With nine times

Figure 1
Summary of Executive Survey Studies, 1991-2003

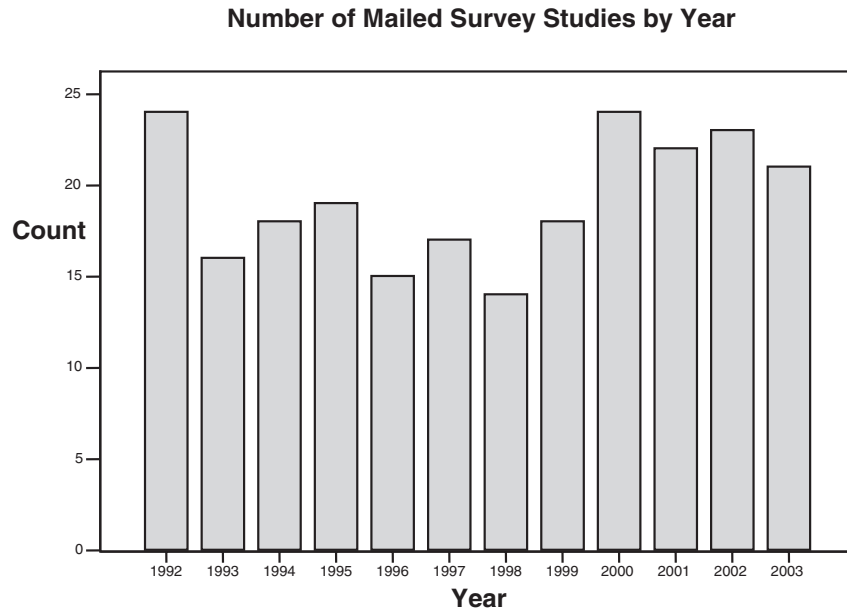
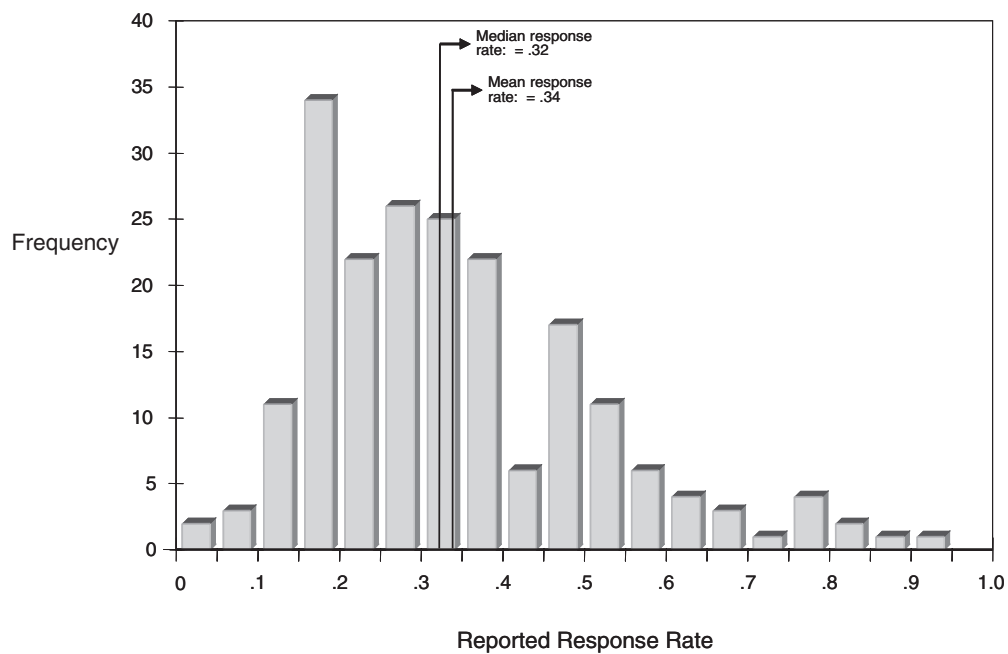


Figure 2
Histogram of Reported Response Rates
From 231 Studies of Executive Populations, 1992-2003



this anticipated variation in the actual data (obtained $SD = 17\%$), there is justification for examining variables that might have systematic effects on response rates.

Trends, Types, and Techniques

Hypothesis 1 predicted that overall response rates were declining over time. Because this is a monotonic rather than a linear hypothesis, we tested it using a Spearman rank-order correlation between the year of data collection and the reported response rate. We found a negative and significant downward ($p < .05$) trend in response rates: $r_s = -.16$. Hypothesis 1 was supported. In the interest of full disclosure, we note that the Pearson correlation was $r = -.13$ (*ns*; see Table 1).

Operationalizations of the rest of the hypotheses involved codes of several independent variables: salience (H2), incentive (H3a), advance notice (H3b), follow-up (H3c), personalization (H3d), consent screening (H4), and social networks (H5). Thus, these variables and year (H1) were all entered simultaneously as main effects in a regression analysis, which has both substantial robustness to normality and straightforward interpretations (Darlington, 1990). Response rate was the dependent variable, and each study served as a separate observation. Remarkably (at least relative to mailed surveys sent to other groups), only one of the studies we reviewed mentioned providing a gift or incentive to the executive respondents, despite its well-documented effect in increasing response rates in other populations (Church, 1993). Therefore, the variable was removed from the regression analyses before proceeding with other hypothesis tests. Results are presented in Table 2, Model 1.

In this main effects regression model, we found that the year of the study ($\beta = -.16, p < .05$), salience of the topic ($\beta = .15, p < .05$), use of consent screening ($\beta = .24, p < .01$), and social networks ($\beta = .19, p < .01$) were significant predictors of response rates, which also nearly matched the pattern of significant correlations in Table 1. The overall model was significant, $F(7, 196) = 5.71, p < .01$, and Hypotheses 1, 2, 4, and 5 were supported. No other hypothesized relationships were detectable, despite a large amount of a priori statistical power to find them (see below). Structural aspects of survey administration—advance notice, repeated contact, personalization (H3b-d)—were not associated with higher response rates from executives.

Exploring Possible Interactive Effects

All of the proposed impacts on executive response rates explained only 14% in the main effects model. Some prior research has found that some of the Dillman (1978) techniques have interactive effects in enhancing response rates, working better when used together (James & Bolstein, 1990; Martin, Duncan, Powers, & Sawyer, 1989), but there is no overarching theory to guide specific tests. Therefore, as suggested by Dillman (1991, 2000), we also performed additional, exploratory tests of the two-way interactions for the response enhancement techniques (salient topic, advance notice, follow-up, and personalization; shown in Model 2). To more thoroughly understand the operation of the supported predictors, we also explored each of their interactive effects with the other, nonsignificant predictors. The two-way interactive equation for consent screening is shown in Model 3; for social networks, it is Model 4. Supplementing the analyses shown in Table 2, we found no significant three-way and higher combinatorial effects for the well-established response rate enhancement techniques (e.g., all TDM techniques at once).

Table 2
Results of Regression Analyses for Effect of Response Rate Enhancement Techniques on Response Rates (Standardized Coefficients)

Variable	Main Effects (Models 1, 2, 3, and 4)	Interactions With Response Rate Enhancement Techniques (Model 2)	Interactions With Consent Screen (Model 3)	Interactions With Social Networks (Model 4)
Main effects				
Year	-.16*	-.16	-.16	-.16
Topic salience	.15*	.27	.19	.17
Advance notice	.05	.14	.12	.11
Follow-up	.02	.23	.03	.04
Personalization	.02	.14	-.01	.02
Consent screen	.24**	.26	.46	.24
Social network	.19**	.19	.22	.32
Interaction with response enhancements				
Topic Salience × Advance Notice		-.13		
Topic Salience × Follow-Up		-.23		
Topic Salience × Personalization		.12		
Advance Notice × Follow-Up		.04		
Advance Notice × Personalization		.11		
Follow-Up × Personalization		.06		
Interaction with consent screen				
Topic Salience × Consent Screen			.20	
Advance Notice × Consent Screen			.12	
Follow-Up × Consent Screen			.01	
Personalization × Consent Screen			.03	
Social Network × Consent Screen			.03	
Interaction with Social network				
Topic Salience × Social Network				.08
Advance Notice × Social Network				.12
Follow-Up × Social Network				.03
Personalization × Social Network				.01
<i>F</i>	5.71**	3.49**	3.55**	3.79**
<i>df</i>	196	190	191	192
Adjusted <i>R</i> ²	.14	.19	.18	.13

Note: Models 2, 3, and 4 include the main effects of Model 1.

p* .05. *p* .01.

Discussion

Summary

Our first objective for this study was to determine the data yield that management researchers could expect when mailing surveys to top managers. The median response rate for executive populations in top-tier journals, at least for roughly the past decade, was 32% ($M =$

34%). When that number is adjusted by not including studies that used prior screening for consent in their calculation of the denominator (see below), the median response rate is 28% ($M = 32\%$). This rate is considerably lower than that found in other populations (e.g., Baruch, 1999, employees and managers, 56%; Church, 1993, general population, consumers, and employees, 45%; Fox et al., 1988, consumers and employees, 83%; Roth & BeVier, 1998, employees, 51%; Yammarino et al., 1991, consumers and employees, 48%; Yu & Cooper, 1983, consumers and employees, 51%). An additional consideration of surveying top managers as key informants is the potential to introduce measurement error as the result of lack of information or personal idiosyncrasy (Viswesvaran et al., 1993; Wright et al., 2001). If researchers require multiple respondents per firm to address this issue, the expected response rate may drop to an even lower level. In practical terms, this means that researchers seeking responses from executives should be prepared to mail out nearly twice as many surveys as they might plan to use for other populations for their study to have the same sample size or the same desired level of statistical power.

This expected response rate is time sensitive, and the picture is not improving. We found that response rates in top-tier journals for surveys mailed to executives declined over the 12-year period we studied. If we were to linearly project future-year response rates (subject to range restrictions), the average rate for 2010 would decrease to 27% and be 4% by 2050. The good news is that this is a gradual decline that might be anticipated and, with care and cleverness, averted by organizational researchers (see below).

Our second goal for this research was to determine which of several common response rate enhancement techniques in the research methods literature were effective in increasing response rates among executives. Our findings indicate that topical salience was the only contributor to response rate variation across studies. None of the traditional techniques for enhancing response rates was found to be effective, at least in the past 12 years of published studies of executives in the nine upper-tier journals we reviewed. These data show only a modicum of empirical justification for the time and effort spent on techniques such as advance notice, follow-up, and personalization, if the focal population is executives. Researchers routinely adopting such techniques and their expenses should now do a more deliberate, cost-benefit analysis of what those efforts will likely produce in data collection (Cycyota & Harrison, 2002).

Other researchers have found consistent enhancement of response rates with these techniques in other populations (e.g., Fox et al., 1988, consumers and employees; Church, 1993, general population, consumers, and employees; Roth & BeVier, 1998, employees; Yammarino et al., 1991, consumers and employees; Yu & Cooper, 1983, consumers and employees). Earlier researchers suggest that time pressures (Cooper & Payne, 1988), target saturation (Baruch, 1998), and organizational constraints (Falconer & Hodgett, 1999) contribute to differences in response rates in executive populations. Our results suggest that executives follow different response mechanisms; they use different inputs in their choices to participate or not in a mailed survey. The fact that few of the studies we reviewed included the use of monetary incentives might indicate a kind of "proposition in use" that such incentives would not be valued by top managers. Still, this widespread assumption has no basis in current evidence. More qualitative, in-depth interviews with executives regarding how they do or do not answer surveys might provide insights into how their response processes differ. Of course, such research would rely on those who already consent to doing interviews, and there

has been virtually no direct comparison of that data collection strategy with mailed surveys for executives.

Limitations

There are a number of possible reasons for null results. The first is that the design of a study may have lacked sufficient power to detect the relationship of interest. At the study level ($n = 231$), our power for detecting effects from the trends, types of executives, and techniques highlighted in Hypotheses 1 to 5 was 80% and 98%, respectively, for medium and large effects. For small effect sizes, it was 33% (Cohen, 1988). The compound power for finding impact of at least one of the response rate enhancement techniques was 70% and greater than 99% for small, medium, and large effects, respectively. Yet no such impact was noticeable. It is possible that the impact of some of the techniques was so small as to not be noticeable in our analyses. However, that prompts the question of whether such an effect is worth the time and effort devoted to it by researchers in adopting any of the techniques.

Another reason for our lack of supportive results could be limitations in selecting the studies for our sample. We realize that journals other than the ones we selected publish studies that might target executives. Our selection was intended to capture studies in journals considered by organizational researchers as signaling the most rigorous methodologies. Although we realize that our focus on only top journals limits our generalizability, our purpose was to establish a base of responses deemed acceptable to the aspirations of those in our profession.

Finally, our coding procedures may have been ineffective in determining what researchers actually did in the administration of their surveys. It may be that some researchers consider all elements of survey administration as “givens” and do not provide descriptions of procedures used in the article. Although it is troubling that research methods are not always presented in enough detail to follow or replicate, it may be that standardized procedures need to be established that may be referred to briefly in an article with only exceptions detailed.

Implications and Suggestions for Organizational Researchers

What did not work. In our view, the chief reason for our pessimistic results is that traditional response techniques are less effective in executive populations when compared to consumer and employee populations. In part, our findings might confirm what many researchers working with executive populations already suspect and have found in at least one experimental study (Cycyota & Harrison, 2002): Executives respond differently when asked for information. Therefore, it is important to identify alternative ways to reach executives and encourage participation. Our only findings related to establishing a relationship between researcher and respondent by appealing to a particular interest, obtaining agreement to participate in advance, or using an established social network. It may be that the perceived effort by the researcher to establish contact with the participant encourages a higher likelihood of response.

Topical salience. Some things did work. We found that surveys that appealed to the right person in the organization and about a topic of importance to the industry, of current interest, and with potential changes to the organization received higher responses in executive popula-

tions. This practice is consistent with prior suggestions for researchers to do what is interesting (Heberlein & Baumgartner, 1978; Roth & BeVier, 1998). Although researchers believe their work is interesting, it may be necessary to carefully design the survey, perhaps via a small pilot group of sponsors or a subsample of the population, to maximize the appeal to executives. If they believe the survey is interesting and timely, we found there is a higher chance of obtaining a response.

Consent prescreening. In terms of what did work, we found that surveys sent to a prescreened population had significantly higher response rates. This practice is consistent with Dillman's (1978) implicit idea that establishing a social exchange between the researcher and the recipient will lead to higher response rates (although it executes that idea in a statistically untoward way; see below). Indeed, Gupta et al. (2000) suggested that social exchange procedures create a norm of reciprocity, allowing the researcher to "elaborate on the potential benefits of participation and highlight the advances, practicality and utility of the information to be generated and disseminated" (p. 326). Although many of the response-enhancement techniques leverage some characteristics of a social exchange, advance contact and agreement to participate act to complete the exchange even before the survey is sent.

On the other hand, there are reasons to have strong misgivings about this approach. The primary concern researchers have with response rates is determining if the reason for non-response is related to the variables or processes under study, thereby producing a response bias in the sample (Dillman, 1991). When the sample is prescreened for consent, the sample itself is established or negotiated by researcher qualification, and there is a clearer and higher danger that such a bias may exist. Prequalifying study participants may be efficient for the research process given the normal limitations on research. However, when this occurs, the participants should be treated as their own unique group, not representative of any broader set of executives. Moreover, a complete description of the method used to develop the group should be provided. External validity is more clearly threatened in this approach, and that should be recognized explicitly by authors (Cook & Campbell, 1976). In addition, researchers should report the entire original number of contacts as the population when reporting response rates.

Researchers of executive populations may wish to consider that the same effort spent in prescreening a population could also be spent in using personal interviews to gather data, in which the information obtained can be richer and more descriptive. However, limitations clearly exist there as well. The strain on an executive's temporal capital is just as heavy with this approach and may be even heavier than in a mailed survey. Also, executives often have an established rhetoric designed to craft answers to questions in a consistent manner (Eccles & Nohria, 1992; Useem, 1995) or offer politically acceptable answers that do not reflect the way things "really are" (Brunsson, 1989). Alternatively, in some cases, the desired information may reflect tacit knowledge (Polanyi, 1961) of which the executives themselves may not be fully aware and provide researchers with additional insights to the information they seek. All of these issues should be weighed by researchers in designing information-gathering procedures from executives, knowing that their response rates should be substantially lower than for their colleagues dealing with other, less-focused populations.

Social networks. We have also documented that some researchers have found ways to overcome access barriers to executives by using social networks for mailed surveys, which

netted higher response rates. This result reinforces the suggestion that executives are more attentive and responsive to requests that draw on existing social ties (Kilduff & Krackhardt, 1994). They may be more likely to disclose strategic information with a researcher who is sponsored or supported by an existing social relationship (D'Aveni, 1995). Examples of these social networks include contact through industry, trade, or professional groups; university contact with visiting professors and alumnae (Thomas, 1993); and personal and professional contacts (Hirsch, 1995). For researchers, these may be particularly promising avenues of access as the information-processing demands for executives continue to increase. Executives simply will not have the time or inclination to respond to cold call mailings.

Other approaches? Newer methods of data collection via the Internet and e-mail may offer an additional means of gathering data. However, standard methodologies for the use of e-mail and the Internet in survey research are still being developed, and particular care should be taken in application of this method (Dillman, 2000; Schaefer & Dillman, 1998). Moreover, response rates for e-mail surveys are consistently lower than for (hard-copy) mailed surveys (Mavis & Brocato, 1998). As another means of data collection, anthropology researchers have provided considerable insight and "how-to" information on the study of elite groups (Hertz & Imber, 1995) that may be very useful for researchers studying executives. Dillman (2000) suggested that surveys of establishments must be tailored by method and design to the nature of the business and the type of information sought and that an appropriate mixture of communication modes such as mail, e-mail, Internet, telephone, and interview may be necessary to reach a difficult-to-access population.

The implications of this suggest that the researcher must clearly and carefully think through the design of the study and plan to include multiple means of gathering data. A survey in executive populations needs to be planned for contacts specifically tailored to the specific type of executives. For example, information technology executives may be very comfortable with Internet-based information gathering, whereas CEOs of very large companies may have even their e-mail screened by assistants as well as telephone and mail. Executives of very large organizations may best be contacted by networked groups or endorsement of a social contact. For other executives, some combination of methods may be required to obtain a response (Dillman, 2000; Useem, 1995).

One way to address the correct combination of techniques may be to simply ask executives what would encourage their response to organizational questions. We suggest that future research on executive response may benefit from interviews and discussions with the targeted population to clearly establish the processes they employ in the decision to respond to a survey or what stimulates their interest (Bowen, 2002; Hambrick, Finkelstein, & Mooney, 2005).

Conclusion

Our study shows that using traditional techniques to improve data gathering from executives might not be as efficient or as effective as management researchers have assumed. There is no evidence that some of the expensive procedures (advance notice, follow-up, personalization) inherent in trying to build a social exchange relationship with survey respondents actually work in executive populations. This study, in combination with our earlier study to response techniques in an executive population, provide converging evidence of the same

phenomena, that traditional response rate enhancement techniques are not effective in executive populations. However, the need remains to acquire answers to research questions from top managers. We have suggested alternatives to the traditional techniques of the mailed survey, such as contact through existing social networks of executives, that should be evaluated in each research context. Perhaps most important of our findings was that a topic carefully selected to appeal to the interest, relevance, timeliness, and effectiveness of executives will be more successful in generating responses. And it is clear that the substantially lower response rates among executive populations requires greater distribution costs (mailing to a larger target sample) if management researchers want sample sizes that support reliable substantive conclusions.

Appendix

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