The authors evaluate several factors affecting the attention given to or "use" of specific market research information by marketing managers. They apply path analysis to test a model of research use involving 11 variables. Factors found to be especially important are organizational structure, technical quality, surprise, actionability, and researcher-manager interaction. The topic and findings of the study relate to a central activity of the marketing profession—the application of knowledge—and to the use of an important product—market research. Both the knowledge system of marketing and the behavior of managers as consumers of research products have been relatively neglected.

Factors Affecting the Use of Market Research Information: A Path Analysis

Our study of the factors affecting marketing managers' attention to market research information may have at least two distinct contributions to marketing knowledge and practice. First, insight is obtained about aspects of a market exchange process involving a product (research results), a producer group (researchers), and a consumer group (managers) of unique interest to the marketing profession. Second, studying elements of the profession's knowledge system may provide insights which could lead to improvements in that system. We offer just a few reasons why more attention should be devoted to knowledge system issues such as factors affecting the use of market research information.

Each year substantial resources are expended in the conduct of market research. The top 10 U.S. private market research agencies alone had transactions of more than 700 million dollars in 1980 (Honomichl 1981). These monies are spent on formal, problem-oriented research to help determine day-after recall for an advertisement, the best location for a new retail outlet, what product line modifications are desirable, and so on. Formal research is undertaken because managers expect the resulting information to reduce uncertainty when they are making important decisions. The market research industry, in fact, exists largely because of this expectation among managers. Thus, understanding what factors affect the use of research by managers is of major consequence to both the market research industry and its clientele. Do managers consider research results while making product or service decisions? What factors influence and enhance the consideration of research results? Additionally, if we give credence to the frequent observation that much problem-oriented research in marketing is not used or not used for its intended purpose (Adler and Mayer 1977; Dyer and Shimp 1977; Ernst 1976; Kover 1976; Kunstler 1975), the study of these factors becomes even more important.

The general issue of market research use has been cited as an extremely important one in need of formal investigation. A special joint commission of the AMA and the Marketing Science Institute surveyed the contributions of more than 25 years of marketing's "R & D." They were "struck by the discrepancies between the volume of the new knowledge generated over [the 25 surveyed years] and a comparatively low rate of adoption at the line manager level" (Myers, Greyser, and Massy 1979, p. 25). The commission's major recommendations were to develop better ways "to bridge the gaps between knowledge-generation and knowledge-utilization" (Myers, Greyser, and Massy 1979, p. 27). These sentiments have been echoed in a study of European managers by Permut (1977). Despite statements such as these, little formal research on the issue has been...
conducted (Albaum et al. 1978; Greenberg, Goldstucker, and Bellenger 1977; Krum 1978). Most commentary about the factors affecting the use of market research has been based largely on introspective, if careful, analyses of personal experiences or observations (Dyer and Shimp 1977; Hardin 1973; Kunstler 1975; Newman 1962).

Because our study is based on extant research in the field of knowledge use (also referred to as knowledge transfer or research utilization), a brief commentary on that field is appropriate.

**KNOWLEDGE USE IN SOCIAL SCIENCE RESEARCH**

The study of the social processes involved in knowledge use has recently come of age as an area of scientific inquiry (Caplan, Morrison, and Stambaugh 1975; Cherm 1979; Holzner and Marx 1979; House and Jones 1978; Kochen 1975; Lindblom and Cohen 1979; Rein 1976; Rich 1979; Weiss 1980; Ziman 1978). In this section we describe a skeletal paradigm which appears to be implicit in much of the literature of the field and which serves as background for our article.

Multiple sources of knowledge have been codified. Some authors distinguish between professional social inquiry, characterized by traditional controlled scientific investigation, and ordinary or commonsense knowledge derived from the careful analysis of experience (Deshpande 1979a; Holzner and Marx 1979; Lindblom and Cohen 1979). Other authors make many more distinctions (e.g., Rich 1979). It is usually acknowledged that multiple sources may produce knowledge that is equally valid and reliable (Campbell 1975; Cook and Campbell 1979; Dunn 1982; Holzner and Marx 1979; Myers, Greyser, and Massy 1977; Ziman 1978). Distinctions are also made about types of knowledge. For example, substantive knowledge about the core problems of a discipline has been distinguished from knowledge relating to the tools and technology employed to examine those substantive problems (Kochen 1975; Rich 1977; Weiss 1980). Obviously, what is substantive research and what is tool or technology research will vary by area. Similarly, what is considered theoretical research may also be viewed as applied research depending on the disciplinary perspective taken. We focus on knowledge produced by traditional scientific investigation addressing substantive problems.

The issue of what is meant by the term “use” (or “utilization”) is a major current concern in the field (Larsen 1980, 1982; Weiss 1982; Zaltman 1982). Multiple kinds of knowledge use have been identified (Weiss 1980). One major distinction is between “instrumental” and “conceptual” uses of knowledge (Caplan, Morrison, and Stambaugh 1975; Rich 1977). Instrumental use refers to the direct application of knowledge to solve a particular problem or make a particular decision. The conceptual use of knowledge refers to information utilized for general enlightenment rather than for any current action a decision maker is contemplating. Our study treats instrumental knowledge. Distinctions are also commonly made between knowledge which has a clear physical manifestation, such as a new technology being expressed as a new product or service, and knowledge which is manifested only as an idea or concept (Larsen 1980; Zaltman, 1979). Other distinctions to be found in the literature cited include separating use from the consequences of use (impact), sequential types of use, confidence building versus decision prevention, and covert versus overt use.

Research on knowledge use has focused on the two-communities theory which maintains that a major source of difficulty in knowledge use is the fact that knowledge producers, e.g., researchers, are from a basically different culture or community than the consumers or users of knowledge, e.g., policy makers, and hold different values and interests (Caplan, Morrison, and Stambaugh 1975; Dunn 1980; Myers, Greyser, and Massy 1979). The role of third-party disseminators has not been neglected, either (Backer and Glaser 1979; Havelock et al. 1971). Recent efforts have begun to explore the interaction among researchers, users, and disseminators. In fact, the notion that knowledge use is basically a social exchange process has been advanced (Dunn 1980; Zaltman 1979). The activities around which exchanges occur tend to be identification of user knowledge needs or gaps (Lingwood 1979), translation of knowledge needs into research questions (Lindblom and Cohen 1979), actual conduct of research (Lazarsfeld, Sewell, and Wilensky 1967), storage/dissemination (Danziger 1979), translation of research into action implications (Rein 1976), implementation of action implications (Weiss and Bucvalas 1980), and evaluation of knowledge implementation (Weiss 1980). We focus on the user community. Although we have collected data from the producer community also (Deshpande 1979b), space limitations preclude their presentation here.

**RESEARCH METHOD**

Our study examines factors affecting the consumption by managers of market research provided by external research agencies (i.e., data collected, analyzed, and presented in a final report by a private research firm). Reliance on external research agencies is a common if not the most common approach to conducting research. Even firms with in-house research capacity make frequent use of external researchers for tasks ranging from data collection through data analysis and presentation.

**Samples and Data Collection Procedures**

The first stage of the study involved personal interviews conducted with 16 individuals in seven large firms (10 managers and six researchers). The second stage involved two separate unweighted cross-sectional samples of managers and researchers to whom questionnaires were mailed. The sampling frame for managers was a listing of the 100 largest advertisers cited in the August
The conclusions from our study are therefore more likely to be pertinent to large firms with specialized brand/product management structures than small businesses. Subsequent empirical testing is needed to determine whether the variables and relationships we report are equally important or unimportant in the same ways for smaller firms. Certainly organizational size is related to selected other attributes of organizational structure. For this reason, we suspect the way organizational structure variables influence research use will differ for smaller firms, but not that these variables will be less relevant overall.

Research Instrument

A mail questionnaire was constructed by modifying the questionnaire used in personal interviews with closed, structured queries. After preliminary questions about job title and work experience, the questionnaire asked respondents to focus on the most recently conducted market research project with which they had been associated, and for which a written research report had already been prepared and presented by an external research agency. The research incident sought was one which aided a consumer product (or service) strategy decision, i.e., the addition, modification, or deletion of a product in the firm’s line of offerings. Though other types of decision would also be appropriate for study, we believed that concentrating on a single type would be best for comparability across responses. Product strategy decisions were selected because of their high frequency, their relevance for instrumental research use, and because a large proportion of market research is conducted to assist strategic decision making. Had a broader array of decision types been studied, a much larger instrument than was feasible and possibly a much larger sample would have been required. We do not suggest generalizing our results on strategic decisions to nonstrategic decision-making contexts.

Response Rates

Response rates to mail questionnaires are typically low among the population studied. The character of the population sampled rather than the saliency of the issues discussed seems to be the chief explanatory factor for this sluggishness. Although several techniques were used in an attempt to increase response rates, the overall response remained modest (although not if considered in comparison with that in other studies of similar populations). A nonresponse analysis was conducted to clarify the reasons for not returning completed questionnaires. The method used was direct telephone contact of a randomly selected subsample of 50 nonrespondents to identify the reasons for not returning completed questionnaires. The method used was direct telephone contact of a randomly selected subsample of 50 nonrespondents to determine why they did not respond.

The chief reason for nonresponse by the eligible nonrespondents was lack of time to fill out the 18-page questionnaire and return it before the deadline date. This reason was given by 91% of the eligible nonrespondents. The remainder claimed that company policy prevented them from responding to questionnaires, or that they had mailed the instrument but after the deadline. Because these latter issues are not subject-matter-related for these eligible nonrespondents, the actual replies received can be assumed to constitute the valid responses of the original total sample (as randomization of nonrespondent direct contact treatments ensures a distribution of their responses over the total sample). Eligible nonrespondents did not differ from respondents in terms of organizational demographics or the salience of the issues being studied.

KEY CONCEPTS AND HYPOTHESES

Drawing upon the literature in the knowledge use field and the results of 16 personal interviews, we identified several variables as potentially having an important impact on the use of market research information. These

1The term “product” is used here generically, i.e., to include both products and services.
were purpose of the research project, organizational structure of managers’ firms, stage of the product life cycle, characteristics of the research report, and extent of interaction between managers and researchers. Each of these variables is described hereafter.

Use of Research Information

The limited work on the definition and empirical operationalization of the use of information has been in nonbusiness areas, especially public policy decision making. Considerable attention is being given to the meanings of the term “use.” The consensus is that the term generally is employed in referring to distinct concepts, each having multiple dimensions (Caplan, Morrison, and Stambaugh 1975; Dunn 1980; Rich 1979; Weiss 1980; Zaltman 1979, 1982). Thus one researcher may employ the term to refer to conceptual use with its multiple dimensions and another researcher may apply it to instances in which specific, overt effects or impacts are evident (instrumental use), and so on. This innocuous sounding term is given considerable complexity of meaning.

For several reasons, our study focused on the instrumental use of research. One simple reason is that such use is easier to investigate than conceptual use. This criteria is appropriate when one is exploring a new area. Instrumental use is also appropriate given our interest in strategic, product-related decisions. Moreover, instrumental research (in contrast to exclusively exploratory and theoretically oriented research) is a common and in fact probably the most common type of research done in marketing (Bellenger 1979; Deshpande 1981; Holbert 1974; Krum 1978), especially in the area of commercial research provided by outside suppliers which was the major concern of our study.

The next issue that had to be addressed was the various dimensions of instrumental use. We concentrated on four conceptually distinct dimensions: decision relevance or the relevance of the information to the decision being made, information surplus or the amount of extraneous information provided, recommendations implemented or the proportion of recommendations made which were implemented, and general quality as reflected by overall satisfaction with the research. These dimensions were selected on the basis of both personal interviews with marketing managers and research suppliers and extant research and thinking (Dunn 1980, 1981; Larsen 1980; Rich 1977). The latter guided the conduct of the interviews. The interviews, in turn, caused us to examine the four dimensions mentioned. The dimension of information surplus was uniquely suggested by the interviews, which also reaffirmed the importance of the other dimensions.

Figure A1 in the appendix displays the questions asked about use. The five research use statements in Figure A1 were combined into a cumulative, equally weighted index called “use.” The index was employed in its raw form (after standardization for different numbers of responses for each of the five statements) in a path analysis.

A major consideration in the development of the “use” index is the appropriateness of combining the four dimensions. One can argue, for example, that recommendations implemented, information surplus, and general quality are especially related to the acceptance of information as input for decisions. The dimension of decision relevance may relate more to the impact of the use of information acceptance. However, these dimensions were combined into a single index in our study for several reasons. The most important reason is that managers and research suppliers who were interviewed indicated that the conduct of market research seldom has only one objective. Consequently, the same research often is evaluated on a variety of dimensions, frequently by different client managers and research suppliers working together on one project. Any investigation of the use of market research may reflect the multiple evaluation objectives that managers and researchers employ. The four dimensions of the index of use in our study come from the suggestions of market researchers and managers as well as researchers working in applied policy sciences. However, the managers in our study may conceivably distinguish between the “input” purpose of research and the “impact” objective of research.

To test this issue, two separate indices were formed. One included the initial two questions in Figure A1 which form the decision relevance dimension and could be conceived of as the “impact” of research acceptance. The other additive index was composed of the remaining dimensions of recommendations implemented, general quality, and information surplus which together may represent whether the research was an “input” to the decision process. A zero-order correlation of the two indices thus formed produced a coefficient of 0.69. This finding is further indication that the four dimensions of use should not be separated but considered in their aggregate sense as an overall measure of use. A comment on the disaggregation of the use variable is made in the Reliability and Validity section. We can mention here, however, that literature on decision making in complex organizations suggests decisions are more organic than linear (Argyris and Schon 1978; Hage 1980; Rothman 1980). So-called decision stages occur out of sequence with frequent short-circuiting at every stage. Additionally, empirical evidence suggests that important policy and strategy decisions are not made in a formal, cut sense but simply “accrete” (Weiss 1980). These are further reasons to believe that research use should be investigated in terms of several underlying dimensions in an attempt to capture the different functions of the research.

Purpose of the Research Project

The personal interviews indicated that managers and researchers perceive research as having two purposes, exploratory and confirmatory. Research which is ex-
The other principal method is considered to be more robust. The approach uses responses to questionnaire items which ask respondents to indicate their degree of confidence (in terms of "true" and "false") in a series of statements on issues such as the flexibility permitted in the handling of organizational tasks, the requirement for conformity with rules and guidelines, the amount of decentralization of authority, and so on (Aiken and Hage 1968; Hall 1972). Because we are focusing on a critical incident of research use, it is much more pertinent to understand how managers perceive the organization affecting their day-to-day tasks than to comprehend the formal organization as described by an organization chart (Sathe 1978).

Research in organization behavior shows that firms which are more decentralized and less formalized are likely to make greater use of new information (cf. Hage and Aiken 1970; Moch and Morse 1977; Zaltman, Duncan, and Holbek 1973). Thus,

\[ H_1: \text{The more exploratory the research purpose, the less the use of research.} \]

Additionally, confirmatory objectives will lead to research that fits the preconceptions of managers. Hence,

\[ H_2: \text{The more confirmatory the research purpose, the greater the use of research.} \]

The two types of research purpose were operationalized by a set of 15 Likert-scaled items asking respondents to agree or disagree (on a 5-point scale) with each statement. Figure A2 is the set of items used for managers. Each statement was preclassified as to whether it reflected exploratory or confirmatory research. Three judges (involved with the work in this field) achieved perfect congruence in identifying the research purpose reflected by each item. Cumulative, equally weighted standardized indices were formed for exploratory purpose and confirmatory purpose.

**Organizational Structure**

Much of the literature on knowledge use stresses the importance of the organizational embeddedness of particular research projects. For example, organizational factors have been found to be much more important than individual difference variables in explaining why and how social science information is used by federal policy makers (Rich 1979).

In investigations of the organizational structure of a marketing firm, it is helpful to consider the dimensions of formalization and centralization. Formalization, as defined in the work of Hall, Haas, and Johnson (1967), is the degree to which rules define roles, authority relations, communications, norms and sanctions, and procedures. It is an attempt to measure a manager's flexibility in handling a particular task such as the implementation of research recommendations. Centralization taps the delegation of decision-making authority throughout an organization and the participation of managers in decision making (Aiken and Hage 1968).

Two principal methods can be used to study these concepts. One method, reflected in the work of Blau and Schoenherr (1971), Hinings and Lee (1971), Child (1972), and others, focuses on "institutional" measures that examine span of control, worker/supervisor ratios, distribution of employees across functional areas, and other indices of an organization chart (Payne and Pugh 1976; Pugh et al. 1968). This approach has been strongly criticized as producing measurements of extremely low internal reliability (Seidler 1974).

The greater the perceived technical adequacy of analyses, the greater the use of research.

Because managers are likely to prefer final reports that are perceived to be of high quality (in both presentation and technical adequacy) and political acceptability and to offer implementable recommendations (actionability),

\[ H_5: \text{The greater the perceived technical adequacy of analyses, the greater the use of research.} \]

\[ H_6: \text{The more satisfactory the presentation of data, the greater the use of research.} \]

\[ H_7: \text{The greater the perceived ability to take action on} \]

In keeping with the treatment of the variables suggested in the literature, equally weighted indices can be formed for formalization (see statements in Part A, Figure A3) and for centralization (see statements in Parts B and C, Figure A4).

**Research Report Characteristics**

Market research can be thought of as a commodity being exchanged between buyers and sellers (Deshpande and Jeffries 1981). The specific physical form of this commodity is the final report presented by researchers to managers.

Work in decision sciences indicates that the form of a research report in terms of data presentation is important (cf. Zmud 1978). For example, some managers prefer data to be presented in tabular rather than graphic form. Additionally, recent work by Weiss and Bucvalas (1977, 1980) and by Rich (1979) shows that the use of information is affected by other characteristics of a report, including the quality of the analyses, the perceived political acceptability of the recommendations, and the extent to which the recommendations are perceived to be implementable. We focus on the latter characteristics.

Because managers are likely to prefer final reports that are perceived to be of high quality (in both presentation and technical adequacy) and political acceptability and to offer implementable recommendations (actionability),
research (actionability), the greater the use of research.

H₈: The greater the perceived political acceptability of recommendations, the greater the use of research.

These four characteristics were operationalized in a series of 5-point Likert-scaled statements shown in Figure A5. The treatment of the resulting four variables involved forming separate indices for each after standardization in a manner similar to that described for the other variable indices.

**Surprise**

The final report may or may not confirm the prior notions of managers. To explore whether (and to what extent) disconfirmation occurred, three statements purporting to measure "surprise" were asked. Surprise can be defined as the extent to which a particular result or set of results in the final report is unanticipated, counterintuitive, or unforeseen by managers.

Surprise causes an increase in uncertainty, and the heightening of uncertainty implies increased risk. If the purpose of research information is to reduce uncertainty (and thereby the risk associated with making a hitherto unsupported decision), then surprise (even so-called "positive surprise") may be an inhibitor of research use. Hence,

H₉: The higher the magnitude of surprise contained in a research report, the less the use of the research.

This hypothesis would apply for both exploratory and confirmatory research purposes. It has much support, although not in marketing literature. First, the purpose of the research clearly is causally prior to the preparation of the final report. Managers develop their "priors" about what they expect the research to demonstrate before, or even as, the research itself is being contracted. After the research is presented in the final report, its evaluation commences. It is at this point that any confirmation or disconfirmation of prior expectations is likely to occur. Work in dissonance theory indicates that individuals will selectively seek information that supports their beliefs, and selectively avoid contrary information (Abelson 1959; Aronson 1969; Festinger 1957; Kassarjian and Cohen 1965). Thus the surprising, discrepant, or dissonant information provided in the market research report would probably lead managers to perceive it as being less useful, especially if it is compared with research information that is not discrepant with managers' expectations.

The operationalization of surprise involved querying respondents about their agreement/disagreement (5-point scale) with the statements shown in Figure A6. In addition to the dimensions of anticipation, intuitiveness, and foresight, a question asked respondents about the extent to which the results from the research project supported decisions made on other grounds. This question was added as a check on responses to other statements.

It was not placed in the same section as the others, but in a subsequent section on research use issues. The treatment of the surprise variable was similar to that of the other variables. An index was formed from the aggregated responses to the three basic dimensions, and the fourth statement was used as an internal consistency check measure.

**Life Cycle Maturity**

The personal interview data suggested that the use of research varies by the product's life cycle stage. Accordingly, a question about the stage of the product life cycle was formed into a simple index called "maturity" using each of the four stages of introduction, growth, maturity, and decline (see Figure A7) as an equally weighted component.

As more is generally known about a product that has been in the market for a while than a newly introduced product, more mature products would be likely to engender confirmatory research whereas new products might lead to more exploratory research. Thus,

H₁₀: The greater the maturity of the product in terms of its stage in the life cycle and the greater the confirmatory research purpose, the greater the use of the research.

H₁₁: The lower the maturity of the product and the greater the exploratory research purpose, the less the use of the research.

**Interaction Between Managers and Researchers**

The value of interaction between the producers and users of information has been emphasized repeatedly by most writers on the subject of research use (Barabba 1978; Brown 1972; Ernst 1976; Kunstler 1975). To tap this element of interaction a question was asked about the extent of interaction (on a 5-point scale) at each of four stages: planning the study, data collection, analysis and write-up, and the presentation and discussion of the results (see Figure A8). A summative, equally weighted index was formed using this question. This concept suggests:

H₁₂: The greater the degree of perceived interaction between managers and researchers during the research project, the greater the use of the research.

**RELIABILITY AND VALIDITY**

Before any assessment can be made about the tests of hypothesized relationships, we must examine the value of the measuring instruments used for analysis. We first discuss the reliability of instruments and then the validity of the several concepts described in preceding sections.

**Reliability**

As Selltiz, Wrightsman, and Cook (1976) indicate, the reliability of any measurement procedure consists of estimating how much of the variation in scores of different variables is due to transitory influences, i.e., how much of the variation is attributable to chance or random
Table 1
RELIABILITY COEFFICIENTS (CRONBACH $\alpha$) FOR VARIABLE SCALES USED IN MODEL
(sample: managers)

<table>
<thead>
<tr>
<th>No. of</th>
<th>Possible</th>
<th>Mean</th>
<th>S.D.</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Var/scale</td>
<td>items range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXPLOR</td>
<td>7 11–56</td>
<td>20.535</td>
<td>5.498</td>
<td>0.76</td>
</tr>
<tr>
<td>CONF</td>
<td>8 16–64</td>
<td>26.930</td>
<td>6.255</td>
<td>0.82</td>
</tr>
<tr>
<td>QUALF</td>
<td>5 6–41</td>
<td>16.163</td>
<td>10.082</td>
<td>0.36</td>
</tr>
<tr>
<td>QUALC</td>
<td>8 8–64</td>
<td>21.802</td>
<td>15.248</td>
<td>0.42</td>
</tr>
<tr>
<td>POLACC</td>
<td>5 5–40</td>
<td>18.035</td>
<td>10.512</td>
<td>0.26</td>
</tr>
<tr>
<td>ACTAB</td>
<td>6 11–48</td>
<td>22.977</td>
<td>11.365</td>
<td>0.27</td>
</tr>
<tr>
<td>CENTRL</td>
<td>8 8–64</td>
<td>20.302</td>
<td>15.472</td>
<td>0.64</td>
</tr>
<tr>
<td>FORML</td>
<td>15 17–120</td>
<td>42.047</td>
<td>26.730</td>
<td>0.76</td>
</tr>
<tr>
<td>SURPR</td>
<td>3 3–24</td>
<td>11.384</td>
<td>4.778</td>
<td>0.57</td>
</tr>
<tr>
<td>UTIL</td>
<td>5 5–37</td>
<td>13.919</td>
<td>7.482</td>
<td>0.63</td>
</tr>
<tr>
<td>INTERACT</td>
<td>4 1–20</td>
<td>14.674</td>
<td>5.945</td>
<td>0.85</td>
</tr>
<tr>
<td>MATUR</td>
<td>1 1–4</td>
<td>2.829</td>
<td>1.163</td>
<td></td>
</tr>
</tbody>
</table>

Key to Variables
EXPLOR: exploratory research purpose
CONF: confirmatory research purpose
QUALF: quality of the final report (form of presentation)
QUALC: quality of the final report (technical quality of presentation)
POLACC: political acceptability of recommendations in final report
ACTAB: ability to implement recommendations in final report
CENTRL: degree of centralization of organizational structure (in managers' firms)
FORML: degree of formalization of organizational structure (in managers' firms)
SURPR: extent of surprise perceived in final report
UTIL: extent of use of research information
INTERACT: degree of interaction between managers and researchers
MATUR: stage of product (service) in life cycle

errors. The method of evaluating reliability used here is the estimation of Cronbach $\alpha$ (Cronbach 1951; Nunnally 1967).

Table 1 reports the values of Cronbach $\alpha$ for the 11 basic variables. The twelfth variable, maturity in the life cycle, was measured on a unidimensional scale consisting of a single question; hence no reliability coefficient can be computed.

Using Nunnally's threshold of acceptable reliability coefficients as equal to or greater than 0.50, we can see that only four variables do not satisfy this requirement. These variables are the four characteristics of the final report. The reasons for their instability is the skewed distribution of responses to questions in each index (see Table 2) which produces a lower variability of response. This problem is common with all self-response measures, but other variables seem to have been less affected (as indicated by their higher Cronbach coefficients).

These four variables are, however, theoretically relevant. They are derived from work in both decision sciences (Zmud 1978) and public policy (Rich 1979; Weiss and Bucuvalas 1980). Hence they were considered im-

Table 2
RESPONSE FREQUENCIES FOR REPORT ATTRIBUTES

<table>
<thead>
<tr>
<th>Variable</th>
<th>Str. agree</th>
<th>Agree</th>
<th>Neither agree/disag.</th>
<th>Disagree</th>
<th>Str. disag.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>49</td>
<td>1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(2) 1</td>
<td>9</td>
<td>19</td>
<td>47</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>(3) 21</td>
<td>58</td>
<td>20</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(4) 19</td>
<td>65</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(5) 26</td>
<td>65</td>
<td>4</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>(6) 0</td>
<td>1</td>
<td>4</td>
<td>51</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>(7) 34</td>
<td>54</td>
<td>8</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(8) 0</td>
<td>3</td>
<td>12</td>
<td>45</td>
<td>41</td>
</tr>
<tr>
<td>QUALF</td>
<td>(1) 0</td>
<td>8</td>
<td>15</td>
<td>53</td>
<td>21</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>(4) 0</td>
<td>7</td>
<td>5</td>
<td>63</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>(5) 19</td>
<td>28</td>
<td>8</td>
<td>34</td>
<td>10</td>
</tr>
<tr>
<td>POLACC</td>
<td>(1) 15</td>
<td>47</td>
<td>24</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(2) 1</td>
<td>4</td>
<td>5</td>
<td>48</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>(3) 1</td>
<td>11</td>
<td>10</td>
<td>51</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>(4) 0</td>
<td>16</td>
<td>19</td>
<td>37</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>(5) 8</td>
<td>31</td>
<td>16</td>
<td>27</td>
<td>4</td>
</tr>
<tr>
<td>ACTAB</td>
<td>(1) 5</td>
<td>16</td>
<td>5</td>
<td>36</td>
<td>32</td>
</tr>
<tr>
<td></td>
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<td>3</td>
<td>4</td>
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<td>(3) 4</td>
<td>22</td>
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</tr>
<tr>
<td></td>
<td>(4) 3</td>
<td>4</td>
<td>5</td>
<td>55</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>(5) 3</td>
<td>5</td>
<td>21</td>
<td>43</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>(6) 1</td>
<td>17</td>
<td>7</td>
<td>45</td>
<td>28</td>
</tr>
</tbody>
</table>

*Responses may not add up to 100% because of "not applicable" responses.

Key to Table 2
QUALC (1) The results addressed very well the problems we had to solve.
(2) There were many contradictory statements or findings.
(3) The technical quality of the research was high.
(4) The conclusions/recommendations of the presentation followed from the data.
(5) The way the information was gathered was appropriate.
(6) The statistics were smokescreens for otherwise useless findings.
(7) The information provided was not available elsewhere.
(8) The information provided was not worth the money spent on it.
QUALF (1) There were too many tables/graphs/statistics.
(2) The language of the presentation was clear.
(3) There was not enough interpretation or explanation of the findings.
(4) The analysis of the data was more complex than necessary.
(5) It was necessary for someone within the company to summarize the information before it could be used.
POLACC (1) The implications of the findings were politically acceptable to you.
(2) The report reflects that external researchers and marketing management were out of touch with each other.
(3) Some of the more negative results were softened in the presentation.
(4) The research results challenged existing institutional arrangements.
(5) The recommendations did not challenge the budget or resource allocations of the department.
USE OF MARKET RESEARCH INFORMATION

Table 2
(Continued)

ACTAB
(1) The presentation provided data but no explicit recommendations for action.
(2) There were more recommendations than could practically be implemented.
(3) The recommendations were easy to put into effect.
(4) The information was not on time for a pending decision.
(5) All recommendations were implemented.
(6) The usability of research did not depend on whether it got there on time.

Table 3
INTER-ITEM INDEX VALIDATION COEFFICIENTS (SPEARMAN) FOR INDICES USED IN MODEL
(sample: managers)

<table>
<thead>
<tr>
<th>Index</th>
<th>Variables</th>
<th>X1</th>
<th>X2</th>
<th>X3</th>
<th>X4</th>
<th>X5</th>
<th>X6</th>
<th>X7</th>
<th>X8</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPLOR</td>
<td>.56</td>
<td>.51</td>
<td>.10</td>
<td>.28</td>
<td>.47</td>
<td>.30</td>
<td>.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.001</td>
<td>.001</td>
<td>.002</td>
<td>.005</td>
<td>.001</td>
<td>.003</td>
<td>.002</td>
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<tr>
<td>CONF</td>
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<td>.50</td>
<td>.20</td>
<td>.35</td>
<td>.43</td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
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<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>.032</td>
<td>.001</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SURPR</td>
<td>.61</td>
<td>.59</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUALF</td>
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<td>.51</td>
<td>.66</td>
<td>.45</td>
<td>.67</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Sig.</td>
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<td>.001</td>
<td>.001</td>
<td>.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUALC</td>
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<td>.51</td>
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<td>.57</td>
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<td>.38</td>
<td>.35</td>
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<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
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<td></td>
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</tr>
<tr>
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<td>.40</td>
<td>.44</td>
<td>.34</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACTAB</td>
<td>.56</td>
<td>.34</td>
<td>.43</td>
<td>.19</td>
<td>.44</td>
<td>.32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
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<td>.002</td>
<td>.001</td>
<td>.002</td>
<td>.001</td>
<td>.002</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CENTRL</td>
<td>.25</td>
<td>.37</td>
<td>.45</td>
<td>.32</td>
<td>.57</td>
<td>.49</td>
<td>.58</td>
<td>.53</td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
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<td>.001</td>
<td>.002</td>
<td>.001</td>
<td>.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Important enough to warrant attention and are retained for the path analysis.

Validity

To determine the validity of some of the concepts being operationalized, two separate procedures were followed. One measured inter-item index validity and the other convergent validity.

Inter-term index validity was measured by correlating each item on an index with the index itself. These coefficients are reported in Table 3.

Almost all correlations are not only in the expected direction, but are significant at 0.001 levels. This finding indicates a strong measure of validity in terms of scale items contributing to the measurement of the concept the total index was designed to measure.

Further, convergent validity, defined as the degree to which two attempts to measure the same concept are convergent (Zaltman, Pinson, and Angelmar 1973, p. 70), was measured by correlating selected indices with other items or questions in the questionnaire. These correlations are displayed in Table 4. For instance, the extent of surprise was correlated with a question that asked whether results supported decisions made on other grounds. High surprise should correlate negatively with the responses to this question. Table 4 indicates that it does and is significant at the 0.001 level.

The measuring instruments used and the concepts operationalized show excellent internal consistency and validity. Slightly lower reliability coefficients for the four final report characteristics are shown to accrue from a somewhat skewed distribution of responses to items on which the respective indices are based. In general,
Table 4
CONVERGENT VALIDATION (SPEARMAN) FOR SELECTED INDICES IN MODEL

<table>
<thead>
<tr>
<th>Managers</th>
<th>SURPR with X001</th>
<th>(N) .36</th>
<th>(79)</th>
<th>SIG.</th>
<th>.001</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTIL with X002</td>
<td>(N) .35</td>
<td>(74)</td>
<td>SIG.</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>MATUR with X003</td>
<td>(N) .61</td>
<td>(84)</td>
<td>SIG.</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>CENTRL with X004</td>
<td>(N) .27</td>
<td>(74)</td>
<td>SIG.</td>
<td>.115</td>
<td></td>
</tr>
<tr>
<td>FORML with X004</td>
<td>(N) .14</td>
<td>(74)</td>
<td>SIG.</td>
<td>.115</td>
<td></td>
</tr>
</tbody>
</table>

Key to Variables in Convergent Validation

X001: The results from this research study supported decisions made on other grounds.
X002: The information provided was not worth the money spent on it.
X003: As far as your firm is concerned, would you classify this product/service as:
- new product for new market*
- new product for old market
- old product for new market
- old product for old market
* A "new" market would be one which the firm has not served before.

however, the measurement of variables is very robust and provides an adequate basis for further analysis.

Before discussing the several analyses conducted to test relationships, we must point out one initial finding from the data. Although the purpose of the study was to investigate what factors lead to greater consideration of market research, it is enlightening to note that managers in the study generally indicated a high degree of overall satisfaction with the research they were provided. This satisfaction can be seen in the marginal frequencies in Table 2. For example, 46% of managers strongly agreed that "research results addressed very well the problems (they) had to solve." A further 24% strongly disagreed that "there were many contradictory statements or findings," and 21% strongly agreed that "the technical quality of the research was high."

The Use Index

The managers' generally substantial degree of satisfaction with the research with which they were provided is consistent with the reasonably high level of research use reported (cf., mean score on UTIL index, Table 1). The results of the path analyses therefore can be interpreted in light of an attempt to improve the relatively high degree of market research information use. As discussed in the Findings and Implications section, an appreciation of the factors affecting the use of research can lead to an understanding of both why the current level of satisfaction exists and what might be done to enhance it.

One additional point related to the issue of the dependent variable must be mentioned: the difficulty in operationalizing the multidimensional concept of "research use." As indicated in the Key Concepts and Hypotheses section, research may be used in a direct, short-term, instrumental fashion or in an indirect, longer term, conceptual manner. Although we have developed an instrumental definition and operationalization of use, more work must be done in this area. Aside from the problematic nature of the non-unidimensionality of the concept, the issue of which dimensions to include must be addressed. The four components of decision relevance, information surplus, recommendations implemented, and general quality were suggested by managers interviewed for the study and were reinforced by the relevant literature in the policy sciences (Larsen 1980; Weiss and Bucuvalas 1980). Though substantively and theoretically pertinent, each of the components captures a different nuance of use. It is for this reason, perhaps, that the inter-item correlations of the individual scale items vary in their association with the overall use index (Table 3). Although we believe that substantively they all build toward a measure of use (and hence should be included in the final index), the first two items, measuring decision relevance, for instance, have lower inter-item correlations than the remaining items. One can speculate that the two decision relevance questions (first two items in Figure A1) may be too rigid in their measurement of research use. For example, conceivably other information (besides the market research being described) was available for making the final product strategy decision. To the extent that this other information may have been used as input for the final decision, the importance of the market research would somewhat decline. That is, the availability of other relevant information would detract from the sine qua non aspect of any one specific market research study. Although we did not investigate the availability of such other information, researchers interested in this area should definitely attempt to determine this issue in an operationalization of the use concept.

With an appreciation of this caution about the measurement of use, as well as the general satisfaction of managers with the research presented to them, we turn to an investigation of the proposed hypotheses.

CAUSAL MODEL ANALYSIS

Collectively, our hypotheses formed a basic model involving 11 variables which may directly and/or indi-
USE OF MARKET RESEARCH INFORMATION

rectly affect the use of market research. This model is a simple one which is far from exhaustive in terms of including all potentially relevant independent variables. However, the model did seem to be the best one which our insights allowed us to construct prior to the actual research.

The framework of relationships formed by the suggested hypotheses was tested by path analysis. This method primarily involves the decomposition and interpretation of linear relationships among a set of variables by assuming that a (weak) causal order is known or theoretically postulated. The magnitude of the relationships (called “paths”) determines whether the prespecified causal order is justified. The technique is therefore eminently suited to the nature of our investigation.

The causal model is presented in its testable form in Figure 1. The model describes both the primary relationships between variables as hypothesized and the subsidiary interactions between groups of variables. Space limitations preclude discussion of these several second-order interactions. However, the relevant interactions are treated in the Discussion section.

The variables used were retained in their raw index form. We performed a series of sequential ordinary least squares regressions using first the ultimate criterion variable (use) with all the remaining variables as predictors. Then, following the causal model structure posited in Figure 1, we used each mediating variable as the criterion with the impacting exogenous variables as predictors.

Figure 1 shows path coefficients of both the variables impinging directly on use and those affecting each other. Dashed lines signify the latter, indirect paths.

All coefficients are statistically significant ($p \leq .01$). This finding by itself is a confirmation of the model as hypothesized. However, before considering the magnitudes of these coefficients, we must investigate the total effect of various independent variables on use.

Table 5 shows these total effects as being composed of both direct and indirect effects. The indirect effects are calculated as a simple multiplicative measure of the magnitude of sequential beta weights. This procedure (i.e., the Simon-Blalock technique) is commonly used in causal modeling and path analysis (Asher 1976; Blalock 1963; 1964; 1967; Lazerwitz 1973; Simon 1957). For example, part of the indirect effect of EXPLOR on UTIL is $(0.17 \times 0.21) = 0.04$ because it is mediated through the variable surprise (SURPR). The total effect is then measured by adding the magnitude of the indirect effects to the direct effects.

We now can see that rather than the simple direct effect considerations, the most important variables in the model that lead to use are formalization, content quality of the research report, interaction, surprise, and centralization.

The value of the contribution from indirect effects is more clearly understood by looking at a percentagewise breakdown of both types of effects (following the analysis suggested by Alwin and Hauser 1975). Table 6 provides this breakdown.

The contribution of surprise to the manager sample is marked. Apart from its own direct impact on use, it pro-

---

**Figure 1**

CAUSAL MODEL OF RESEARCH USE—MANAGERS

---

*ALL PATH COEFFICIENTS ARE SIGNIFICANT AT $P < 0.01$ LEVELS
SOLID LINES INDICATE DIRECT EFFECTS
DASHED LINES INDICATE INDIRECT EFFECTS
FOR SCHEMATIC CLARITY, RESIDUALS HAVE BEEN OMITTED

R$^2 = 0.655$
vides 63% of the explanation of why the form of the report has an impact on the criterion variable. In addition, it contributes more than a third of the explanation of the impact of confirmatory research purpose and 30% of the impact of the content quality attribute. Interaction between managers and researchers also appears to be an important mediating variable. However, much of the effect of interaction occurs through other variables.

The path analysis results indicate that all the variables posited as having a causal impact on the use of market research indeed do. The findings on the report attributes construct are presented with some reservations because the measurement of the report attributes construct was not very reliable. However, in their interactions with other variables (especially surprise) in the causal model, they have statistically significant coefficients and are included in the results.

The model explains 65.5% of the variance in research use. Although the purpose of path analysis is to determine the existence (in terms of statistical significance) and magnitude of hypothesized effects on the ultimate dependent variable rather than to measure explained variance, these figures of explained variance indicate that the variables we considered are indeed important in influencing the extent to which market research is used. These variables are only a small set of the total number of logically relevant variables which might have been included in the analysis.

The analysis described was repeated for two other variables. The dependent variable “use” was decomposed into the variables “input” and “impact.” Both analyses were inconclusive. The magnitudes of beta weights forming both direct and indirect effects were not large enough to justify considering the influence of the set of predictor variables on either “input” or “impact.” This conclusion can be expected because for both conceptual and statistical reasons, the four dimensions of the use variable need to be considered together in analyzing the attention given to specific market research information by managers.

**DISCUSSION OF FINDINGS AND IMPLICATIONS**

The most important variables affecting the use of research are organizational structure (formalization and centralization), technical quality, surprise, actionability, and researcher-manager interaction. Organizational structure variables have a particularly large effect on research use. The degree of centralization and formalization (or lack thereof) seems to outweigh life cycle maturity, research purpose (confirmatory and exploratory), and to an even greater extent the report attributes in its influence on what and how much market research information is used. The more decentralized and less formalized firms are more likely to make greater (and perhaps better) use of the research they subcontract than differently structured companies. This conclusion is in accordance with the findings of Rich (1977) in the public

### Table 5

**DIRECT, INDIRECT, AND TOTAL EFFECTS OF INDEPENDENT VARIABLES ON USE**

(dependent variable: use)

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Direct effect</th>
<th>Indirect effect</th>
<th>Total effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPLOR</td>
<td>-.05</td>
<td>-.10</td>
<td>-.15</td>
</tr>
<tr>
<td>CONFM</td>
<td>.04</td>
<td>.07</td>
<td>.11</td>
</tr>
<tr>
<td>SURPR</td>
<td>-.21</td>
<td></td>
<td>-.21</td>
</tr>
<tr>
<td>FORML</td>
<td>-.48</td>
<td>-.01</td>
<td>-.49</td>
</tr>
<tr>
<td>CENTRL</td>
<td>.15</td>
<td>-.06</td>
<td>-.21</td>
</tr>
<tr>
<td>QUALF</td>
<td>.03</td>
<td>.05</td>
<td>.08</td>
</tr>
<tr>
<td>QUALC</td>
<td>.21</td>
<td>.09</td>
<td>.30</td>
</tr>
<tr>
<td>POLACC</td>
<td>.09</td>
<td>.03</td>
<td>.12</td>
</tr>
<tr>
<td>ACTAB</td>
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<td>.00</td>
<td>.12</td>
</tr>
<tr>
<td>MATUR</td>
<td>.05</td>
<td>.06</td>
<td>.09</td>
</tr>
<tr>
<td>INTERACT</td>
<td>.05</td>
<td>.18</td>
<td>.23</td>
</tr>
</tbody>
</table>

*aSee Table 1 for key to independent variables.

*bAll significant at p < .01.

### Table 6

**PROPORTIONAL BREAKDOWN OF EFFECTS**

(dependent variable: use)

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Total % explained by direct effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPLOR</td>
<td>-.15</td>
</tr>
<tr>
<td>CONFM</td>
<td>.11</td>
</tr>
<tr>
<td>SURPR</td>
<td>-.21</td>
</tr>
<tr>
<td>FORML</td>
<td>-.49</td>
</tr>
<tr>
<td>CENTRL</td>
<td>.15</td>
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<tr>
<td>QUALF</td>
<td>.08</td>
</tr>
<tr>
<td>QUALC</td>
<td>.30</td>
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<td>POLACC</td>
<td>.12</td>
</tr>
<tr>
<td>ACTAB</td>
<td>.12</td>
</tr>
<tr>
<td>MATUR</td>
<td>.09</td>
</tr>
<tr>
<td>INTERACT</td>
<td>.23</td>
</tr>
</tbody>
</table>

*See Table 1 for key to independent variables.
policy area and of Moch and Morse (1977) among many others in the organizational theory/innovation adoption area. Although our study was not designed to explore these possibilities, more decentralized companies conceivably allow lower-level managers to take greater part in research activities, thus ensuring their commitment to the results of such activities. Also, the greater the involvement (and hence interaction) of managers with researchers, the more the former know what to expect and what not to expect and the less surprised they are likely to be by the final results. This interaction also provides researchers with insights about how they can best structure the contents of the final report in terms of the several report characteristics studied. Less formalized structure would permit managers to be cognizant of the "business realities" facing their firms. These concerns could be communicated to researchers as a basis for making recommendations which are within the resource capabilities of the firm.

We believe our findings about organizational structure are very significant in at least two related respects. First, in terms of management or organizational behavior, they are an empirical indication of the major impact of the internal environment of firms on marketing decision making. This aspect of marketing management is little researched. Second, our findings reflect the impact of organizational structure variables on the consumption behavior of organizations. The need to study the impact of structural variables on purchase behavior has been noted previously although little studied (Bonomia, Zaltman, and Johnston 1977) in the buyer behavior literature. These findings suggest that postpurchase or consumption behavior is affected strongly by structural variables as well. This possibility merits much further exploration by researchers concerned with industrial or organizational buying behavior.

Another factor found to be very important is surprise. Surprise is an important moderating variable between the research requested and produced and its use. Surprise can be thought of as a reality test which helps managers decide whether or not to use certain research results. If the results are intended to reinforce prior feelings (or information), a high degree of surprise would lessen acceptance of a research report's findings.

The same would be true even in the case of exploratory research but to a lesser extent. Some degree of surprise would be tolerated, particularly if the research design also had a partly confirmatory purpose (and the surprise did not occur there). Information is needed to reduce uncertainty, not to increase it. Even positive surprises imply a change in status quo which in turn may create problems. These are not considerations that managers weigh lightly. Surprise, then, is used as one arbiter of what information is accepted and used and what information is questioned or discarded.

Surprise is especially significant in explaining the impact of report attributes on use. The quality attributes in particular have 71% (for form quality) and 38% (for content quality) of their total effects explained by indirect effects via surprise. High quality enhances use partly by lowering the level of surprise which ordinarily inhibits use.

Surprise also influences report attribute ranking. Although actionability and political acceptability were expected to be the highest rated attributes, one reversal did occur: content quality was the highest rated attribute. An explanation for this discrepancy is given in the discussion of the value of the surprise variable. If managers use surprise as a criterion in their decision to use or not use research findings, the magnitude of the surprise has implications for the behavior of the manager. Imagine a situation in which predominantly confirmatory research was desired by managers and unanticipated findings were produced by researchers. Managers must find a basis for criticizing the findings. Because they cannot comfortably tell researchers that they do not like findings which do not coincide with expectations, managers can select one (or several) of the research report attributes to censure. Content quality may be selected for several reasons.

Managers often do not inform external researchers about how decisions will be made on the basis of the information provided. Therefore the actionability attribute may not be readily selected as a basis for criticism. Additionally the political acceptability of research results involves the managers themselves and their colleagues. Researchers are usually not well informed about the political environment within client firms (although other data indicate they would like to be thus informed; Deshpande 1979b). Hence political acceptability as a basis for criticism is not easy to employ. The way the results are presented (in terms of the form of the report) might seem too trivial an aspect to criticize. The final attribute, and the one most likely to be chosen, is the technical quality ("content quality") of the research done. It is generally not difficult to find one or more technical limitations in any significant research undertaking. One can simply give special prominence to these limitations when the results are surprising. It is notable that data from the 16 interviews strongly suggest that managers are much more inclined to pay attention to research methodology and to do so critically when the research results are surprising. When the results are largely consistent with expectations, little attention is given to the research methodology section of the report.

Finally, managers do not appear to believe that the maturity of a product or service in its life cycle has a great impact on the use of research relating to that product or service. Even the indirect effects of maturity on research use do not contribute very much.

Our study findings have the following implications.

1. The structure of an organization should be examined carefully to detect any inhibitory effects on research use. To the extent that an organization does or could make frequent use of research, an alternative organizational design (i.e., decentralized responsibility) which en-
hances research use might be considered. Redesign may be temporary for a specific research project. For example, research in the organizational behavior literature suggests that certain organizational structures may facilitate the initiation of new projects (i.e., a decision to conduct a major research study) and yet inhibit the implementation of those projects (i.e., taking action based on the research) and vice versa (Duncan 1972; Hage 1980). Thus an organization which is highly centralized (which may facilitate the decision to conduct a major research project) may have difficulty in implementing results of the study. Centralization appears to inhibit research use (see Tables 5 and 6). Thus, for purposes of implementing the research, a highly centralized firm may wish to decentralize decision making temporarily in the marketing area, at least during the implementation phase. Similar "switching rules" (Duncan 1972; Zaltman and Duncan 1977) can be developed for other relevant organizational structure features or variables.

2. Managers should provide researchers with more information about the decisions to be made on the basis of the research they produce.

3. Personal interaction between managers and researchers is very important in creating trust in the researcher and consequently in the results of the research. The quality of personal interaction affects manager perceptions of the overall quality of the report itself.

4. Providing a research agency feedback about the use/nonuse made of the research is especially important if that agency is expected to have a continuing relationship with the firm.

5. Researchers who favor an exploratory style of research should be especially sensitive to managers' tendencies to want confirmatory research containing few surprises. One respondent used the term "comfort zone" to refer to a manager's tolerance for counterintuitive and/or unexpected findings. The larger the comfort zone, the more tolerant and accepting a manager is of such information. Special efforts will be necessary to widen comfort zones among managers if the results of exploratory research are to be accepted. Managers themselves might try to identify how they would react to unanticipated results in research they commission. Comfort zones might be widened by managers and researchers generating a large array of possible research outcomes prior to the conduct of the research (Deshpande and Zaltman 1981). Use of a dialectic procedure, as has been employed by Xerox Corporation among others, might generate a range of outcomes which would make any particular outcome appear less surprising (Mitroff, Kilmann, and Barabba 1979). This approach could be facilitated by generating deliberately skewed responses to research questions for use by managers in a brainstorming mode prior to the research. Such responses are likely to include surprises and hence sensitize managers to the possibility of unanticipated research outcomes. The task of broadening comfort zones appears to have received little attention in management contexts and certainly is worthy of further inquiry.

FUTURE ACTIVITY

Our research findings might properly be considered "commencements" rather than conclusions. Though we believe the findings have substantial validity and reliability, many other necessarily untested variables need exploration. For example, cognitive variables might be very important explanatory factors affecting responses to surprise and the salience of research report attributes. Manager attitudes toward research in general and their perception of science may affect the impact of several variables in the model. Additionally, the specific hypotheses tested should be explored with different samples, e.g., consumer product managers in small firms and managers in industrial goods firms.

Our study is necessarily a first attempt at exploring empirically the relationships associated with the use of market research information. Like all first attempts in a new area, this exploration has both strengths and weaknesses which are discussed at various points throughout the article. However, particular mention must be made here of the attempts to measure the dependent variable, use. Although an initial attempt is made to operationalize this key variable in our study, much more work clearly needs to be done. One possibly fruitful direction for reconceptualizing the concept of use may be to consider the change between expected application prior to the conduct of research and the actual application of research upon its completion. This approach, which stresses the impact aspect of use, requires longitudinal research designs. (We believe such an approach would offer several other benefits as well). Another conceptualization might be to consider such dimensions as changes in assumptions and decision rules even when such changes may not be uniquely linked to, or easily associated with, specific actions.

Commencement activities along these lines should provide needed insight into marketing management behavior, the consumption behavior of organizations, and aspects of the knowledge system of the marketing profession. These insights, in turn, can enhance both our theories of consumer behavior and the quality of professional practices among managers and researchers.
USE OF MARKET RESEARCH INFORMATION

APPENDIX
OPERATIONALIZATION OF VARIABLES

Figure A1
USE OF RESEARCH INFORMATION

A. Please indicate your extent of agreement with each of the following statements (using the scale below).

1 strongly agree
2 agree
3 neither agree nor disagree
4 disagree
5 strongly disagree
9 don’t know

(1) Without this research information, the decisions made would have been very different.
(2) No decision would have been made without this research information.
(3) The majority of the research information from this project was not used.
(4) How successful would you say that this research project was in resolving the key issues for which the project was designed? (Please check one.)

1 very successful
2 moderately successful
3 neither successful nor unsuccessful
4 moderately unsuccessful
5 very unsuccessful
9 don’t know

B. In your opinion, what proportion of this particular study need not have been done (for whatever reasons):

_____%

Figure A2
RESEARCH PURPOSE (FOR RESEARCHERS)

EXPLORATORY
Considering the problems or issues research was to address, please indicate your agreement or disagreement with the following in the space before each statement. (Please use the scale below.)

1 strongly agree
2 agree
3 neither agree nor disagree
4 disagree
5 strongly disagree
9 don’t know

a. The research was intended to identify what the problems/key issues were.
b. The client intended the research to identify many different solutions to these issues.
c. The client intended the research to identify one clear solution to resolve these issues.
d. The client wanted a major focus of the research to be that of identifying which strategies would be unsuccessful.
e. The client expected the research would give their managers new ideas and strategies.
f. The client relied upon many different sources of information to shed light on these issues.
g. The client was pretty flexible on their position concerning these issues.

CONFIRMATORY
a. Past experience was more likely to be relied on by client managers than new research to resolve these issues.
b. The client had a position on these issues before they were researched.
c. The client was strongly committed to a position on these issues.
d. The client seemed to have had a good idea of what the final results should look like.
e. The client expected any results from the project to be compatible with their intuition on these issues.
f. Independent of the research, the client felt their company would continue to do things as before.
g. The client intended the research to help legitimate positions already taken on these issues.
h. There was a belief by some of the client managers that the research would cast doubt on a policy or position other groups in the firm had taken concerning these issues.

FORMALIZATION
In this last section, we would like to ask you the following questions about your organization and the way that you see your job within the company as related to this specific research project. For each item, please answer as it applies to you and your organization, using the answer categories below.

1 definitely true
2 more true than false
3 more false than true
4 definitely false
5 not applicable

A. (1) First, I felt that I was my own boss in most matters relating to the project.
(2) I could make my own decisions regarding the project without checking with anybody else.
(3) How things were done around here was left pretty much up to me.
(4) I was allowed to do almost as I pleased.
(5) I made up my own rules on this job.
(6) I was constantly being checked on for rule violations.
(7) I felt as though I was constantly being watched to see that I obeyed all the rules.
(8) There was no specific rules manual relating to this project.
(9) There is a complete written job description for going about this task.
(10) Whatever situation arose, we had procedures to follow in dealing with it.
(11) Everyone had a specific job to do.
(12) Going through the proper channels in getting this job done was constantly stressed.
(13) The organization kept a written record of everyone’s performance.
(14) We had to follow strict operational procedures at all times.
(15) Whenever we had a problem, we were supposed to go to the same person for an answer.
### Figure A4

**CENTRALIZATION**

- 1 never
- 2 seldom
- 3 often
- 4 always

B. (1) How frequently did you usually participate in decisions on the adoption of new products?
(2) How frequently did you usually participate in decisions on the modification of existent products?
(3) How frequently did you usually participate in decisions to delete existent products?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>definitely true</td>
<td>1</td>
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<tr>
<td>more true than false</td>
<td>2</td>
</tr>
<tr>
<td>more false than true</td>
<td>3</td>
</tr>
<tr>
<td>definitely false</td>
<td>4</td>
</tr>
<tr>
<td>not applicable</td>
<td>5</td>
</tr>
</tbody>
</table>

C. (1) There could be little action taken on this project until a superior approved a decision.
(2) If I wished to make my own decisions, I would be quickly discouraged.
(3) Even small matters on this job had to be referred to someone higher up for a final answer.
(4) I had to ask my boss before I did almost anything.
(5) Any decision I made had to have my boss' approval.

### Figure A5

**QUALITY (content)**

Please indicate your agreement or disagreement on each of the following issues regarding the final report (if they apply) in the space before each statement.

- 1 strongly agree
- 2 agree
- 3 neither agree nor disagree
- 4 disagree
- 5 strongly disagree
- 9 not applicable

(1) The technical quality of the research was high.
(2) There were many contradictory statements or findings.
(3) The conclusions/recommendations of the presentation followed from the data.
(4) The statistics were smokescreens for otherwise useless findings.
(5) The way the information was gathered was appropriate.
(6) The results addressed very well the problems we had to solve.
(7) The information provided was not available elsewhere.
(8) The information provided was not worth the money spent on it.

**QUALITY (form)**

(1) The language of the presentation was clear.
(2) There were too many tables/graphs/statistics.
(3) There was not enough interpretation or explanation of the findings.
(4) The analysis of the data was more complex than necessary.
(5) It was necessary for someone within the company to summarize the information before it could be used.

### Figure A6

**SURPRISE**

Referring to the research project that you have been describing, please indicate to what extent you agree or disagree with the following statements, from your perspective. (Please use the scale below.)

- 1 strongly agree
- 2 agree
- 3 neither agree nor disagree
- 4 disagree
- 5 strongly disagree
- 9 not applicable

(a) The results were what we anticipated.
(b) The findings were counterintuitive.
(c) The results suggested issues that were unforeseen at the start of the project.
(d) The results from this research study supported decisions made on other grounds.

### REFERENCES

- Albaum, A., D. S. Tull, J. Hanson, and M. Lineweaver (1978), "The Use by Business Firms of Expected Value of
USE OF MARKET RESEARCH INFORMATION

Figure A7

LIFE CYCLE MATURITY

At which one of the following stages would you place this product?
(Please check one.)

$ Sales

<table>
<thead>
<tr>
<th>I Introduction</th>
<th>II Growth</th>
<th>III Maturity</th>
<th>IV Decline</th>
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<td>1</td>
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Figure A8

INTERACTION

1. (A) We would now like to get a few details about your interaction with outside researchers used in this project. First of all, please indicate the extent of your interaction in each of the following phases.

- a. planning the study
- b. data collection
- c. analysis and writeup
- d. presentation and discussion of results


Campbell, Donald T. (1975), "Degrees of Freedom and the Case Study," Comparative Political Studies, 8 (July), 178-93.


Deshpande, R. (1979a), "The Use, Nonuse, and Abuse of Social Science Knowledge," Knowledge: Creation, Diffusion, Utilization, 1 (September), 164-76.


