

Research in industrial buying behavior—today's needs, tomorrow's seeds

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THE FUTURE of industrial buying behavior research depends largely on its past and present.

A careful look at the state of the art shows the field has a rich tradition of empirical and practice-oriented research. After reviewing and summarizing such findings, I find it possible to speculate about future research needs and trends in this area.

Although I've found more than 1,000 references in books, articles, comments, and trade and professional publications, many are unaware of such research; consider it nonvoluntary and trade-oriented; and still believe consumer buying behavior is a more thoroughly researched area. Among the reasons for this are:

- More good research seems to have been conducted in Europe than in the U.S.; and, therefore, we in the U.S. aren't aware of it.
- Research in industrial buying is scattered over several disciplines such as political science, organizational behavior and development, business, and production, finance, and personnel management.
- Since relating to consumer behavior through personal experiences, buyers conducting research in Europe are more experienced and learning the rigidity of industrial buying behavior, borrowing and applying easy behavioral science theories and methods seems more straightforward in consumer than in industrial behavior. This has probably led to greater relative exposure to, and retention of, consumer research findings.
- Consumer marketers have tended to be more receptive and less hard-nosed about applying new and different techniques and theories of behavioral sciences probably because of the presumption that

upon the same situation differently and different situations as if they were the same. A related, but controversial, issue is whether industrial buyers primarily use rational or emotional criteria in selecting suppliers.

The controversy becomes more interesting when one compares the empirical research on industrial buyers with that on housewives. Not very surprisingly, but contrary to popular belief, industrial buyers also tend to use a substantial number of noneconomic criteria in selecting products or services.

Individual characteristics also include learning and loyalty and perceived risk. Perceived risk theory assumes buyers tend not to maximize the expected payoff but rather minimize the risk.

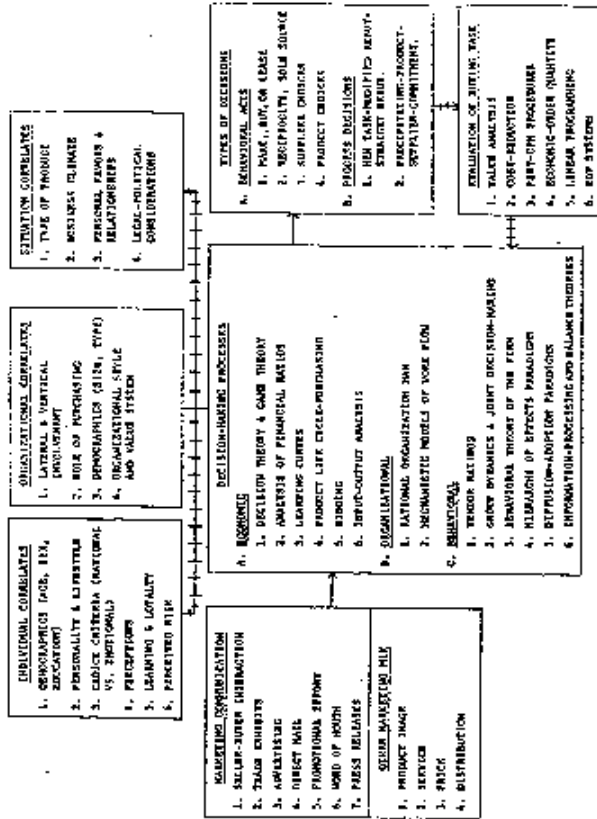
This research has focused on specific tactics buyers adopt to minimize risks including relying on supplier reputation, developing strong source loyalty, reaching for information, relying upon credible sources such as friends and experts, and greater deliberation and planning in high-risk situations.

Risk theory is supplemented by psychological learning theories by which the buying process over time and with repetitive purchase decisions becomes routine.

FUTURE—First is the need to investigate sex and race differences, if any, among industry buyers. And with the recent government rules about affirmative action programs, minority buyers are likely to be legally desolved members of minority groups.

Differences in both style and content of decision making between men and women and different subcultures and ethnic groups are likely to spill over into the area of industrial buying decisions. So far, very little research exists which answers whether male purchasing

SUMMARY OF RESEARCH IN INDUSTRIAL BUYING BEHAVIOR



is to provide some insights into the impact of their communication efforts.

FUTURE—If there is one aspect of industrial buying behavior which needs more, and more rigorous, research, this is it. Considerable work remains to be done in measuring the direction and magnitude of impact of marketing communications on industrial buying behavior since so little is known so far.

The area of two specific areas in need of immediate research is the modeling and testing of marketing mix variables appropriate for industrial marketing. We know very little about the main effects and interaction effects of personal selling, direct mail, exhibitions, and advertising in industrial marketing.

The second and related area is the search for alternative ways of communicating to successful salesmen. As

within each organization which is not understood by the organization across functions and departments which are at a lateral level on the organization chart but in reality they are hierarchically stratified.

A second more fascinating area of research is the measurement of organizational lifestyles and value systems. While we know a lot about the style and philosophies of Japanese, European, and American management, there seems to be insufficient research on the variability of organizational lifestyles among U.S. corporations.

Both the style and content of the purchasing function will vary between organizations with distinctly different lifestyles or value systems.

SITUATION CORRELATES—Four distinct areas of research in industrial buying

Value analysis is, therefore, a normative tool which attempts to quantify the decision outcomes in monetary terms and provide a set of decision rules to improve the efficiency of buying. But other techniques with basically the same objective are cost-reduction and economic-order quantity analysis.

On the other hand, systems analysis has been identified as a very useful normative technique for evaluating the buying task. Despite the qualitative and scores that the quantitative approach to evaluating the buying task or the purchasing function, there is still relatively low sophistication and standardization in measuring the economic and noneconomic performance of industrial buying decisions.

FUTURE—While a substantial amount of research exists on the economic marketing approaches to

... of the presumption that behavior is, by definition, more complex and emotional in industrial buying behavior. A good research in industrial buying behavior indeed, has been practice-oriented than academic-oriented.

... between industrial consumer buying behavior can be seen in regard to the buyers' attitudes, perceptions, and mix of rational vs. emotional choice. Recently, strong efforts have been made to theorize and industrial buying behavior including comparable efforts in other behavior. Some of these parallels, industrial marketing probably enables consumer marketing in its of emphasizing nonfunctional in the marketing mix. If this mix is increasingly true, it's likely to produce greater regulations and in policy considerations in the field of industrial marketing. In framework, "Summary of research in Industrial Buying Behavior" illustrates the vast amount of information available and for a quick review of existing work. It consists of inputs, a mediating, decision-making process, and outside factors that impact upon decisions. Most such research can be divided into one or more of the following categories:

INDIVIDUAL, CURRENT STATE.—A considerable amount of research has been done on the individual differences among industrial buyers and their impact on the decision-making process. The presumption is that certain characteristics of the individual buyer can explain differences in both the content and the nature of the decision-making process. Organizational buying, in addition to the demographic correlates shown in the figure are length of experience and position in the organization. A related category includes quality and lifestyle profiles. The next two categories relate to special differences among the buyers with respect to relevance and

CURRENT STATE.—Four distinct types of purchase situations (broadly defined) exist: (1) routine, (2) semi-routine, (3) non-routine, and (4) complex. The most obvious is the type of product.

In particular, a substantial difference in the process exists between the purchase of capital goods, raw materials, and maintenance products. Decisions to buy or make, replace or repair also often are influenced by the economic outlook and its impact on the liquidity of the buying organization.

A third, more subtle category relates to personal favors and relations between buyers and sellers. Here we must also include bribery, patronage, and nepotism, which seem to be widespread in some countries. Finally, legal-political considerations impinging upon specific purchase situations are often more crucial in the choice of suppliers than in the choice of products because of the complex web of antitrust legislation. Of course, a number of political considerations come into play when dealing with foreign suppliers such as the East European countries.

FUTURE.—More research is needed on the impact of non-routine, economic and non-economic situational factors on the decision-making process. In particular, we need to know more about the postponing of a decision as a consequence of a specific event, such as the energy crisis or a management change within the organization.

MARKETING COMMUNICATIONS.—Current state.—While several studies purport to measure the impact of a specific marketing communication effort such as direct mail, trade shows, press releases, etc., very little scientific basis exists to come to any general conclusions about the relationship between marketing communication and the industrial buyer's decision-making process, as Aubrey Wilton pointed out in 1966 in *The Marketing of Industrial Products*.

This is somewhat unfortunate and highly frustrating to marketing managers because, in essence, the single most important reason for

CURRENT STATE.—The types of buying decisions can be divided into two distinct categories of research focusing on the ultimate choice or outcome of a decision and on the sequential process or steps involved in buying products or services either within a given decision or dynamic changes in the process which often occur in repetitive buying behavior. The types of choices involved in industrial buying are outlined in the figure.

FUTURE.—While a relatively well-researched area, two aspects need immediate attention. The first is research on supplier and buyer loyalty which transcends a single purchase. There is very little research on the loyalty toward the buying organization a supplier develops, and only Jerry Wind's research reported nearly 10 years ago in the *Journal of Marketing Research* has touched upon the question of loyalty toward suppliers. The second and related area is the measurement of post-decision consequences including post-purchase rationalization tactics and the degree of satisfaction or dissatisfaction felt by the buying organization.

EVALUATION OF BUYING TASK.—Current state.—The evaluation of the buying task and the purchasing function is one area where a surprising amount of research seems to have taken a quantitative bent. Perhaps this is due to the dissatisfaction of existing quantitative and even subjective personnel methods of evaluating the purchasing agents and the task they perform. The best-known quantitative technique applied in value analysis, which refers to quantifying the economic value of a purchase to the organization and equating the price to be paid for this

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economic performance approaches to evaluating the buying task, what we need is a more technically oriented, evaluating method comparable to the development of "theory Y" in the personnel area.

DECISION-MAKING PROCESSES.—Current state.—Perhaps the single most researched area in industrial buying behavior is how and why the organizations decide about various choices outlined in the purchasing function. Both theories and empirical research abound in an effort to unravel the mysteries of the purchasing function in the organization. The vast amount of literature seems to have concentrated on these common questions:

- Is the industrial buyer rational or emotional in the decision process?
- Is the purchase decided on by an individual or a committee?
- In the decision-making process, different for innovation options or applied to existing products?
- What is the extent of conflict in industrial buying and how is it resolved?
- What factors influence the organizational decision-making process?

This knowledge can be classed into three categories: economic, industrial, and behavioral approaches.

ECONOMIC VIEWPOINTS.—Several diverse approaches having only the concentration on the economic aspect in common, have been suggested:

1. An attempt to explore the feasibility of applying decision theory and game theory to industrial buying.
2. An attempt to identify the linear, non-linear, and sequential characteristics of the buying process and to relate them to the quality of the buying task. A selling company is likely to provide to the buying organizations.
3. The recent interest in microeconomics about the learning (experience) curves of organizations, which are supposed to become more efficient with repetitive economic activity and, therefore, economies can be attributed not simply to the scale factors but also to learning factors.
4. A more marketing-oriented approach is where the product life cycle of the buying organization becomes the focal point for devel-

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—CONTINUED FROM PAGE 14

- 3. Closely related to game theory is the analysis and modeling of the competitive bidding process.
- 4. In the applications of input-output analysis the purchasing function is modeled as provider of inputs such as raw materials, materials, and capital goods for the desired organization output.

ORGANIZATIONAL VIEWPOINTS: At least four different organizational viewpoints have been applied to understand and explain how the purchasing agents decide on products and suppliers. First, we are rather classical, normative, and identify viewpoints of the organization man. These include modeling the purchasing agents as rational economic men primarily motivated by well-defined and economic objectives of the organization and behaving in a manner which would typically rational decision-making process.

A second classical view uses the time-and-motion-study approach to define the work flow of the purchasing function and even attempts to build highly mechanistic models of the organization man. Attempts to implement such views in purchasing organizations have met with considerable resistance or been bypassed by inventing loopholes or backdoor tactics.

The other two organizational viewpoints are more contemporary. The first, reported in 1972 by Frederick L. Webster Jr. and Wind in their *Organizational Buying Behavior*, is an attempt to model the purchasing function in terms of an organizational decision-making process, including identifying goals, calculating benefits of feasible alternatives, and using some rational decision rule to optimally match the organization's objectives and the most appropriate alternative.

The organizational decision theory differs from the rational organization man in terms of legitimacy of goals. Whatever the organization's objectives, whether they are national

example, is the so-called "AIDA model," consisting of attention, interest, desire, and action stages of the mental process of buying decisions.

A fifth approach (C-1), more practical and relying less upon any specific behavioral science theory, consists of developing rating scales on a number of select criteria with which to assess unit evaluate supplier. These criteria can be both economic and noneconomic, according to Wind, Paul Green, and Patrick Robinson's 1968 *Journal of Purchasing* article.

Also, they are often derived by a subjective consensus of the buying staff, although past performance and commercial information provided by the suppliers are used as inputs to those subjective ratings. The ratings are more limited to the

JBR calls for papers on industrial buying behavior

A CALL FOR PAPERS TO fill a special topic section on industrial buying behavior to be published in 1981 has been issued by the *Journal of Business Research*.

Although the editors, Wesley O. H. Johnston and Robert E. Spekman, will consider all relevant papers, they prefer research on:

- Organizational behavior approaches to understanding the industrial buying behavior process;
- Dyadic interactions of industrial buyers and sellers on individual or organizational levels;
- Environmental influences on industrial buying behavior.

suppliers rather than to a specific product category or a specific buying situation. The vendor ratings are then used by the buying manager for his decision to include or exclude a specific supplier for a particular purchase situation.

The sixth behavioral approach (C-6) to modeling the industrial buying decision process is the use of information-processing and cognitive consistency theories from social psychology, such as reported by J.A. Howard and W.M. Morganstern in 1968. The basic emphasis is to understand or synthesize how a buyer confronted with some descriptive or evaluative profile of information about various products or suppliers decides on selecting or rejecting them.

What are his decision rules? Does he use some compensatory or trade-off principle between two or more criteria so that a supplier weak in one is balanced by his strengths with respect to other criteria?

Alternatively, does he use a disjunctive (excellence in one attribute such as delivery, price, or specifications) or a conjunctive (above minimum levels on all salient criteria) decision rule? This research is fascinating and highly useful for policy purposes.

However, very little is as yet known first about the variety of the human calculus involved in processing of information and secondly about the specific rules industrial buyers tend to use.

FUTURE:—There is already too much theorizing of the decision-making process involved in organizational buying behavior.



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What we need now are two things: First, someone should attempt to bring about consistency among various economic, organizational, and behavioral theories by integrating them into a comprehensive theory of industrial buying behavior. Furthermore, the integration theory should be tested and validated or revised based on adequate empirical research. In this regard, industrial buying behavior can learn from consumer behavior where, for example, several attempts have been made to test the Howard-Sheth theory of buyer behavior.

Second, it would be even more valuable if we carry out research on "buyers' sense." Another words, what specific theory of industrial buying do the purchasing agents and other decision makers actually use in their buying tasks?

We'll bet you can't pass a simple test

observed, whether they are rational or not, economic or noneconomic, the organizational decision-making approach does not question its legitimacy but attempts to achieve its satisfaction by means of an efficient decision-making process.

A second contemporary viewpoint, reported by Wind in the following year, is the classification of purchasing decisions into:

- Those which require consensus in the organization,
- Those which are hierarchical where a superior has the power to negate or modify lower-level decisions, and
- Those which entail a bargaining process of give-and-take among decision makers.

The organizational viewpoints, in general, have tended to be more descriptive and realistic than the economic viewpoints. They focus on the organization task itself as opposed to the individuals performing the tasks.

BETHAVIDRAL VIEWPOINTS: Probably the single most influential behavioral approach applied in understanding how and why industrial buying takes place is that theory proposed by R.M. Cyert and J.G. March, in their 1963 book, *The Behavioral Theory of the Firm* (3-3) in the summary figure), consists of four related aspects of decision making.

- Conflict among decision makers and its partial resolution,
- Avoidance of uncertainty by establishing decision rules,
- Problematic search which is highly selective and narrow, and
- Organizational learning due to repeatable experiences.

The best applications of the theory to understanding industrial buying behavior were made by Wind in 1966 and by Webster and Wind in 1972. Closely related is the group dynamics approach (C-2) in the figure, which I reported in 1973. The emphasis here is on the understanding of the interaction process within a small group, where the individuals probably have very different buying objectives and expectations about the alternatives of suppliers.

A major focus in the group dynamics approach is on the process of conflict resolution in the organization among various decision makers.

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- A: Young blue-collar adult men (average age 32) with a heavy interest in outdoor life are heavy watchers of TV Sports. FALSE
- B: Young married suburban women who focus on home entertainment and their children prefer TV programs about investment. FALSE

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ABOUT THE AUTHORS

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market segments...
low study funded by the John and Mary R. Napier Foundation and conducted by Professor Harold E. Frank of the Alton School of the University of California and Dr. Marshall C. Broad, a division of Broad, Allen & Hamilton, Inc.

