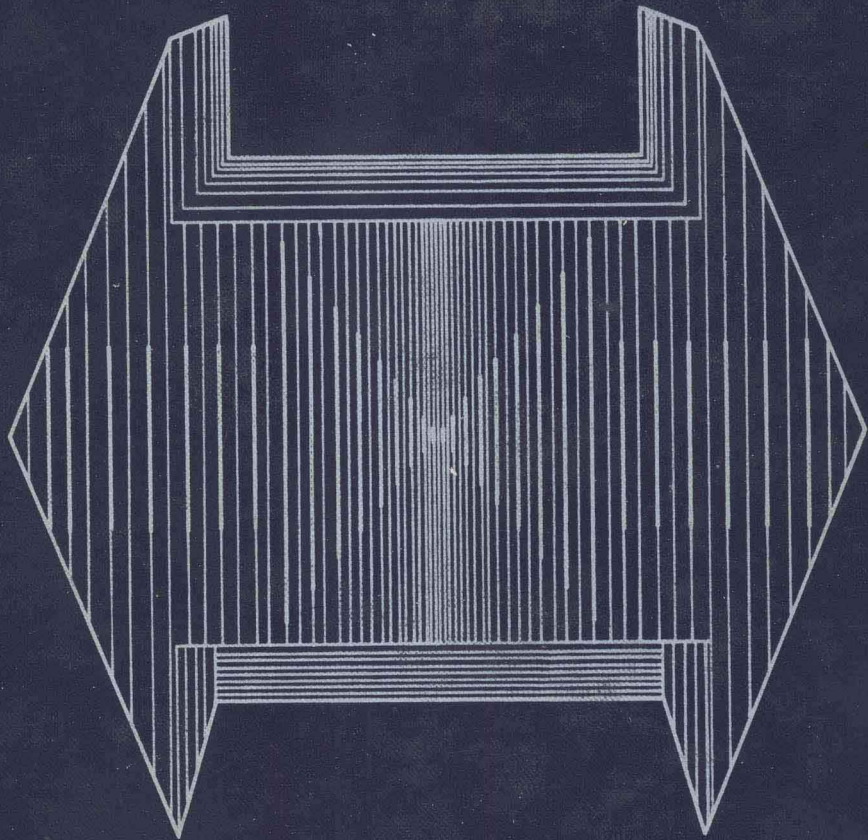


MARKETING RESEARCH

a structure for decision making



F. E. BROWN

MARKETING RESEARCH:

A STRUCTURE FOR DECISION MAKING

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PREFACE

Marketing Research: A Structure for Decision Making is designed for two principal groups: (1) graduate MBA students desiring a working knowledge of marketing research and (2) practicing researchers who wish to upgrade their technical skills. It is primarily a text with an integrated development of the subject, but it can also serve as a reference book for those interested in specialized topics. The book was motivated, as probably all texts are, by satisfactions and frustrations experienced over a number of years in teaching the subject matter.

The frustrations are more easily classified and have been more influential in establishing the coverage and structure for the book. The satisfactions are more subtle and have been incorporated in specifics throughout. The past frustrations are best summarized by quotes from three students:

That sounds very fine, but what good is it to a marketing manager?

I sort of follow what you've done, but I could never do it.

I'm glad I've had a semester of marketing research. Now I can be my own researcher.

The first quote is the result of a failure to communicate the relevance of marketing research and is encountered most often when the class becomes bogged down in formulae and mathematical calculations. Problem definition from the decision maker's perspective and how it is translated into a research question supply the remedy. Part I of the text is designed to emphasize that real-world problems are the foundations for any meaningful marketing research. The point is reiterated throughout the text, and the problems at the end of each chapter reinforce this perspective.

The second quote results from a failure to involve the students in the actual solving of problems, leaving the students in the passive role of ob-

servers. This occurs most often when the techniques are talked “about” rather than worked through. It also occurs when the instructor slips into a lecture —“the notes of the instructor become the notes of the student without going through the mind of either.” The text demonstrates each specific technique on a step-by-step basis so that the students are required to follow the logic as well as the arithmetic. The exercises at the end of the chapters then require the students to apply the techniques to a different set of data. The instructor should not expect students to develop either competence or confidence unless these exercises are a part of the course.

The third quote results from a failure to convey the true extent of marketing research. The quoted student saw marketing research as a closed set of n analytic techniques to be neatly applied to particular marketing problems. The text develops in some detail selected techniques—techniques of which the students can gain a fairly complete understanding. But it also includes references and examples of other techniques. Neither space nor the prerequisite technical level permits the thorough documentation and development of these techniques. Their inclusion acquaints the student with the broader horizons of marketing research and encourages the more ambitious to pursue them.

The only formal mathematics prerequisite is high school algebra. A basic statistics course is not a prerequisite, but a willingness to work with quantitative material is essential. Marketing research of today, and even more of tomorrow, requires quantitative models. The student or instructor who avoids them fails to cover the subject adequately.

Past satisfactions from teaching marketing research are best summarized by “the seeing of the ‘Aha’ reaction.” It is at this point that the student gains understanding and insight. The whole effort is worthwhile when students comprehend the interrelatedness of marketing research, grasp the significance of some particular subtlety, or see how a new idea or technique has specific applicability.

The text stresses for each technique the proper interpretation of the numerical results. This interpretation refers both to the general meaning of a result and to the specific meaning within a particular problem. This stress is also repeated through the exercises at the end of each chapter.

The interrelatedness of the various steps of marketing research is underlined by constant reminders that the step under study is useless unless it is consistent with decisions at all other steps. Sometimes this requires an abrupt interruption by refocusing attention in a different direction. At other times it can be achieved by a broad question at the close of an example or exercise.

The coverage of the four basic techniques of contingency tables, analysis of variance, regression, and discriminant analysis is structured in order to help the student understand their similarities and differences—particularly with respect to managerial problems and the scaling of variables. The development follows a gradual progression from bivariate to multivariate relationships followed by modifications of the initial structure. A series of summary charts enables the student to compare the different techniques, stressing both their structural natures and the relevant statistics that summarize their results.

A second set of summary charts is provided with respect to alternative sample designs. By comparing them, the student can determine the gains or losses available from stratification and clustering—as opposed to simple random sampling.

Although the text is designed for sequential coverage, it is possible to omit certain sections if a shorter course is desired. This approach can also be used with well-motivated undergraduate students who want a good grasp of analytic techniques and an understanding of how these techniques fit into a total project. Instructors who desire a short basic course can cover the first 12 chapters and finish with Chapter 21. Inclusion of Chapter 13 would add multivariate material, and Chapter 8 could be omitted in order to de-emphasize technical sampling considerations.

Marketing research can be approached from at least four different perspectives: (1) the analytic approach, (2) the conceptual approach, (3) the case approach, or (4) the mathematical approach. The text utilizes a blend of the approaches, but it stresses the analytic and conceptual. The types of exercises and problems assigned and the amount of detail considered in specific examples can be varied to meet each instructor's goals. The emphasis given to detail, problems, derivations, and live cases will of course determine the rate at which material is covered. Instructors can select from Chapters 14 to 20 according to their interest in particular topics, their time constraints, and the depth of coverage desired.

ORGANIZATION OF THE BOOK

The text divides the marketing research process into five steps: problem definition, research design, data collection, data analysis, and interpretation. Part I is addressed to the successive detail required in the first three steps. Quantitative skill and analytic sophistication are at a minimum during these three steps. We are trying to be sure the right questions are posed—that relevant data are generated rather than meaningless numbers. At this stage the distinction between a census and a sample is of small concern. Chapter 2 is addressed to problem definition; Chapter 3, to research design; and Chapters 4 and 5, to data collection. Data collection is further divided into instrument design (Chapter 4) and fieldwork (Chapter 5).

Part II focuses on the problems introduced by using a sample rather than a census. In Chapter 6 the selection of various types of samples and their properties are considered. Chapter 7 deals with how sample results are used in reaching conclusions about the universe. Chapter 8 addresses more directly the problem of deciding how large a sample is needed. Finally, Chapter 9 considers comparisons between two samples. Thus Part II is both a bridge to the

fourth step of data analysis and an introduction to it by providing a quick review of the elementary principles of sampling and statistical inference.

The elementary techniques for measuring relationships and their interpretation are considered in Part III. Chapter 10 discusses the general problem of establishing relationships and association. Two variable associations are developed in Chapter 11 (contingency tables and the analysis of variance) and Chapter 12 (regression and discriminant analysis). The four techniques are extended to multivariate problems in Chapter 13, and selected modifications are discussed in Chapter 14. Search techniques, as opposed to hypothesis testing, are introduced in Chapter 15. The special case of time-series data is considered in Chapter 16.

Part IV examines selected analytic techniques that have been of particular significance in more recent marketing research application. The techniques are grouped under the topics of nonpartitioned data with particular emphasis on factor analysis and clustering (Chapter 17), use of multiple dependent variables (Chapter 18), ordinal scales (Chapter 19), and multidimensional scaling and conjoint analysis (Chapter 20). Part IV closes with a look at future directions in marketing research (Chapter 21).

I am grateful to the Literary Executor of the late Sir Ronald A. Fisher, F.R.S., to Dr. Frank Yates, F.R.S., and to Longman Group Ltd., London, for permission to reprint Table III from their book, *Statistical Tables for Biological, Agricultural, and Medical Research* (6th ed., 1974.)

Yardley, Pennsylvania
January 1980

F. E. B.

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Any book involves a complex of inputs. Some are recognizable and others are not. Those that are not recognizable are usually more fundamental than those that are. This book is no exception but probably involves a more varied input, bearing the marks of instructors from the author's own graduate training starting with E. Douglass Burdick, J. Parker Bursk, and Donald F. Blankertz—all of the Wharton School.

Input from colleagues over the years in structuring and restructuring problems and models has been diverse. Colleagues and clients have freely shared their insights, and the author is particularly grateful for their willingness to release the databases for many of the examples employed. Alfred R. Oxenfeldt of Columbia University and H. Jay Shaffer of the Sperry and Hutchinson Company were particularly encouraging in the early stages, providing helpful soundingboards and comments as the project took shape.

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