



# NEW BOOKS IN REVIEW

EDITOR: *George R. Franke*

ASSOCIATE EDITORS: *Naveen Donthu*

*Meryl P. Gardner*

**MARKET RESPONSE MODELS: ECONOMETRIC AND TIME SERIES ANALYSIS**, 2d ed., Dominique M. Hanssens, Leonard J. Parsons, and Randall L. Schultz, Boston: Kluwer Academic Publishers, 2001, 501 pages, \$125.00

Several trends are fundamentally changing the marketing manager's job (Lilien and Rangaswamy 1998). First, marketing departments now have impressive computing power, and software availability has grown commensurately. Second, the volume of data is exploding. Though available data have grown exponentially, the human brain has not grown at a comparable rate, and therefore managers need computers and models to make better decisions in this environment. Third, instead of relying on staff members to combine models, analyses, and computer simulations and design an effective marketing program, managers are increasingly using computers and software packages to perform such analyses themselves.

Market response models help managers quantify the effects of marketing input, such as price, advertising, and product design, on observed marketing output, such as sales, awareness, and preference. Econometric and time series (ETS) analysis methods are used to show (1) the relationships between marketing input and output and (2) the influence of past values of marketing input and output on their current and future values. Time series or cross-sectional data are needed to statistically estimate the relations in market response models. Marketing managers may use the relationships identified by market response models as input for marketing-mix planning and forecasting.

The second edition of *Market Response Models: Econometric and Time Series Analysis*, by Hanssens, Parsons, and Schultz (HPS), should be a valuable resource to this new breed of marketing managers, marketing scientists working in industry, and MBA students. The book is not highly theoretical in its presentation. Unlike many other ETS texts, HPS focus on the application of these techniques in marketing contexts, citing marketing studies and using marketing data, examples, and even mini case histories. New to this edition, these case histories are shown as boxed inserts titled "Industry Perspectives." In them, corporate marketing scientists provide examples of how market response models are applied in their organizations. Indeed, the primary competitive advantage of this book is its focus on applications of market response models specifically in marketing.

The book is organized into five sections. Section I does an excellent job of demonstrating the role of market response models in the planning, budgeting, forecasting, and control processes. The second edition of the book adds to this section a chapter on data sources for market response models, which gives a great deal of attention to scanner panel and single-source data. Moreover, HPS critically assess the various sources of data. The chapter also includes discussions on various adjustments that may need to be made to time series data, such as adjustments for trends, seasonality, and changes in price level and population. The critical (and not fully understood) issue of biases resulting from data aggregation is also discussed.

Section II presents market response models based on econometric analysis of stationary data (i.e., data having fixed means and variances over time). This section discusses two types of models: static and dynamic. Static models are most applicable to cross-sectional data, and dynamic models are appropriate when marketing-mix input has lagged effects (e.g., the effects of advertising on sales). For the various functional forms for econometric models, HPS cite empirical evidence supporting (or contradicting) the forms, which is useful. Regression analysis is the primary analysis tool used to estimate market responses, given the data and functional form. The chapter on parameter estimation and testing includes a discussion of traditional techniques as well as newer Bayesian estimation methods and data-mining techniques.

Section III discusses the use of time series analysis for data that may not be stationary. Covered in this section are such important and current topics as unit roots, cointegration and error-correction modeling, empirical causal ordering, the vector ARMA model, and the long-term impact of marketing-mix variables. The modeling philosophy underlying the discussion of time series analysis is based on the ARIMA models developed by Box and Jenkins (1976). I would have liked some discussion of structural time series models (Harvey 1989) as an alternative to ARIMA models. Structural time series models are simply regression models in which the explanatory variables are functions of time (e.g., trend, seasonality) and the parameters are allowed to vary over time. The use of a regression framework for time series analysis opens the way for a unified modeling methodology for econometric and time series models, because many econometric applications are also based on regression analysis. There is some evidence that structural

time series models provide more accurate forecasts than ARIMA models as well (Andrews 1994).

Section IV pertains to the use of ETS in marketing problem solving. The section includes an excellent chapter devoted to empirical generalizations resulting from market response studies, in the spirit of the 1999 special issue on managerial decision making in *Marketing Science* (see Staelin 1999). This chapter may be useful to marketing practitioners, students, and academics because it serves as a source of references for the work that has been done in various areas. This section includes a chapter that discusses the process of using market response estimates as input to the marketing planning process and using market response models for forecasting. The material on sales forecasting is new to the second edition.

Finally, Section V examines factors that lead to the successful implementation of model-based planning and forecasting, such as top management support and user involvement. I did not find this section very useful, but perhaps marketing managers working with ETS methods would.

*Market Response Models: Econometric and Time Series Analysis*, though most useful for marketing managers, marketing scientists working in industry, and MBA students, would also be useful as a reference book for readers of *Journal of Marketing Research* who are engaged in any type of research with market response models. For readers needing a more theoretical treatment of ETS models, books such as Hamilton's (1994) may be more appropriate. For readers interested in a more applied introductory book than Hamilton's but one that has a focus on micro- and macroeconomic applications, Enders's (1994) book is an option. And for readers interested in an alternative approach to time series analysis, Harvey (1989) provides a detailed theoretical treatment of structural time series models with data and examples.

Although HPS's book is excellent in organization and content, data and software modules could have been included to provide users of the book with an opportunity for hands-on learning. As mentioned, the current management environment favors an end-user modeling approach, in which the marketing manager is heavily involved in the modeling effort. Lilien and Rangaswamy's (1998) *Marketing Engineering* is an excellent example of a book that embraces the learning-by-doing and end-user modeling principles. The availability of nonmathematical software modules (in which the underlying models are mathematical) could only accelerate the already growing market response industry.

RICK L. ANDREWS  
University of Delaware

#### REFERENCES

- Andrews, Rick L. (1994), "Forecasting Performance of Structural Time Series Models," *Journal of Business & Economic Statistics*, 12 (January), 129-34.
- Box, George E.P. and Gwilym M. Jenkins (1976), *Time Series Analysis, Forecasting and Control*. Oakland, CA: Holden-Day.
- Enders, Walter (1994), *Applied Econometric Time Series*. New York: John Wiley & Sons.
- Hamilton, James D. (1994), *Time Series Analysis*. Princeton, NJ: Princeton University Press.
- Harvey, Andrew C. (1989), *Forecasting, Structural Time Series Models, and the Kalman Filter*. New York: Cambridge University Press.
- Lilien, Gary L. and Arvind Rangaswamy (1998), *Marketing Engineering: Computer-Assisted Marketing Analysis and Planning*. Reading, MA: Addison Wesley Educational Publishers.
- Staelin, Richard (1999), "Special Issue on Managerial Decision Making," *Marketing Science*, 18 (3).
- CULTURE'S CONSEQUENCES: COMPARING VALUES, BEHAVIORS, INSTITUTIONS AND ORGANIZATIONS ACROSS NATIONS, 2d ed., Geert Hofstede, Thousand Oaks, CA: Sage Publications, 2001, 596 pages, \$97.95.
- This second edition extensively updates Geert Hofstede's 1980 book, which has been cited more than any other work in social sciences (Chandy and Williams 1994; Søndergaard 1994). The 1980 book facilitated comparative culture studies dramatically. Some sections of the new book repeat the old one, but most chapters have been completely rewritten. To accomplish this extensive task, the author spent seven years following his retirement surveying and documenting the empirical findings of all major studies that had cited his work in the past two decades.
- By integrating previous theories and his own empirical work, the author identifies nation-level cultural values in five dimensions: power distance, uncertainty avoidance, individualism-collectivism, masculinity-femininity, and long- versus short-term orientation. The temporal-orientation dimension, which was called Confucian work dynamism by its originators, The Chinese Culture Connection (1987), is an addition to the four dimensions proposed in the 1980 book. The book defines the meaning of each culture dimension from a variety of perspectives and describes its relationships to other variables. The most influential aspect of the book is its position as the most dependable source for a variety of nation-level culture index scores. It reports culture scores of 50 countries and three regions, 10 more countries than the 1980 book does. In 1980, these 10 countries were excluded because their sample size, ranging from 132 to 56 respondents per country, was judged not to be conservative enough. Why they can be considered acceptable now is not explained.
- The book consists of ten chapters. In Chapter 1, the author discusses culture's general issues and dimensions. In Chapter 2, he describes the data-collection process and culture score computation methods. In Chapters 3 through 7, he thoroughly examines each dimension of culture, including measurement, cross-national scale validation, theoretical origin of the dimension, and connotations in various institutions such as family, consumers, schools, work, legislation, and political systems. Chapter 8 is devoted to both national and organizational culture's impact on management and organizational matters. In Chapter 9, the author deals with intercultural communication, cooperation, and acculturation. Finally, in Chapter 10, the author briefly addresses common pitfalls in replicating and extending his research and suggests future research directions.
- Throughout the new edition, the author attempts to defend himself against every criticism of his 1980 book rather than correct the flaws that have been identified. For example, the author denies changes of national culture and argues for the

continuing relevance of the culture scores derived from his data, which were collected three decades ago (specifically, in 1967 and 1973). However, recent studies find that Japanese and Koreans are often more individualistic and less collectivistic than Americans, which contradicts the author's ratings of their respective national cultures (Oyserman, Coon, and Kimmelmeier 2002). Two possible explanations can be made: First, contrary to Hofstede, national culture changes over time. In the past three decades, events such as the breakdown of former Communist countries, industrialization of underdeveloped countries, free international trade and travel, globalization of leading corporations, and information technology have played a major role in reshaping modern national cultures. These changes are not reflected in the new book's culture scores. Second, Hofstede's unique sample (IBM workers) was well matched across countries but might have been biased. Three decades ago, IBM workers in developed countries represented an average social class, whereas those in underdeveloped countries, equipped with advanced technology, good education, and global mindsets, must have belonged to their nations' elite classes.

Furthermore, there are serious methodological problems with the author's culture scale. For example, the scale's reliability is still unknown. Through a rigorous psychometric investigation, it should be demonstrated that strong associations exist among the items within each culture dimension, which is a fundamental requirement for multi-item scales. In addition, the factor analysis used to identify culture dimensions might have capitalized on statistical chance due to the small sample size, as the number of data points was equal to the number of countries surveyed. The author extracted two dimensions of culture, individualism and power distance, from one factor, which explains why the two dimensions are highly correlated. The fifth cultural dimension, short- versus long-term orientation, was not surveyed and analyzed simultaneously with the other four dimensions. Because the dimension was later adopted from a study conducted by different authors, it was analyzed separately from the original four dimensions. The study from which the fifth dimension was adopted surveyed 21 fewer countries than were surveyed in Hofstede's 1980 book, which resulted in the omission of its score from countries such as Argentina, Israel, Mexico, and South Africa.

The book omits many countries from analysis simply because they lacked an IBM subsidiary three decades ago and were not surveyed in the first edition. These countries include various past and present Communist countries such as Russia and other components of the former Soviet Union, China, Cuba, North Korea, Poland, and Vietnam. In addition, most Arabic and African countries are pooled in three regions and are not analyzed individually. Although the book introduces culture scores for 16 additional countries based on other researchers' studies, the scores are not incorporated into the analysis with the book's 50 countries.

Rather than argue against the criticisms of the first edition, any future revisions of the book should address the

concerns in a real sense by demonstrating the psychometric soundness of the scales, computing current culture index scores, and surveying more representative populations in more countries. It would also be helpful if new culture scales were developed that measure the five culture dimensions at the individual level, because the existing scales were designed to measure country-level culture only (Bond 2002). Such measures would be useful for investigations of the impact of individual managers' and consumers' culture orientation on their attitudes and behaviors.

It is unfortunate that the present revision uses the same data, analysis, and scales as the first edition. Nevertheless, the book remains the best available source of national culture ratings. Although the ratings of 40 countries have not been updated since the first edition, the ratings of 10 more countries are reported, and long- versus short-term orientation scores are now available for selected countries. By providing five dimensions of culture ratings, the book enables researchers to compare countries more comprehensively than before. The book also provides an excellent review of cross-cultural studies for the past 20 years. This material can facilitate further cross-cultural theory advancement. Finally, the book's focus on national cultures provides a good start to researchers who want to investigate the ecological relationships in individual people's behaviors. In summary, despite the many critical weaknesses noted, this revision is valuable for marketing researchers who are interested in the consequences of national cultures.

BOONGHEE YOO  
Hofstra University

NAVEEN DONTU  
Georgia State University

#### REFERENCES

- Bond, Michael Harris (2002), "Reclaiming the Individual from Hofstede's Ecological Analysis—A 20-Year Odyssey: Comment on Oyserman et al. (2002)," *Psychological Bulletin*, 128 (January), 73–77.
- Chandy, P.R. and Thomas G.E. Williams (1994), "The Impact of Journals and Authors on International Business Research: A Citation Analysis of *JIBS* Articles," *Journal of International Business Studies*, 25 (4), 715–28.
- The Chinese Culture Connection (1987), "Chinese Values and the Search for Culture-Free Dimensions of Culture," *Journal of Cross-Cultural Psychology*, 18 (June), 143–64.
- Hofstede, Geert (1980), *Culture's Consequences: International Differences in Work-Related Values*. Beverly Hills, CA: Sage Publications.
- Oyserman, Daphna, Heather M. Coon, and Markus Kimmelmeier (2002), "Rethinking Individualism and Collectivism: Evaluation of Theoretical Assumptions and Meta-analyses," *Psychological Bulletin*, 128 (January), 3–72.
- Søndergaard, Mikael (1994), "Research Note: Hofstede's Consequences: A Study of Reviews, Citations, and Replications," *Organization Studies*, 15 (3), 447–56.