APPENDIX

Market research and decision support system

LEARNING OBJECTIVES

After studying this appendix you should be able to:

- explain the concepts of data warehouses and data mining
- explain the main contents of a B2B customer file
- explain the importance of having a carefully designed international information system
- link global market research to the decision-making process
- discuss the key problems in gathering and using international market data
- distinguish between different research approaches, data sources and data types
- understand the relevance of the Web as an important data source in global marketing research

A.1 INTRODUCTION

The term market research refers to gathering, analysing and presenting information that is related to a well-defined problem. Hence the focus of market research is a specific problem or project with a beginning and an end.

Market research differs from a decision support system (DSS), which is information gathered and analysed on a continual basis. In practice, market research and DSS are often hard to differentiate, so they will be used interchangeably in this context.

Marketers have the idea that different customers should be treated differently to maximise the relationship with the best ones and minimise the involvement with the worst ones. Information technology helps to realise that desire. The reality comes at a cost, however, as relationship marketing presents a new set of challenges both to marketers and information

systems managers. To succeed, an effective cross-functional team of information systems and marketing specialists must work harmoniously. In the past, the two groups barely understood or tolerated each other. On a positive note, a new breed of cross-disciplinary executives exists. They understand both marketing and technology. Overall, the most successful implementation will require true collaboration (Crie and Micheaux, 2006).

To be useful to organisations, knowledge tools must be accessible to mainstream users. They must be understandable and useful to marketing managers, not just statistical experts and information systems managers. To overcome potential problems in applicability, marketers must insist that several key goals be achieved. They include:

- putting the problem in the marketer's terms, including viewing the data from a marketing model perspective. Often the job of knowledge discovery is performed by analysts whose primary training is in statistics and data analysis. It is likely that these analysts do not have the same perspective as marketers. To be useful to marketing, the findings must be in a form that marketers can understand;
- presenting results in a manner that is useful for the business problem at hand. The foremost benefit of the analysis and the job of the analyst is to help solve business problems and increase or diminish the value of the analysis;
- providing support for specific key business analyses, marketers need to know about segmentation, market response, segment reachability. Knowledge discovery tools must support these analyses from the beginning;
- providing support for an extensive and iterative exploratory process. Realistic knowledge discovery is not simple and not linear. It is an interactive and iterative learning process. Initial results are fed back into the process to increase accuracy. The process takes time and can have a long lifespan.

The heart of RM (both for B2B and B2C marketing) is the database. The next section considers selected issues concerning data warehousing.

A.2 DATA WAREHOUSING

Data warehousing (or mining)
The storage and analysis of customer data gathered from their visits to websites for classification and modelling purposes so that products, promotions and price can be tailored to the specific needs of individual customers. The use of powerful computers to work through large volumes of data to discover purchasing patterns among an organisation's customers.

A customer data warehouse can be defined as large amounts of information about the customer, from sources both internal to the company and from the customer and third sources, such as the government, credit bureaus and market research firms. Data can include behaviours, preferences, lifestyle information, transactional data and data about communications with the firm before, during and after the sale. It may include information about customer profitability, satisfaction, retention, loyalty and referrals.

More generally, data warehouses can be described in terms of the processes and layers needed to automate and add value to communications with the customer and to facilitate mass customisation.

Data warehousing enables companies to extract information from the underlying data to develop a better understanding of the most profitable relationships, for example. Data mining relies on statistical modelling and the other tools discussed below to spot rules and patterns in customer information from the data warehouse.

A.3 DATA MINING

Data mining is a process that employs information technology – both hardware and software – to uncover previously unknown patterns of behaviour, trends and issues from the assessment of warehoused data.

The focus is on finding, for example, buying patterns that help marketers make better decisions. These data mining techniques may depend on a series of interactive, structured databases (data warehouse).

With the explosion in supermarket scanner data, techniques were developed to analyse supermarket sales data. The results portrayed the most important changes in a particular product's volume and market share. The reports often broke the results down by location, product type, price level or other factor. The most important element was the clear understandable business language used to write the reports. They offer real value to marketing managers. Since the initial efforts, factors such as distribution channels, price changes, promotional levels and competitive initiatives have been related to changes in volume, profits and share.

Still other knowledge tools have concentrated on the movement of retail stock at a point of sale. Such information can support decisions about shelf-space allocation, store layout, promotional effectiveness, product location and product turnover.

Databases can be centralised for common usage, distributed locally or widely for access by multiple users, and can apply to a single user.

A.4 THE CUSTOMER INFORMATION FILE

The benefits of a customer information file in RM are as follows (Gordon, 1998):

- Marketing effort becomes more efficient and more effective because the marketer is able to identify the most important customers and then present them with the right offer, product or service at the right time.
- Computer technology is harnessed to manage the vast amounts of data the marketer requires to interact with the customers in a truly personalised manner.
- A true 'dialogue' can be maintained with consumers by tracking interactions over time, identifying changes in purchasing, and allowing the marketer to anticipate future changes.
- New product development is facilitated by knowing who has purchased a product, how satisfied he or she is and whether any changes would enhance the performance of the product.

An example of a customer information file (from the B2B market) is presented in Table A.1 (only the most important data are shown).

Table A.1 An example of a B2B customer file

Identification	• Account or identification number • Company name • Main telephone number/fax/e-mail • Website address
Background	• Business demography – industry classification code (SIC) • History of company • Geography • Financial data, e.g. sales, growth rate and profitability, both overall and for relevant products; cash flow; return on investment; operating profit on net sales • Market position: market size for customer's products; market segment participation; market share; major customers. • Suppliers: major suppliers to this company and duration of relationships • Overall business strategies

Table A.1 An example of a B2B customer file (*continued*)

Pre-sale contact	• Number of contacts prior to purchases • Types of information sought • Channels of communication initiated by customer (telephone, Internet, interactive voice response, etc.), by type of information sought • Call history – personal sales calls, by date, by audience
Purchases	• Purchase behaviour • Frequency with which purchases are made (per day, week, month, year) • Amount spent on purchases • Average margin on customer's purchase
Decision makers	• Names, titles • Staff who have relationships with these people
Decision making	• Process (buying centre) • Decision initiators • Decision influencers • Decision makers • Executors of decision • Gatekeepers
Purchase cycle	• Time required to make decision, by type of decision: new buy, modified rebuy and rebuy
Customer's buying criteria	• Supplier selection criteria • Product selection criteria • Key selection and patronage criteria, overall company • Perceptions of company in respect of criteria • Perceptions of competitors in respect of criteria
Post-purchase behaviour	• Services required • Items returned • Condition in which returned • Purchase amounts of returned product • Tone and manner of return, customer • Customer complaint frequency, recency • Customer satisfaction: overall and specific product/service
Distribution channels used by customers	• Intermediaries used for product/service, type and name • Customer satisfaction with channel intermediaries
Pricing	• Pricing history • Pricing expectations • Win/loss assessments: prices of winning vendors
Creditworthiness	• Debt history • Receivables on account • Payment schedule • Credit scoring and rating

A.5 LINKING MARKET RESEARCH TO THE DECISION-MAKING PROCESS

Market research should be linked to the decision-making process within the firm. The recognition that a situation requires action is the initiating factor in the decision-making process.

Even though most firms recognise the need for domestic market research, this need is not fully understood for global marketing activities. Most SMEs conduct no international market

research before they enter a foreign market. Often, decisions concerning entry and expansion in overseas markets and the selection and appointment of distributors are made after a subjective assessment of the situation. The research done is usually less rigorous, less formal and less quantitative than in LSEs. Furthermore, once an SME has entered a foreign market, it is likely to discontinue any research of that market. Many business executives therefore appear to view foreign market research as relatively unimportant.

A major reason that firms are reluctant to engage in global market research is the lack of sensitivity to cross-cultural customer tastes and preferences. What information should the global market research/DSS provide?

Table A.2 summarises the principal tasks of global market research, according to the major decision phases of the global marketing process. As can be seen, both internal (firm-specific) and external (market) data are needed. The role of a firm's internal information system in providing data for marketing decisions is often forgotten.

How the different types of information affect the major decisions have been thoroughly discussed in the different parts and chapters of this book. Besides the split between internal and external data, the two major sources of information are primary data and secondary data:

1 *Primary data*: These can be defined as information that is collected first-hand, generated by original research tailor-made to answer specific current research questions. The major advantage of primary data is that the information is specific ('fine grained'), relevant and

Table A.2 Information needed for major global marketing decisions

Global marketing decision	Information needed
Deciding whether to internationalise	• Assessment of global market opportunities (global demand) for the firm's products • Commitment of the management to internationalise • Competences and competitiveness of the firm compared to local and international competitors • Domestic versus international market opportunities
Deciding which markets to enter	• Ranking of world markets according to market potential of countries/regions • Local competition • Political risks • Trade barriers (tariff and non-tariff barriers) • Cultural/psychic 'distance' to potential market
Deciding how to enter foreign markets	• Desired control, flexibility and risks • Nature of the product (standard versus complex product) • Size of markets/segments • Behaviour of potential intermediaries • Behaviour of local competition • Transport costs • Government requirements
Designing the global marketing programme	• Buyer behaviour (consumers and intermediaries) • Competitive practice • Available distribution channels • Media and promotional channels
Implementing and controlling the global marketing programme	• Negotiation styles in different cultures • Sales by product line, salesforce, customer type and country/region • Contribution margins, financial metrics • Marketing expenses per market

up to date. The disadvantages of primary data are, however, the high costs and amount of time associated with its collection.

2 *Secondary data*: These can be defined as information that has already been collected for other purposes and is thus readily available. The major disadvantage is that the data are often more general and 'coarse grained' in nature. The advantages of secondary data are the low costs and amount of time associated with its collection. For those who are unclear on the terminology, secondary research is frequently referred to as 'desk research'.

The two basic forms of research (primary and secondary research) will be discussed in further detail later in this appendix.

If we combine the split of internal/external data with primary/secondary data, it is possible to place data in four categories. In Figure A.1 this approach is used to categorise indicator variables for answering the following marketing questions. Is there a market for the firm's product A in country B? If yes, how large is it and what is the possible market share for the firm to obtain? Note that in Figure A.1 only a limited number of indicator variables are shown.

As a rule, no primary research should be done without first searching for relevant secondary information, and secondary data should be used whenever available and appropriate. Besides, secondary data often help to define problems and research objectives. In most cases, however, secondary sources cannot provide all the information needed and the company must collect primary data.

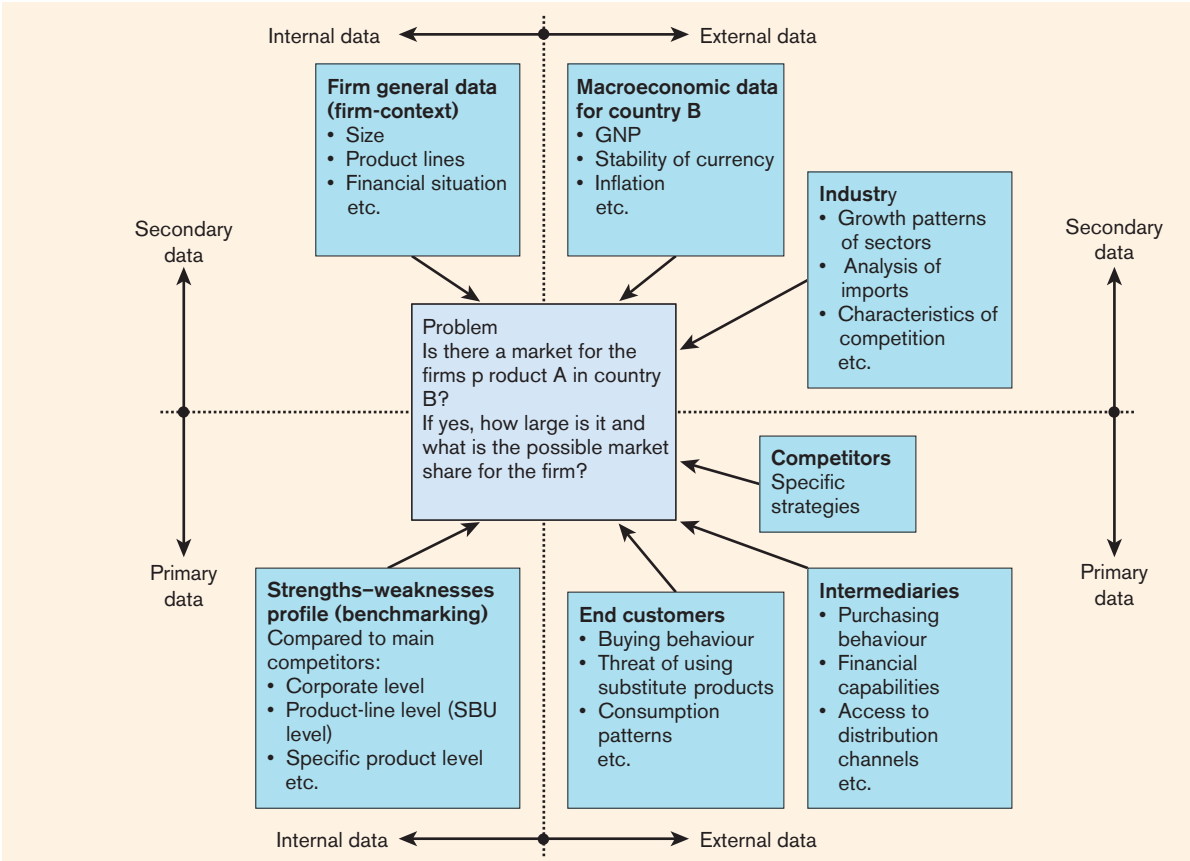

Figure A.1 Categorisation of data for assessment of market potential in a country

Source: Hollensen, S. (2001) *Global Marketing: A Market Responsive Approach*, 2nd ed., Financial Times-Prentice Hall, Harlow, p. 629. Reproduced with permission.

In Figure A.1 the most difficult and costly kind of data to obtain is probably the strengths and weaknesses of the firm (internal and primary data). However, because it compares the profile of the firm with those of its main competitors, this quadrant is a very important indicator of the firm's international competitiveness. The following two sections discuss different forms of secondary research and primary research.

A.6 SECONDARY RESEARCH

With many international markets to consider, it is essential that firms begin their market research by seeking and utilising secondary data.

Advantages of secondary research

Secondary research conducted from the home base is less expensive and less time consuming than research conducted abroad. No contacts have to be made outside the home country, thus keeping commitment to possible future projects at a low level. Research undertaken in the home country about the foreign environment also has the benefit of objectivity. The researcher is not constrained by overseas customs. As a preliminary stage of a market-screening process, secondary research can quickly generate background information to eliminate many countries from the scope of enquiries.

Disadvantages of secondary research

Problems with secondary research are as follows.

Non-availability of data

In many developing countries, secondary data are very scarce. Weak economies have poor statistical services – many do not even carry out a population census. Information on retail and wholesale trade is especially difficult to obtain. In such cases, primary data collection becomes vital.

Reliability of data

Sometimes political considerations may affect the reliability of data. In some developing countries, governments may enhance the information to paint a rosy picture of the economic life in the country. In addition, due to the data collection procedures used, or the personnel who gathered the data, many data lack statistical accuracy. As a practical matter, the following questions should be asked to judge the reliability of data sources (Cateora, 1993, p. 346):

- Who collected the data? Would there be any reason for purposely misrepresenting the facts?
- For what purpose was the data collected?
- How was the data collected (methodology)?
- Are the data internally consistent and logical in the light of known data sources or market factors?

Data classification

In many countries, the data reported are too broadly classified for use at the micro level.

Comparability of data

International marketers often like to compare data from different countries. Unfortunately, the secondary data obtainable from different countries are not readily comparable because national definitions of statistical phenomena differ from one country to another.

Although the possibility of obtaining secondary data has increased dramatically, the international community has grown increasingly sensitive to the issue of data privacy. Readily accessible large-scale databases contain information valuable to marketers but they are considered sensitive by the individuals who have provided the data. The international marketer must therefore also pay careful attention to the privacy laws in different nations and to the possible consumer response to using such data. Neglecting these concerns may result in research backfiring and the corporate position being weakened.

In doing secondary research or building a decision support system, there are many information sources available. Generally, these secondary data sources can be divided into internal and external sources (Figure A.1). The latter can be classified as either international/global or regional/country-based sources.

Internal data sources

Internal company data can be a most fruitful source of information. However, it is often not utilised as fully as it should be.

The global marketing and sales departments are the main points of commercial interaction between an organisation and its foreign customers. Consequently, a great deal of information should be available, including the following:

- *Total sales*: Every company keeps a record of its total sales over a defined time period; for example, weekly records, monthly records and so on.
- *Sales by countries*: Sales statistics should be split up by countries. This is partly to measure the progress and competence of the export manager or the salesperson (sometimes to influence earnings because commission may be paid on sales) and partly to measure the degree of market penetration in a particular country.
- *Sales by products*: Very few companies sell only one product. Most companies sell a range of products and keep records for each kind of product or, if the range is large, each product group.
- *Sales volume by market segment*: Such segmentation may be geographical or by type of industry. This will give an indication of segment trends in terms of whether they are static, declining or expanding.
- *Sales volume by type of channel distribution*: Where a company uses several different distribution channels, it is possible to calculate the effectiveness and profitability of each type of channel. Such information allows marketing management to identify and develop promising channel opportunities, and results in more effective channel marketing.
- *Pricing information*: Historical information relating to price adjustments by product allows the organisation to establish the effect of price changes on demand.
- *Communication mix information*: This includes historical data on the effects of advertising campaigns, sponsorship and direct mail on sales. Such information can act as a guide to the likely effectiveness of future communication expenditure plans.
- *Sales representatives' records and reports*: Sales representatives should keep a record card or file on every 'live' customer. In addition, sales representatives often send reports to head office on such matters as orders lost to competitors and possible reasons why, as well as on firms that are planning future purchasing decisions. Such information could help to bring improvements in marketing strategy.

External data sources

A very basic method of finding international business information is to begin with a public library or a university library. The Internet can help in the search for data sources. The Internet has made available thousands of databases for intelligence research (i.e. research on competitors). In addition, electronic databases carry marketing information ranging from the latest news on product development to new thoughts in the academic and trade press and updates in international trade statistics. However, the Internet will not totally replace other sources of secondary data. Cost compared to data quality will still be a factor influencing a company's choice of secondary data sources.

Links to some relevant international data sources may be reached at www.pearsoned.co.uk/hollensen.

Secondary data used for estimation of foreign market potential

Secondary data are often used to estimate the size of potential foreign markets. In assessing current product demand and forecasting future demand reliable historical data are required. As previously mentioned, the quality and availability of secondary data are frequently inadequate. Nevertheless, estimates of market size must be attempted in order to plan effectively. Despite limitations there are approaches to forecasting future demand in a market with a minimum of information. A number of techniques are available (see Craig and Douglas, 2000), but here only two are further explained: lead–lag analysis and estimation by analogy.

Lead–lag analysis

Lead–lag analysis
Determinants of demand and the rate of diffusion are the same in two countries, but time separates the two.

This technique is based on the use of time-series data from one country to project sales in other countries. It assumes that the determinants of demand in the two countries are the same, and that only time separates them. This requires that the diffusion process and specifically the rate of diffusion is the same in all countries. Of course this is not always the case, and it seems that products introduced more recently diffuse more quickly (Craig and Douglas, 2000).

Figure A.2 shows the principle behind the **lead–lag analysis** with an illustrative example in the DVD player market. By the end of 2003 it was assumed that 55 per cent of the US

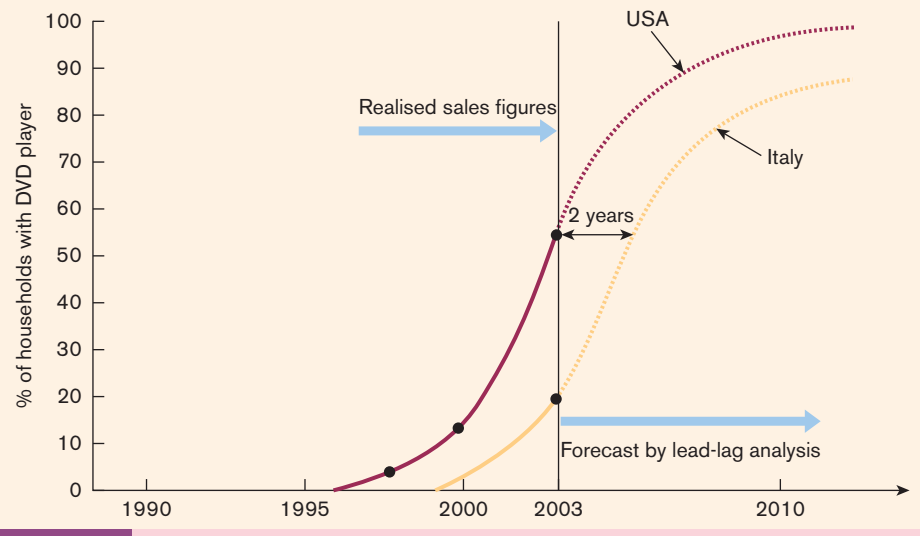

Figure A.2 Lead–lag analysis of penetration of DVD (Digital Versatile Discs) players in the USA and Italy (illustrative examples)

households would have at least one DVD player in their home, whereas it was assumed that 'only' 20 per cent of Italian households would have one. We define the time lag between the American and the Italian DVD market as two years. To estimate the future penetration of DVD players in Italian households (and as a consequence also demand) we could make a parallel displacement of the S-formed US penetration curve by two years, as illustrated in Figure A.2. This also shows how rapidly new products today are diffused from market to market. The difficulty in using the lead–lag analysis includes the problem of identifying the relevant time lag and factors that impact future demand. However, the technique has considerable intuitive appeal to managers and is likely to guide some of their thinking.

When data are not available for a regular lead–lag analysis, estimation by analogy can be used.

Estimation by analogy

Estimation by analogy
A correlation value (between a factor and the demand for the product) for one market is used in another international market.

Estimation by analogy is essentially a single-factor index with a correlation value (between a factor and demand for a product) obtained in one country applied to a target international market. First a relationship (correlation) must be established between the demand to be estimated and the factor, which is to serve as the basis for the analogy. Once the known relationship is established the correlation value then attempts to draw an analogy between the known situation and the market demand in question.

Example

We want to estimate the market demand for refrigerators in Germany. We know the market size in the United Kingdom but we do not know it in Germany.

As nearly all households in the two countries already have a refrigerator, a good correlation could be number of households or population size in the two countries. In this situation we choose to use population size as the basis for the analogy:

- Population size in the United Kingdom: 60 million
- Population size in Germany: 82 million.

Furthermore we know that the number of refrigerators sold in the United Kingdom in 2002 was 1.1 million units.

Then by analogy we estimate the sales to be the following in Germany:

$$(82/60) \times 1.1 \text{ million units} = 1.5 \text{ million units.}$$

A note of caution

Generally caution must be used with 'estimation by analogy' because the method assumes that factors other than the correlation factor used (in this example population size) are similar in both countries, such as the same culture, buying power of consumers, tastes, taxes, prices, selling methods, availability of products, consumption patterns and so forth. Despite the apparent drawbacks to analogy it is useful where international data are limited.

A.7 PRIMARY RESEARCH

Qualitative and quantitative research

Quantitative research
Data analysis based on questionnaires from a large group of respondents.

If a marketer's research questions are not adequately answered by secondary research it may be necessary to search for additional information in primary data. These data can be collected by **quantitative research** and **qualitative research.** Quantitative and qualitative techniques can be distinguished by the fact that quantitative techniques involve getting data from a large, representative group of respondents.

The objective of qualitative research techniques is to give a holistic view of the research problem, and therefore these techniques must have a large number of variables and few

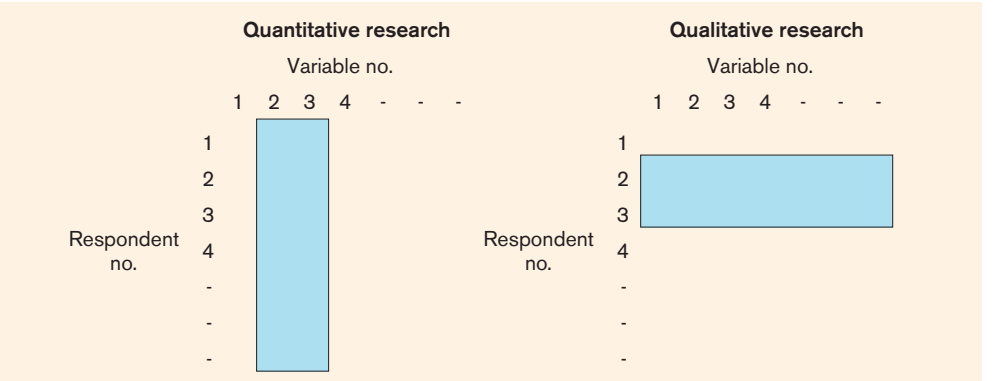

Figure A.3 The trade-off in the choice between quantitative and qualitative research
Source: Hollensen, S. (2001) *Global Marketing: A Market Responsive Approach*, 2nd edn, Financial Times-Prentice Hall, Harlow, p. 632. Reproduced with permission.

Qualitative research Provides a holistic view of a research problem by integrating a larger number of variables, but asking only a few respondents.

respondents (illustrated in Figure A.3). Choosing between quantitative and qualitative techniques is a question of trading off breadth and depth in the results of the analysis.

Other differences between the two research methodologies are summarised in Table A.3. Data retrieval and analysis of quantitative respondent data are based on a comparison of data between all respondents. This places heavy demands on the measuring instrument (the questionnaire), which must be well structured (with different answering categories) and tested before the survey takes place. All respondents are given identical stimuli, that is, the same questions. This approach will not usually give any problems, as long as the respondent group is homogeneous. However, if it is a heterogeneous group of respondents it is possible that the same question will be understood in different ways. This problem becomes especially intensified in cross-cultural surveys.

Data retrieval and analysis of qualitative data, however, are characterised by a high degree of flexibility and adaptation to the individual respondent and his or her special background. Another considerable difference between qualitative and quantitative surveys is the source of data:

- Quantitative techniques are characterised by a certain degree of distance as the construction of the questionnaire, data retrieval and data analysis take place in separate phases. Data retrieval is often done by people who have not had anything to do with the construction of the questionnaire. Here the measuring instrument (the questionnaire) is the critical element in the research process.
- Qualitative techniques are characterised by proximity to the source of data, where data retrieval and analysis are done by the same person, namely, the interviewer. Data retrieval is characterised by interaction between the interviewer and the respondent, where each new question is to a certain degree dependent on the previous question. Here it is the interviewer and his or her competence (or lack of the same) which is the critical element in the research process.

Qualitative techniques imply a less sharp separation between data retrieval and analysis/interpretation, since data retrieval (e.g. the next question in a personal interview) will be dependent on the interviewer's interpretation of the previous answer. The researcher's personal experience from fieldwork (data retrieval) is generally a considerable input into the analysis phase.

Triangulation: mixing qualitative and quantitative research methods

Quantitative and qualitative research methods often complement each other. Combined use of quantitative and qualitative research methods in the study of the same phenomenon is termed triangulation (Denzin, 1978; Jick, 1979). The triangulation metaphor is from navigation and

Table A.3 Quantitative versus qualitative research

Comparison dimension	Quantitative research (e.g. a postal questionnaire)	Qualitative research (e.g. a focus group interview or the case method)
Objective	To quantify the data and generalise the results from the sample to the population of interest	To gain an initial and qualitative understanding of the underlying reasons and motives
Type of research	Descriptive and/or casual	Exploratory
Flexibility in research design	Low (as a result of a standardised and structured questionnaire: one-way communication)	High (as a result of the personal interview, where the interviewer can change questions during the interview: two-way communication)
Sample size	Large	Small
Choice of respondents	Representative sample of the population	Persons with considerable knowledge of the problem (key informants)
Information per respondent	Low	High
Data analysis	Statistical summary	Subjective, interpretative
Ability to replicate with same result	High	Low
Interviewer requirements	No special skills required	Special skills required (an understanding of the interaction between interviewer and respondent)
Time consumption during the research	*Design phase*: high (formulation of questions must be correct) *Analysis phase*: low (the answers to the questions can be coded)	*Design phase*: low (no 'exact' questions are required before the interview) *Analysis phase*: high (as a result of many 'soft' data)

military strategy, which use multiple reference points to locate an object's exact position. Similarly, market researchers can improve the accuracy and validity of their judgements by collecting both quantitative and qualitative data. Sometimes qualitative research methods explain or reinforce quantitative findings and even reveal new information.

Sometimes it is relevant to use qualitative data collected by, for example, in-depth interview of a few key informants as exploratory input to the construction of the best possible questionnaire for the collection of quantitative data. In this way triangulation can enrich our understanding of a research question before a structured and formalised questionnaire is designed.

Research design

Figure A.4 shows that designing research for primary data collection calls for a number of decisions on research approaches, contact methods, sampling plan and research instruments. The following pages will look at the various elements of Figure A.4 in further detail.

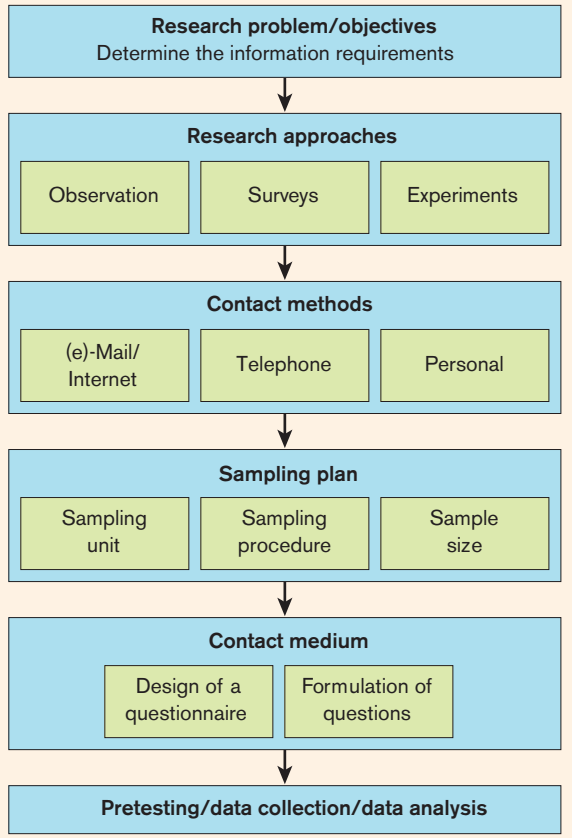

Figure A.4 Primary data collection: research design
Source: Hollensen, S. (2001) *Global Marketing: A Market Responsive Approach*, 2nd ed., Financial Times-Prentice Hall, Harlow, p. 635. Reproduced with permission.

Research problem/objectives

Companies are increasingly recognising the need for primary international research. As the extent of a firm's international involvement increases, so does the importance and complexity of its international research. The primary research process should begin with a definition of the research problem and the establishment of specific objectives. The major difficulty here is translating the business problem into a research problem with a set of specific researchable objectives. In this initial stage researchers often embark on the research process with only a vague grasp of the total problem. Symptoms are often mistaken for causes, and action determined by symptoms may be oriented in the wrong direction.

Research objectives may include obtaining detailed information for better penetrating the market, for designing and fine-tuning the marketing mix, or for monitoring the political climate of a country so that the firm can expand its operations successfully. The better defined the research objective is, the better the researcher will be able to determine the information requirement.

Research approaches

In Figure A.4 three possible research approaches are indicated: observation, surveys and experiments.

Observation

This approach to the generation of primary data is based on watching and sometimes recording market-related behaviour. Observational techniques are more suited to investigating what people do than why they do it. Here are some examples of this approach:

- *Store checks*: a food products manufacturer sends researchers into supermarkets to find out the prices of competing brands or how much shelf space and display support retailers give its brands. To conduct in-store research in Europe, for example, store checks, photo audits of shelves and store interviews must be scheduled well in advance and need to be preceded by a full round of introductions of the researchers to store management and personnel.
- *Mechanical observations*: these are often used to measure TV viewership.
- *Cash register scanners*: these can be used to keep track of customer purchases and inventories.

Observational research can obtain information that people are unwilling or unable to provide. In some countries individuals may be reluctant to discuss personal habits or consumption. In such cases observation is the only way to obtain the necessary information. In contrast, some things are simply not observable, such as feelings, attitudes and motives, or private behaviour. Long-term or infrequent behaviour is also difficult to observe. Because of these limitations, researchers often use observation along with other data collection methods.

Experiments

Experiments gather casual information. They involve selecting matched groups of subjects, giving them different treatments, controlling unrelated factors and checking for differences in group responses. Thus experimental research tries to explain cause-and-effect relationships.

The most used marketing research application of experiments is in test marketing. This is a research technique in which a product under study is placed on sale in one or more selected localities or areas, and its reception by consumers and the trade is observed, recorded and analysed. In order to isolate, for example, the sales effects of advertising campaigns, it is necessary to use relatively self-contained marketing areas as test markets.

Performance in these test markets gives some indication of the performance to be expected when the product goes into general distribution. However, experiments are difficult to implement in global marketing research. The researcher faces the task of designing an experiment in which most variables are held constant or are comparable across cultures. To do so represents a major challenge. For example, an experiment that intends to determine a casual effect within the distribution system of one country may be difficult to transfer to another country where the distribution system is different. As a result experiments are used only rarely, even though their potential value to the international market researcher is recognised.

Surveys

The survey research method is based on the questioning of respondents and represents, both in volume and in value terms, perhaps the most important method of collecting data. Typically the questioning is structured: a formal questionnaire is prepared and the questions are asked in a prearranged order. The questions may be asked verbally, in writing or via a computer.

Survey research is used for a variety of marketing issues, including the following:

- Customer attitudes
- Customer buying habits
- Potential market size
- Market trends.

Unlike experimental research, survey research is usually aimed at generating descriptive rather than casual data. Unlike observational research, survey research usually involves the respondent.

Because of the importance and diversity of survey research in global marketing, it is on this particular aspect that we now concentrate.

Contact methods

The method of contact chosen is usually a balance between speed, degree of accuracy and costs. In principle there are four possibilities when choosing a contact method: mail, internet/e-mail, telephone interviews and personal (face-to-face) interviews. Each method has its own strengths and weaknesses. Table A.4 gives an overview of these.

Mail

Mail surveys are among the least expensive. The questionnaire can include pictures – something that is not possible over the phone. Mail surveys allow the respondent to answer at their leisure, rather than at the often inconvenient moment they are contacted for a phone or personal interview. For this reason, they are not considered as intrusive as other kinds of interviews. However, mail surveys take longer than other kinds. You will need to wait several weeks after mailing out questionnaires before you can be sure that you have obtained most of the responses. In countries of lower educational and literacy levels, response rates to mail surveys are often too small to be useful.

Internet/e-mail surveys

These can collect a large amount of data that can be quantified and coded into a computer. A low research budget combined with a widely dispersed population may mean that there is no alternative to the mail/Internet survey. E-mail surveys are both very economical and very fast. It is possible to attach pictures and sound files. However, many people dislike unsolicited e-mail even more than unsolicited regular mail. Furthermore, it is difficult to generalise findings from an e-mail survey to the whole population. People who have e-mail are different from those who do not, even when matched on demographic characteristics, such as age and gender. In section A.8 the online research method will be further discussed.

Telephone interviews

In some ways these are somewhere between personal and mail surveys. They generally have a response rate higher than mail questionnaires but lower than face-to-face interviews, their cost is usually less than with personal interviews, and they allow a degree of flexibility when interviewing. However, the use of visual aids is not possible and there are limits to the number of questions that can be asked before respondents either terminate the interview or give quick (invalid) answers to speed up the process. With computer-aided telephone interviewing

Table A.4 Strengths and weaknesses of the four contact methods

Questions/questionnaire	Mail	Internet/e-mail	Telephone	Personal
Flexibility (ability to clarify problems)	Poor	Fair	Good	Excellent
Possibility of in-depth information (use of open-ended questions)	Fair	Poor	Fair	Excellent
Use of visual aids	Good	Excellent	Poor	Good
Possibility of a widely dispersed sample	Excellent	Excellent	Excellent	Fair
Response rates	Poor	Fair	Good	Fair
Asking sensitive questions	Good	Poor	Poor	Fair
Control of interviewer effects (no interviewer bias)	Excellent	Fair	Fair	Poor
Speed of data collection	Poor	Excellent	Excellent	Good
Costs	Good	Excellent	Excellent	Poor

(CATI), centrally located interviewers read questions from a computer monitor and input answers via the keyboard. Routing through the questionnaire is computer controlled, helping the process of interviewing. Some research firms set up terminals in shopping centres, where respondents sit down at a terminal, read questions from a screen and type their answers into the computer.

Personal interviews

Personal interviews take two forms – individual and group interviewing. *Individual interviewing* involves talking with people in their homes or offices, in the street or in shopping arcades. The interviewer must gain the cooperation of the respondents. *Group interviewing* (*focus-group interviewing*) consists of inviting six to ten people to gather for a few hours with a trained moderator to talk about a product, service or organisation. The moderator needs objectivity, knowledge of the subject and industry, and some understanding of group and consumer behaviour. The participants are normally paid a small sum for attending.

Personal interviewing is quite flexible and can collect large amounts of information. Trained interviewers can hold a respondent's attention for a long time and can explain difficult questions. They can guide interviews, explore issues and probe as the situation requires. Interviewers can show subjects actual products, advertisements or packages, and observe reactions and behaviour.

The main drawbacks of personal interviewing are the high costs and sampling problems. Group interview studies usually employ small sample sizes to keep time and costs down, but it may be hard to generalise from the results. Because interviewers have more freedom in personal interviews the problem of interviewer bias is greater.

Thus there is no 'best' contact method – it all depends on the situation. Sometimes it may even be appropriate to combine the methods.

Sampling plan

Sampling unit

Except in very restricted markets it is both impractical and too expensive for a researcher to contact all the people who could have some relevance to the research problem. This total number is known statistically as the 'universe' or 'population'. In marketing terms, it comprises the total number of actual and potential users/customers of a particular product or service.

Sampling plan
A scheme outlining the group (or groups) to be surveyed in a marketing research study, how many individuals are to be chosen for the survey, and on what basis this choice is made.

The population can also be defined in terms of elements and sampling units. Suppose that a lipstick manufacturer has a **sampling plan** to assess consumer response to a new line of lipsticks and wants to sample females over 15 years of age. It may be possible to sample females of this age directly, in which case a sampling unit would be the same as an element. Alternatively, households might be sampled and all females over 15 in each selected household interviewed. Here the sampling unit is the household, and the element is a female over 15 years old.

What is usually done in practice is to contact a selected group of consumers/customers to be representative of the entire population. The total number of consumers who could be interviewed is known as the 'sample frame', while the number of people who are actually interviewed is known as the 'sample'.

Sampling procedure

There are several kinds of sampling procedure, with probability and non-probability sampling being the two major categories:

- *Probability sampling*: here it is possible to specify in advance the chance that each element in the population will have of being included in a sample, although there is not necessarily an equal probability for each element. Examples are simple random sampling, systematic sampling, stratified sampling and cluster sampling (see Malhotra (1993) for more information).

- *Non-probability sampling*: here it is not possible to determine the above-mentioned probability or to estimate the sampling error. These procedures rely on the personal judgement of the researcher. Examples are convenience sampling, quota sampling and snowball sampling (see Malhotra (1993) for more information).

Given the disadvantages of non-probability samples (results are not projectable to the total population, and sampling error cannot be computed) one may wonder why they are used so frequently by marketing researchers. The reasons relate to the inherent advantages of non-probability sampling:

- Non-probability samples cost less than probability samples.
- If accuracy is not critical non-probability sampling may have considerable appeal.
- Non-probability sampling can be conducted quicker than probability sampling.
- Non-probability sampling, if executed properly, can produce samples of the population that are reasonably representative (e.g. by use of quota sampling) (Malhotra, 1993, p. 359).

Sample size

Once we have chosen the sampling procedure the next step is to determine the appropriate sample size. Determining the sample size is a complex decision and involves financial, statistical and managerial considerations. Other things being equal the larger the sample, the less the sampling error. However, larger samples cost more money, and the resources (money and time) available for a particular research project are always limited.

In addition the cost of larger samples tends to increase on a linear basis, whereas the level of sampling error decreases at a rate only equal to the square root of the relative increase in sample size. For example, if sample size is quadrupled data collection costs will be quadrupled too, but the level of sampling error will be reduced by only one-half. Among the methods for determining the sample size are the following:

- *Traditional statistical techniques* (assuming the standard normal distribution).
- *Budget available*: although seemingly unscientific this is a fact of life in a business environment, based on the budgeting of financial resources. This approach forces the researcher to consider carefully the value of information in relation to its cost.
- *Rules of thumb*: the justification for a specified sample size may boil down to a 'gut feeling' that this is an appropriate sample size, or it may be a result of common practice in the particular industry.
- *Number of subgroups to be analysed*: generally speaking the more subgroups that need to be analysed, the larger the required total sample size.

In transnational market research, sampling procedures become a rather complicated matter. Ideally a researcher wants to use the same sampling method for all countries in order to maintain consistency. Sampling desirability, however, often gives way to practicality and flexibility. Sampling procedures may have to vary across countries in order to ensure reasonable comparability of national groups. Thus the relevance of a sampling method depends on whether it will yield a sample that is representative of a target group in a certain country, and on whether comparable samples can be obtained from similar groups in different countries.

Contact medium/measurement instrument

Designing the questionnaire

A good questionnaire cannot be designed until the precise information requirements are known. It is the vehicle whereby the research objectives are translated into specific questions. The types of information sought, and the types of respondent to be researched, will have a bearing upon the contact method to be used, and this in turn will influence whether the questionnaire is relatively

unstructured (with open-ended questions), aimed at depth interviewing, or relatively structured (with closed-ended questions) for 'on the street' interviews.

In cross-cultural studies open-ended questions appear useful because they may help to identify the frame of reference of the respondents. Another issue is the choice between direct and indirect questions. Societies have different degrees of sensitivity to certain questions. Questions related to the income or age of the respondent may be accepted differently in different countries. Thus the researcher must be sure that the questions are culturally acceptable. This may mean that questions, which can be asked directly in some societies, will have to be asked indirectly in others.

Formulation (wording) of questions

Once the researcher has decided on specific types of questions the next task is the actual writing of the questions. Four general guidelines are useful to bear in mind during the wording and sequencing of each question:

- *The wording must be clear*: for example, try to avoid two questions in one.
- *Select words so as to avoid biasing the respondent*: for example, try to avoid leading questions.
- *Consider the ability of the respondent to answer the question*: for example, asking respondents about a brand or store that they have never encountered creates a problem. Since respondents may be forgetful, time periods should be relatively short. For example: 'Did you purchase one or more cola(s) within the last week?'
- *Consider the willingness of the respondent to answer the question*: 'embarrassing' topics that deal with things such as borrowing money, sexual activities and criminal records must be dealt with carefully. One technique is to ask the question in the third person or to state that the behaviour or attitude is not unusual prior to asking the question. For example: 'Millions of people suffer from haemorrhoids. Do you or does any member of your family suffer from this problem?' It is also a feasible solution to ask about 'embarrassing' topics at the end of the interview.

The impact of language and culture is of particular importance when wording questions. The goal for the global marketing researcher should be to ensure that the potential for misunderstandings and misinterpretations of spoken or written words is minimised. Both language and cultural differences make this issue an extremely sensitive one in the global marketing research process.

In many countries different languages are spoken in different areas. In Switzerland, German is used in some areas and French and Italian in others. And the meaning of words often differs from country to country. For example, in the United States the concept of 'family' generally refers only to the parents and children. In the southern part of Europe, the Middle East and many Latin countries it may also include grandparents, uncles, aunts, cousins and so forth.

When finally evaluating the questionnaire, the following items should be considered:

- Is a certain question necessary? The phrase 'It would be nice to know' is often heard, but each question should either serve a purpose or be omitted.
- Is the questionnaire too long?
- Will the questions achieve the survey objectives?

Pretesting
Conducting limited trials of a questionnaire or some other aspect of a study to determine its suitability for the planned research project. In the context of advertising, research carried out beforehand on the effectiveness of an advertisement. It begins at the earliest stages of development and continues until the advertisement is ready for use.

Pretesting

No matter how comfortable and experienced the researcher is in international research activities, an instrument should always be pretested. Ideally such a **pretest** is carried out with a subset of the population under study, but a pretest should at least be conducted with knowledgeable experts and/or individuals. The pretest should also be conducted in the same mode as the final interview. If the study is to be 'on the street' or in the shopping arcade, then the pretest should be the same. Even though a pretest may mean time delays and additional cost the risks of poor research are simply too great for this process to be omitted.

Data collection

The global marketing researcher must check that the data are gathered correctly, efficiently and at a reasonable cost. The market researcher has to establish the parameters under which the research is conducted. Without clear instructions the interviews may be conducted in different ways by different interviewers. Therefore the interviewers have to be instructed about the nature of the study, start and completion time, and sampling methodology. Sometimes a sample interview is included with detailed information on probing and quotas. Spot checks on these administration procedures are vital to ensure reasonable data quality.

Data analysis and interpretation

Once data have been collected the final steps are the analysis and interpretation of findings in the light of the stated problem. Analysing data from cross-country studies calls for substantial creativity as well as scepticism. Not only are data often limited, but frequently results are significantly influenced by cultural differences. This suggests that there is a need for properly trained local personnel to function as supervisors and interviewers; alternatively international market researchers require substantial advice from knowledgeable local research firms that can also take care of the actual collection of data. Although data in cross-country analyses are often of a qualitative nature the researcher should, of course, use the best and most appropriate tools available for analysis. On the other hand, international researchers should be cautioned against using overly sophisticated tools for unsophisticated data. Even the best of tools will not improve data quality. The quality of data must be matched with the quality of the research tools.

Problems with using primary research

Most problems in collecting primary data in international marketing research stem from cultural differences among countries, and range from the inability of respondents to communicate their opinions to inadequacies in questionnaire translation (Cateora *et al.*, 2000).

Sampling in field surveys

The greatest problem of sampling stems from the lack of adequate demographic data and available lists from which to draw meaningful samples. For example, in many South American and Asian cities street maps are unavailable, and streets are neither identified nor houses numbered. In Saudi Arabia, the difficulties with probability sampling is so acute that non-probabilistic sampling becomes a necessary evil. Some of the problems in drawing a random sample include:

- no officially recognised census of population;
- incomplete and out-of-date telephone directories;
- no accurate maps of population centres, therefore no area samples can be made.

Furthermore, door-to-door interviewing in Saudi Arabia is illegal.

Non-response

Non-response is the inability to reach selected elements in the sample frame. As a result, opinions of some sample elements are not obtained or properly represented. A good sampling method can only identify elements that should be selected; there is no guarantee that such elements will ever be included.

The two main reasons for non-response errors are as follows:

1 *Not being at home*: in countries where males are still dominant in the labour force it may be difficult to contact a head of household at home during working hours. Frequently only housewives or servants are at home during the day.

2 *Refusal to respond*: cultural habits in many countries virtually prohibit communication with a stranger, particularly for women. This is the case in the Middle East, much of the Mediterranean area and throughout most of South-East Asia – in fact wherever strong traditional societies persist. Moreover, in many societies such matters as preferences for hygienic products and food products are too personal to be shared with an outsider. For example, in many Latin American countries a woman may feel ashamed to talk with a researcher about her choice of brand of sanitary towel, or even hair shampoo or perfume. Respondents may also suspect that the interviewers are agents of the government, seeking information for the imposition of additional taxes. Finally, privacy is becoming a big issue in many countries: for example, in Japan the middle class is showing increasing concern about the protection of personal information.

Language barriers

This problem area includes the difficulty of exact translation that creates problems in eliciting the specific information desired and in interpreting the respondents' answers.

In some developing countries with low literacy rates written questionnaires are completely useless. Within some countries the problem of dialects and different languages can make a national questionnaire survey impractical – this is the case in India, which has 25 official languages.

The obvious solution of having questionnaires prepared or reviewed by someone fluent in the language of the country is frequently overlooked. In order to find possible translation errors marketers can use the technique of *back translation*, where the questionnaire is translated from one language to another, and then back again into the original language (Douglas and Craig, 2007). For example, if a questionnaire survey is going to be made in France, the English version is translated into French and then translated back to English by a different translator. The two English versions are then compared and, where there are differences, the translation is checked thoroughly.

Measurement

Validity
If the measurement method measures what it is supposed to measure, then it has high validity (the 'what' dimension). There are three types of validity: construct, internal and external.

The best research design is useless without proper measurements. A measurement method that works satisfactorily in one culture may fail to achieve the intended purpose in another country. Special care must therefore be taken to ensure the reliability and **validity** of the measurement method.

In general, 'how' you measure refers to reliability and 'what' you measure refers to validity.

If we measure the same phenomenon over and over again with the same measurement device and we get similar results then the method is reliable. There are three types of validity, construct, internal and external:

- *Construct validity*: this establishes correct operational measures for the concepts being studied. If a measurement method lacks construct validity it is not measuring what it is supposed to.
- *Internal validity*: this establishes a causal relationship, whereby certain conditions are shown to lead to other conditions.
- *External validity*: this is concerned with the possible generalisation of research results to other populations. For example, high external validity exists if research results obtained for a marketing problem in one country will be applicable to a similar marketing problem in another country. If such a relationship exists it may be relevant to use the analogy method for estimating market demand in different countries. Estimating by analogy assumes, for example, that the demand for a product develops in much the same way in countries that are similar.

The concepts of reliability and validity are illustrated in Figure A.5. In the figure, the bull's eye is what the measurement device is supposed to 'hit'.

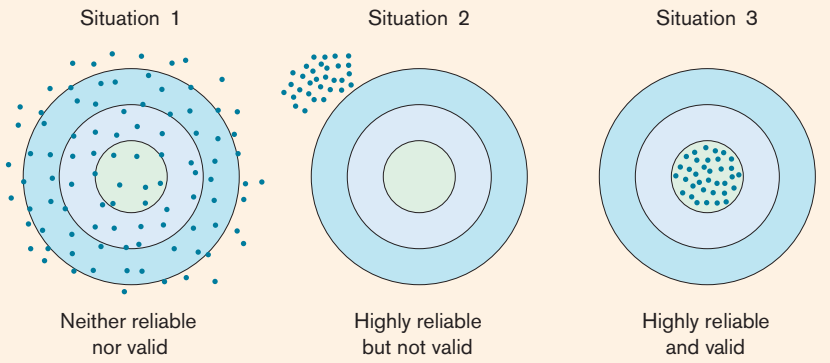

Figure A.5 Illustrations of possible reliability and validity situations in measurement
Source: Adapted from McDaniel Jr, S. and Gates, R. (2005) *Marketing Research Essentials*, 5th ed., John Wiley & Sons, New York, p. 228. Copyright © 2005 John Wiley & Sons, Inc., reproduced with permission.

Situation 1 shows holes all over the target, which could be due to the use of a bad measurement device. If a measurement instrument is not reliable there are no circumstances under which it can be valid. However, just because an instrument is reliable, the instrument is not automatically valid. We see this in *situation 2*, where the instrument is reliable but is not measuring what it is supposed to measure. The shooter has a steady eye, but the sights are not adjusted properly. *Situation 3* is the ideal situation for the researcher to be in. The measurement method is both reliable and valid.

An instrument proven to be reliable and valid in one country may not be so in another culture (Craig and Douglas, 2006). The same measurement scales may have different reliabilities in different cultures because of various levels of consumers' product knowledge. Therefore it may be dangerous simply to compare results in cross-country research. One way to minimise the problem is to adapt measurement scales to local cultures by pretesting measures in each market of interest until they show similar and satisfactory levels of reliability.

However, as different methods may have varying reliabilities in different countries, it is essential that these differences can be taken into account in the design of a multicultural survey. Thus, a mail survey could be most appropriate to use in country A and personal interviews in country B. In collecting data from different countries it is more important to use techniques with equivalent levels of reliability than to use the same techniques across countries.

A.8 ONLINE (INTERNET) PRIMARY RESEARCH METHODS

Although the Internet is still confined to the boundaries of the personal computer screen this will soon be a thing of the past; it is now clear that the Internet is definitely going to be a medium for the masses. Many researchers are amazed at how efficiently surveys can be conducted, tabulated and analysed on the Web. Additionally, online data collection lets marketers use complex study designs once considered either too expensive or too cumbersome to execute via traditional means. While initial forays were fraught with technical difficulties and methodological hurdles recent developments have begun to expose the medium's immense potential.

The earliest online tools offered little more than the ability to deploy paper-based questionnaires to Internet users. Today, however, online tools and services are available with a wide range of features at a wide range of prices.

For the international market researcher the major advantages and disadvantages of online surveys are the following (Grossnickle and Raskin, 2001).

Advantages of online surveys

- *Low financial resource implications*: the scale of the online survey is not associated with finance, i.e. large-scale surveys do not require greater financial resources than small surveys. Expenses related to self-administered postal surveys are usually in the form of outward and return postage, photocopying, etc., none of which is associated with online surveys.
- *Short response time*: online surveys allow questionnaires to be delivered instantly to their recipients, irrespective of their geographical location. Fast survey execution allows for most interviews to be completed within a week or so.
- *Saving time with data collection and analysis*: the respective questionnaire can be programmed so that responses can feed automatically into the data analysis software (SPSS, SAS, Excel, etc.), thus saving time and resources associated with the data entry process. Furthermore, this avoids associated data transcription errors.
- *Visual stimuli*: this can be evaluated, unlike CATI.

Disadvantages of online surveys

- *Respondents have no physical addresses*: the major advantage of postal over online surveys is that respondents have physical addresses, whereas not everyone has an electronic address. This is a particular international marketing research problem in geographical areas where the penetration of the Internet is not as high as in Europe and North America. For cross-country surveys the multimode approach (i.e. a combination of online and postal survey) compensates for the misrepresentation of the general population.
- *Guarding respondents' anonymity*: traditional mail surveys have advantages in guarding respondents' anonymity. Sensitive issues, which may prevent respondents from giving sincere answers, should be addressed via the post rather than online.
- *Time necessary to download pages*: problems may arise with older browsers that fail to display HTML questionnaires properly, and also with the appearance of the questionnaires in different browsers (Internet Explorer, Netscape).

Response rates to e-mail questionnaires vary according to the study context. Various factors have been found to inhibit response to e-mail or Internet data collection. These factors include poor design of e-mail questionnaires, lack of anonymity and completion incentives. By addressing these factors in the context of specific research objectives it may provide a way to tackle non-response to e-mail questionnaires. Incentives should be used to encourage response rates, especially if the e-mail questionnaires are lengthy. Potential respondents are likely to trade off their anonymity if incentives are used. The researcher can easily negotiate completion incentives if the sampling frame derives from a company's database (Michaelidou and Dibb, 2006).

Online quantitative market research (e-mail and Web-based surveys)

Online surveys can be conducted through e-mail or they can be posted on the Web and the URL provided (a password is optional depending on the nature of the research) to the respondents who have already been approached. When a wide audience is targeted the survey can be designed as a pop-up survey, which would appear as a Web-based questionnaire in a browser window while users are browsing the respective websites. Such a Web-based survey is appropriate for a wide audience, where all the visitors to certain websites have an equal chance to enter the survey.

However, the researcher's control over respondents entering the Web-based surveys is lower than for e-mail surveys. One advantage of Web-based surveys is the better display of the questionnaire, whereas e-mail software still suffers from certain limitations in terms of design tools and offering interactive and clear presentation. However, these two modes of survey may be mixed, combining the advantages of each (Ilieva *et al.*, 2002):

Online qualitative market research

There are many interesting opportunities to conduct international qualitative market research quickly and at relatively low cost, without too much travelling involved (Scholl *et al.*, 2002):

- *Saving money on travelling costs, etc*: many qualitative researchers often have to travel to countries in which research is conducted, briefing local moderators and viewing some groups or holding interviews to get a grasp of the local habits and attitudes. This leads to high travelling costs and increases the time needed to execute the fieldwork. It usually takes one or two weeks to recruit the respondents, and one or two weeks before the analysis can start. In online research the respondents can be recruited and interviewed from any computer anywhere in the world. Nearly everyone who is connected to the Internet knows how to use chat rooms. Fieldwork may start two days after briefing, and the analysis may start straight after the last interview on the basis of complete and accurate transcripts, with each comment linked to the respective respondent.
- *Cross-country qualitative research*: international online research is particularly interesting for multinational companies that sell their products on a global scale and are afraid to build the global marketing strategy on research which has been conducted in only a few of these countries. Online qualitative research could serve as an additional multicountry check. This is not intended to give insight into the psychology of customers but rather to check whether other countries or cultures may add to the general picture, which has been made on the basis of qualitative face-to-face research.

One of the limitations with, for example, online focus groups is that they seem to generate less interaction between members than the face-to-face groups. Discussions between respondents occur, but they are less clear and coherent.

A.9 OTHER TYPES OF MARKET RESEARCH

A distinction is made between ad-hoc and continuous research.

Ad-hoc research

An ad hoc study focuses on a specific marketing problem and collects data at one point in time from one sample of respondents. Examples of ad hoc studies are usage and attitude surveys, and product and concept tests via custom-designed or multiclient studies. More general marketing problems (e.g. total market estimates for product groups) may be examined by using Delphi studies (see below).

Custom-designed studies

These are based on the specific needs of the client. The research design is based on the research brief given to the marketing research agency or internal marketing researcher. Because they are tailor-made such surveys can be expensive.

Multiclient studies

These are a relatively low-cost way for a company to answer specific questions without embarking on its own primary research. There are two types of multiclient study:

1 *Independent research studies*: these are carried out totally independently by research companies (e.g. Frost and Sullivan) and then offered for sale.

Omnibus studies
A regular survey usually operated by a market research specialist company which asks questions of respondents.

2 **Omnibus studies:** here a research agency will target specified segments in a particular foreign market and companies will buy questions in the survey. Consequently interviews (usually face to face or by telephone) may cover many topics. Clients will then receive an analysis of the questions purchased. For omnibus studies to be of use the researcher must have clearly defined research needs and a corresponding target segment in order to obtain meaningful information.

Delphi studies

This type of research approach clearly aims at qualitative rather than quantitative measures by aggregating the information of a group of experts. It seeks to obtain answers from those who possess particular in-depth expertise instead of seeking the average responses of many with only limited knowledge.

The area of concern may be future developments in the international trading environment or long-term forecasts for market penetration of new products. Typically 10–30 key informants are selected and asked to identify the major issues in the area of concern. They are also requested to rank their statements according to importance and explain the rationale behind the ranking. Next the aggregated information is returned to all participants, who are encouraged to state clearly their agreements or disagreements with the various rank orders and comments. Statements can be challenged and then, in another round, participants can respond to the challenges. After several rounds of challenge and response a reasonably coherent consensus is developed.

One drawback of the technique is that it requires several steps, and therefore months may elapse before the information is obtained. However, the emergence of e-mail may accelerate the process. If done properly the Delphi method can provide insightful forecast data for the international information system of the firm.

Continuous research (longitudinal designs)

A longitudinal design differs from ad hoc research in that the sample or panel remains the same over time. In this way a longitudinal study provides a series of pictures that give an in-depth view of developments taking place. The panel consists of a sample of respondents who have agreed to provide information at specified intervals over an extended period.

There are two major types of panel:

- *Consumer panels*: these provide information on their purchases over time. For example, a grocery panel would record the brands, pack sizes, prices and stores used for a wide range of supermarket brands. By using the same households over a period of time, measures of brand loyalty and switching can be achieved, together with a demographic profile of the type of person or household who buys particular brands.
- *Retailer panels*: by gaining the cooperation of retail outlets (e.g. supermarkets) sales of brands can be measured by laser scanning the bar codes on goods as they pass through the checkout. Although brand loyalty and switching cannot be measured in this way retail audits can provide accurate assessments of sales achieved by store. A major provider of retail data is the A. C. Nielsen Company.

Sales forecasting

A company can forecast its sales either by forecasting the market sales (called *market forecasting*) and then determining what share of this will accrue to the company or by forecasting the company's sales directly. The point is that planners are only interested in forecasts when the forecast comes down to individual products in the company.

We shall now examine the applicability and usefulness of the short-, medium- and long-term forecasts in so far as company planners are concerned and shall then look at each from individual company departmental viewpoints:

- *Short-term forecasts*: these are usually for periods up to three months ahead, and as such are really of use for tactical matters such as production planning. The general trend of sales is less important here than short-term fluctuations.
- *Medium-term forecasts*: these have direct implications for planners. They are of most importance in the area of business budgeting, the starting point for which is the sales forecast. Thus if the sales forecast is incorrect the entire budget is incorrect. If the forecast is over-optimistic then the company will have unsold stocks, which must be financed out of working capital. If the forecast is pessimistic then the firm may miss out on marketing opportunities because it is not geared up to produce the extra goods required by the market. More to the point is that when forecasting is left to accountants they will tend to err on the conservative side and will produce a forecast that is less than actual sales, the implications of which have just been described. This serves to re-emphasise the point that sales forecasting is the responsibility of the sales manager. Such medium-term forecasts are normally for one year ahead.
- *Long-term forecasts*: these are usually for periods of three years or more depending on the type of industry being considered. In industries such as computers three years is considered long term, whereas for steel manufacture ten years is a long-term horizon. Long-term forecasts are worked out from macroenvironmental factors such as government policy, economic trends, etc. Such forecasts are needed mainly by financial accountants for long-term resource implications, but such matters of course are boards of directors' concerns. The board must decide what its policy is to be in establishing the levels of production needed to meet the forecast demand; such decisions might mean the construction of a new factory and the training of a workforce. Forecasts can be produced for different horizons, starting at an international level and then ranging down to national levels, by industry and then by company levels until we reach individual product-by-product forecasts. This is then broken down seasonally over the time span of the forecasting period, and geographically right down to individual salesperson areas. It is these latter levels that are of specific interest to sales management, or it is from this level of forecasting that the sales budgeting and remuneration system stems. Figure A.6 shows an example of trend forecasting.

The unit sales and trend are drawn in as in Figure A.6. The trend line is extended by sight (and it is here that the forecaster's skill and intuition must come in). The deviations from trend are then applied to the trend line, and this provides the sales forecast.

In this particular example it can be seen that the trend line has been extended slowly upwards, similar to previous years. The technique, as with many similar techniques, suffers from the fact that downturns and upturns cannot be predicted, and such data must be subjectively entered by the forecaster through manipulation of the extension to the trend line.

Scenarios
Stories about plausible alternative futures.

Convergent forces
Factors driving developments in the same direction.

Divergent forces
Forces driving developments apart from each other.

Scenario planning

Scenarios are stories about plausible alternative futures (Wright, 2005). They differ from forecasts in that they explore possible futures rather than predict a single future point. Figure A.7 shows two different scenarios – A and B – where the outcome – measured on two dimensions – is influenced by both **convergent** and **divergent forces**.

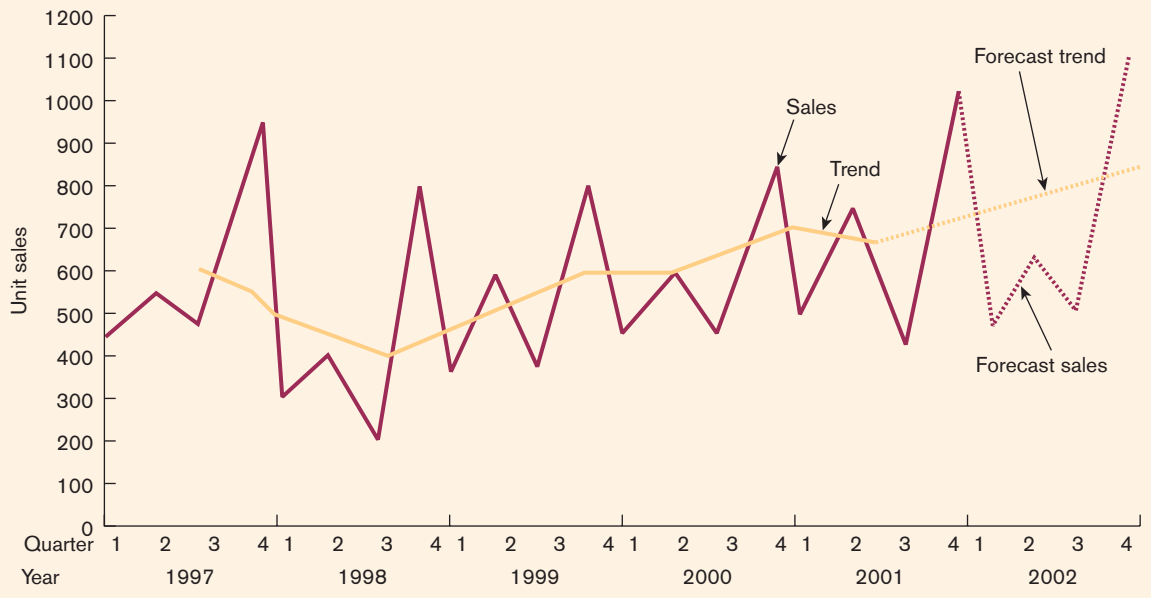

Figure A.6 An example of trend forecasting

Figure A.7 shows that the diverging and converging factors have to be balanced. Time flows from the left to the right. The courses of the scenarios pass through a number of time windows, each made up of the key dimensions the scenario writers want to highlight. In Figure A.7 two 'time windows' are shown: one in two years from now and another one in five years from now. The two dimensions could be e.g. 'worldwide market share' and 'worldwide market growth' for one of the company's main products. The 'convergent forces' would mean

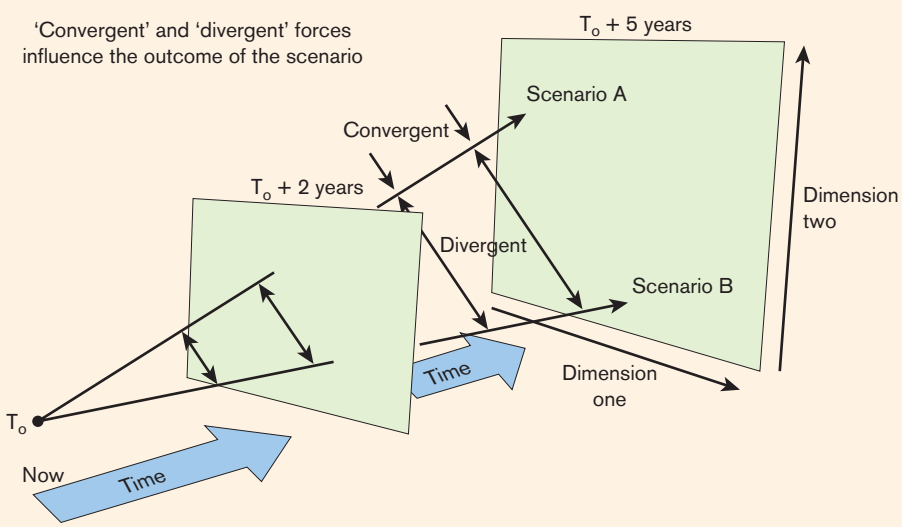

Figure A.7 Development of scenarios A and B over time

that Scenarios A and B would come nearer to each other over time. The 'divergent forces' would have the opposite effect.

Examples of *convergent* forces would be:

- high degree of macroeconomic stability in key international markets;
- increasing standardisation of products across borders.

An example of a *divergent* force would be 'cultural diversity' among target markets.

Scenario planning allows us to consider a range of 'alternative futures', each of which is dramatically different from the other and from the current operating environment. Rather than rely on a single 'most likely' forecast it is possible to compare and contrast alternative opinions on how your industry may evolve (Culver, 2006; Ringland, 2005).

Since it is externally oriented, scenario planning is very effective at identifying growth strategies for the company as well as potential threats to its market position. Scenarios can also help to identify the specific external industry changes that are causing falling market share or margins.

Guidelines for scenario planning

- *Establish a core planning team*: analysing the strategic implications of scenarios is best done in teams. The creative dynamics of an effective group are likely to provide the types of breakthrough that will make the scenario process worthwhile. What seems obvious to one person will be surprising to another. A good rule of thumb is to have five to eight people in the planning group.
- *Get a cross-section of expertise*: include the heads of all functional areas – sales, marketing, operations, purchasing, information technology, personnel, etc. We also recommend including individuals beyond the top executives. This injects new perspectives on your company or your line of trade. This is a great time to involve the rising stars and innovative thinkers in the organisation.
- *Include outside information and outside people*: focus on injecting interesting and challenging perspectives into the discussion. In a group composed solely of insiders it will be hard to achieve breakthrough insights. Outsiders may be customers, suppliers or consultants. If possible, involve an executive from another line of trade. However, many executives feel uncomfortable letting outsiders participate in the planning process of their companies.

A.10 SETTING UP A MARKETING INFORMATION SYSTEM (MIS)

Once research has been conducted, the data collected and analysed, the next step is to incorporate this information into management decision making. More and more businesses are now concerned with increasing the productivity of their marketing efforts, especially in their marketing research departments.

A massive amount of data is available from a wide variety of sources. The trick is to transform that data, ranging from statistics and facts to opinions and predictions, into information that is useful to the organisation's marketing decision makers. The importance of a timely and comprehensive information system is becoming more evident with the increased need to develop closer customer relationships, the increasing costs of making wrong marketing decisions, the greater complexity of the marketplace, and the elevated level of competitor aggressiveness. The need for current and relevant knowledge may result in the development and implementation of information systems that incorporate data management procedures involving generating new data or gathering existing data, storing and retrieving data, processing data into useful information, and disseminating information to those individuals who

International marketing information system
An interacting organisation of people, systems and processes devised to create a regular, continuous flow in information essential to the international marketer's problem-solving and decision-making activities around the world.

need it. The **international marketing information system** is an interacting organisation of people, systems and processes devised to create a regular, continuous and orderly flow of information essential to the marketer's problem-solving and decision-making activities. As a planned, sequential flow of information tailored to the needs of a particular marketing manager, the international MIS can be conceptualised as a four-stage process consisting of locating, gathering, processing and utilising information.

In this rather complete international MIS model, input data flow into the system from three major sources: the microenvironment, the macroenvironment and functional areas of the firm. The output information will then be made available to management for analysis, planning, implementation and control purposes. The proposed model meets the exigencies of the ever-expanding role of the MIS professional that has to provide timely, accurate and objective information for management to be able to navigate its way through the complex and fast-changing world of business globalisation. Against the backdrop of a dynamic business environment, companies are increasingly developing their marketing information systems to provide managers with real-time market information. Likewise, they are expanding from local to national to global operations while consumers are becoming ever more selective in their product choices.

A.11 SUMMARY

The basic objective of the global marketing research function is to provide management with relevant information for more accurate decision making. The objective is the same for both domestic and global marketing. However, global marketing is more complex because of the difficulty of gathering information about multiple and different foreign environments.

In this chapter, special attention has been given to the information collection process and the use of marketing information. This coverage is far from being exhaustive, and the reader should consult marketing research textbooks for specific details related to particular research topics.

An international marketer should initiate research by searching first for any relevant secondary data. Typically a great deal of information is already available, and the researcher needs to know how to identify and locate the international sources of secondary data.

If it is necessary to gather primary data the international marketer should be aware that it is simply not possible to replicate elsewhere the methodology used in one country. Some adaptation of the research method to different countries is usually necessary.

The firm should set up a decision support system or an international market information system (MIS) to handle the gathered information efficiently. This system should integrate all information inputs, both internal and external. In addition, an international MIS can support managers in their marketing decision making by providing interlinkage and integration between functional departments or international divisions. However, in the final analysis, every international marketer should keep in mind that an information system is no substitute for sound judgement.

QUESTIONS FOR DISCUSSION

1 Explore the reasons for using a marketing information system in the international market. What are the main types of information you would expect to use?

2 What are some of the problems that a global marketing manager can expect to encounter when creating a centralised marketing information system? How can these problems be solved?

3 What are the dangers of translating questionnaires that have been designed for one country for use in a multicountry study? How would you avoid these dangers?

4 Identify and classify the major groups of factors that must be taken into account when conducting a foreign market assessment.

5 What is the difference between 'data warehousing' and 'data mining'?

6 Identify and discuss the major considerations in deciding whether research should be centralised or decentralised.

7 Distinguish between internal and external validity. What are the implications of external validity for international marketers?

8 Would Tokyo be a good test market for a new brand planned to be marketed worldwide? Explain your reasoning.

9 If you had a contract to do market research in Saudi Arabia, what problems would you expect in obtaining primary data?

10 Do demographic variables have universal meanings? Is there a chance that they may be interpreted differently in different cultures?

11 In forecasting sales in international markets, to what extent can the past be used to predict the future?

12 How should the firm decide whether to gather its own intelligence or to buy it from outside?

REFERENCES

Cateora, P. R. (1993) *International Marketing*, 8th edn, Irwin, Homewood, IL.

Craig, S. C. and Douglas, S. P. (2000) *International Marketing Research*, 2nd edn, John Wiley & Sons, England.

Craig, C. S. and Douglas, S. P. (2006) Beyond national culture: implications of cultural dynamics for consumer research, *International Marketing Review*, 23(3): 322–42.

Criè, D. and Micheaux, A. (2006) From customer data to value: what is lacking in the information chain? *Database Marketing & Customer Strategy Management*, 13(4): 282–99.

Culver, M. (2006) Using tactical intelligence to help inform strategy, *Strategy & Leadership*, 34(6): 17–23.

Curry, A., Ringland, G. and Young, L. (2006) Using scenarios to improve marketing, *Strategy & Leadership*, 34(6): 30–7.

Dang, T. and Speece, M. (1996) Marketing research in Vietnam, *Journal of International Marketing and Marketing Research*, 21(3): 145–61.

Denzin, N. K. (1978) *The Research Act*, 2nd edn, McGraw-Hill, New York.

Douglas, S. P. and Craig, C. S. (2006) Collaborative and iterative translation: an alternative approach to back translation, *Journal of International Marketing*, 15(1): 30–43.

Gordon, I. (1998) *Relationship Marketing: New Strategies, Technologies and Techniques to Win Customers You Want and Keep Them Forever,* John Wiley & Sons, Etobicoke, Ontario.

Grossnickle, J. and Raskin, O. (2001) What's ahead on the Internet: new tools, sampling methods, and applications help simplify Web research, *Market Research*, Summer: 9–13.

Hollensen, S. (2001) *Global Marketing: A Market Responsive Approach*, 2nd edn, Financial Times/Prentice Hall, Harlow.

Ilieva, J., Baron, S. and Healey, N.M. (2002) Online surveys in marketing research: pros and cons, *International Journal of Market Research*, 44(3): 361–76.

Jick, T. D. (1979) Mixing qualitative and quantitative methods: triangulation in action, *Administrative Science Quarterly*, 24 (December): 602–11.

Lasserre, P. (1993) Gathering and interpreting strategic intelligence in Asia Pacific, *Long Range Planning*, 26(3): 55–66.

McDaniel, Jr, S. and Gates, R. (1993) *Contemporary Market Research: An Applied Orientation*, Prentice Hall, Englewood Cliffs, NJ.

Malhotra, N. K. (1993) *Marketing Research: An Applied Orientation*, Prentice Hall, Englewood Cliffs, NJ.

Malhotra, N. K. and Miller, G. L. (1999) Social responsibility and the marketing educator: a focus on stakeholders, ethical theories, and related codes of ethics, *Journal of Business Ethics*, 19(2): 211–24.

Michaelidou, N. and Dibb, S. (2006) Using email questionnaires for research: Good practice in tackling non-response, *Journal of Targeting, Measurement and Analysis for Marketing*, 14(4): 289–96.

Ringland, G. (2005) Using scenarios to create common understanding across different cultures, *Strategy & Leadership*, 33(6): 34–8.

Schmidt, M. and Hollensen, S. (2006) *Marketing Research: An International Approach*, Financial Times/Prentice Hall, Harlow.

Shariat, M. and Hightower, R. (2007) Conceptualizing business intelligence architecture, *The Marketing Management Journal*, 17(2): 40–6.

Wade, K. (2002) Focus groups' research role is shifting, *Marketing News*, 4 March: 47.

Wright, L. T. and Crimp, M. (2000) *The Marketing Research Process*, 5th edn, Financial Times/Prentice Hall, Harlow.