5 Market research

Objectives

After reading this chapter you should be able to:

- explain the difference between data and information;
- describe the research process;
- explain the difference between qualitative and quantitative research;
- explain the difference between primary and secondary research;
- develop a sampling frame for a given piece of research;
- design a suitable questionnaire;
- explain the importance of correct interview technique.

INTRODUCTION

There is considerable debate over the term 'market research'; many marketers believe that the term 'marketing research' is more appropriate. Market research is usually considered to be research into customer needs, wants and preferences; marketing research is sometimes used to describe all research carried out for the purpose of supporting marketing decisions. Whichever term is used, market research is concerned with the disciplined collection and evaluation of specific data in order to help suppliers understand their customers' needs better.[1]

THE NEED FOR MARKET RESEARCH

Market research is the process of collecting, analysing and presenting useful information about consumers. **Marketing research** also includes the more general research into markets, which includes competitive activities and also environmental issues such as government activities and economic shifts.

The first question any marketer should ask before embarking on a research exercise is whether the information gained will be worth more than the cost of collecting it. Market research can represent a substantial investment in both time and money terms; in some cases it is undoubtedly cheaper simply to go ahead with the project without carrying out any research at all. For example, if the total cost of sending out a mailing is less than £10 000, but research into finding out whether or not it would be effective would cost £12 000, it is obviously better not to do the research. More subtly, if the managers feel that the risk of the mailshot failing altogether is low, they may still not run the research even if it is much cheaper. If, for example, the management estimated the risk of failure at only 10%, the value of the research would be only £1000. Therefore it might not be worthwhile carrying out research even if the cost of it were, say, £3000.

In general, however, it is not wise to embark on a major commitment (such as launching a new product) without carrying out some market research beforehand. The vast majority of new products fail (see Chapter 6), and this is usually because the consumers do not think that the product is worth the money. Good market research will reduce the risk of this happening, and it has been said (wisely) that those who find research expensive should think about what ignorance would cost.

Types of research that are carried out by marketers are as follows:

- Customer research.
- Promotion research.
- Product research.
- Distribution research.

- Sales research.
- Marketing environment research.

Customer research is intended to produce facts about markets and market segments; it provides information about where customers live, what they do with their time, what their motivations are, what they like to spend money on and what their spending power is, and what the trends are in the market.

Promotion research measures the success of promotions in terms of their objectives. It relies on careful planning of objectives (see Chapter 9) but can provide information about the suitability of the approach used in reaching a target audience. Research is also useful for determining which media should be used; since promotion in general, and advertising in particular, tends to be expensive it is important that the effort is not squandered on advertising in the wrong place.

Product research is used to identify new uses for existing products, or to identify needs for new products. Product research is often used to refine the design of an existing product to produce an improved 'Mark 2' version.

Distribution research is concerned with finding the best channels of distribution for a product; often it overlaps with consumer research, since the location of retail outlets will depend on where the target consumers live and on their habits. For example, many DIY products are distributed through edge-of-town outlets, which means that only those consumers with cars will be able to reach the store and buy the product. This will not matter if the product is an automotive one, but may matter if it is a product for elderly people, who may not own cars (or perhaps prefer not to drive).

Sales research is intended to help the sales management process by ensuring that territories are of equal size or value, that the techniques and approaches being used are effective, that the training of the salesforce is appropriate and sufficient, and that the salesforce motivation is appropriate (see Chapter 9).

Finally, **marketing environment research** examines aspects of the micro- and macro-environments (see Chapter 2). The purpose of the exercise is to ensure that the firm can anticipate environmental change and develop responses in advance.

Very often research can be carried out fairly quickly and cheaply, since much of the information needed will probably already exist, either in published form or within the company's own records. Often the company records contain a great deal of useful **data**, or raw facts; analysis of those facts will turn it into usable **information**. The data items themselves are worthless until there has been some kind of thoughtful analysis to convert them to information.

Marketing information systems are often set up to provide an automatic flow of data into the firm, with systems for regular analysis of the data. These systems used to be held on paper, with consequent emphasis on form-filling by salespeople, shipping departments, finance staff and others. In recent years, the increased use of computers (particularly desktop PCs) has allowed far more efficient systems to be put in place, and has reduced the amount of time spent on gathering information.[2] There is always a trade-off involved between the value of information and the cost

in time, effort and money of obtaining it; by reducing the cost element, computers have increased the possibilities for obtaining useful data and converting it into usable information. Computer-based systems such as these are called **decision support systems**: an example is the electronic point-of-sale (EPOS) systems used by large retailers. These record every purchase made in the store so that the retailer can re-order stock in the correct amounts, can automatically analyse trends, and can even (with the use of loyalty cards) track an individual customer's purchases over a period of time.[3]

Decision support systems need to be user-friendly so that managers without training in data analysis can use them; this is the main reason for their popularity over paper-based information systems.[4,5]

THE RESEARCH PROCESS

The purpose of the research is to collect data (and sometimes information) and process it into usable information that can be used to make management decisions. The first stage in any research process is to define the problem and set objectives. Figure 5.1 shows the research process.

After setting the objectives, the process of collecting the data can begin. Data can be collected from either **primary** sources or **secondary** sources. Primary sources are original research: questionnaires, interviews, experiments or product tests with consumers. Secondary research (also called *desk research*) comes from already published information in journals, newspapers, commercially published market research, government statistics, directories, yearbooks, CD-ROM databases, the Internet, and other published materials. Secondary data are, in effect, second-hand data.

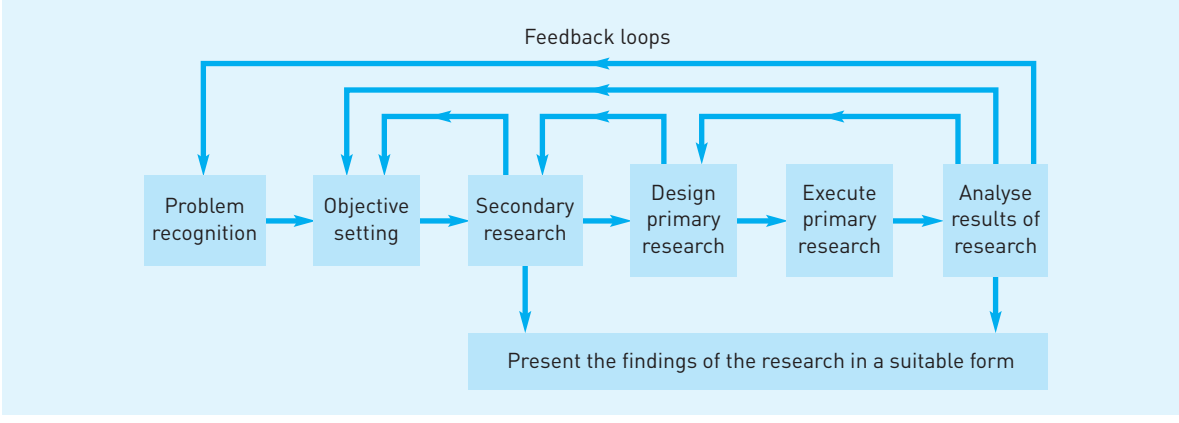

FIGURE 5.1 The market research process

Normally it is sensible to begin the research process by looking at secondary sources. The reasons for this are as follows:

- It is always cheaper.
- It is always quicker.
- Sometimes all the necessary information for making the decision has already been published and is available.
- Even when the published information is incomplete, the researchers will only have to fill in the gaps with primary research rather than gather all the information first-hand.

Secondary research will not necessarily tell the researchers everything they need to know. For example, if the company is planning to launch a new solar-powered personal FM radio set, it is unlikely that anyone will have carried out research specifically into solar-powered FM radio sets. There will probably be research on personal stereos, on radio ownership, on environment-friendly consumers and on solar power, so all these sources should be examined first. This will, at the very least, help with the design of the primary research.

The other main drawbacks with secondary research are that it is often out of date, and that it can be hard for the researcher to be confident of its accuracy, since it is often published without giving details of the methods used in its collection. Researchers therefore need to exercise some caution, but that certainly does not mean that secondary sources should be ignored.

Having completed the search for secondary data, it is possible to design the primary research. This will involve deciding: (a) what gaps there are, in terms of the objectives and what is known from the secondary sources; (b) who we need to approach to get the information; and (c) the methods to be used.

Deciding what we need to find out from the primary research means comparing what the secondary research says with the objectives that were originally set. Where there is information lacking, the researchers need to decide how to find it out, and who would have the information.

APPROACHING RESPONDENTS

Respondents are the subjects of research – the people whose behaviour and opinion are of interest to the researchers. The *methodology* will depend on what the researchers are hoping to discover. Methodology is not the same as method; methodology is actually the study of method, and is concerned with the philosophy behind the choice of a specific method.

Qualitative research

Qualitative research is to do with how people feel about the product, advertisement or company; the approach is usually much more probing (and thus time-consuming) than would be the case with quantitative research, and therefore the *sample size* (number of respondents) will be much smaller. Qualitative research will often tell researchers why people behave in the way they do, but since it usually consists of subjective opinions it can be difficult to quantify. Table 5.1 shows some of the methods used in qualitative research.

It is not unusual to carry out qualitative research before designing a quantitative study, to find out the dimensions of the problem; the researcher might then carry out a questionnaire-type survey to find out how many people agree with the statements made in the qualitative study. Because of the cost and time involved, there has been a movement away from this extensive approach, however, and much more research is being done using qualitative methods only.[9]

Quantitative research

Quantitative research methodology deals with areas that can be expressed in numbers. It will tell researchers, for example, what proportion of the population drinks tea in the mornings and what their ages and occupations are; what it will not do very easily is tell researchers why those people prefer tea to coffee.

Surveys

Most people have at some time or other been asked to participate in a survey, and this method remains the commonest method of collecting quantitative data. Surveys can elicit facts about the respondent's behaviour and possessions, can find out opinions about issues and ideas, and can sometimes elicit interpretations of the respondent's actions or opinions. Table 5.2 shows some survey techniques.

A major problem with any survey lies in ensuring that the right questions are asked, and that they are asked in the right way. A typical questionnaire would ask respondents about their behaviour and attitudes, and about themselves; this is important for classification purposes. Obviously the researcher will be unable to say '25% of 25–35-year-olds buy beer at least twice a week' if the questionnaire did not ask the respondents their age, but most questionnaires would need to contain much more detail about the respondents. The questions about the respondents themselves must be discreet as well as relevant, and this requires considerable skill on the part of the researcher in deciding what might or might not be relevant to the study at hand.

TABLE 5.1 Qualitative methods

Method	Explanation
Group depth interview, or focus group	A group of six or eight people is recruited and invited to talk about the subject. This method tends to produce a wide range of opinion, because each member of the group will 'trigger' the other members to think of things to say. On the other hand, group pressure may mean that only the most vociferous respondents' views are expressed.
Exploratory groups	A type of focus group used at the initial stages of market research to find the dimensions of the problem. Dimensions are the factors which are of interest to respondents about a particular marketing issue. Exploratory groups usually consist of a cross-section of potential consumers.
Clinical focus groups	On some issues, respondents' attitudes may be hidden below the conscious level. These groups are used in a clinical setting where the researcher can judge whether the person's true feelings are being expressed. Clinical focus groups are also heterogeneous.
Experiencing focus groups	These groups are homogeneous, and allow the researcher to gauge the feelings of a group of actual customers for the product category under consideration.
Teleconferencing	Teleconferencing involves a group discussion conducted over the telephone. Similar to a focus group, this avoids the necessity of bringing people together physically and also can make people feel easier about expressing themselves. The technique is particularly useful for focus groups involving managers in industry.
Video-conferencing	Like teleconferencing, but with vision. This has the major advantage of allowing the researcher to see people's facial reactions, which often say more about a person's true feelings than do words.
Depth interviews	Usually carried out by highly trained interviewers or psychologists, the depth interview uses probing questions to uncover the respondent's deepest feelings.
Projective techniques	Subjects are presented with ambiguous, unstructured situations and invited to respond. Because the situation is unclear, the respondents must use their imaginations to respond, in the course of which their own true feelings will be revealed. Projective techniques are used when a direct response might be embarrassing for the respondent.
Word association	A projective technique in which the respondent is asked to say the first thing that comes to mind when the researcher says a particular word. The theory is that the respondent does not have time to censor his or her response, so that the respondent's true feelings are revealed.

TABLE 5.1 Qualitative methods *(continued)*

Cartoon tests	Another projective technique; the respondent is shown a cartoon and asked to supply the captions for it. The respondent will actually put his or her true feelings down; since it is only a cartoon, no blame can attach to the respondent for what the characters are 'saying'.
Third-person techniques	This projective technique is simple to apply: the respondent is asked what he or she thinks another person ('your neighbour' or 'most people') would say or do in a given situation. The respondent would typically give their own opinion as if it were that of the third person.
Analogy	Here the respondent's personality is linked to a prospective purchase. For example, the respondent might be asked to imagine what it would be like to actually be a new BMW car. The respondent might say 'I feel powerful' or 'I feel ready for my new executive owner'.[6] Analogies help marketers develop communications strategies targeted at specific groups of consumers.
Experimentation	Respondents are invited to do something, or are shown an item and their responses are monitored. For example, Goodyear Tire and Rubber Company used a virtual shopping computer simulation to examine brand equity issues.[7]
Observation	The researcher watches the consumers and notes their behaviour. For example, a researcher might stand outside a shopping mall and count how many people go in. Fisher-Price, the toy manufacturer, runs a free crèche in Chicago and gives the children prototype toys to play with in order to see which ones the children like best, and how they play with the toys.[8]

TABLE 5.2 Survey techniques

Method	Explanation
Postal surveys	Questionnaires sent to respondents through the mail. Respondents fill in the answers and mail the survey back. They have the advantages of being cheap, of avoiding interviewer bias and of being capable of containing questions on a broad range of issues. They have the disadvantages of (typically) having a low response rate, of not allowing the researcher control over the respondent, and of the possibility of someone other than the addressee (e.g. a secretary or assistant) filling in the replies.
Personal structured interviews	Here the researcher goes through the questions face-to-face with the respondent. This technique is more expensive than a postal survey, but gives the researcher control over the process (e.g. the order in which questions are asked and answered). The cost is high, and refusal rate (the proportion of people who refuse to participate) is also high.

Telephone surveys	Here the questionnaire is administered over the telephone. This has the advantage of being quick and cheap, with a high response rate, while still allowing the researcher to control the process. The disadvantage is that respondents sometimes suspect that they are about to be subjected to an unwanted sales pitch, and also the list of telephone numbers may be out of date. In recent years, people have been able to opt out of inclusion on telephone lists by registering with the Telephone Preference Service, which means that a large number of potential respondents have been removed from the system.
Self-administered surveys	This method is often used in service industries such as hotels and restaurants. Questionnaires are left for customers to fill in and put into a box, or mail back. The major drawback of this method is that not all customers will fill in the survey; only those who are exceptionally pleased or exceptionally disappointed are likely to fill them in, so the management will get a distorted picture of the customer satisfaction levels.
Panels	A panel is a group of respondents who regularly respond to surveys. Some panels are set up on a permanent basis and are often made available to researchers by commercial market research companies. Sometimes panels are used by a group of firms to carry out research which is syndicated to the group. Panels are expensive to set up, but relatively cheap to run and have the major advantage of offering a very high response rate.
Omnibus studies	Omnibus surveys are usually carried out by commercial market research agencies who combine several studies into one questionnaire. This reduces the cost for each client, and ultimately reduces effort for respondents since they will need to give their personal details only once. For an omnibus survey respondents will be asked about several unrelated topics; the questionnaires tend to be somewhat long and arduous to complete so respondents are often rewarded with a small gift.

Questionnaire design can be a lengthy process for this reason. The criteria for writing survey questions are as follows:

- Questions need to be short, simple and unambiguous.
- Questions should not be leading – in other words they should not direct the respondent towards a particular answer.
- The questionnaire's introduction should be persuasive, and must qualify the respondent as belonging in the sample.
- The answers must be capable of analysis, preferably by computer.
- Questions must be necessary and relevant to the study.
- The respondent must have the information needed to answer the question.

- Respondents must be willing to answer the questions. If the questions get too personal, people will not respond.
- Questions must be specific. Avoid asking two questions at once: e.g. 'Was your holiday pleasant and good value for money?' Holidays can be pleasant without being good value.
- Hypothetical questions should be avoided; they require guesswork on the part of respondents, and also can rarely be worded in such a way that respondents have enough information to answer.

Even experienced researchers have difficulty in writing effective questionnaires; what is a clear and obvious question to one person may have a different meaning to another, so it is usually a good idea to **pilot** all questionnaires. This means testing the first draft of the questionnaire by asking a group of typical respondents to fill it in, then analysing the results. Often (in fact usually) this process will throw up errors in the design; these can be corrected before the finished version is used on the overall sample of respondents. If several errors are detected at the pilot stage, it may be worth considering piloting a second time; many surveys have been run only to find that there is a major ambiguity in one or more questions, invalidating the entire project.

Sampling

Sampling means choosing who to ask. It is usually not feasible or necessary to ask everybody in the target market to give an opinion on a given issue, but it is important to ask enough of the right type of people to ensure that the data we get are reasonably representative of the market as a whole.

Finding the right mix of respondents is important because the researcher is attempting to draw conclusions about the target market as a whole; for many surveys less than 100 respondents' opinions would be solicited in order to draw conclusions about consumers numbering in the millions. This means that a small sampling error will be multiplied manyfold when the analysis takes place.

The **sampling frame** is the list of possible respondents from whom the researcher wishes to draw a **sample**. In some cases this list will be available: for example, if a researcher wants to sample the opinions of doctors, it is possible to obtain a list of names and addresses for every doctor in the country. It would then be relatively simple to construct a sample from the list. It is more likely, though, that the list the researcher wants is unavailable: for example, a list of people who have played squash in the last three months probably does not exist. In those circumstances the researcher would have to construct a representative sample of individuals with the required characteristics. This can be a difficult task.[10]

Table 5.3 shows some sampling methods.

TABLE 5.3 Sampling methods

Sampling method	Description	Advantages	Disadvantages
Random sample, **or probability sample**	Each individual in the population at large has an equal chance of being included in the sample.	Will give a clear cross-section of the population.	Almost impossible to achieve. Most so-called 'random' samples are seriously biased: for example, choosing names from the telephone book might seem 'random', but in fact only people with landline telephones will be included, and even then those who are ex-directory will not be included.
Quota sample	An analysis of the population is undertaken first of all, often from the census data. Then a quota for each category (e.g. women aged 35, men aged 20, middle-aged professionals) is drawn up and interviewers are told to fill the quota.	Will produce a clear cross-section of opinion, provided the basis for the quota is correctly set.	Often means that interviewers are rejecting respondents because they do not fit the quota, and towards the end of the day the interviewers might be spending a lot of time looking for that last 35-year-old manual worker with two children.
Stratified sample	Similar to quota sampling in that broad bands of the population are specified, but the final choice of respondent is almost taken by chance.	Less waste of respondents than quota sampling, more flexibility for interviewers and therefore cheaper.	Not as accurate as quota sampling.

Recently there has been a move away from probability sampling towards quota sampling and a growing use of databases for sampling.[11] The reasons for this are that quota sampling is easier and more reliable, and databases provide a quick and easy way of sampling for postal questionnaires.

Interview technique

When conducting interviews, it is all too easy for the interviewer to 'lead' the respondents into making the 'right' statements. Sometimes respondents will encourage this by asking questions themselves; good interviewers will avoid the temptation to step in and help at this point.

Some ways to avoid this are to use statements such as, 'Well, it's your opinion that's important. What do you think?' or perhaps just to give a questioning look. It is also advisable to explain to the respondents beforehand that you will not be able to help them with the answers.

In the case of a focus group or group depth interview, there is a problem of judging whether to let a particular line of conversation continue or not. What may at first appear to be an entirely irrelevant digression from the subject may eventually turn round and produce something very insightful; on the other hand, if the interview just degenerates into a general chat nothing useful will arise. The moderator could, possibly, just ask how the topic relates to the subject of the research. This will sometimes produce a quick explanation of the relationship, or otherwise a quick return to the point of discussion.

In practice, groups usually do keep to the subject at hand; digressions are few, and usually short-lived.

Sources of bias

Bias is the effect whereby the results of a survey are rendered unreliable by some external force. The commonest sources are **sampling bias** and **interviewer bias**.

Sampling bias

This results from taking a sample that is not representative of the population we wish to study. It is easy to fall into the trap of thinking that the sample is representative, when in fact it has been drawn from a small population. For example, a researcher might carry out a survey in a high street, stopping every third shopper. This survey will not be representative, since it includes only those who shop in that high street on that day. A survey of this type undertaken on a Tuesday afternoon, for example, might include a higher proportion of pensioners and unemployed people than there are in the population at large. A similar survey undertaken on a Saturday afternoon might exclude most sports fans. Sample bias is common, and difficult to avoid.

Interviewer bias

This comes about because the interviewer wants to help the respondent to answer the question. Interviewers naturally want to get through the questionnaire with

the minimum of problems, and they are also acutely aware that the respondent probably has better things to do than answer awkward or badly phrased questions. If the interviewer finds that respondents are showing a negative reaction to some questions, he or she might skip past those questions in future, and 'guess' the answers. Sadly, it has been known for some unscrupulous interviewers to fake the answers altogether if they are having difficulty in finding enough respondents to fill the quota.[11]

Interviewer bias can be subtle; in one-to-one open-ended interviews the interviewer's body language (facial expressions, movements, etc.) can convey a message to the respondent that leads to a specific answer being given, or to some information being withheld.

ANALYSING THE RESULTS

Analysis has three distinct stages: **editing**, which means discarding any inconsistent or spoiled responses; **tabulating**, which means totalling the various responses and cross-tabulating them; and **interpreting**, which means saying what the figures mean.

Qualitative data analysis

Until relatively recently the analysis of *qualitative data* was heavily reliant on the judgement of the researcher. The traditional approach has been to make transcripts of recordings made during focus groups or depth interviews, then make an overall judgement of the views expressed using quotes to support the argument. This approach has been criticised on the grounds that it lacks the rigour of quantitative methods.

With the widespread use of computers, programs have become available for the analysis of qualitative data. Programs are available to carry out the following operations:

- Find individual words or phrases. Having decided which are the key phrases or words that are significant in the study, the researcher can tell the computer to find and count such words and phrases.
- Create *indexes* to show where and in what context the words and phrases have been used. Rather like a book index, this allows the researcher to attribute phrases to types of individual.
- Attach key words or codes to segments of text. Sometimes respondents will be talking about a particular issue without using the actual words that the

researcher believes are the key ones. Some programs allow the researcher to add relevant codes and key words to identify subject areas in the text.

- Connecting the categories. This allows the researcher to see whether some types of statement are associated with other types of statement: for example, whether those respondents who make right-wing comments also prefer powerful cars.

Table 5.4 gives some examples of computer programs for analysis of qualitative data. The list is by no means exhaustive; there are many other programs available to help in qualitative analysis, and more are being developed. Such programs can only help take the tedium out of the analysis; they will not do the thinking for the researcher, and a great deal of judgement is still needed in qualitative analysis.[12]

Presentation of the data is not numeric. It is not appropriate to ascribe percentages to the comments made, since the sample used is small and the process of ascribing key words and codes to the data is not precise. Typically, qualitative data analysis results in a set of **matrices**, or a **network**. A matrix is the cross-tabulation of two lists, set up as rows and columns; a network is a diagram showing the relationship between concepts.

For example, a *tree* **taxonomy** is a network showing how concepts relate; it is rather like a family tree. A tree taxonomy for eating out is shown in Figure 5.2.

TABLE 5.4 Analysis tools for qualitative data

Program	Description
QSR NUD*IST	Indexes, searches and supports theorising; will handle text or non-textual records such as photographs and tape-recordings. Connects categories, and is good at generating taxonomies (see below).
QUALPRO	Researcher has to segment and code, then QUALPRO will find and assemble the indicated segments.
ETHNOGRAPH	Does what QUALPRO does, but can also find text that has been coded two or more ways.
Longman Concordance	Creates a KWIC (key word in context) file by searching for the key word identified by the researcher and abstracting it with the words around it so as to develop a list of places where the key word appears.

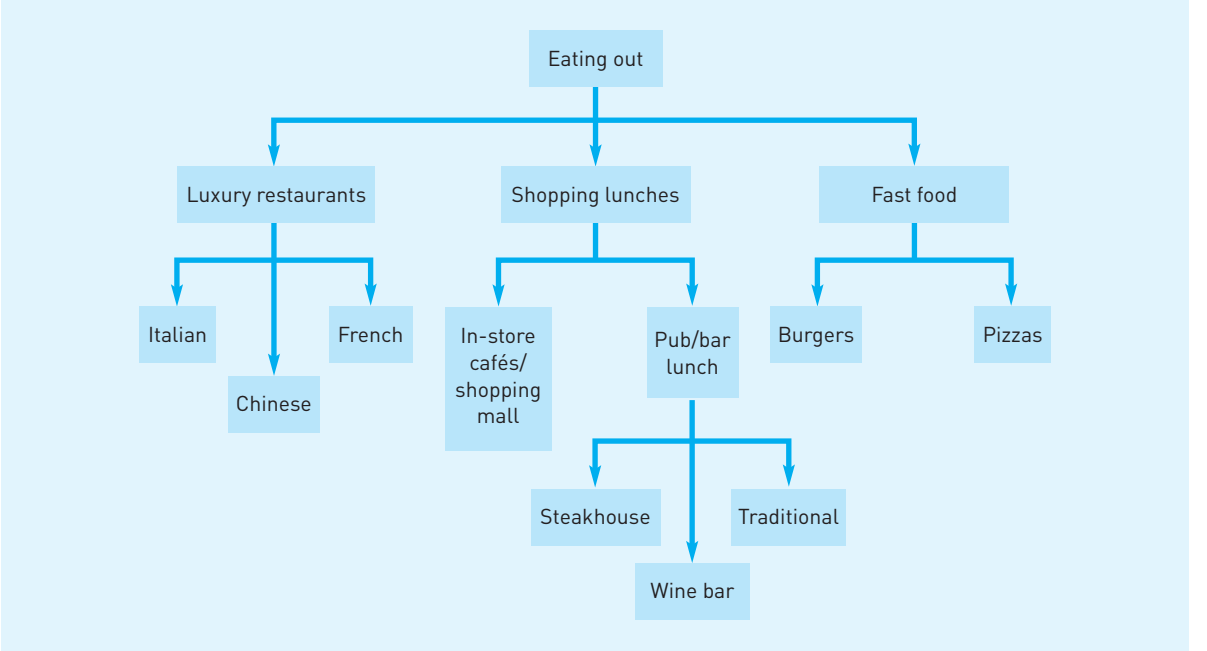

FIGURE 5.2 Tree taxonomy for eating out

The final stage in qualitative analysis is to interpret the findings into something usable by managers. Again, this requires a degree of judgement on the part of the researcher, and (in common with quantitative analysis) researchers can usually only draw inferences about what is probably happening, rather than make categorical statements about what is happening. For this reason most market research reports tend to be lengthy and contain details on the reasoning behind the statements made.

Quantitative data analysis

Quantitative data analysis follows the editing, tabulating and interpreting format described earlier. Putting the data into tables needs to be considered at the design stage of the research; projects have been known to collapse because the questionnaire proved impossible to analyse. Normally the data would be cross-tabulated so that the researcher can identify which type of respondent gives each type of answer. For example, research into soft drink consumption might show that 40% of the respondents buy soft drinks at least four times a week, and 5% buy soft drinks every day. The researcher would now need to identify which of the respondents do this, and what else they have in common: Are they all young? What are their incomes? Which newspapers and magazines do they read? This enables the marketers to target that segment of the market.

One of the problems of quantitative analysis is determining how reliable the information is. Because only a small number of people have been surveyed (compared with the population at large), errors can easily be multiplied. The larger the sample, the more reliable it will be, and the more confident the researcher will be that the data reflect a true state of affairs in the population.

The mathematics of analysing the data is beyond the scope of this book, but statistical techniques exist that will enable the researcher to say how reliable the results are likely to be, and also to say which are the relevant factors in the research (see Further Reading at the end of the chapter). Figure 5.3 shows a broad overview of the quantitative methods used in marketing.

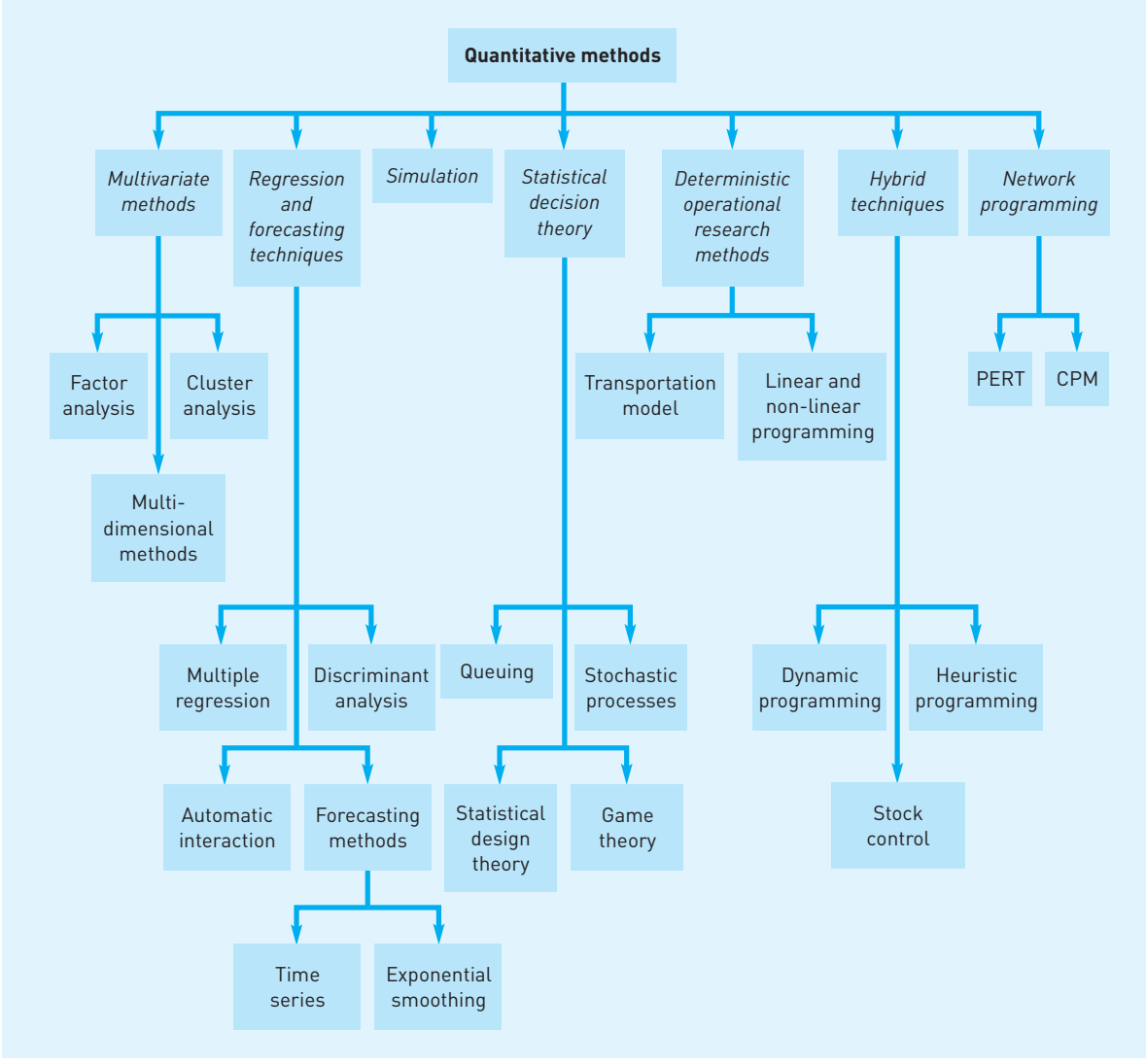

FIGURE 5.3 Statistical methods chart: PERT, program evaluation and review technique; CPM, critical path method

(*Source*: Adapted from Meidan[13])

Statistical testing should, if carried out correctly, tell us whether this year's results are following a similar pattern to last year's, and whether this relationship actually means something, or merely came about by accident. Table 5.5 shows some of the statistical methods available, and the results that can be obtained.

There are, of course, a great many more statistical tools available, most of which are easily available on computer programs such as SPSS or Windows Excel. This means that the hard work of doing the calculations is taken away, but researchers still need to understand the principles behind the statistical tools if they are to be able to draw sensible conclusions from the answers.

For example, a researcher might have surveyed 100 people to find out how many of them would be prepared to buy a new brand of beer. The researcher finds that 42% of them, having tasted the beer, say that they would buy the beer, and on looking at the results for those people it turns out that three-quarters of them are manual workers. This seems to show that manual workers are much more likely to try the beer than are white-collar workers, but it is possible that the researcher just happened to ask an unusual group of manual workers, and most manual workers in the population at large would stay loyal to their current brand of beer.

A *t*-test might show that the results of the survey are significant at the 95% confidence interval. This means that the researcher is 95% confident that the results can be relied upon; there is still, however, a 5% chance that the results have come about by a fluke. Unless the researcher talks to everybody in the country, there will always be some chance that the sample chosen is not typical; in practice, of course,

TABLE 5.5 Common statistical methods

Statistical method	Explanation
Exponential smoothing	Detects trends in the data by smoothing out the peaks and troughs. Gives more weight to recent data.
Regression analysis	Compares one set of data with another to show whether a trend in one set relates to a trend in the other.
Correlation	Shows the degree to which one set of data relates to another.
Factor analysis	Shows which factors relate to each other by relating them to a set of (theoretical) extra factors.
Significance testing, e.g. *t*-tests.	Tests whether the results of a survey can be relied on, or whether they could simply have come about by chance.

it is impossibly expensive to question the entire population of the country, so researchers will always be working with samples of the population. In general the larger the sample, the more reliable the results, but this is what a *t*-test will show. By comparing the size of the difference between the groups with the overall sample size, a *t*-test will show whether the sample was large enough to be confident that the difference is a real one, and not one that has appeared by chance.

Statistical methods are relatively easy to apply with the use of a computer, but the most exacting part of the analysis is interpreting the results. For example, the research may show that 40% of people under 35 say that they prefer one type of washing powder to another. This is an interesting piece of information, but it still begs the question of why this should be so. Often research of this nature throws up as many questions as it answers, and the researchers may find themselves going back to the beginning and re-designing the research to answer a different set of questions. Usually qualitative research is more useful than quantitative research in finding out why people behave the way they do.

Overall, market research is not a simple proposition. There are many pitfalls for the unwary, but the alternative is almost always worse: examples abound of companies who failed to carry out appropriate market research, launched their products and lost millions before their mistakes could be corrected. Because of the subjective nature of consumer behaviour, no market research is ever going to be fully accurate, but good research will always improve the marketer's 'batting average'.

For example, in Denmark there was a steady decline in the consumption of fresh fish during the 1980s and 1990s. Research showed that consumers thought that fish was difficult to prepare, and awkward to eat because of the number of bones. The Danish fishing industry developed a series of advertisements that showed easy recipes for fish, and also packaged a range of fish guaranteed to be bone-free. The result has been a doubling of the consumption of fish in Denmark; a similar campaign in the United Kingdom has yielded equally impressive results.

CASE STUDY 5: RECLASSIFYING THE CENSUS

Every 10 years since 1841, the UK has held a national census. Heads of households throughout the country have been compelled by law to fill in details about the people staying in their homes on Census Night: the information is used to measure changes in the demography of the country, to analyse population movements, and to plan for future provision of social welfare programmes. For example, knowing how many newborn babies there are in the country gives the government five years to plan for primary-school provision, and knowing how many 50-year olds there are allows 15 years for pension planning.

For the 2001 National Census, the UK's Office for National Statistics (ONS) did away with the 90-year-old system for socio-economic classification of the population. The system, which classified people as A, B, C1, C2, D or E, was first used for

the 1911 census: marketers have long considered these classifications to be past the 'sell-by' date and have been using commercially available classifications such as ACORN, which classifies people according to the type of housing they live in. The ONS's new system classifies people as higher managerial and professional (for example doctors), lower managerial and professional (teachers), intermediate (computer engineers), small employers and own-account workers (such as shopkeepers), lower supervisory, craft and related (electricians), semi-routine (gardeners) and routine occupations (such as cleaners). An additional category for those who have never worked, or are long-term unemployed, will also be used when possible, and the new classifications will also focus on the working conditions and fringe benefits of the job.

The new method is more scientific, and reflects changes in the structure of the working population since 1911. The reduction in the number of people employed in manufacturing and the increase in the number of skilled workers in service industries, coupled with the increasing trend towards career changes, mean that the old system became irrelevant.

From the viewpoint of market researchers, the changes are welcome, but do not go far enough. A consortium of seven companies that are big users of demographic data has been pressuring the government to include more marketing-orientated questions in the census. For example, the consortium would like to see questions on religious belief and on income included. Agreement to include religion has been reached, but a parliamentary debate will be necessary to discuss the inclusion of income. Although income information is available through published statistics from the Inland Revenue offices, including the question in the census would enable researchers to estimate disposable income by combining data on number of children in the household and house size (based on the number of rooms in the house). This kind of information is currently not available on a national basis.

Most commercial market research companies carry out extra surveys of their own to supplement the census data, but these surveys are based on samples of the population. Three-quarters of the data produced by these commercial firms are extracted from the census and refined in some way. Keith Dugmore, director of the consultancy Demographic Decisions, says that the census is 'the bedrock underlying direct marketing'. John Rae of CACI adds that he would rather use a census that is nine years old than use a recent partial survey.

Socio-economic status, as classified by the 1911 system, refers to the occupation of the head of the household. This is, in itself, an outmoded concept given that the majority of British women work outside the home: thus the majority of households are dual-income (except, of course, single-person households). The commercial researchers often use classifications that do not relate to the individual's employment in any way. For example, ACORN and Mosaic classify respondents according to the type of housing they live in, and many research agencies carry out lifestyle surveys aimed at finding out how people prioritise their expenditure. Social grade is only one of around 70 variables included in the census, so researchers are able to use the rest of the information independently of the socio-economic classifications.

Whether or not more questions are included in the 2011 census will depend on the ONS's view of the degree to which the public should be burdened by form-filling. Currently, the provision of the information is required by law, but the ONS is well aware that asking too many questions is likely to lead to falsification of answers. Currently the census is too important a tool for government and business to want to risk damaging it.

Questions

1. Why might a researcher prefer to use an old census rather than an up-to-date sample?
2. What problems might arise from dropping the old socio-economic classifications?
3. What might be the reasons for including religion in the census?
4. Why might type of housing be more useful than level of income in predicting spending patterns?
5. Why might people falsify information on the census?

SUMMARY

Market research is the starting-point of marketing planning, since it focuses on the needs of the customer and provides information that supports decisions designed to meet those needs. Without good information systems, the marketing planning and strategy activities have little hope of success, and will almost always focus on the beliefs of the senior management, which may bear no relationship to the real needs of customers.

Here are the key points from this chapter:

- Data (raw facts) are useless until analysed and interpreted.
- Secondary research should always be conducted before embarking on primary research.
- Self-completion questionnaires need to be simple and unambiguous.
- All questionnaires should be piloted at least once.
- Careful training is needed to avoid interviewer bias.

- Quantitative research is about the how and the what; qualitative research is about the why.
- Market research is never 100% reliable.

CHAPTER QUESTIONS

1 What steps would you take to research the market for a new computer game?

2 Questionnaires can sometimes be ambiguous or ask irrelevant questions. How can these sources of error be reduced?

3 What can be done to overcome interviewer bias?

4 Under what circumstances would qualitative research be more appropriate than quantitative research?

5 What are the main drawbacks of questionnaires?

6 What type of focus group would be best suited to an investigation of working women's food shopping habits?

MULTI-CHOICE QUESTIONS

1 A management information system is typically an example of:

(A) Secondary research.
(B) Primary research.
(C) Customer research.

2 Primary research is:

(A) The research that is carried out first.
(B) Research that is original.
(C) The most important research.

3 Which of the following is *not* an example of qualitative research?

(A) A self-administered survey.
(B) A focus group.
(C) A cartoon test.

4 A random sample is:

(A) A sample chosen in a way that the interviewer does not control.
(B) A sample that represents the whole population.
(C) A sample in which each member of the population has an equal chance of being included.

5 People who participate in market research exercises are called:

(A) Respondents.
(B) Interviewers.
(C) Surveyors.

6 Product research is carried out in order to:

(A) Find new uses for old products.
(B) Identify new customers.
(C) Identify new ways to distribute products.

7 Which of the following is *not* a test of statistical confidence?

(A) A *t*-test.
(B) A chi-square test.
(C) A cartoon test.

8 Testing a questionnaire before running it is called:

(A) Piloting.
(B) Conferencing.
(C) Sampling.

9 A research exercise which investigates a number of different issues at once with the same respondents is called:

(A) A decision-support system.
(B) An omnibus study.
(C) A panel.

10 Environment research is concerned with:

(A) Green issues.
(B) Investigating pressure groups.
(C) Investigating the general business climate within which the firm operates.

FURTHER READING

Ian Dey's *Qualitative Data Analysis: A User-friendly Guide for Social Scientists*, (London, Routledge, 1993) offers a very entertaining and readable guide to some

of the issues surrounding qualitative data analysis, as well as some techniques for carrying it out.

Essentials of Marketing Research, 2nd edn by Tony Proctor (Harlow, Financial Times Prentice Hall, 2000) gives a concise yet comprehensive guide to marketing research techniques. In particular, Chapter 10 gives a straightforward guide to data analysis and the mathematical tools used by market researchers.

Contemporary Marketing Research by Carl McDaniel and Roger Gates (St Paul, MN, West, 1996) is a comprehensive American text with a wealth of examples. The explanations are clear and the examples are realistic, although the whole book is geared to a US audience.

GLOSSARY

Analogy A projective technique in which the respondent is invited to identify himself/herself with a non-human object.

Clinical focus group A heterogeneous group of respondents brought together under clinical conditions to discuss an issue.

Customer research Information gathering regarding the customer's needs and wants.

Data Facts gathered in the course of research.

Decision support systems Computer-based information-gathering and interpreting systems used to inform marketing decisions.

Depth interview An interview with an individual, using probing questions to arrive at the individual's innermost feelings.

Distribution research Studies of distribution methods and systems with a view to improving distribution in the future.

Editing The act of removing spoiled or aberrant data, prior to analysis.

Experiencing focus group A homogeneous group of respondents brought together to give the researcher experience of talking to a group from the population of interest.

Experiment A controlled event in which a subject is given a stimulus and his/her reactions are noted.

Focus group A group of respondents brought together to discuss an issue in the presence of a moderator, who records the group's deliberations.

Information Data that have been interpreted and explained.

Interpreting The act of extracting meaning from data in order to create information.

Interviewer bias Errors in results caused by deliberate or accidental acts of the interviewer.

Market research Studies of consumer needs, wants, behaviour and personalities in order to inform marketing decisions.

Marketing environment research Information gathering about the organisation's environment in terms of political, socio-cultural, economic and technological threats and opportunities.

Marketing information systems Ongoing information-gathering systems and record-keeping systems used to inform marketing decisions.

Marketing research All forms of information-gathering used to inform marketing decisions.

Matrix A table in which data are arranged in two or more dimensions.

Network A diagrammatic representation of the relationships between concepts.

Omnibus studies Surveys carried out on behalf of several researchers at once.

Panels Permanent or semi-permanent groups of respondents who are prepared to comment on a wide range of issues.

Piloting The act of testing a questionnaire or other research tool on a small group of respondents in order to detect errors in its design.

Postal surveys Questionnaires sent and returned through the mail.

Primary research Research carried out first-hand; original, previously unpublished work.

Product research Studies of customer and consumer responses to product offerings with a view to adapting future offerings.

Projective techniques A research method which invites respondents to project their own views onto a third party, or a cartoon character, in order to avoid embarrassment.

Promotion research Organised information-gathering regarding the effectiveness of promotional activities or potential audience responses to proposed promotional activities.

Qualitative research Gathering of non-numerical data.

Quantitative research Gathering of numerical data.

Quota sample A group of respondents having the same mix of relevant characteristics as the sample frame.

Random sample A group of respondents taken from a sample frame, each member of which has an equal chance of being included in the random sample.

Respondents Individuals who participate in research studies.

Sales research Information gathering about the selling process in order to improve training and motivation of the salesforce.

Sample A representative sub-group of respondents taken from the population as a whole.

Sample frame The population of potential respondents from which a sample will be taken.

Sampling bias Errors in results caused by studying an unrepresentative group of respondents.

Secondary research Published research; second-hand information, already published and available.

Stratified sample A group of respondents whose individual characteristics fall within specified strata of the overall sampling frame.

Structured interviews The administering of a questionnaire-type survey in a face-to-face situation.

Tabulating The arrangement of data in tables.

Taxonomy The arrangement and naming of data.

Teleconferencing Focus groups conducted over the telephone.

Telephone surveys Administering a questionnaire over the telephone.

Video-conferencing Focus groups conducted over a video link.

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