Chapter 2
The Market Research Process

Learning Objectives

After reading this chapter, you should understand:

- How to determine a research design.
- The differences between, and examples of, exploratory research, descriptive research, and causal research.
- What causality is.
- The market research process.
- The difference between qualitative and quantitative research.

Keywords Descriptive research · Causal research · Ethnographies · Exploratory research · Focus groups · Hypotheses · Interviews · Lab and field experiments · Observational studies · Qualitative and quantitative research · Scanner data

Planning a successful market research process is complex as Best Western, a worldwide association of hotels headquartered in Phoenix Arizona, discovered. When they tried to expand the Best Western brand, they planned a substantial research process to find answers to seven major marketing questions. Answering these questions required involving several research firms, such as PriceWaterhouseCoopers. These firms then collected data to gain insights into customers, non-customers, and influencers in nine different countries.

How do organizations plan for market research processes? In this chapter, we explore the market research process and various types of research.

Introduction

Executing professional market research requires good planning. In this chapter, we introduce the planning of market research projects, starting with identifying and formulating the problem and ending with presenting the findings and the follow-up (see Fig. 2.1). This chapter is also an outline for the chapters to come.

E. Mooi and M. Sarstedt, *A Concise Guide to Market Research*,
DOI 10.1007/978-3-642-12541-6_2,

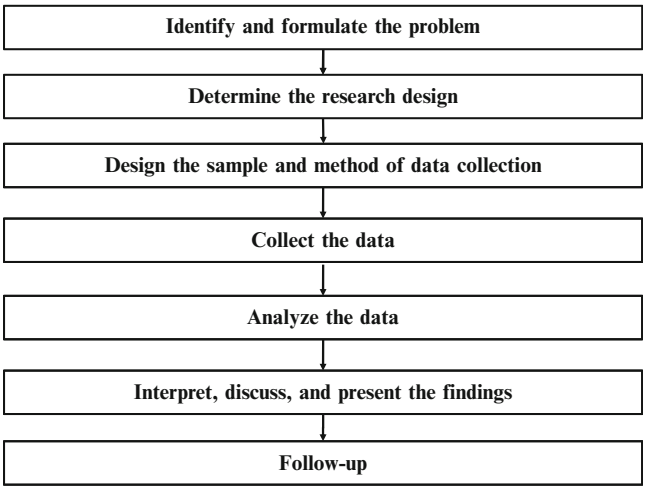

Fig. 2.1 The market research process

Identify and Formulate the Problem

The first step in setting up a market research process involves identifying and formulating the research problem. Identifying the research problem is valuable, but also difficult. To identify the "right" research problem, we have to first identify the marketing symptoms or marketing opportunities. The *marketing symptom* is the (usually tangible) problem that an organization faces. Examples of a marketing symptom include declining market shares, increasing numbers of complaints, or new products that consumers do not adopt. In some cases, there is no real existing problem but rather a *marketing opportunity*, such as potential benefits offered by new channels and products, or emerging market opportunities that need to be explored.

Organizations should identify the *marketing problem*, based on marketing symptoms or opportunities, if they want to undertake market research. The marketing problem explores what underlies the marketing symptom or opportunity by asking questions such as:

- *Why* is our market share declining?
- *Why* do the number of complaints increase?
- *Why* are our new products not successful?

Such marketing problems are divided into three categories: ambiguous problems, somewhat defined problems, and clearly defined problems.

Ambiguous problems occur when we know very little about the issues important to solve them. For example, the introduction of radically new technologies or products is often surrounded by ambiguity. When Amazon.com started selling products online,

critical but little understood issues arose, such as how to deal with the logistics and encouraging customers to access the website.

When we face *somewhat defined problems*, we know the issues (and variables) that are important for solving the problem, but not how they are related. For example, when an organization wants to export products, it is relatively easy to obtain all sorts of information, for example, on market sizes, economic development, and the political and legal system. However, how these variables impact exporting success may be very uncertain.

When we face *clearly defined problems*, both the issues and variables that are important, and their relationships are clear. However, we do not know how to make the best possible choice. Thus, we face a problem of how to optimize the situation. A clearly defined problem may arise when organizations want to change their prices. While organizations know that increasing (or decreasing) prices generally results in decreased (increased) demand, the precise relationship (i.e., how many units do we sell less when the price is increased by 1 US Dollar (USD)?) is unknown.

Determine the Research Design

The research design is related to the identification and formulation of the problem. Research problems and research designs are highly related. If we start working on an issue that has never been researched before, we seem to enter a funnel where we initially ask exploratory questions because we as yet know little about the issues we face. These exploratory questions are best answered using an exploratory research design. Once we have a clearer picture of the research issue after exploratory research, we move further into the funnel. Typically, we want to learn more by describing the research problem in terms of descriptive research. Once we have a reasonably complete picture of all the issues, it may be time to determine exactly how key variables are linked. Thus, we move to the narrowest part of the funnel. We do this through causal (not *casual*!) research (Fig. 2.2).

Exploratory Research

As its name suggests, the objective of exploratory research is to explore a problem or situation. As such, exploratory research has several key uses in solving ambiguous problems. It can help organizations formulate their problems exactly. Through initial research, such as interviewing potential customers, opportunities and pitfalls may be identified that help to determine or refine the research problem. It is crucial to discuss this information with the client to ensure that your findings are helpful. Such initial research also helps establish priorities (what is *nice* to know and what is *important* to know?) and to eliminate impractical ideas. For example, market research helped Toyota dispel the belief that people concerned with the

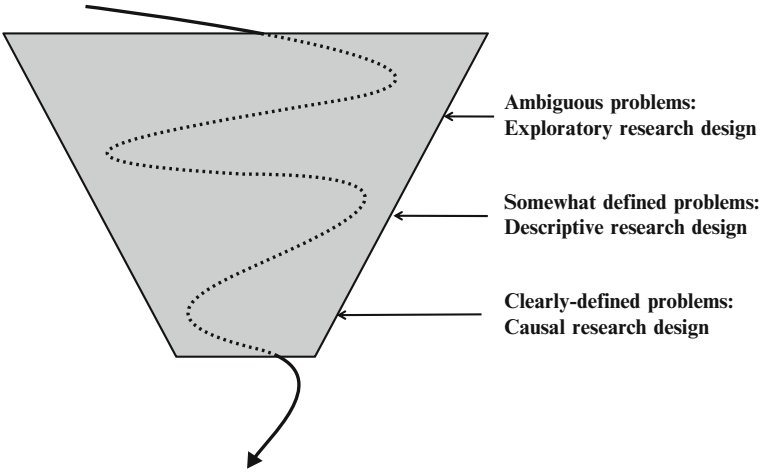

Fig. 2.2 The relationship between the marketing problem and the research design

environment would buy the Prius, as this target group has an aversion to high technology and lacks spending power.

Uses of Exploratory Research

Exploratory research may be used to formulate problems precisely. For example, interviews, focus groups, projective tests, observational studies, and ethnographies are often used to achieve this. When *personal interviews* are conducted, an interviewer asks the interviewee a number of questions. On the other hand, *focus groups* usually have between 4 and 6 participants who, led by a moderator, discuss a particular subject. The key difference between an interview and focus group is that focus group participants can react with one another (e.g., "What do you mean by…?", "How does this differ from…."), thereby providing insight into group dynamics. *Projective tests* present people with pictures, words, or other stimuli to which they respond. For example, a researcher could ask what people think of BMW owners ("A BMW owner is someone who…") or could show them a picture of a BMW and ask them what they associate the picture with. Moreover, when designing new products, market researchers can use different pictures and words to create analogies to existing products and product categories, thus making the adoption of new products more attractive (Feiereisen et al. 2008).

Observational studies are also frequently used to refine research questions and clarify issues. Observational studies require an observer to monitor and interpret participants' behavior. For example, someone could monitor how consumers spend their time in shops or how they walk through the aisles of a supermarket. These studies require the presence of a person, camera or other tracking devices, such as

RFID chips, to monitor behavior. Other observational studies may consist of click stream data that tracks information on the web pages people have visited. Observational studies can also be useful to understand how people consume and/or use products. Such studies found, for example, that baby wipes are frequently used to clean leather and cars!

Ethnographies (or ethnographic studies) originate from anthropology. In ethnographic research a researcher interacts with consumers over a period to observe and ask questions. Such studies can consist of, for example, a researcher living with a family to observe how people buy, consume, and dispose products. For example, the market research company BBDO used ethnographies to understand consumers' rituals. The company found that many consumer rituals are ingrained in consumers in certain countries, but not in others. For example, women in Colombia, Brazil, and Japan are more than twice as likely to apply make-up when in their cars than women in other countries. These findings can help marketers in many ways.

Exploratory research can help establish research priorities. What is important to know and what is less important? For example, a *literature search* may reveal that there are useful previous studies and that new market research is not necessary. Eliminating impractical ideas may also be achieved through exploratory research. Again, literature searches, just like interviews, may be useful to eliminate impractical ideas.

Another helpful aspect of exploratory research is the formulation of *hypotheses*. A hypothesis is a claim made about a population, which can be tested by using sample results. For example, one could hypothesize that at least 10% of people in France are aware of a certain product. Marketers frequently put forward such hypotheses because they help structure decision making processes. In Chap. 6, we discuss the nature of hypotheses and how they can be tested in further detail.

Another use of exploratory research is to develop *measurement scales*. For example, what questions can we use to measure customer satisfaction? What questions work best in our context? Do potential respondents understand the wording, or do we need to make changes? Exploratory research can help us answer such questions. For example, an exploratory literature search may contain measurement scales that tell us how to measure important variables such as corporate reputation and service quality. Many of these measurement scales are also included in the Marketing Handbook of Scales, such as the scale book published by Bruner et al. (2001).

Descriptive Research

As its name implies, descriptive research is all about describing certain phenomena, characteristics or functions. It can focus on one variable (e.g., profitability) or on two or more variables at the same time ("What is the relationship between market share and profitability?" and "How does temperature relate to sales of ice cream?"). Such descriptive research often builds upon previous exploratory research. After all, to describe something, we must have a good idea of what we need to measure

and how we should measure it. Key ways in which descriptive research can help us include describing customers, competitors, market segments, and measuring performance.

Uses of Descriptive Research

Market researchers conduct descriptive research for many purposes. These include, for example, describing customers or competitors. For instance, how large is the UK market for pre-packed cookies? How large is the worldwide market for cruises priced 10,000 USD and more? How many new products did our competitors launch last year? Descriptive research helps us answer such questions. For example, the Nielsen Company has vast amounts of data available in the form of *scanner data*. Scanner data are mostly collected at the checkout of a supermarket where details about each product sold are entered into a vast database. By using scanner data, it is, for example, possible to describe the market for pre-packed cookies in the UK.

Descriptive research is frequently used to segment markets. As companies often cannot connect with all customers individually, they divide markets into groups of consumers, customers, or clients with similar needs and wants. These are called *segments*. Firms can then target each of these segments by positioning themselves in a unique segment (such as Ferrari in the high-end sports car market). There are many market research companies specializing in market segmentation, such as Claritas, which developed a segmentation scheme for the US market called PRIZM (Potential Ratings Index by Zip Markets). PRIZM segments consumers along a multitude of attitudinal, behavioral, and demographic characteristics and companies can use this to better target their customers. Segments have names, such as Up-and-Comers (young professionals with a college degree and a mid-level income) and Backcountry Folk (older, often retired people with a high school degree and low income).

Another important function of descriptive market research is to measure performance. Nearly all companies regularly track their sales across specific product categories to evaluate the firm, managers, or specific employees' performance. Such descriptive work overlaps the finance or accounting departments' responsibilities. However, market researchers also frequently measure performance using measures that are quite specific to marketing, such as *share of wallet* (i.e., how much do people spend on a certain brand or company in a product category?) and *brand awareness* (i.e., do you know brand/company X?).

Causal Research

Market researchers undertake causal research less frequently than exploratory or descriptive research. Nevertheless, it is important to understand the delicate relationships between variables that are important to marketing. Causal research is used to understand how changes in one variable (e.g., the wording in advertising) affect another variable (e.g., understanding as a result of advertising). The key usage of

causal research is to uncover *causality*. Causality is the relationship between an event (the cause) and a second event (the effect), when the second event is a consequence of the first. To claim causality, we need to meet four requirements:

First, the variable that causes the other needs to be related to the other. Simply put, if we want to determine whether price changes cause sales to drop, there should be a relationship or correlation (see Chap. 5). Note that people often confuse correlation and causality. Just because there is some type of relationship between to variables does not mean that the one caused the other (see Box 2.1). Second, the cause needs to come before the effect. This is the requirement of time order. Third, we need to control for other factors. If we increase the price, sales may go up because competitors increase their prices even more. Controlling for other factors is difficult, but not impossible. In experiments, we design studies so that external factors' effect is nil, or as close to nil as possible. This is achieved by, for example, randomly giving participants a stimulus (such as information on a price increase) in an experiment, or by controlling environmental factors by conducting experiments in labs where, for example, light and noise conditions are constant (controlled). To control for other factors, we can also use statistical tools that account for external influences. These statistical tools include analysis of variance (see Chap. 6), regression analysis (see Chap. 7), and structural equation modeling (see end of Chap. 8). Finally, an important criterion is that there needs to be a good explanatory theory. Without theory our effects may be due to chance and no "real" effect may be present. For example, we may observe that when we advertise, sales decrease. Without any good explanation for this (such as that people dislike the advertisement), we cannot claim that there is a causal relationship.

Box 2.1 Correlation does not imply causation

Correlation between two variables does not automatically imply causality. For example, in Fig. 2.3 US fatal motor vehicle crashes (per 100,000 people) are plotted against the harvested area of melons (in 1,000 acres) between 1996 and 2005.

Clearly, the picture shows a trend. If the harvested area of melons increases, the number of US fatal motor vehicle crashes increases. This is a correlation and the first requirement to determine causality. Where the story falls short in determining causality is explanatory theory. What possible mechanism could explain the findings? Other examples include the following:

- As ice cream sales increase, the rate of drowning deaths increases sharply. Therefore, ice cream causes drowning.
- With a decrease in the number of pirates, there has been an increase in global warming over the same period. Therefore, global warming is caused by a lack of pirates.

If the above facts were to be presented, most people would be highly skeptical and would not interpret these facts as describing a causal mechanism.

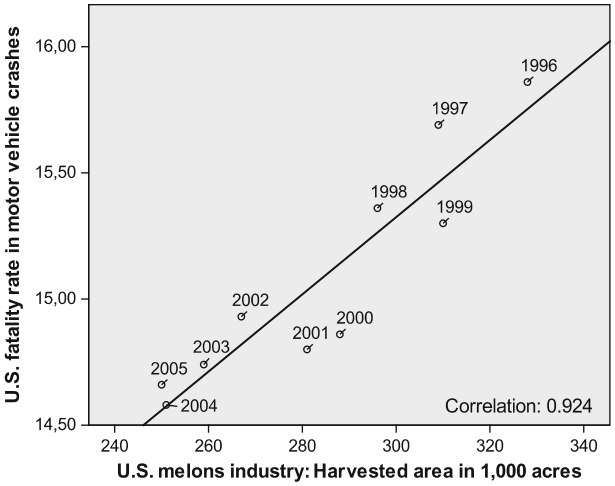

Fig. 2.3 Correlation and causation. The data were taken from the NHTSA Traffic Safety Facts, DOT HS 810 780, and the United States Department of Agriculture, National Agricultural Statistics Service

For other mechanisms, the situation is much less clear-cut. Think of claims that are part of everyday market research, such as "The new advertisement campaign caused a sharp increase in sales," "Our company's sponsorship activities helped improve our company's reputation," or "Declining sales figures are caused by competitors' aggressive price policies." Even if there is a correlation, the other requirements to determine causality may not be met. Causal research may help us to determine if causality really exists in these situations.

Some of the above and further examples can be found in Huff (1993) or on Wikipedia.

http://en.wikipedia.org/wiki/Correlation_does_not_imply_causation

Causal research is important, as it provides exact insights into how variables relate and may be useful as a test run for trying out changes in the marketing mix. Key examples of causal research include lab and field experiments and test markets.

Uses of Causal Research

Experiments are a key type of causal research and come in the form of either lab or field experiments. *Lab experiments* are performed in controlled environments (usually in a company or academic lab) to gain understanding of how changes in one variable (called *stimulus*) causes changes in another variable. For example, substantial experimental research is conducted to gain understanding of how changing websites helps people navigate better through online stores, thereby increasing sales. *Field experiments* are experiments conducted in real-life settings where a stimulus (often in the form of a new product or changes in advertising) is provided to gain understanding of how these changes impact sales. Field experiments are not set up in controlled environments (thus eliminating some of the causality claim's strength), but their realism makes them attractive for market research purposes. Field experiments are conducted regularly. For example, Procter & Gamble conducted a substantial number of field experiments to test the effects of different pricing strategies to help ease challenges and brand loyalty issues related to promotional pricing (see mobile tag and URL in Box 2.2 for more information). We discuss experimental set-ups in more detail in Chap. 4.

Box 2.2 Procter & Gamble's value pricing strategy

http://www.emorymi.com/neslin.shtml

Test markets are a particular form of field experiments in which organizations in a geographically defined area introduce new products and services, or change the marketing mix to gauge consumer reactions. For example, Acxiom and GFK's Behaviorscan provide test market services. Picking a controlled and geographically

Table 2.1 Types of research, uses, and examples

Type of research	Examples
Exploratory	Formulate problems precisely
	Establish priorities for research
	Eliminate impractical ideas
	Develop hypotheses
	Develop measurement scales
Descriptive	Describe customers/competitors
	Describe segments
	Measure performance
Causal	Explore causal relationships

defined test market is difficult. Test markets help marketers learn about consumer response, thus reducing the risks associated with a nationwide rollout of new products/services or changes in the marketing mix. In Chap. 4, we discuss test markets in more depth.

In Table 2.1 we provide several examples of the different types of research discussed.

Design the Sample and Method of Data Collection

After having determined the research design, we need to design a sampling plan and choose a data-collecting method. This involves deciding whether to use existing (secondary) data or to conduct primary research. We discuss this in further detail in Chap. 3.

Collect the Data

Collecting data is a practical but sometimes difficult part of the market research process. How do we design a survey? How do we measure attitudes toward a product, brand, or company if we cannot observe these attitudes directly? How do we get CEOs to respond? Dealing with such issues requires careful planning and knowledge of the marketing process. We discuss related key issues in Chap. 4.

Analyze the Data

Analyzing data requires technical skills. We discuss how to describe data in Chap. 5. After this, we introduce key techniques, such as hypothesis testing and analysis of variance (ANOVA), regression analysis, factor analysis, and cluster analysis in Chaps. 6–9. In each of these chapters, we discuss the key theoretical choices and issues market researchers face when using these techniques. We also illustrate how

researchers can deal practically with these theoretical choices and issues, using the market-leading software package IBM SPSS Statistics.

Interpret, Discuss, and Present the Findings

When executing the market research process, one's immediate goals are interpreting, discussing, and presenting the findings. Consequently, researchers should provide detailed answers and actionable suggestions based on data (discussed in Chaps. 3 and 4) and analysis techniques (Chaps. 5–9). The last step is to clearly communicate the findings and recommendations to help decision making and implementation. This is further discussed in Chap. 10.

Follow-Up

Market researchers often stop when the results have been interpreted, discussed, and presented. However, following up on the research findings is important too. Implementing market research findings sometimes requires further research because suggestions or recommendations may not be feasible or practical and market conditions may have changed. From a market research firm's perspective, follow-up research on previously conducted research can be a good way of entering new deals to conduct further research.

Qualitative and Quantitative Research

In the discussion above on the market research process, we ignored the choice between qualitative and quantitative research. Nevertheless, market researchers often label themselves as either quantitative or qualitative researchers. The two types of researchers use different methodologies, different types of data, and focus on different research questions. Most people regard the difference between qualitative and quantitative as one between numbers and words, with quantitative researchers focusing on numbers and qualitative researchers on words. This distinction is not accurate, as many qualitative researchers use numbers in their analyses. Rather, the distinction should be made according to when the information is *quantified*. If we know that the possible values occur in the data before the research starts, we conduct quantitative research, while if we know only this after the data have been collected, we conduct qualitative research. Think of it in this way: if we ask survey questions and use a few closed questions such as "Is this product of good quality?" and the respondents can choose between "Completely disagree," "Somewhat disagree," "Neutral," "Somewhat agree," and "Completely

agree," we know that the data we will obtain from this will – at most – contain five different values. Because we know all possible values beforehand, the data are also quantified beforehand. This is therefore quantitative research. If, on the other hand, we ask someone, "Is this product of good quality?," he or she could give many different answers, such as "Yes," "No," "Perhaps," "Last time yes, but lately. . .". This means we have no idea what the possible answer values are. Therefore, these data are qualitative. We can, however, recode these qualitative data and assign values to each response. Thus, we quantify the data, allowing further statistical analysis.

Qualitative and quantitative research are equally important in the market research industry in terms of money spent on services.[1]

Questions

1. What is market research? Try to explain what market research is in your own words.
2. Why do we follow a structured process when conducting market research? Are there any shortcuts you can take? Compare, for example, Polaris's market research process (http://www.polarismr.com/education/steps_index.html) with the process discussed above. What are the similarities and differences?
3. Describe what exploratory, descriptive, and causal research are and how these are related to one another. Provide an example of each type of research.
4. What are the four requirements for claiming causality? Do we meet these requirements in the following situations?
   - Good design caused the apple iPad to outsell its direct competitors.
   - Using Aspirin makes headaches disappear.
   - More advertising causes greater sales.
5. What is qualitative research and what is quantitative research? In which type of research (exploratory, descriptive, and causal) is qualitative or quantitative research most likely to be useful?

Further Readings

Levitt SD, Dubner SJ (2005) Freakonomics. A rogue economist explores the hidden side of everything. HarperCollins, New York, NY

An entertaining book that discusses statistical (mis)conceptions and introduces cases where people confuse correlation and causation.

Levitt SD, Dubner SJ (2009) Superfreakonomics. HarperCollins, New York, NY

[1] See http://www.e-focusgroups.com/press/online_article.html

The follow-up book on Freakonomics. Also worth a read.

Market Research Services, Inc. at http://www.mrsi.com/where.html

This website discusses how MRSI approaches the market research process.

Nielsen Retail Measurement at http://en-us.nielsen.com/tab/product_families/nielsen_retail_measurement

This website details some of the data the Nielsen company has available.

PRIZM by Claritas at http://www.claritas.com/MyBestSegments/Default.jsp?ID=20

This website allows looking up lifestyle segments at the zip level in the US.

Qualitative vs. Quantitative Research: Key Points in a Classic Debate at http://wilderdom.com/research/QualitativeVersusQuantitativeResearch.html

Explores differences between qualitative and quantitative research.

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Feiereisen S, Wong V, Broderick AJ (2008) Analogies and mental simulations in learning for really new products: the role of visual attention. J Prod Innov Manage 25(6):593–607

Huff D (1993) How to lie with statistics. W. W. Norton & Company, New York, NY