# 6 Marketing research design

Marketing research is a way of obtaining data. Research involves systematic, controlled, valid and rigorous exploration and description of what is not known, verification of what is already known or establishment of associations and causation.

**A research design** is a plan, structure and strategy of obtaining answers to research questions (objectives) of problems. It is the complete scheme or programme of the research. It is a detailed plan for how a research study is to be completed – operationalizing variables so they can be measured, selecting a sample of interest to study, collecting data to be used as a basis for testing hypotheses, and analysing the results (Kerlinger, 1986, p. 279; Thyer, 1993, p. 94 quoted in Kumar, 2011, p. 94).

A research design has two functions:

- To identify or develop procedure and logical arrangements in order to conduct the research

- To ensure quality in the research procedure in order to get validity, objectivity and accuracy of data.

In other words, it allows to conceptualize an operational plan to undertake various procedure and tasks related to the research in order to get accurate data. A research design can be cross-sectional, before-and-after, comparative, control experiment or random control design (Kumar, 2011, p. 94-95).

Sometime we may want to explore cause-and-effect relationship of independent variable responsible for bringing a change on dependent variable that changes under the impact of independent variable(s). There are other factors that affect the relationship of two or more variables and cannot be eliminated, however they can be controlled to some extent. They are called extraneous variables. The impact of extraneous variables can be identified by using a control group in the study design. The findings can also be affected by random variables or chance variables that are a source of error. In most cases the net effect of chance variables is considered to be of negligible importance (Kumar, 2011, p. 96-97).

The main purpose of a research design is to decide how we will find answers to our research questions. .It is important to clear up what (information) we want to find and how.

**A research design should include the following:**

- **A conceptual framework design**

- **The study design** per se including methodology (methods of data collection, the measurement procedures, the sampling strategy, the frame of analysis and the time-frame).

- The research design as a part of a research process is shown in Figure 6.1.
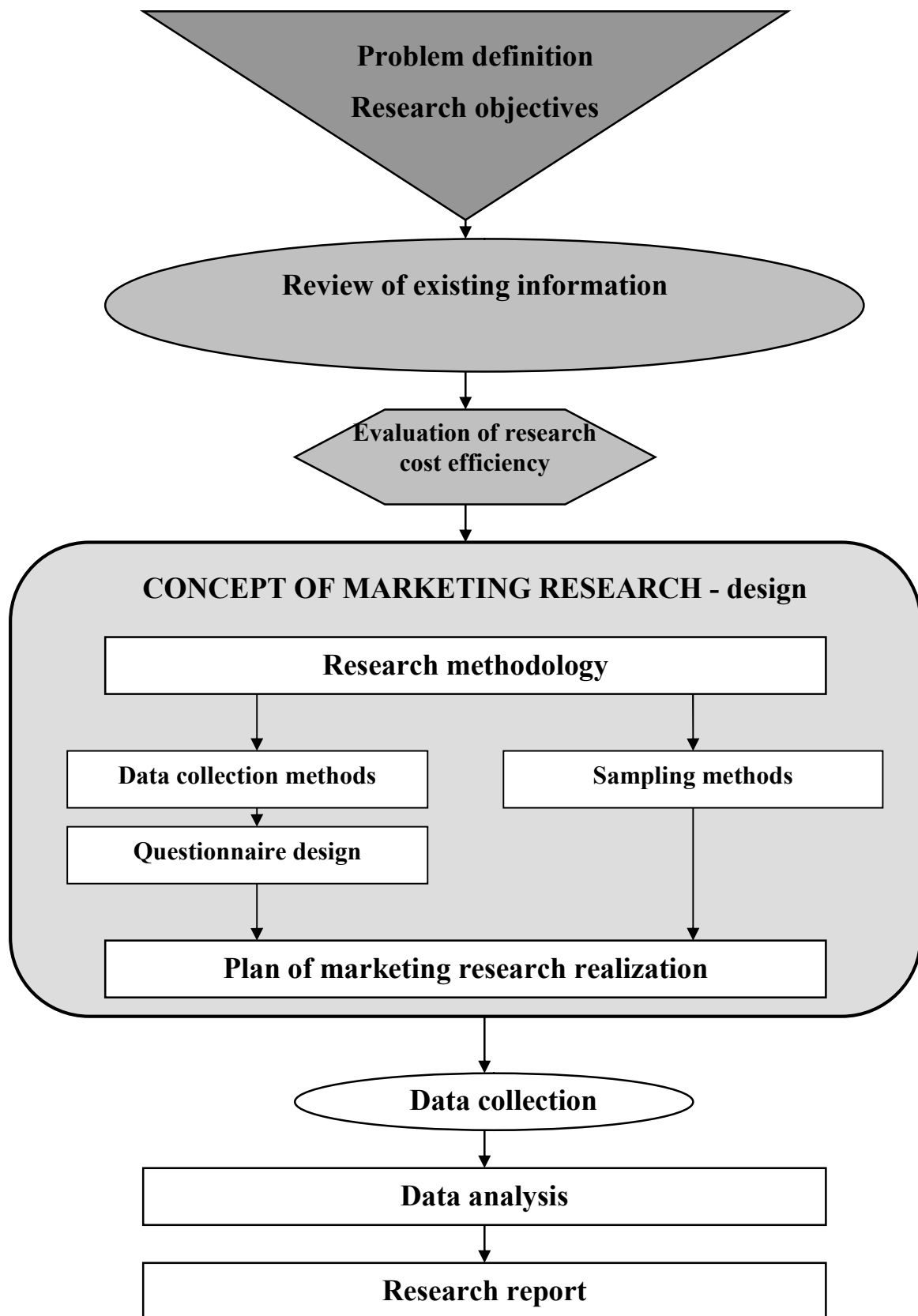
**Figure 6.1 Marketing research process**

Source: Simová, 2010a

The research design refers to research questions, objectives and conceptual framework of the study. It further develops it into methodological approach, research purpose and strategy, methods of sampling and data-collection as well as methods of analysis.

Figure 6.2 shows the development of the research design in the sequence of an overall study development. It displays a link between the conceptual part of the study covering problem definition, research questions and objective specifications, development of theoretical framework of the study, and research methods design.

Figure 6.2 shows the research design, the methodological approach and methods used to study the impact of the transition process on the development of clothing retailing in the Czech Republic. For more detail see Simová, 2010b. The research is broadly aimed at characterising changes in the structure of clothing retailing, to identify the main factors associated with the changes in retailing and to analyse their impact on development of clothing retailing. As the topic of the research is rather broad, it was necessarily to apply a few different approaches to fulfil the objectives of the study. Along with the research questions and objectives of the study the research process was designed to examine changes at both, the macro (structural changes) and the micro level of the retail development (changes at the level of retail institutions in relation to consumers and competition). The research process was thus composed of three different surveys concentrated on:

- *Changes in clothing retail structure* (what has changed, how and to what extent)
- *Factors associated with changes in clothing retailing* (why it has changed) examining factors at both, macro (environmental factors) and micro (competition, consumers, merchandise distribution channel) levels
- *Impact of consumers* on development of clothing retailing.

The surveys applied different methodological approaches and methods of data collection in an attempt to answer research questions and to explain the development of clothing retailing in the Czech Republic under special conditions of the transition process.

The relationship between the macro and the micro levels of the study and associated surveys as well as their contributions to the study of changes and development of clothing retailing in the Czech Republic, is also outlined in Figure 6.2.
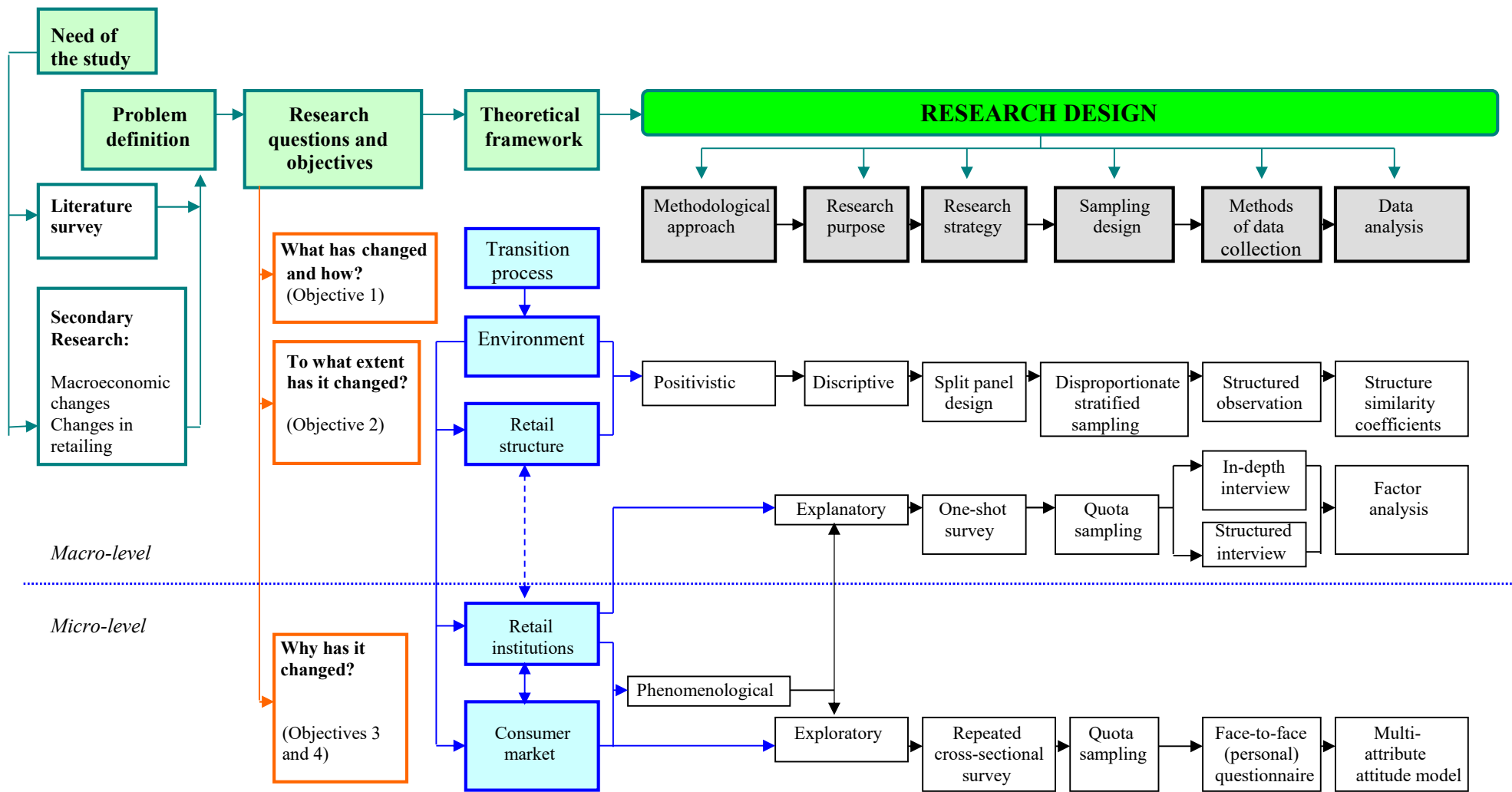
**Figure 6.2 Research design**

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## 6.1 Conceptual framework of marketing research

**Conceptual framework** is a structured concept of a study that enables to depict all relevant and associated areas of the explored topic. It is actually a model of important variables showing their relationship and impact on explored phenomena. The conceptual framework can be designed based on a literature study, an existing model and its alteration or developed as a new model using various methods and techniques or exploratory study.

Conceptual framework allows to:

- understand and decompose a problem explored by the research
- identify and specify information we need
- get better knowledge and information about the related topic.

Conceptual framework is related to the problem definition and needs for the research. It reflects the objectives of the research and thematically delimit the areas of interest. Sometime, the main objective of the research can be decomposed into a few partial objectives or even into a few independent researches. It should be a starting point of a study design.

The conceptual framework consists in the following:

- Analysis and deeper understanding of the research problem and explored issue, its structure and components
- Specification of all related factors and variables, identification of dependent and independent variables and mutual relationships between them
- determining the main variables that are important in terms of the research objectives and will be explored by the research
- specification of variables measurement  (quantification) (Simová, 2010a).

To help explain a conceptual framework development, the following example of a research study focused on changes in the Czech clothing retail market, its structure and changes in it within the process of transition to a market economy will be used (see Simová, 2010b).

The study aimed to identify main causes of retail changes and contribute to their understanding by developing a model in an attempt to explain changes in clothing retailing in the Czech Republic caused by specific conditions of the transition process.

Conceptually the project aimed to study *what* changed in clothing retailing in the Czech Republic and *how* (objective 1), *to what extent* clothing retailing changed (objective 2) and *why* it changed (objectives 3 and 4) - which meant to find out what were the main factors associated with changes in the Czech clothing retailing in the 1990s.

**The objectives of the study were summarised as follows:**

1. To study the evolution of the structure of clothing retailing longitudinally with particular reference to:
   - number of shops
   - sales space
   - location
   - ownership
   - retail format
   - store size
   - merchandise
   - price

2. To describe the extent of structural changes in clothing retailing caused by market changes

3. To determine the main factors associated with changes in clothing retailing and examine their impact on retail changes by the size of population in towns and retailers' background characteristics

4. To study changes in the consumer market associated with consumers' shopping attribute importance in relation to changes in clothing retailing by examining consumers' store type perception and attitudes towards different retail formats

The conceptual framework of the research was based on the literature study and its critical analysis. The retail theories examining the evolution of retail institutions and the market structure generally emphasise two different approaches. One approach attempts to bring a historical survey of the significant events occurring in the course of the retail development, the other attempts to identify causal factors in the emergence and development of major retail store types. Basically, retailing is a dynamic complex affected by a large number of factors. The causes of changes in the retail industry thus are considered to be both, environmental (external) and internal to the business itself.

Besides environmental (political, legislative, economic, social and technological) factors, the major driving forces in the retail development are:

- consumers, their changing nature, characteristics and behaviour
- retailers themselves searching for more effective ways and more profitable methods of operation (new technology) and emerging higher level of competition
- conflicts in the distributive structure and increasing horizontal and vertical competition.

The study focused upon the monitoring of what changed in clothing retailing in the Czech Republic in the 1990s, identifying a few major interrelated forces causing changes in retailing and assessing their importance in the retail development.

The preliminary findings led to the conclusion that the structure of clothing retailing was related to population and that is why the structural changes in clothing retailing should be examined with particular reference to the size of population. For this purpose, five categories of towns according to their size of population stated in accordance with the town population categories used in the Czech official statistics were used as a sampling frame and basis for data analysis. As population also represents consumers, consumers and their impact on changes in clothing retailing were considered to be an important factor in the development of clothing retailing. For this reason, research on consumers' store type perception was designed and conducted in 1995 and 1999. The study thus, besides monitoring structural changes in clothing retailing in the transition process, also attempted to explore the role and impact of consumers, their shopping preferences, store perceptions and attitudes on changes in clothing retailing in the Czech Republic. In order to identify the impact of other important factors on changes in clothing retailing, research on retailers' perception of retail changes was conducted in 1999. The conceptual framework of the study is illustrated in Figure 6.3.
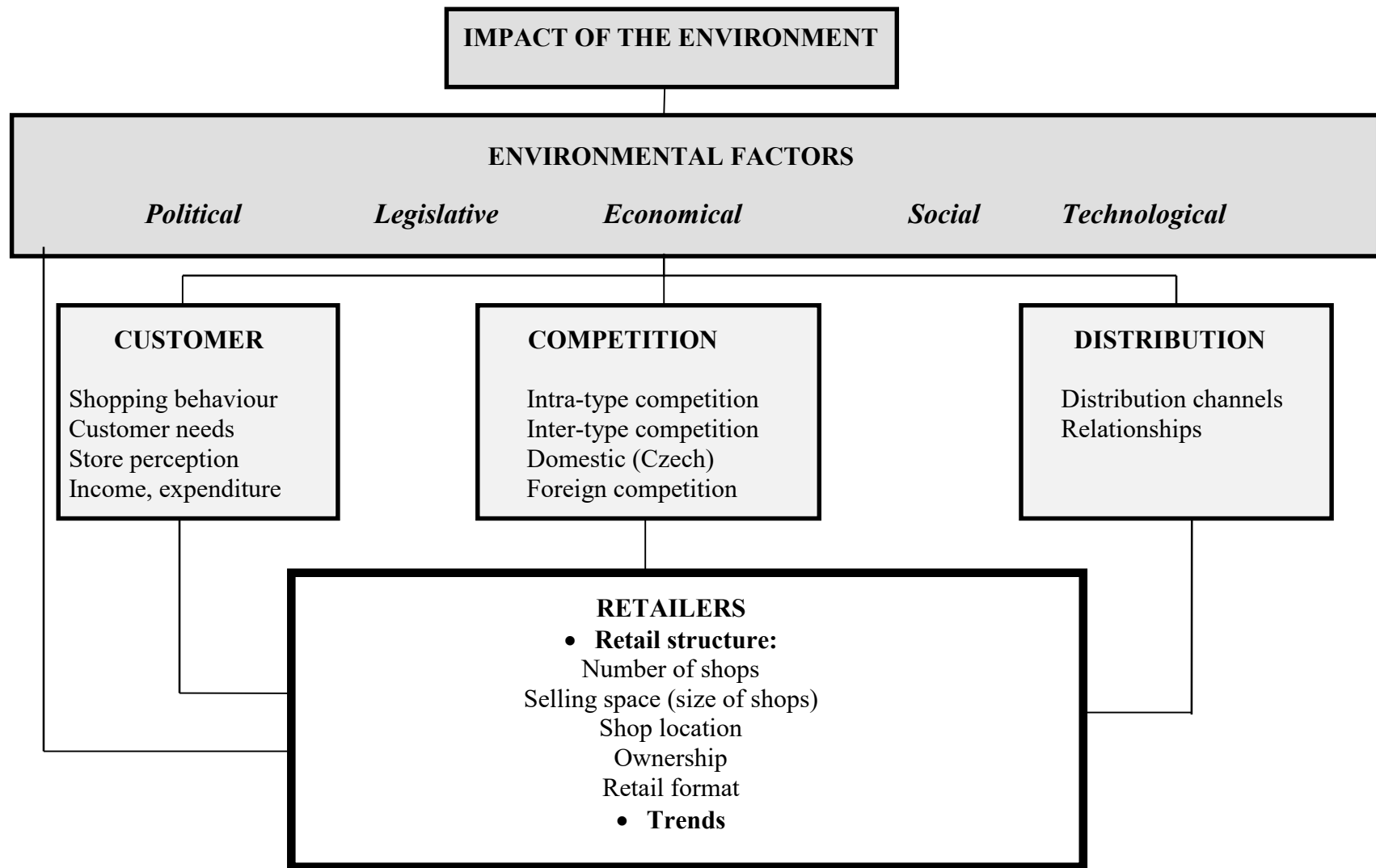
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**IMPACT OF THE ENVIRONMENT**

**ENVIRONMENTAL FACTORS**

*Political*     *Legislative*     *Economical*     *Social*     *Technological*

**CUSTOMER**

Shopping behaviour
Customer needs
Store perception
Income, expenditure

**COMPETITION**

Intra-type competition
Inter-type competition
Domestic (Czech)
Foreign competition

**DISTRIBUTION**

Distribution channels
Relationships

**RETAILERS**
- **Retail structure:**
Number of shops
Selling space (size of shops)
Shop location
Ownership
Retail format
- **Trends**

**Figure 6.3 Conceptual framework of marketing research**

## 6.2 Methodological approach in marketing research design

**A study design** is an important part of the research design. Methodological approach is one of the first things that should be considered when designing a research as it also influences research methods of sampling and data collection. However, the appropriateness of the research approach is given by the nature of the phenomena that are going to be explored (Easterby-Smith, Thorpe, Lowe, 1991).

There are two methodological approaches – positivistic and phenomenological (Easterby-Smith et al., 1991; Saunders, Lewis, Thornhill, 1997) that can be used in quantitative and qualitative study design (Kumar, 2011, p. 103-133).

The methodological approaches have their advantages and disadvantages, one is more suitable for a certain type of the research than the other and a different quality of results can be obtained by them. While **positivistic approach** is regarded as scientific, quantitative, hypothetico-deductive (hypotheses testing) starting with a theory and describing what is happening, **phenomenological approach** is labelled as interpretative, qualitative, ethnographic, naturalistic, the approach the theory of that tends to arise from the enquiry (hypotheses generating) and attempts to understand and explain why something is happening (Robson, 1993; Saunders et al., 1997). It has the ability to look at change process over time, to adjust to new ideas and to contribute to the evolution of new theories (Easterby-Smith et al., 1991).

To fulfil the objectives of the study mentioned above and answer the research questions (see chapter 6.1) both positivistic and phenomenological approaches were taken in the study in the following way:

- **The positivistic approach** was applied in the longitudinal study on the structure of clothing retailing. Changes in clothing retailing were monitored objectively from "outside" (external reality) by observing the total number of clothing stores, their ownership, retail format, location and size in selected towns in the Czech Republic. This part of the research provides a descriptive analysis of the structure of clothing retailing and points out changes that have happened in the sector in the period of the transition. It

gives answers to the questions *"What has changed?", "How has it changed?"* and *"To what extent?"* To monitor changes, a longitudinal study on the structure of clothing retailing in the Czech Republic was carried and repeated every year six times since 1994 to 1999. The collected data are purely quantitative in nature and were used to test hypotheses drawn from the theory of retail structure evolution (presented in chapter 1).

- To complete the study on changes in clothing retailing, a **phenomenological approach** was used to examine the changes in clothing retailing from "inside" (internal to business itself) trying to understand and explain what has happened and why.

This part of the research expands into qualitative area of the research trying to identify causes of changes and analyse the level of their impact on development of clothing retailing. It is an analytic research orientated less towards representativeness and more towards finding associations and explanations. It attempts to give an answer to the question *"Why has retail structure changed?"* or in other words *"What were the main factors associated with changes in clothing retailing?"* The research focuses on analysis of changes in clothing retailing determined by retailers themselves:

- the inter (competition between different retail formats)- and intra-type competition (competition among the same type of retail formats)
- changes in distribution
- new technology developments
- consumers (Simová, 2010b).

The most significant cause of retail change has been considered to be consumers, their needs and wants that are now totally different from consumers in the 1980s and from that of the 1950s. The research analyses the influence of consumers on retailers by examining their perception and attitudes towards different retail formats.

Along with the theory and objectives, the research was divided into three parts:

1. Study of retail environment and clothing retail structure evolution.

2. Study of the development of clothing retailing from the perspective of clothing retailers, including competition and problems in distribution and sourcing, and how retailers respond to them.

3. Study of consumer market (demographics, consumers' attitudes and perception of different types of retail shops).


## 6.3 Research strategy

Research strategy represents different ways of collecting and analysing data that have to be related to the purpose of the research as well as being appropriate to address the research questions. There are three commonly used strategies - **experiment, survey and case study.** Although it is suggested that there is a link between the three strategies in relation to the purpose of the research (Robson, 1993), each strategy can be used for any or all of the three purposes that can be **exploratory, descriptive or explanatory** (for more detail see lecture 4). It is also important to note that the three traditional strategies do not represent all possible forms of inquiry; some hybrid strategy or a combination of the strategies can be used in investigation (Robson, 2002).

Despite a growing attempt to combine strategies in research, survey with the multi-method approach is considered to be the most appropriate strategy for a research for the following reasons:

- Survey is a popular and common strategy used in research because it is easily understood. It provides a general and representative picture. Conceptually, survey is not tied to any particular philosophical viewpoint (Shaughnessy and Zechmeister, 1990).
- Surveys allow the use of a few different methods of data collection such as structured observation, structured interview or questionnaire and can be applied in quantitative and qualitative research. They are not restricted to variants of questionnaire. (Saunders et al., 1997).

- Data obtained by surveys are standardised allowing easy comparison (Shaughnessy and Zechmeister, 1990).

- Surveys provide a relatively simple and straightforward approach to the study of attitudes, values, beliefs and motives (Robson, 1993; Fife-Schaw, 1995a).

- Surveys are often cross-sectional studies but they also allow for describing and assessing changes or development over time as a form of longitudinal research (Easterby-Smith et al., 1991).

- In this study surveys were used to explore aspects of the situation (changes in clothing retailing), to describe the situation (how clothing retailing and consumers changed), to seek explanation (why they changed) and provide data for testing hypotheses which correspond to the research objectives of this study (Easterby-Smith et al., 1991; Robson, 1993).

- Surveys are often the only, or the easiest way of retrieving information about the past history of a large set of people or organisations (Robson, 1993). In this study, survey was used to examine the past history and experience of clothing retailers in the process of the transition (the research on retail structure and retailers themselves).

- As the aim of the project was to study changes in clothing retailing in a certain period of time (during the transition process), the same things had to be measured and investigated at different points in time. A survey is often the main approach in this kind of research (Robson, 1993).

- In surveys, there is no attempt to manipulate variables or control conditions of investigated phenomena, which was the case in this research. Changes in clothing retailing were examined in the real conditions as they happened because it was not possible to manipulate or control any variable affecting the change.

- While conclusions on changes in clothing retailing could not be drawn from a small sample of retailers or consumers (in the research on consumers' store perceptions and attitudes), survey allowed the collection of a large amount of data from a sizeable population in a highly economic way in a short period of time (Robson, 1993; Saunders et al., 1997).

However, survey strategy is not without its shortcomings. While some researchers tend to see the survey as the central 'real world' strategy, others view surveys as generating a large amount of data of dubious value (Robson, 1993). The trustworthiness of the data is given by internal validity associated with concerns about question-wording, answer-coding, obtaining

valid information (interviewer bias) about respondents, asking the 'right' people, and external validity that concerns sampling, reliability of response and generalisation of findings.

Hagenaars (1990) points out that valid insight into the nature of past and future changes can be obtained only from the systematic analysis of empirical data. The most appropriate approach for the analysis of change is to use several cross-sectional surveys repeated over time since a one-shot cross-sectional survey by itself conducted at one point in time is not suited for the study of change. By using surveys from different periods, many processes of change can be observed and identified; differences between groups in terms of their characteristics can be investigated to determine the causes and consequences of changes (Hagenaars, 1990).

Two basic approaches in a longitudinal study of change - *panel and repeated cross-sectional studies* referring to the essence of a sample design can be distinguished.

In a study using a *panel design*, data on the same topics are collected from the same respondents at different points in time. However, this methodology brings a few problems that concern the achievement of the initial sample, sample mortality and conditioning (Moser and Kalton, 1971; Five-Schaw, 1995a). This means that in a long-term study, it is difficult to recruit a representative panel of respondents and guarantee that the data will be collected from the same sample every time. The reason is that either fewer people are willing to participate in the research, or some of them die and new people are not represented in the original panel. There is also a risk that the panel members become untypical as a result of being on the panel. Really long-term longitudinal studies require a long-term commitment of resources (financial and human) and this makes this approach to the research comparatively rare (Fife-Schaw, 1995a).

In *repeated cross-sectional design* or so-called trend studies (Menard, 1991) or time series surveys (Fife-Schaw, 1995a), data are gathered at different points in time from different samples drawn from the same population under study. Repeated survey, as they do not follow the same individuals over time, allow a shift of focus from detecting individual change, i.e. gross change among individuals in panel survey to one of aggregate change - the net effect of all the changes ("net change") in the population.

To overcome limitations of panel and cross-sectional studies, a combination of both designs can be used. One such hybrid is the "rotating panel survey" (Duncan and Kalton, (1987); Robson, 1993) where panels are rotated - new panels are added and old ones are rotated off to maintain up-to-date samples of changing population. A second hybrid, the "split panel survey" (Duncan and Kalton, 1987) estimates gross change in repeated surveys by adding a panel component to repeated survey (Firenbaugh, 1997). It is supposed that these hybrids will likely become more common in the future; however Kish (1983, 1986) recommended the use of split panel design.

Although panel design can be used to investigate both individual and aggregate changes (Firenbaugh, 1997; Hagenaars, 1990), for the purpose of this project, a traditional panel design was ill-suited to estimate aggregate trends for the overall changes in clothing retailing. The focus of the study was to examine the impact of the transition on clothing retailing (the net effect of all changes) rather than individual changes, i.e. gross change among individuals (clothing retailers and consumers) as they depend to a large extent on individual (retailers and consumers) differences in behaviour. For this reason a repeated cross-sectional design was applied in the research on changes in the retail structure and consumer market. One-shot cross-sectional design was used in the research on retailers themselves.

## 6.4 Purpose of the research

Another factor related to a research strategy is the purpose of the research (Robson, 1993). The research in terms of its purpose can be:

- exploratory,
- descriptive
- explanatory.

**Exploratory research** is rather general in its topic and objectives. It is less formal, structured and rather small in its extent.

It can be the first stage of a main research. Its objective is either to explore an area where little is known or to investigate the possibilities of undertaking a particular research study and use the preliminary data for the research study design. It can also be called a **feasibility study** or a

**pilot study** in case the study is conducted to decide if it is worth to undertake a detailed investigation. Exploratory studies are also conducted to develop, refine and/or test measurement tools and procedures. Methods used in an exploratory study includes literature review, observations, secondary data analysis, and interviews with customers or experts.

**Descriptive research** aims to describe what is prevalent with respect to the issue or problem under study, i.e. to describe systematically a situation, problem, phenomenon or attitudes towards an issue and provide thus information needed by a company.

Descriptive study usually describes:

- Market, market potential characteristics
- Characteristics of a certain product/service users, profiles of consumers
- Attitudes and/or behaviour of customers or consumers
- New products, new technologies or innovations in the market.

**Explanatory research** attempts to clarify why or how there is a relationship between two or more factors associated with a situation or phenomenon. The aim is either to explain or to discover or establish the existence of a relationship, association or interdependence between two or more aspects of a situation. These studies can also be called correlational studies.

This type of research is demanding in terms of its preparation, undertaking and data analysis and interpretation. It can be time consuming and expensive, as well. Experiments and market tests are used often (Kumar, 2011).

**Example: Research on clothing retail development**

The *research on changes in the structure of clothing retailing* was used as a descriptive study in order to get the first picture of what happened in clothing retailing in the period studied. Survey was used in this research because it appeared to be the best and the only strategy appropriate for exploring the structure of clothing retailing. The highly structured observation used in the survey on changes in the structure of clothing retailing brought new insights and valuable information on what has happened in clothing retailing, especially in the case when absolutely no data on the structure of clothing retailing in the Czech Republic were available at all.

The survey as a device of explanation (Robson, 1993) was employed in an explanatory *research on retailers' perception of changes in clothing retailing* attempting to explain, based on the perception of clothing retailers, how changes in the retail environment affected clothing retailing in the 1990s.

The survey strategy was used in the exploratory research on *consumers' store type perceptions and attitudes* attempting to explore changes in clothing retailing in relation to changes in consumers' store type perceptions and store attitudes. At this point it should be stated that the main objective of this research was not to study store image perception and consumers' store attitudes per se but instead, to use this study as a device to examine and explain the influence of consumers' store attitudes (if any) on the development of clothing retailing in the Czech Republic.

For the purpose of the research, four different retail formats - department store, "mid-range"[1] category clothing store, boutique and discount store were used to explore consumers' attitudes towards different types of clothing stores. The objective of the research was to evaluate the selected store image attributes of four different types of clothing stores (department store, mid-range clothing store, boutique and discount store) as perceived by consumers and to explore the relative strength and importance of these attributes in their choice of clothing store.

The data obtained by the research conducted in 1995 and 1999 were used to describe consumers' attitudes towards each type of clothing stores in relation to their store attribute importance and to explore the influence of consumers (if any) on changes in clothing retailing.

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[1] This retail format category includes clothing stores that could be positioned as a store between a boutique and a discount store (somewhere in the middle of the price and quality continua). This category of clothing stores comprises both multiple and small independent clothing retailers of the same price-quality market position. In 1994 when the retail structure was very fragmented, most of the clothing stores were small independent stores. After that, the share of multiple retailers began to grow.

# Summary

A research design is a plan, structure and strategy of obtaining answers to research questions (objectives) of problems. It is the complete scheme or programme of the research. It is a detailed plan for how a research study is to be completed – operationalizing variables so they can be measured, selecting a sample of interest to study, collecting data to be used as a basis for testing hypotheses, and analysing the results. The main purpose of a research design is to decide how we will find answers to our research questions. .It is important to clear up what (information) we want to find and how.

A research design includes a conceptual framework design and a study design. A study design is an important part of the research design. There are two methodological approaches – positivistic and phenomenological that can be used in quantitative and qualitative study design.

Research strategy represents different ways of collecting and analysing data that have to be related to the purpose of the research as well as being appropriate to address the research questions. There are three commonly used strategies - **experiment, survey and case study.**

Another important aspect to consider in the research design is the purpose of the research, which can be **exploratory, descriptive or explanatory.**

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