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**COMPARISON OF SURVEY METHODOLOGY
IN THE US AND EUROPE**

A Thesis

Presented to the

College of Business Administration

and the

Faculty of the Graduate College

University of Nebraska

In Partial Fulfillment

of the Requirements for the Degree

Master of Business Administration

University of Nebraska at Omaha

by

Anke Pietrowski

August 1996

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Thesis Acceptance

Acceptance for the faculty of the Graduate College,
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requirements for the degree Master of Business
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Abstract

Over the last two decades more companies expanded their business internationally. Key factor to successful global decision making is marketing information. International companies find it essential to know how to do research abroad and how to do it most cost effectively. Although this knowledge is crucial to international companies there is a general lack of cross-national research on survey methodology. Only cross-national comparisons of survey methodology detect differences and similarities in patterns of survey methods and offer insight into the standardization versus adaptation debate. Globalization of markets suggests that survey methodology moves toward greater similarity (standardization), which is more cost effective. However, cross-national differences prompt an adaptation strategy to avoid losses caused by inappropriate strategies.

This thesis represents a comparison of survey methodology in the US and Europe. The main goal is to detect differences in survey methodology between the two markets. The review of literature suggests differences between the US and Europe with regard to factors that influence the

utilization of a survey method. Important issues are the costs of conducting a survey, the access and acceptance of survey media, the availability of mailing lists, and the debate over the differentiation of telemarketing and telephone research.

Primary studies of US, UK and German journals were classified through a content analysis. The statistical analysis resulted in significant differences in the utilization of personal interviews and mail surveys in the US and in Europe. No significant difference was found for the use of telephone surveys. Furthermore, differences between European countries were tested and resulted in significant differences. Results are discussed and interpreted with regard to cross-national differences.

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1. Market Research in a Global Picture

In recent years, more companies have been seeking international growth including a group of young companies, so-called “Born Globals”. Interactive communication and growing computer networks such as the Internet has spread throughout the world. Advanced communication technologies make it relatively easy for companies to expand their business in many countries. At the same time, managers attempt to strengthen their information gathering and analysis capabilities because efficient marketing operations are crucial to the survival of the companies in an unknown, very competitive environment (Albaum and Peterson 1984, Raffée 1989, p.81, Douglas and Craig 1983, pp. 11, Naumann et. al. 1994). Insightful investigation on issues such as pricing, distribution channels or sales provide managers with the facts they need to make informed and effective decisions abroad (Cavusgil 1995).

With regard to marketing research, the most important questions faced by international expanding companies is how to gather marketing information abroad and how to do it most cost effectively. Thus, as the need for global decision making information moves beyond national borders, cross-national comparisons of marketing research practices are essential for international companies. Despite the fast growing need for such information, only few studies during the last decade have considered marketing research activities from a cross-national perspective. Often, researchers are not

aware of differences in research methodology used in countries that are perceived to be similar in the standard of living, such as the US and Western Europe. Therefore, this comparison between the US and Europe is conducted to contribute more knowledge about the differences in the use of marketing research methodologies internationally.

Standardization or differentiation is an important issue when searching for the most cost-effective survey methodologies in an unknown market. The debate over standardization versus adaptation of marketing strategies has simmered for over thirty years. Theodore Levitt (1983) stirred this controversy by contending that the time had finally come for standardized, global strategies due to a homogenization of markets around the world (Levitt 1983). Referring to marketing research, the ultimate goal would be to use the same survey method in many countries to reduce cost. Marketing researchers might utilize survey methods in foreign markets with which they are familiar (standardization). These are often the most commonly used in their home country. Other researchers like Boddewyn, Soehl and Picard (1986), however, criticized Levitt's arguments, as hardly based on facts. They argued that reliable data about the homogenization of markets and the standardization of marketing around the world are lacking.

Taylor (1995) reported significant differences in survey methodology among markets. He argued that although national differences are often inevitable, research

methodology that works well in one country does not necessarily work well in others (see also Douglas and Craig 1983, p. 11). He documented that there are huge differences in basic survey methodologies utilized among various countries. A survey of 35 leading market research firms in North America, Europe, Australia, Japan and South Africa revealed that there were great differences in research methodologies used. In particular, the study showed differences in the use of quota sampling and random digit dialing outside the US (Taylor 1995). For example, what French and German researchers regard as accepted practice for public opinion research - quota samples - Americans would consider gross malpractice.

Researchers might use alternative survey methods that are better suited to the conditions of the market, for example, the cost of interviewers, quality of postal services or telecommunications infrastructure. An adaptation to the environment would include the selection of a survey method that would be less expensive or yield a better response rate in that environment as compared with the survey method commonly used at home. For example, the Survey Methods Price Index of the European Society for Opinion and Marketing Research (ESOMAR) is 155 for a business-to-business telephone survey in Germany compared to an index of 100 for other European countries (Esomar 1995b, p. 25). This index reflects higher telephone costs in Germany. After the most recent increase in local telephone rates, Germany now has the world's highest charges for local calls

(Anonymous 1996a). Thus, considering costs, a mail survey might be more appropriate to cover the whole country.

Through cross-national comparisons, marketing researchers gain an understanding of data collection patterns. This knowledge enables them to choose the most effective survey method in a specific country. Comparing survey methods in different markets also offers insights on how to conduct research more efficiently in the home market. An understanding of differences in survey methodology is crucial for researchers conducting cross-national surveys. Research in more than one country implies a certain level of standardization of survey methods, enabling researchers to contrast results.

This study compares survey methodologies in the US and European countries to detect differences and similarities. The statistical analysis in this study will indicate differences researchers conducting studies in these regions should be aware of. Most cross-national research has been conducted regarding advertising and consumer behavior. Only a few studies actually focus on differences in quantitative survey methodology and use statistical tests to verify their significance. In this study, primary research published by leading academic marketing journals during the period 1990-95 is classified by content analysis. Differences of how researchers utilized personal interviews, mail and telephone surveys are tested for significance using cross-tabulation and chi-square tests.

The second chapter deals with problems in international research and gives an overview of the relevant literature as well as background information on theoretical issues. In addition, previous cross-national research on market research methodology is reviewed. Hypotheses, derived from this theoretical discussion, are introduced in chapter three investigating differences between the US and Europe in survey methods. Chapter three also explains the design of the survey and the structure of the sample. In addition, content analysis is discussed as a research tool. Chapter three also provides an overview of data analysis methods used in this study. In the first part of chapter four, research findings of the descriptive analysis provide insights on survey methods used in the US and European countries. Furthermore, the results of significance tests for differences between these regions are discussed. Research findings are interpreted with reference to cultural, technological and legal issues. Implications and limitations of this research are discussed in the last chapter.

2. Problems in International Marketing Research

Cross-National Differences Relevant to International Marketing Research

Since comparative international marketing research is conducted in multiple cultures, data collection takes place in a more diverse, unknown, and complex environment than national research (Bauer 1995, p. 31). Following Levitt's theory of standardized global strategies, Jain (1989) suggested that the more similar the marketing infrastructure is, the greater the standardization of approaches can be. Table 2.1 shows factors that force countries either to converge or diverge. Western European, North American countries and Japan are economically alike in terms of per capita GNP, disposable income and quality of life (Naumann et.al. 1994). Another force toward convergence, as shown in Table 2.1, is the growing geographic mobility between countries in Europe and North America. Furthermore, advanced communication modes such as the Internet bring countries closer together. Due to the convergence of North American and Western European countries, it logically follows that standardization of marketing research would be more practical in these markets.

In contrast to this approach, Homma (1991) argues that conflicting forces continue to shape national cultures and markets (divergence of countries). For instance:

- Within the European union, large differences in standard of living are observable, for example, between Portugal and Germany.

- Many Europeans have developed a negative view of the European Union (EU). They feel uncomfortable with the introduction of a common currency in the EU because of differences in economic strength of the countries.

Access to the new communication technology, regarded as a strong convergence force, depends on penetration of media like the telephone or computers, and penetration ratios differ immensely between countries.

Table 2.1 Convergence and divergence forces

Convergence forces	Divergence forces
<ul style="list-style-type: none"> • economic and technological growth • rising standards of living • growing geographical mobility • prolonged period of peace • spread of mass education • spread of mass communication • higher life expectancy 	<ul style="list-style-type: none"> • developed vs. undeveloped markets • different media penetration • modernity vs. traditionalism • differences in political stability • ethnic conflicts and nationalism • centralism vs. regionalism • Pro- and Anti-European attitude

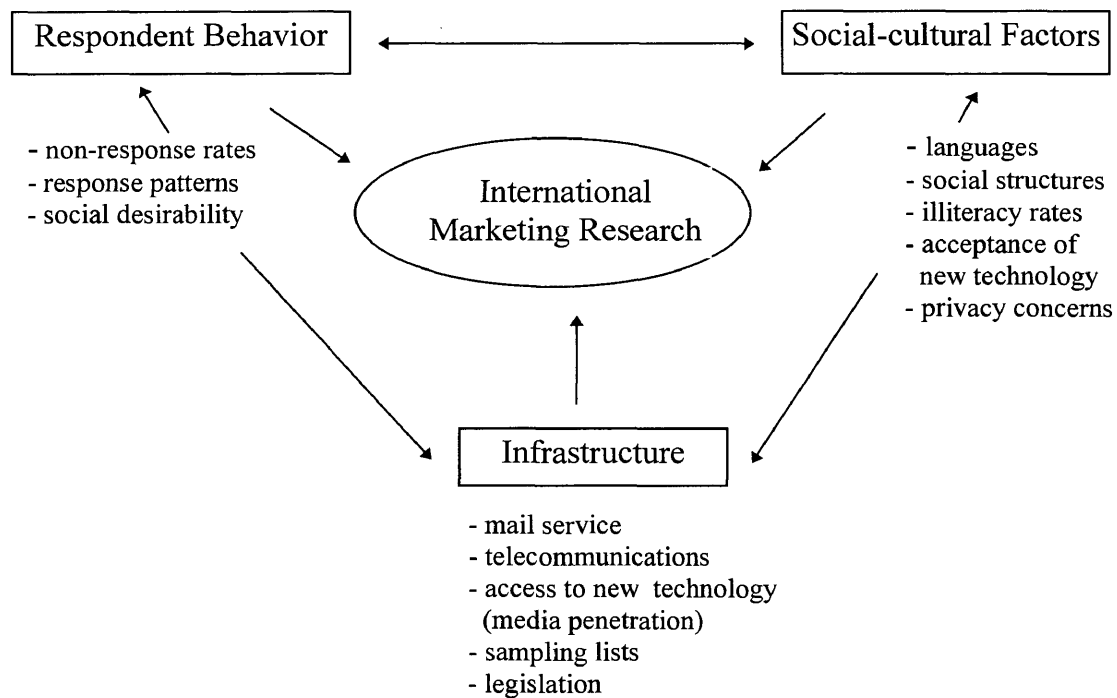
Source: Homma 1991

Consequently, cultural diversity still results in conceptual, methodological and organizational problems for the conduct of research for international compared to national research (Douglas and Craig 1983, p. 15, Bauer 1995, p. 32). As shown in Figure 2.1,

population density, quality and cost of mail service or telecommunications, access to advanced communication technology or sampling lists, as well as legislative language are infrastructural factors that influence the selection of a survey method. Social-cultural factors such as language, social structure, acceptance of new technology or privacy concerns are not only important when selecting a survey method; they can lead to a specific respondent behavior which is observable by response rates, response patterns, and responses as a result of social desirability.

Figure 2.1 shows an overview of differences that are relevant for international marketing research. Infrastructure, social-cultural factors and respondent behavior are related to each other. For example, increasing privacy concerns might lead to higher non-response rates and the initiation of legislative efforts to protect respondents' privacy. Factors shown in Figure 2.1 are discussed in depth in the following paragraphs.

Figure 2.1 Differences relevant to international marketing research



Social-cultural Factors

The most apparent expression of heterogeneity can be seen in the use of different languages. With regard to languages, Europe is still a “highly heterogeneous entity”. Diversity is even greater as a result of new links to Eastern European countries with their great number of ethnic minorities. Differences in vocabulary, accent, and terminology are found even in single language geographic areas, for example:

- in the German speaking countris of Eastern, and Western Germany, Austria and Switzerland or

- in the English speaking countries of the UK, US and Australia.

Questionnaires, as well as non-verbal stimuli, have to be translated and interpreted according to cultural particularities (Bauer 1995, p. 33; Korzenny and Korzenny 1994; Schopphoven 1991). For example, language barriers can also lead to miscommunication when recording the answers of respondents. Language problems, combined with a lack of knowledge about local issues (e.g., TV programs, sports, personalities), can even result in false, superficial or misleading conclusions in research reports (Bhaduri et.al. 1993).

Another social-cultural issue relevant for international research is one of social structure. Social structure is the network of relationships between respondents in a country. Social structure such as family structure might influence the respondent's behavior. For example, a person who lives in an "extended family" in China can often be interviewed only when other family members are present (Bauer 1995, p. 36). Since the result will be a group discussion rather than a personal interview, an out-of-home interview might be more suitable. In contrast to this, members act more independently in so called "nuclear" families, e.g., in Northern Europe. The differentiation of a person or a group in the society - social status - is also part of the social structure. In many countries, in particular Asia, social status often depends on blood line while in more performance-oriented societies, such as North America and Europe, income and occupation are status criteria. Differences in social structure as well as value systems can lead to respondent

behavior that is responsible for distortions in measuring specific variables. Such distortions include:

- different response rates since some studies reveal that questionnaire and item non-response differ among countries (for example, respondents in the UK would not answer a question regarding their income, while Germans usually like to discuss this topic (Bauer 1995, p. 38; Roland and Hendrich 1990, p. 190);
- differences in responses due to a “politeness” bias or social desirability when respondents do not want to disappoint the interviewer (particularly in Asia) or they answer more sophisticated than they normally would (Douglas and Craig 1983, p. 191; Wich 1989, p. 114/125).
- differences in response patterns such as bias towards extreme responses, “yea-saying”, “nay-saying” or “Don’t know” answers (Douglas and Craig 1983, pp. 193, Bachmann and Malley 1984, pp. 491; Sicinski 1970, pp. 126)

Literacy is another social-cultural issue that is relevant, in particular, when intending to use mail surveys (Duelfer 1991, p. 253). If the illiteracy rate is considerably higher within a survey population, a personal interview would be the alternative data collection method. Differences in illiteracy exist even among the industrialized countries - for example, Italy with 3.5 percent versus the US with 0.5 percent (United Nations 1995, p. 139-143). In Europe, illiteracy rates range from 0.3 percent in Liechtenstein to 24 percent in Turkey. Terpstra (1983) introduces the term of technical illiteracy. This is

when respondents do not know the terminology used in the survey. Therefore, the questions do not measure what they were designed to because respondents interpret unknown terminology differently (lack of validity). Either missing values or untrue statements distort the research results.

Infrastructural Issues

The selection of a data collection method depends on infrastructural problems such as in the quality of the mail services or telecommunication. In general, mail services are reliable in the US or Western European countries. However, mail may be delivered late. It usually takes from seven to ten days to send mail from the US to Europe or vice versa using public postal services, as opposed to private services. Telephone surveys are hampered by a low telephone density in many countries or uneven telephone penetration among households even in individual countries. For example, 49 percent of households in East-Germany have a telephone compared to 92 percent in West-Germany. The variables “telephone penetration among households” and “telephones per 100 inhabitants (telephone densities)” - shown in Table 2.2 for different countries - describe the accessibility of telephone lines in selected countries (Nazem 1995, p.8). While in the US 95 percent of all households have a telephone, in Europe the penetration is lower. In particular, Eastern Germany and rural regions of many other European countries still need to improve their telecommunications infrastructure (Nazem 1995, p. 8).

Table 2.2 Telephone penetrations and densities in selected countries

Countries/Mean of communication	US	Western Germany	France	UK	Italy
Telephone penetration among households (pct.)	95	92	91	87	75
Telephones/100 inhabitants	57.4	45.7	53.6	49.4	41.8

Source: Baim 1991, United Nation Statistical Yearbook 1995, p. 139-147

An increasing number of marketing research surveys are conducted with the assistance of computers or computer networks (e.g., the Internet used for the exchange of electronic mail) as well as other media such as fax or BTX. BTX (“Bildschirmtext”) is an information service of German Telecom that can be used via modem and TV screen. It is also used as a mode to survey respondents in Germany. However, with the fast growth of computer networks BTX is now accessible through PC and modem. With these changes, BTX attracts more users (Ludwig 1996). However, it is only a small network compared to the Internet so that the potential for market research is limited.

The usage of advanced technology for data collection depends on the penetration ratios of new media in the target population. The cost for installation and use of new media can differ between the countries. In addition, the acceptance of technology (e.g., a willingness to be interviewed on the phone) can differ for both marketing researchers and

respondents depending on the cultural environment. The cultural acceptance of new technology is greater in the US, where one-half of the public can truly be called “pro-technology”, than in European or Asian countries (Fay 1994; Naumann et.al. 1994). In Europe, empirical research found different attitudes towards technology. Germany is one of the European countries where people are reluctant to use new technology such as in communication (Hansen and Noelle-Neumann 1986, pp. 77). However, negative reactions on the part of respondents to computer-assisted surveys are very rare.

On the other hand, researchers might be more reluctant to use newer technology for cultural and financial reasons. While advanced technology can improve traditional survey methods (e.g. computer-assisted personal interviewing, CAPI) conservative researchers might hold on to traditional, more familiar methodology with which they feel more comfortable. Furthermore, higher costs incurred for additional equipment such as portable computers or fax machines can hinder data collection. The use of new media almost always requires an investment which represents a financial risk. Generally, the European manager is risk-averse when compared to a manager in the US. For example, capital markets in the US are more sophisticated and risk-differentiated and American managers are more risk-oriented (Doerig 1995).

The acceptance of technology becomes apparent when looking at the densities of cellular phones and fax machines shown in Table 2.3. These numbers are utilized here as

a measure of the acceptance of advanced technology. The acceptance of modern technology is higher in the US than in European countries because 6 out of 100 inhabitants use cell phones compared to two out of 100 inhabitants in Europe. Within Europe, the acceptance of new communication modes is especially high in the UK where almost four out of 100 inhabitants use cell phones. In other countries, such as Germany and France, the densities are lower indicating a lower acceptance.

Table 2.3 Number of cell phones and fax machines in selected countries in 1993

Countries/means of communication	US	UK	Germany	France	Italy
cell phones/100 inhabitants	6.1	3.8	2.2	1.0	2.1
fax machines/100 inhabitants	2.3	2.1	1.6	N/A	N/A

Source: United Nations Statistical Yearbook 1995, 134-138

Legal Concerns

In general, cultural distinctiveness is reflected in the legal framework of a country. Privacy issues are the most important legal issues relevant to marketing research. Laws differ greatly in countries due to differences in public opinion about privacy. Marketing research is influenced by both perceived and real conflicts regarding personal privacy. The nature of market research requires researchers to invade individual privacy, albeit on different levels (Bowers 1994a). Telephone interviews will disturb a respondent's

privacy more than a mail survey because of the level of personal interaction. In mail surveys people can choose when to answer questions, as well as if to answer them at all. A basic issue for market research is the differentiation between direct marketing and market research. The difference between surveying and selling is not easily recognized over the telephone since telemarketers often start out with qualifying questions. “Sugging” or “frugging”, the term for selling or fund-raising under the guise of a survey, blurs the line between research and selling (Anonymous 1993, Bowers 1994b).

Declining respondent cooperation has been recognized as a major threat to the research industry (Nichols 1994). During the last 15 years, response rates have been declined dramatically. Respondents use answering machines and other devices to screen calls and to avoid unwanted calls (Tuckel 1995). Tuckel (1995) examined the public’s orientation toward telephone survey participation. Results indicate that only eight percent of respondents are positively disposed toward telephone survey participation. About 14 percent of the respondents would participate depending on the topic. In addition, 59 percent of respondents owning answering machines routinely screen their calls.

Thus, one of the major legal and ethical concerns of companies engaged in telephone marketing or market research is truthfulness about the actual reason for the call. The growing perception that telephone marketing is an invasion of consumer privacy has resulted in legal proposals to limit marketing practices (Milne 1994). These legal

activities are raising fears that market researchers will eventually become swept up in a flurry of privacy legislation that is primarily aimed at direct marketers. The Council for Marketing and Opinion Research (CMOR) - founded in 1992 - designed a new Respondents' Bill of Rights to guarantee respondents' privacy. An amendment to the federal telemarketing fraud legislation has passed the Senate requiring telemarketers to disclose promptly that they are selling something (Bowers 1994b). The newest revision to the Telephone Consumer Fraud Protection Act (TCFPA) of 1994 went into effect on January 1, 1996 (Bolls 1996). After this date, one mistake by a sales representative could cost the telemarketing company a substantial fine. One of the rules telemarketers must now obey is to state up front that they are making a sales call. The main objective of these efforts is the differentiation between telemarketing and telephone research to increase respondent cooperation. However, the results of a survey of state regulators regarding enforcement of telemarketing legislation in 45 states indicate that state regulators appear extremely lax in pursuing violators. Most telemarketers can feel fairly secure that their lack of compliance will not result in legal sanctions (Cain 1995).

In contrast to the US, the European Union (EU) Commission in Brussels has already developed EU-wide guidelines and regulations concerning the privacy issue. The ISDN¹- directive - regulating telecommunications - reads that cold calls from businesses to households both for scientific and business purposes are forbidden. The ISDN-

¹ ISDN stands for Integrated Services Digital Network.

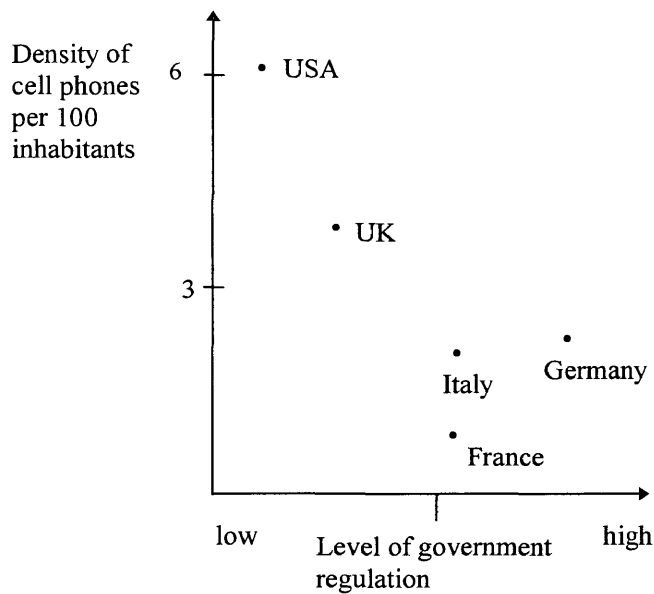
directive in its present form does not differentiate between telephone research and telemarketing (§13 in ISDN-Directive) (Bates 1995; Bowers 1994a). An intense discussion is also going on about the new International Code of Marketing and Social Research Practice developed by the International Chamber of Commerce (ICC) and ESOMAR. This code of ethics deals with marketing and poll research and recommends strict data protection on an international level (Jung 1995, p. 24). In addition, ESOMAR itself has developed a regulation framework for its member firms to secure a clear differentiation between telephone research and telephone marketing for higher cooperation rates (Esomar 1989, p. 1). However, researchers do not agree on the extent of self-regulation due to different legislative language in each country (Jung 1995, p. 23). While researchers in the UK do not see a distinction between telemarketing and telephone marketing research, researchers in Germany, for example, clearly differentiate between both activities (Haupt 1994; Jung 1995; Anonymous 1995).

Lists with respondent's names, addresses, telephone numbers and other personal data - used both for direct marketing and marketing research - are also topics of the privacy discussions. The availability of sampling lists for marketing research depends on privacy legislation in each country. In the US where telemarketing, including cold calling, is legal, mailing lists are available to a much greater extent than anywhere else (Rosenfield 1994). In Europe, the use of lists for telemarketing and direct mail is increasing despite stricter privacy regulations. In the UK and France, good quality lists

are available due to the fast growing direct marketing business (World Post Services 1994). In contrast, in Italy lists are still a relatively new concept. Most Italian companies currently rely on their own lists based on past business with the customer. In Germany, lists are also available, however, there is self-regulation regarding the storage of data. Companies must inform consumers if they plan to keep personal information. Laws prescribe that data can only include name and address, telephone number, occupation, year of birth, and one other descriptive characteristic such as mail order purchases in the last six months (World Post Service 1994).

Besides social-cultural differences, factors such as accessibility and acceptance of new media as well as legal restrictions influence the selection of survey methods. Figure 2.2 documents differences between countries perceived as similar in regard to standard of living. The X-axis is a quality scale showing the level of government legislation in telecommunications in European countries and the US. The Y-axis depicts the acceptance of new technology measured by the density of cell phones. The figure shows differences in legislation with regard to telecommunication and privacy as well as the acceptance of new communication technology. Since these factors influence the selection of a survey method, differences between these countries should lead to the selection of different survey methods.

Figure 2.2 Differences in privacy legislation and acceptance of new technology



Source: Figure is based on data from United Nations Statistical Yearbook 1995, 134-138, Jung 1995, p. 24, Esomar 1996b

Only the US and the UK show a high acceptance of new communication modes. Presumably, when the acceptance of new media is high market researchers tend to use more advanced methods such as surveys supported by computers. However, cell phones might be less expensive in these countries due to a larger production volume. At the same time, the legal environment in these countries still is less restricted. Respondents' lists are available and cold calls are possible. However, a less restricted environment does not mean that potential respondents welcome telephone calls for research purposes. The more highly restricted legal environment in countries such as Germany reflects the

respondents' perception of telephone calls as an invasion of their privacy. Low respondent cooperation can hinder data collection over the telephone.

The cell phone as a new mode of communication is not very common yet in other countries. This suggests a greater reluctance to use new media for financial reasons. For example, while in the US many companies offer cellular services only three offer this service in Germany. High cost can hamper a fast penetration of cell phones within the population.

As a summary, the following factors need to be considered in an international context of marketing research.

- social cultural issues
- levels of literacy and availability of sampling lists,
- quality of mail service,
- telephone penetration
- penetration and acceptance of new media
- privacy concerns

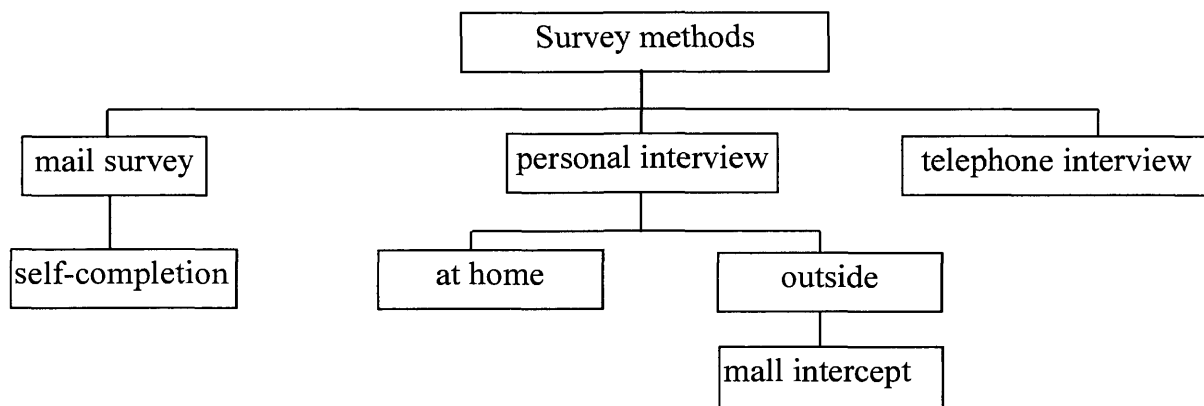
The relevance of these factors might change with the region or country where the research is conducted (Douglas and Craig 1983, p. 223). The next section discusses the advantages and disadvantages of survey methods, such as personal interviews, mail and telephone surveys. Differences in utilization of survey methods in the US and Western

European countries are examined. Furthermore, trends of using advanced communication technology to improve traditional survey methods are discussed.

State of the Art in Data Collection

With regard to basic methods of data collection, international research generally does not differ from national research. Mail and telephone surveys as well as personal interviews are seen as basic survey methods that can be used both nationally and abroad. An overview of quantitative data collection methodology is given in Figure 2.3.

Figure 2.3 Overview of data collection methods



Mail surveys provide primary data from large and widely dispersed population samples. Broad geographic areas are covered at a comparatively low cost per interview. Therefore, mail surveys are preferable to telephone surveys when the sample required is very large and the budget is limited. Since the sample size is increased, accuracy is

improved. Furthermore, interviewer bias is avoided. For a mail survey, a considerable number of potential data sources should exist with readily available names and addresses (Frigstad 1995, p. 46). Low response rates represent a major disadvantage, however, response rates can be improved by pre-notifications and appropriate follow-up activities.

The absence of mailing lists, poor mail services and high levels of illiteracy make mail surveys often effective only in industrialized countries (Bauer 1995, p. 168). Problems might emerge even in countries where the levels of literacy and quality of mail service make the use of mail surveys feasible if respondents tend to regard mail surveys as an invasion of privacy. Declining respondent cooperation and therefore low response rates limits the desirability of mail surveys and may outweigh the low cost of administering mail surveys (Douglas and Craig 1983, p. 224, Tull 1990, p. 195). Different response rates make multi-country survey results difficult to compare (Bauer 1995, pp. 170, Wich 1989, p. 109).

Telephone interviewing is becoming more widespread and widely accepted due to increasing levels of telephone penetration in Europe and the US. Telephone surveys are very efficient because large numbers of respondents can be interviewed in a comparatively short time. Telephone response rates are generally higher than those for mail surveys because call-backs are easily made. Respondents also discard mail surveys easier than a telephone interview. Compared to personal interviews, telephone surveys

are more cost-effective, however, costs especially escalate when large geographic areas are involved (Frigstad 1995, p. 50). Furthermore, staff to conduct the interviews has to be hired and trained.

Lower international charges per call make multi-country studies possible from one single location. However, slower than anticipated growth of telephone research in Europe suggests that there is a reluctance on the part of mainstream market researchers to use even proven technologies (Blyth and Piper 1994, p. 184). In particular, uneven telephone penetration ratios limit the desirability of use for specific countries. Different penetration rates among both private respondents and firms should be considered when conducting cross-national telephone surveys. The cultural acceptance of longer telephone conversations is lower in Europe compared to the US (Naumann et.al. 1994). However, as previously discussed, response to telephone surveys is declining also in the US.

Due to limitations in mail and telephone survey methodologies, personal interviews are the best way to collect data internationally. Personal interviews are the oldest method of collecting primary data. They are suited for the collection of highly detailed data and allow respondents to use visual aids and follow-up questions. Furthermore, personal interviews are the appropriate method when longer interviews are necessary. They achieve higher response rates compared to mail and telephone surveys (Nicholls et.al 1996). A major disadvantage of personal interviews is the time involved. Interviewers have to arrange appointments and must travel to and from the interviewees.

Another major drawback of personal interviews is the costs. Interviewers have to be hired and trained. Travel costs are high when covering a large geographic area. Thus, personal interviewing tends to be the dominant mode of data collection outside of the United States when only smaller geographic areas have to be covered (Barnard 1982; see also Douglas and Craig 1983, p. 226). However, mall intercepts are growing in the US for the ability to be more selective in sampling and to control the interviewing process more carefully (Worick 1995).

As shown in Table 2.4, on average, 50 percent of the quantitative interviews conducted in European countries are personal interviews (Esomar 1995a, p. 23). Mail surveys average 21 percent of the quantitative interviews in Europe, while telephone surveys represent 29 percent. In 1990, telephone and mail surveys still presented equal proportions of interviews conducted in Europe (Esomar 1996a, p.15). Obviously, mail surveys are slowly replaced by telephone surveys.

Table 2.4 Average proportions for each survey method from 1990-1994 in Europe

Year/Pct. of Usage	Mail	Telephone	Personal Interviews
1990	25	25	50
1991	25	25	50
1992	21	29	49
1993	20	29	51
1994	21	29	50

Source: Esomar 1996a, p. 15

In the US, only 23 percent of all surveys are conducted as personal interviews² (Baim 1991). Mail and telephone surveys represent almost equal proportions - 40 percent and 37 percent, respectively. The telephone is used more often in the US than in European countries because the cultural acceptance of telephone conversations is still higher (Naumann et.al. 1994). Table 2.5 shows the proportion of data collection techniques in the US, the UK and Germany compared to the European average for the total number of interviews.

Table 2.5 Proportion of each survey method on average for European countries

Countries/Pct. of Usage	Mail	Telephone	Personal Interviews
European average	21	29	50
UK	38	18	44
Germany	10	29	61
US	40	37	23

Source: ESOMAR 1995a, p.23, Baim 1991(US)

The usage ratios of survey methods (e.g., number of mail surveys out of the total number of interviews) show considerable variation among European countries. Considering the annual statistics of ESOMAR, European countries can be classified into four groups as illustrated by Figure 2.4 (ESOMAR 1995a, p. 23). These four groups are characterized by the selection of different survey methods for the majority of surveys

² Unfortunately no later data than 1991 were available for the US. Presumably, a market research firm in Europe is more interested in marketing research conducted in other European countries due to the geographical proximity and the creation of the European union.

conducted. For example, marketing research in smaller countries such as Luxembourg and Switzerland is dominated by telephone surveys. Personal interviews dominate research in countries such as Portugal, Ireland, and Greece, where the telecommunication infrastructure still needs improvement (Nazem 1995, p. 8). Also in Spain and Bulgaria, telecommunications need to be more developed, while in Germany high charges for telephone calls hamper telephone research.

Figure 2.4 Diversity in use of data collection methods in Europe

Personal interviews: Portugal, Ireland, Turkey, Czech Republic and Greece	Personal interviews and Telephone: Spain, Bulgaria and Germany
Mail and Telephone: Scandinavian countries like Finland, Denmark, and Sweden	Telephone: Switzerland, Norway, Slovenia, Luxembourg

The UK provides an exception to Europe because data collection is dominated by personal interviews (44 percent) and mail surveys (38 percent). In particular, mail surveys are used far more frequently than in other European countries (38 versus 21 percent) (Esomar 1995a, p. 23). Telephone research represents only 18 percent of quantitative interviews. It is also possible that only a few market research companies, that preferably use mail surveys, responded to ESOMAR's survey.

The high cost of conducting telephone surveys in the UK might also be responsible for the selection of mail surveys. As illustrated in Table 2.6, the 1994 price index for the UK indicated higher cost for a business-to-business telephone study compared to other European countries, (Esomar 1995b, p. 25). While personal interviews are least expensive in the UK (index of 93) the costs are very high in the US explaining the low use of personal interviews (index of 209). In the US, telephone surveys are generally more expensive than in Europe, reflecting the larger geographical area to cover.

Table 2.6 Average price indices for various countries

Survey methods	Survey Methods Price Index					
	15 Western European countries	UK	Germany	France	Italy	US
Personal interview	100	93	124	134	96	209
Telephone survey:						
consumer	100	91	136	128	76	155
Telephone survey:						
businesses	100	110	155	114	78	167

Source: ESOMAR 1995b, p. 9,11 and 25

Research firms in Germany frequently use personal interviews for data collection (61 percent). The usage rate for telephone surveys is equivalent to the European average, 29 percent, while mail surveys are not used as often (10 percent) (ESOMAR 1995a, p. 23). Researchers in Germany prefer personal interviews to other modes of data collection because of observed low response rates for mail surveys. Telephone research is still

hindered by strict privacy legislation and a lower telephone penetration in East Germany. Besides, respondents in East Germany are still not used to longer telephone conversations.

Social-cultural differences, as well as different media penetration and legislation, apparently lead to a different use of quantitative data collection techniques in European countries and the US. The next section investigates some trends using advanced technology. Differences in access and availability of new media might lead to a different utilization of new technology for data collection.

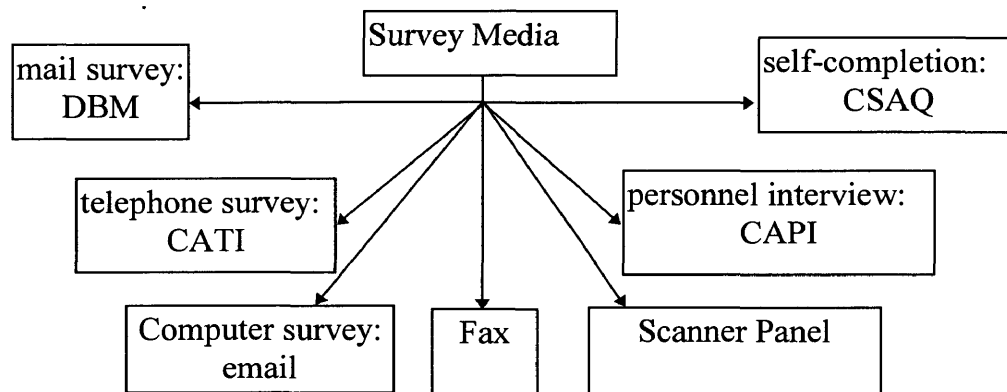
Trends in Improving Survey Methodology

Each of the basic data collection methods - personal interviews, mail and telephone surveys as well as self-completion - has different strengths and weaknesses. Therefore, combinations of these methods are developed to minimize the limitations of each method and to increase response rates. For example, a telephone prenotification can announce a personal interview, a mail survey or a self-administered questionnaire. Telephone follow-ups have proven very effective in increasing the response rate (see also Aaker and Day 1990, p. 213; Meier 1992; Dickinson and Filipic 1991; Churchill 1995, p. 377).

Over the last two decades, there has been a considerable increase in combining advanced technology with basic data collection methods. Advanced technology such as computer or computer networks as well as other modes (e.g. fax, BTX) make market research faster and more cost-efficient. In particular, continuing developments in computer technologies have the potential to make computer-based interviewing an increasingly attractive method of data collection. For conventional market research surveys, the greatest benefits are likely to be in terms of faster client service and cheaper and higher quality data preparation (Jones and Polak 1993, p. 231). The long term cost savings cover not only data entry, paper, printing and postage, but built-in routing, on-the-spot consistency checking and on-line help. Many other features enhance the quality of the interview and of the data (Jones and Polak 1993, p. 231, Roughton 1992). Data are available at every point in time - especially in networks (Ewen and Gelszus 1990, Jeck-Schlottmann and Neilbecker 1994; Zentes 1991; also Neffendorf 1993; Semon 1994).

Figure 2.5 shows how traditional data collection methods can be combined with new technology. Technological advances make survey methods feasible such as Computer-Assisted Personal Interview (CAPI), Computer-Assisted-Telephone-Interview (CATI), Computerized-Self-Administered-Questionnaires (CSAQ), fax, disk-by-mail (DBM), video text, video teleconferencing, electronic panel, electronic mail (EMS) or scanner research (Meyer 1994 a and b; Churchill 1995, p. 372, Hinrichsmeier 1992).

Figure 2.5 Data collection methods combined with new media



Dandurand (1987, p. 27) defines computer-assisted personal interviewing (CAPI) as “... asking and answering questions in a computer-based system. The computer presents the questions to interviewers or respondents via CRT’s, TV screens, print data terminals or PC monitors. Interviewers or respondents enter answers using a keyboard, pen-pad, a light-pen, or by finger-touch.” (also in Mueller-Schroth 1995; Meier 1992, Hippler and Beckenbach 1992). Today, CAPI is still at a relatively early stage of development since it is very cost intensive to equip an interviewer with a portable computer (Jones and Polak 1993, p. 222, Schlottmann and Neibecker 1994, p. 29, Hoepner 1994, Ewen and Gelszus 1990; Blyth and Piper 1994, p. 184).

In contrast to CAPI, Computer-Assisted Telephone Interviewing (CATI) as well as scanner based tracking with single source approaches are now well established.

Scanning is widely used in the US while in Europe scanning adoptions differ among the countries. In France and the UK as well as in some smaller countries such as Denmark and Belgium about 60 percent of the grocery stores are engaged in scanning. In Italy and Spain about 30 percent utilize scanning devices. In Germany, low scanner coverage is due to a large super market chain (Aldi) which does not use scanning at all (Eskin 1994).

CATI is very common in the US and Canada compared to Europe where only 50 percent of research companies offer CATI (Bauer 1995, p. 184). Countries who use more telephone research, generally utilize more CATI (Switzerland, Sweden). Italy and France also make greater use of CATI than European countries on average. In contrast, only one-third of market research firms in Germany utilize CATI (Bauer 1995, p. 183). Future enhancements to CATI systems are likely to come in the form of upgrading screen appearance and handling, voice recording and more sophisticated auto dialing (Roughton 34). Furthermore, in the US most telephone surveys use random digit dialing (RDD) methods. Marketing research firms in other countries are more reluctant to use RDD because unlisted residents complained that they have been called (Taylor 1995).

The discussion of whether the paper and pencil (PPI) or computer-assisted methods should be used is ongoing (Ostermeyer and Meier 1994). Results of experiments suggest differences between PPI, CATI and CAPI in the number of responses to open questions and in the number of yes-responses (Ostermeyer and Meier

1994). Martin and Nagao (1989) found significant social desirability in personal interviews compared to computer surveys. The computer is often perceived as more neutral and anonymous and socially expected behavior is reduced (Ewen and Gelszus 1990; Hoepner 1994, p. 227). Not surprisingly, O'Brien and Dugdale (1978) reported that the answers in computer-interviews tend to be more honest as well as more extreme on scales. However, Hoepner (1994) discussed a "computer bias" in computer assisted surveys when people are questioned regarding computers. In contrast to these results, Koson (1970) as well as Kroeber-Riel and Neibecker (1983) did not find significant differences when comparing personal interview with computer interviews.

Fax is especially efficient for research firms limited by funds and manpower to collect information quickly and efficiently (Vazzana 1994; Katori 1990; Vahrenkamp et.al. 1994). On the other hand, the fax is not considered easy to access and to use by average customers. The most serious problem involved in fax surveys is the low penetration of fax machines among residential customers (Katori 1990; Anonymous 1994, p. 27, Vahrenkamp et.al. 1994). Fax surveys of businesses, however, might be an efficient alternative to mail surveys. Nowadays, almost every company in the US and Western Europe is equipped with at least one fax machine. Fax is perceived as more important than mail so that fax surveys might achieve higher response rates. In an experimental survey of an industrial company's customer base, fax surveying compared favorably with mail in several respects. Features that were compared include

prenotification and post-notification effects, response rates, information quality, and response speeds. The mail survey drew a response rate of 19.1 percent compared to 20.8 percent for the fax survey. Fax prenotification, post-notification, and control group were not significantly different. In the survey, 26 percent of the fax respondents returned the survey in one day or less, demonstrating the fax methodology can materially decrease response times in comparison to mail (Vazzana 1994).

The growing penetration of the Internet makes off-line and on-line marketing research possible (Naether 1995, p. 63). A comparison of response rates showed that the response rates for electronic mail surveys (EMS) were lower than that for mail questionnaires. Moreover, EMS responses were confined primarily to respondents who had a greater interest in technology than the average respondent (Schuldt and Totten 1994). Although electronic mail still has some drawbacks (e.g. lost and undelivered messages) further study into electronic mail surveying is likely since it may become the standard data collection method in the 21st century. Many Internet surveys already are conducted to collect information from Internet users. However, currently computer-administered questionnaires have little importance for traditional market research purposes (Bauer 1995, p. 186) due to a low penetration of on-line users. Another problem exists with not being able to validate respondents (Worick 1995).

International research can be very efficient and fast when supported by newer technology. Researchers from one location can reach respondents worldwide using the Internet. Computer-assisted telephone surveys reduce interviewer bias, which contributes to better comparable results. Nevertheless, instead of interviewer bias, a technology-bias may be introduced in the short run. As soon as people become used to new communications modes this effect will diminish. With regard to privacy concerns, multi-national respondents may be reluctant to respond to strangers or to lengthy telephone conversations (Douglas and Craig 1983, p. 226, Tull 1990). In contrast, Bauer (1995, p. 185) contends that the so called “abroad-effect” can result in even higher response rates, because people feel more important because they are called from another country.

The descriptive analysis of international research methodology in this chapter shows that there are differences in usage of quantitative data collection methods and new technology among European countries and the US. Comparative research investigates differences in marketing research methodology by contrasting countries and applying statistical tests. The next section reviews cross-national research conducted on marketing research methodology.

Cross-national Research on Marketing Research Methodology

The purpose of cross-national research on marketing research methodology is a) to test the universality and generality of data collection methodologies, and b) to assess similarities and differences in research designs among countries. There are two distinct philosophies regarding the conduct of cross-national and cross-cultural research - the emic (“culture specific”) and the etic (pan-cultural or “culture-free”) approach as compared in Table 2.7 (Wich 1989, pp. 10). While the emic approach only focuses on one system (e.g. culture or nation) the etic-orientation assumes that cross-national and cross-cultural comparisons are possible (Wich 1989, p. 11; Douglas and Craig 1983, p. 133).

Table 2.7 Emic and ethic approaches to cross-national research

Characteristics	emic	etic
Researcher approach	from inside of the system	from outside of the system
Number of systems	one	several systems, comparisons
Criteria of comparison	comp. only inside the system	comp. with other systems

Source: Wich 1989, p.11

The specific issues of concern to cross-national researchers include the functional equivalence of the phenomena being studied and the equivalence of concepts and research instruments. Functionally non-equivalent situations mean that any differences in

responses should not be attributed automatically to national differences. It may be equally plausible that, for example, questions are not equivalent in all countries (Green and White 1976). In addition, equivalent research instrumentation should be used cross-nationally. Often, researchers have to use different instruments with respect to a cross-national survey. However, methodology in cross-national should be as standardized as possible to achieve comparable results.

Although cross-cultural research is nothing new, there is a general lack of programmatic research on marketing research practices³. Albaum and Peterson (1984, p. 161) stated “that with few exceptions, existing research on international issues is fragmentary..”. Cavusgil (1987) suggested that we know very little “about the issues that attract international marketing research attention, the nature of data collection, particular methods used for data analysis, the use of a systematic procedure in international marketing research, and relative sophistication of such research compared with domestic marketing research activities”. Eight years later, Cavusgil (1995, p. 1) wrote that there is a “dire need to investigate issues such as pricing, channels and sales in international management”. More studies should detail both existing and “best” practices in cross-cultural and international marketing research.

³ The very first issue of the *Journal of Marketing* contained an article entitled “Marketing Research in Germany” (Brandt 1936).

The most extensive on-going research on marketing research methodology is conducted by ESOMAR for European countries. Esomar publishes the “Market Study on Market Statistics” annually. This study provides essential insights into how research is done in European countries. The data include an annual report on market size and structure together with a profile of research methods. The data contribute to a better understanding of market research business in Europe and enhance the professionalism of market research firms as market research buyers, users, suppliers and consultants. Moreover, ESOMAR prepares a trend report covering five years and identifies the main areas of growth in terms of market size, research focus and data collection methods. The major drawback is that the studies are only descriptive.

Schlegelmilch, Boyle and Therivel (1986) investigated marketing research in medium-sized UK and US firms. They found that US firms utilize more marketing research than UK firms. Jobber and Horgan (1988) compared techniques used by marketing researchers in the UK and the US. Gaul and Homburg (1988) looked at the use of data analysis techniques by German marketing research firms. They found that adoption of new results is slowed by the problem of communication between researcher and clients. Kushner (1982) discussed marketing practices in Asia. Naumann, Jackson Jr., and Wolfe (1994) followed Kushner’s study and compared research practices of Japanese and American firms. They found that US companies made greater use of the telephone interview while Japanese businesses relied more on personal interviews.

Bauer (1995) also reports a need for cross-national studies on marketing research methodology. He contends that issues related to international market research are not given the attention they deserve considering the rapid changes in international business. The most stated justification for the small number of studies investigating research methodology cross-nationally is that international marketing research does not differ from national research. As discussed in this chapter, market research methodology differs considerably even between industrialized countries such as the US and European countries.

Differences and similarities cannot be observed or inferred in the absence of comparisons. Single-culture studies are of limited use to marketing researchers who are interested in developing a better understanding of global marketing research (Samiee and Jeong 1994, p. 205). The next chapter introduces goals and hypotheses of a cross-national comparison between the US and European countries that is conducted as a contribution to further understanding of the pattern of international survey methodology. Chapter three describes the design of the study and the structure of the sample. Chapter three also provides an overview of methods and tests utilized for the statistical analysis of the data.

3. A Comparison of Marketing Research Methodology in Europe and US

Goals and Hypotheses of the Study

As discussed previously, the purpose of the study is to compare survey methods in the US and European countries and to detect similarities and differences in patterns of personal interviews, mail and telephone survey use. The comparison is designed to bring some insight into the standardization versus adaptation discussion with regard to survey methods. If standardization exists, methodologies should be similar in all selected countries. The previous chapter, however, discussed evidence of cross-national differences and also found that marketing research methodology differs among the countries. Therefore, the hypotheses guiding this research focus on differences in survey methods among the countries.

The null hypotheses are formulated stating no differences among the countries. The alternative hypotheses determine differences and their direction when literature implies so. The acceptance of an alternative hypothesis is conditional because the truth of propositions can only be assessed indirectly through the rejection of contrary hypotheses (Bohrnstedt/Knoke 1988, p. 113). The general hypothesis of this research addresses the adaptation of market research practices to cross-national differences. The null hypothesis of no difference is formulated as follows:

H₀ 1: There is no difference between Europe and the US in the utilization of survey methods.

$$\mathbf{H_0\ 1:}\ p_{\text{Europe}} = p_{\text{US}}$$

$$\mathbf{H_1\ 1:}\ p_{\text{Europe}} \neq p_{\text{US}}$$

Personal interviewing is the oldest survey method used still by researchers in many countries because of its high response rates and immunity to infrastructural problems. However, personal interviews can be very costly and time consuming, in particular, when a large geographic area such as the US is to be covered. Not surprisingly, Barnard (1982) maintained that personal interviewing tends to be the dominant mode of data collection outside the US. The statistical data published by ESOMAR (1995, p. 23) support this conclusion. As previously noted, on average 50 percent of all interviews in 1994 conducted in Europe were personal interviews. Since the literature clearly implies a direction for the alternative hypothesis, a one-tailed test should be used. One-tailed tests have more power than two-tailed tests because they are more likely to lead to a rejection of a false null hypothesis (smaller critical values for the same α -level) (Churchill 1995, p. 825, Bohrnstedt 1988, p. 178). Thus, the following hypothesis is one-tailed and is based on the observation that researchers in Europe use personal interviews more often for data collection than researchers in the US. Therefore the null hypothesis H₀ 2 reads:

H₀ 2: Researchers in European countries do not use more personal interviews than researchers in the US.

$$\mathbf{H_0\ 2: } p_{\text{Europe}} = p_{\text{US}}$$

$$\mathbf{H_1\ 2: } p_{\text{Europe}} > p_{\text{US}}$$

For one-tailed hypothesis testing, both the null and the alternative hypothesis are exact hypotheses, while for a two-tailed test the alternative is inexact. The alternative hypothesis, H₁2, implies that the proportion for personal interviewing in Europe is larger than the proportion specified under the null hypothesis. This proportion is larger than the proportion determined for personal interviews in the US.

Mail surveys are widely used in the US and European countries. Data indicate that there are differences in the use of mail surveys between European countries; e.g., Germany versus the UK (10 percent versus 38 percent of quantitative interviews), due to cultural and financial reasons. However, the literature does not suggest that there are differences between the US and Europe. Therefore, a clear hypothesis of differences that would qualify a one-tailed test cannot be derived. The two-tailed hypothesis investigates differences among the countries in the proportions of mail surveys:

H₀ 3: There is no difference in usage of mail surveys between European countries and the US. Hence:

$$\mathbf{H_0\,3:} \; p_{\text{Europe}} = p_{\text{US}}$$

$$\mathbf{H_1\,3:} \; p_{\text{Europe}} \neq p_{\text{US}}$$

Blyth and Piper (1994) indicated that there is a reluctance for European marketing researchers to use even proven technology such as telephone marketing research. High telephone charges and uneven telephone penetration such as in Germany limit the desirability of using telephone surveys. More restrictive privacy legislation in Europe hampers telephone research. Furthermore, published research proposes that the cultural acceptance of communication over the telephone is lower in many European countries compared with the US (Naumann et.al. 1994). Therefore the one-tailed hypothesis H₀4 states that the usage percentage (number of telephone surveys out of total number of surveys) will be smaller for European countries than for the US.

H₀ 4: Researchers in the US do not use more telephone interviews than researchers in Europe.

Hypothesis H₀ 4, again, in symbolic form:

$$\mathbf{H_0\ 4: } p_{US} = p_{Europe}$$

$$\mathbf{H_1\ 4: } p_{US} > p_{Europe}$$

The literature suggests that both CATI and scanning research are used more often in the US than in European countries. Europeans are more hesitant to use modern technology for cultural and financial reasons. They see a risk in new technology in giving up traditional methodology. Moreover, they view the investment in new equipment as a financial risk. Generally, the US population can be called more pro-technology (Fay 1994). Thus, one-tailed hypothesis H5 can clearly be derived from the literature and published research. The alternate hypothesis proposes that the proportion of studies supported by new technology such as CATI, CAPI or scanning will be larger for the US than for Europe.

H₀ 5: There is no difference between the proportions of studies using new technology in the US and in Europe.

$$\mathbf{H_0\ 5: } p_{US} = p_{Europe}$$

$$\mathbf{H_1\ 5: } p_{US} > p_{Europe}$$

One-tailed and two-tailed hypotheses relevant for the comparison of market research methodology in the US and in Europe are summarized in Figure 3.1.

To test these hypotheses, data was collected from marketing journals and classified by a content analysis. The following section describes the design of data collection and the structure of the sample.

Figure 3.1 One-tailed and two-tailed hypotheses

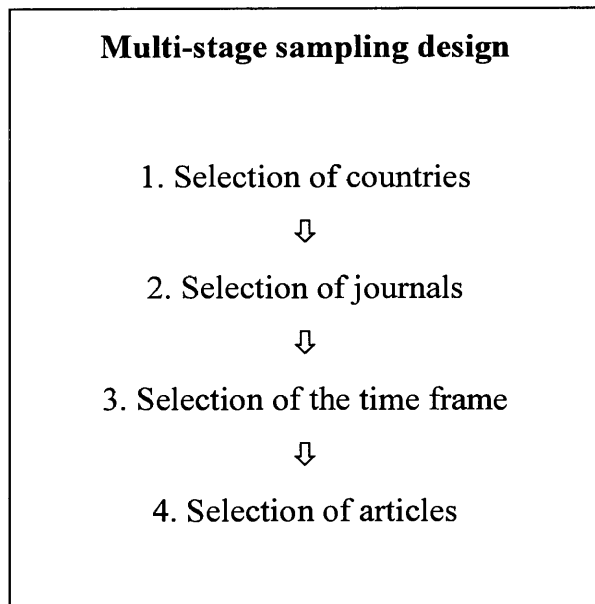
Differences in	two-tailed hypothesis H_1	one-tailed hypothesis H_1
1. approaches, designs, methodologies	$p_{\text{Europe}} \neq p_{\text{US}}$	
proportions of 2. personal interviews		$p_{\text{Europe}} > p_{\text{US}}$
3. mail surveys	$p_{\text{Europe}} \neq p_{\text{US}}$	
4. telephone surveys		$p_{\text{US}} > p_{\text{Europe}}$
5. studies using new technology		$p_{\text{US}} > p_{\text{Europe}}$

The Design of the Survey and Structure of Sample

Two general approaches can be used to investigate the state of knowledge in a field of interest. One approach is to directly survey individuals who have conducted research in that area or who are familiar with the subject. The alternative - the one used

in this paper - is a content analysis of literature published in the area of interest (Albaum and Peterson 1984, p. 162).

Figure 3.2 Sampling design



The purpose of the sampling design shown in Figure 3.2 was to generate a collection of published research articles that could then be content analyzed. In the first step, marketing research journals have been stratified by country of origin (US, UK, Germany). The UK and Germany were chose because they represent the two largest markets in marketing research expenditure in Europe. In the second step, the search

was limited to marketing and marketing research publications that were identified as the most highly regarded by marketing academicians in the US, the UK and Germany (judgment sampling). Marketing academicians are more demanding in their review process and tend to more carefully screen manuscripts from a methodological perspective. For the US, marketing journals have been ranked based on the perception by a survey of faculty members in the US (Hult, Neese and Bashaw 1995). Table 3.1 provides a listing of the selected journals.

Table 3.1 Overview of selected journals for review

USA	Germany	United Kingdom
Journal of Marketing	Zeitschrift für BWL	European Journal of Marketing
Journal of Marketing Research	Jahrbuch der Absatz- und Verbrauchsforschung	Journal of the Market research Society
Journal of Consumer Research	Marketing Zeitschrift für Forschung und Praxis	Marketing and Research Today
Journal of Retailing	Planung +Analyse	International Journal of Research in Marketing
Journal of the Academy of Marketing Science	Absatzwirtschaft	

Source: Journal rankings for the US adopted from data as reported by Hult et.al. 1995; for the UK Bell 1995; for Germany Mueller 1995

In the third step, a time frame was chosen sufficiently long enough to provide a large number of publications, but also current enough to reflect recent developments in market research. In addition, technology and its application in marketing research has developed quickly in the last five years. Furthermore, the political changes in Europe during 1989 and 1990, especially in Germany also affected the development of European marketing research. For all reasons given, the selected time period begins in 1990. The subject matter of this study is primary research using quantitative survey methodology such as personal interviews, mail and telephone surveys. There was no constraint on the topics of the surveys. Research based on secondary data (such as studies on PIMS-data) is not included.

The gray shadowed journals in Table 3.1 were eventually included into the review and constitute a representative sample of the relevant literature during 1990-1995 period. The two German journals did not contain primary research that used quantitative survey methodology. Therefore, they were not included in the content analysis. However, they provided insight in the research trends in Germany.

In total, 2261 articles, comments, and research notes were examined for survey methodology in the fourth step of sampling. The sources yielded 510 studies and sub-studies that met the stated criteria of survey methodology and were therefore included in the content analysis. Table 3.2 provides further information on the sample. The majority of the articles are based in the US. This accounts for the dominance of the US as a country being studied.

Many authors are affiliated with educational institutions. However, a good number of them are co-authoring with practitioners. Thus, the reviewed literature provides an overview how quantitative marketing research generally is conducted.

Table 3.2 Number of articles and primary studies

Journals	Articles	Primary Studies
Journal of Marketing	164	76
Journal of Marketing Research	288	62
Journal of Consumer Research	246	36
Journal of Retailing	105	47
Journal of the Academy of Marketing Science	177	69
International Journal of Research in Marketing	129	17
Zeitschrift für BWL	398	32
Jahrbuch der Absatz- und Verbrauchsforschung	119	30
Marketing Zeitschrift für Forschung und Praxis	129	16
European Journal of Marketing	173	73
Journal of the Market Research Society	165	44
Marketing and Research Today	168	8

Methods of Assessment

Content analysis is the objective and systematic survey of any set of communications that might lead to attitudinal or behavioral generalizations. This research tool classifies many words of texts into fewer content categories (data reduction). Content analysis is a reputable and widely applied tool for marketing research studies, including international marketing, and dominates the cross-cultural advertising literature (Samiee and Jeong 1994, p. 212). Content analysis is chosen as the appropriate research tool for this study because it accepts unstructured material like articles and descriptions of empirical studies (Krippendorff 1980, pp. 29).

Perhaps the most important guideline in using content analysis is objectivity (Kassarjian 1977). The influence of other cultures in defining content categories has to be taken into consideration in order to secure the study's validity. Validity in content analysis is validity of the classification scheme, and the variables derived from it. Four types of external validity are important: construct, hypothesis, predictive and semantic. For this analysis validity is related to the surveys found in the journals. The contents of the articles are classified in categories. These are predefined so that there is no bias in favor of a given hypothesis during this process (Samiee and Jeong 1994, p. 212). The categories in which the data has been classified are mutually exclusive to avoid the violation of basic statistical assumptions. Since differences are examined between more than one country, this analysis follows an etic approach (Wich 1989, p. 11; Douglas and Craig 1983, p. 292).

Three types of reliability are pertinent to content analysis: stability, reproducibility or replicability and accuracy (Krippendorff 1980, p. 130-154). Stability refers to the extent to which the results of content classification are invariant over time. Reproducibility, sometimes called intercoder reliability, refers to the extent to which content classification produces the same results when the same text is coded by more than one order (Krippendorff 1980, p. 21). The categories used in this analysis are rather simple, thus, no second coder was utilized. Accuracy refers to the extent to which the classification of text corresponds to a standard or norm but is seldom used in reliability assessment.

Methods of Data Analysis

Data was classified into categories supported by MS-Excel. This database was converted into a SPSS database and coded so that statistical calculations were possible. Table 3.3 provides an overview of the data analysis methods that are used.

The descriptive analysis - frequencies of variables- provides a first overview on how research is conducted in selected countries. Statistical tests such as the Chi-square test examine the significance of differences between the US and Europe for survey methods. Based on the results, the hypotheses can either be rejected or accepted. Chapter four discusses the research findings of the statistical analysis in depth providing interpretations and explanations.

Table 3.3 Data analysis methods

Method of Analysis	Step of Analysis	Goals
Frequencies	counting the number of cases in a given outcome of a variable	descriptive and quantitative picture of data
Crosstabulations	tabular display of the joint frequency distribution of two discrete variables that has r rows and c columns	relationships among and between variables as hypothesized,
Chi-square test	A test of statistical significance based on a comparison of the observed cell frequencies of a joint contingency table with frequencies that would be expected under the null hypothesis of no relationship	significant differences of cross-tabulated variables

Source: Bohrnstedt and Knoke 1982, Churchill 1995, Siegel 1956

4. Research Findings

Descriptive Analysis - Frequencies

The purpose of this research is to compare survey methodologies in the US and European countries and to find similarities and differences. Studies published in selected American and European journals are classified by content analysis. The analysis includes the 507 studies that met the criteria of being a quantitative survey.

Chapter three introduced the null hypotheses of no differences in survey methods, H_{11} - H_{10} as summarized in Figure 3.1. Chapter 4 now presents:

- the results of the descriptive analysis which is designed to provide insights on survey methods used in the US and European countries,
- the results of significance tests for differences in survey methods between the US and Europe,

While on average US journals publish more primary studies per journal than European journals, research in European journals covers more countries. In the last five years, for example, the European Journal of Marketing published studies that involved 30 countries. In total, primary research in the journals selected for this study covered 44 countries. As shown in Table 4.1, approximately 53 percent of the total number of studies were conducted in the US. Western European countries, France, the UK, and

Germany, constituted the second most frequently studied geographic area with 37 percent. These countries are regarded as the largest consumer markets in Europe, and represent the largest markets for marketing research in Europe.

Only two percent of the studies involved countries from Eastern Europe, although these countries are attractive for European companies. For example, German companies report growing trade with East Europeans, implying a greater need for information about potential markets and target groups (Anonymous 1996b). In contrast to Eastern Europe, more surveys were conducted in Asian countries in the past five years (38 studies or six percent of the empirical surveys that were published). This shows the importance of these countries in the world market. Companies have a greater need for research because they are less familiar with these markets due to geographic and social-cultural differences. In Japan, 15 studies were conducted making this country the most frequently studied in the Asian-Pacific region.

Table 4.1 shows the breakdown of studies conducted in the US and Western Europe as included in this research. The third row of the table provides comparative quantitative research conducted by market research firms. While in this study researchers focused mainly on the US (53.1 percent), market research firms conducted 38 percent in the US. Approximately 37 percent of the studies in this research is conducted in Europe

compared to 42 percent by market research firms. Thus, researchers in this study focus on the same markets as market research firms do, as shown in Table 4.1.

Table 4.1 Focus of marketing researchers

	Total	US	Western Europe ¹	Other countries
Number of studies	510	271	190	49
Percentage of studies (researchers affiliated with academic institutions)	100	53.1	37.5	9.6
Percentage of interviews (market research firms)	100	38.0	42.0	10.0

¹ without Eastern European countries

For the comparison of survey methodology eventually only the 461 studies conducted in the US and European countries are selected. The following sections explain the structure of the sample regarding

- survey population (such as consumer, businesses or public organizations, and
- survey methods.

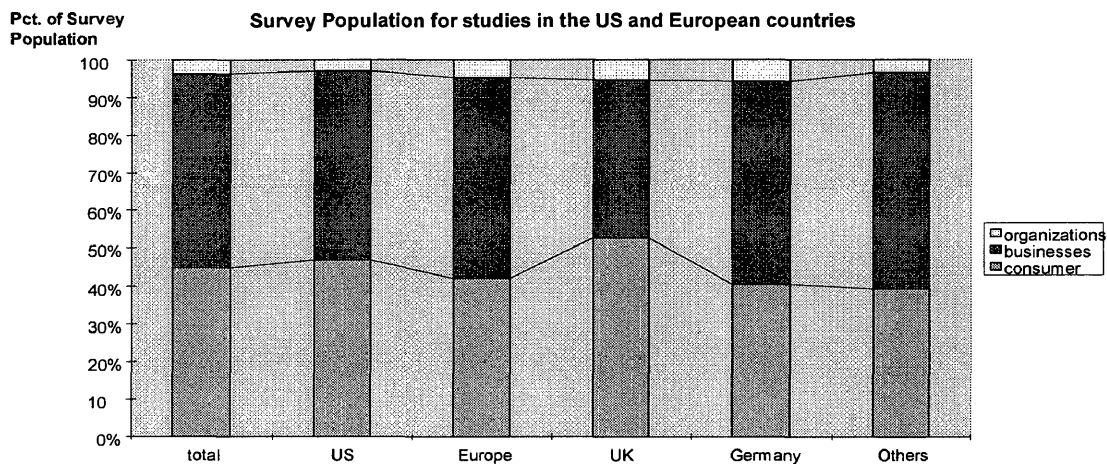
Survey Population

Figure 4.1 shows the object focus of researchers in the US and Europe. Of all studies, 51.4 percent involved companies as a survey population indicating a greater interest in business-to-business research. Individual consumers were surveyed in 44.9

percent of the studies, while public organizations such as the American Marketing Association (AMA) constituted the survey population in 3.7 percent of the studies. These percentages reflect the interest of researchers in the US where 50.2 percent of the studies focused on companies and 46.9 percent involved consumers. Only 3.0 percent focused on public organizations. For the aggregated sample of Europe, descriptive analysis resulted in a similar picture. Over one-half of the studies in Europe focused on businesses as well (52.7 percent). Studies on consumers constituted 42.4 percent of the studies. Almost five percent (4.7 percent) involved public organizations. Compared to the US, researchers in Europe conducted slightly more studies on businesses and public organizations.

Within Europe, however, there is a great variation among the countries. Researchers in the UK surveyed consumers in 52.6 percent of studies, indicating a strong focus on consumer studies. In contrast to the UK, researchers in Germany focused more heavily on business-to-business research instead. Over one half of the studies involved businesses (53.6 percent). In both countries, the percentage of studies conducted on public organizations is low, about six percent, but it is still double that seen in the US (3.0 percent).

Figure 4.1 Survey population for studies in the US and European countries



Survey Methods

Based on the total number of studies, mail surveys dominated the quantitative research reviewed and accounted for 59.4 percent of all studies. Personal interviews were employed in almost one out of three studies (31.2 percent), while telephone surveys constitute 9.3 percent of all studies. Presumably, mail surveys are employed for financial reasons. Many of the authors who published studies based on survey data are affiliated with educational institutions. Their research is often restricted with regard to cost. Mail surveys cover broad geographic areas, and wide distribution is achieved at a comparatively low cost. The cost per interview is substantially lower than that for a personal interview. Moreover, personal interviews are time consuming because the interviewers have to be hired and trained. However, personal interviews were utilized in 31.2 percent of the studies making them the second most important survey method. As

previously discussed, personal interviews are the oldest survey method. Thus, many researchers are familiar with personal interviews. Personal interviews usually produce the highest response rates. Furthermore, they are relatively immune to infrastructural problems compared to mail and telephone survey. Not surprisingly, a high percentage of personal interviews is used in many countries.

Telephone surveys were used in 9.3 percent of all studies. Presumably, researchers conducted larger percentages of mail surveys and personal interviews for several reasons:

- Compared to telephone interviews, mail surveys are preferable when the budget is limited, but the time span is less restrictive (Frigstad 1995, p. 46). Costs for telephone surveys escalate, in particular, when large geographic areas are involved (Frigstad 1995, p. 46). Mail surveys provide quantitative primary data from large or geographically dispersed populations. The sample size can be larger, thus, accuracy is improved.
- As noted before, for telephone surveys, respondents' willingness to cooperate is declining because of a growing perception that unwanted calls are an invasion of privacy. Telephone interviews disturb a respondents' privacy more than a mail survey because people can choose when to answer questions of a mail survey. Telemarketers, who try to sell their product under the guise of research, are a major

threat to market research (Bowers 1994, Anonymous 1993). Many respondents do not distinguish between telephone surveys and unwelcome telemarketing calls. Two thirds of Americans consider surveys and telemarketing “the same thing” or “don’t know” if they are different, according to a 1991 Fairfax Research Group of Ontario, California (Anonymous 1993, p. 18). Respondents increasingly refuse to answer “cold calls” at all or use answering machines and other devices to avoid unwanted calls. Declining response rates result in higher cost for telephone surveys because more respondents have to be called. Moreover, telephone surveying becomes more time consuming.

- Finally, there might be a greater reluctance for researchers at academic institutions to use the telephone for survey purposes. It is more costly and time consuming to set up a phone bank for telephone surveys than it is to mail out questionnaires. Furthermore, telephone interviewers have to be hired and trained to conduct telephone surveys.

The analysis of frequencies for studies conducted in the US shows that mail surveys dominate survey methods (66.4 percent of the studies). Personal interviews are employed in 24.4 percent of the surveys, while telephone surveys were used 9.2 percent of the time. This compares to Europe where mail surveys are the dominant survey method as well (49.5 percent). However, the percentage relying on personal interviews is much higher in Europe than it is in the US (41.1 percent in Europe versus 24.4 percent in

the US). About the same percentages of telephone surveys are conducted in Europe and the US (9.5 and 9.2 percent, respectively).

Table 4.2 presents data on the 507 surveys analyzed, cross-tabulated by countries. The descriptive analysis of studies conducted in Germany indicates a high percentage of mail surveys, 56.5 percent, in fact, the highest percentage for Europe. Personal interviews are used in 37.7 percent of the studies. A very low percentage of telephone surveys, about six percent, implies a reluctance of researchers in Germany to use telephone surveys. In contrast to Germany, researchers in the UK utilize telephone surveys much more often (17.5 percent of all studies). Mail surveys and personal interviews constitute almost equal percentages. In other European countries, such as France, Italy, the Netherland, the profile of survey methods is similar. Personal interviews and mail surveys are employed in almost equal proportions, but on a higher level compared to the UK.

Table 4.2 Survey methods (in percentages of total number of studies)

Survey methods	Total	US	Europe	Germany	UK	Others
mail	59.4	66.4	49.5	56.5	42.1	45.3
personal	31.2	24.4	41.1	37.7	40.4	48.4
telephone	9.3	9.2	9.5	5.8	17.5	6.3

Researchers reported computer technology utilization in almost three percent (2.6 percent) of all studies. The descriptive analysis showed CAPI was more frequently used than CATI (five versus three studies, respectively). This result is in contrast to the discussion in the marketing literature, which noted that CATI is frequently utilized among market research firms. In this study, many of the researchers are affiliated with academic institutions instead of market research firms and that might explain the lower number of CATI surveys compared to CAPI. Moreover, telephone surveys are employed less often than personal interviews overall; this might also explain the lower number of CATI surveys.

Four out of five CAPI surveys are conducted in the US, two out of three CATI-surveys in Europe. Based on the descriptive analysis, there is a difference between the proportion of studies in the US and Europe using new technology. However, the differences in frequencies are not tested for their significance since the total number of studies for computer assisted surveys and scanning is extremely small. The low number of computer-assisted studies leads to the speculation that researchers might have used more computer assistance, but did not report it in publication. On the other hand, CATI and CAPI surveys require investments in computers and the development of the programs. High cost probably result in a reluctance to use computer technology for surveys. Furthermore, researchers affiliated with academic institutions conduct surveys less frequently than research firms. For this reason, it can be more efficient to work with

the traditional paper-and pencil-method, indicating a technology gap between researchers in academic institutions and market research firms.

In view of the results of the descriptive analysis, the following conclusions about the use of data collection designs can be derived and are shown in Table 4.3. The descriptive analysis shows differences between Europe and the US in focusing on different survey populations and sampling designs. For survey methodology, Europeans utilized more personal interviews than the US instead of mail surveys. The next chapter discusses the results of statistical procedures that test the differences between the proportions for each country for their significance.

Table 4.3 Summary of the descriptive analysis

	Conclusions
Countries of study	<ul style="list-style-type: none"> • Compared to quantitative research conducted by market research firms, researchers in this study focus on the same markets: US, Western Europe and Japan.
Survey population	<ul style="list-style-type: none"> • Compared to the US, researchers in Europe conducted slightly more studies on businesses and public organizations. • Within Europe, research indicates a strong focus on consumer studies in the UK. In contrast to the UK, researchers in Germany conducted more surveys on businesses.
Data collection	<ul style="list-style-type: none"> • Overall, the mail survey is the most widely used method, followed by the personal interview. • Based on the analysis, researchers in Europe prefer personal interviews instead of mail surveys in almost 20 percent of the cases. • Telephone research constitutes a low percentage of studies both in the US and Europe. However, researchers in the UK use telephone research more often than researchers in the US and other European countries. • Computer-assisted methods still do not play an important role in academic marketing research. Nevertheless, researchers in the US utilize computers and scanning more frequently than in Europe.

Hypotheses Testing

The descriptive analysis provides insights into the extent that various survey methods are used in the US and Europe. Additional analysis is necessary to search for statistical significance of differences in the utilization of survey methods. When the null hypotheses of no difference can be rejected with a high level of significance¹ (α), automatically evidence in favor of H_1 is established (Bohrnstedt/Knoke 1988, p. 189). A high significance level means a low probability of rejecting a true null hypothesis (false rejection error - Type I).

Comparison of Survey Methods

The one-tailed null hypothesis H_0 states there is no difference between Europe and the US in use of survey methods. To test this hypothesis, the frequencies of survey methods in Europe and the US are cross-tabulated. The chi-square test is appropriate for assessing the statistical significance of cross-tabulated variables. It is based on a comparison between the observed cell frequencies of a cross-tabulation (or joint contingency table) with frequencies expected if the null hypothesis of no relationship was in fact true (Bohrnstedt and Knoke 1988, p. 114). Two variables have no relationship when observed frequencies of a single row are the same or similar the expected frequencies (Buehl 1994, p. 181). As significance level, $\alpha = 0.05$ is chosen. The

¹ The current analysis uses $\alpha = 0.05$.

statistical package SPSS was used to run the chi-square test. The formula for the chi-square in SPSS is calculated according to Pearson

$$\chi^2 = \sum_i \sum_j \frac{o_{ij} - e_{ij}}{e_{ij}}$$

with o_{ij} as the observed count and e_{ij} the expected count in each cell (Buehl 1994, p. 182, SPSS 1996, p. 66).

The null-hypothesis for the Pearson chi-square is that row and column variables are independent of each other. The null hypothesis is rejected when the resulting chi-square statistic is the same size or larger than the selected critical value of chi-square for a particular level of significance. When the hypothesis can be rejected at a sufficient level ($\alpha=0.05$), the differences between the countries for survey methods are significant. The chi-square test requires that the expected frequencies in each cell are not too small (Siegel 1956, p. 178). Cochran (1954) recommends that for chi-square tests with degree of freedom larger than one, fewer than 20 percent of the cells should have an expected frequency of less than five. No cell should have an expected frequency of less than one.

The chi-square test for the cross-tabulated survey methods in Europe and the US results in a chi-square value of 15.375 ($p<0.0001$). Zero cells have expected count less than five and the minimum expected count is 17.72. Thus, the requirements for the chi-square test, as discussed above, are not violated. Significant differences in survey

methodologies between the US and Europe can be assumed. However, the cause for the highly significant chi-square value cannot be determined from this test. Therefore, the three variables of survey methods (personal interviews, mail surveys, telephone surveys) are coded dichotomously representing the use (coded as one) and non-use (coded as zero) of one survey method. Then, variables representing survey methods and countries are used to form three tables each containing two rows and two columns. These tables are used to test the significance of differences between Europe and the US for one survey method at a time.

To test for differences in the utilization of personal interviews, the European sample was compared to the US in a two \times two contingency table. In this table, the chi-square test can be used to test the equality of proportions. The null hypothesis, H_0 , is that the proportion of researchers in Europe using personal interviews equals that for researchers in the US. In fact, previous research suggests a direction for the alternative hypothesis implying researchers in Europe use more personal interviews than in the US. The test results in a chi-square value of 14.499 ($p < 0.0001$) indicating a significant difference between the countries. The requirements for the chi-square test are fulfilled because zero cells have expected count less than 5 and the minimum expected count is 59.35. Furthermore, the Fisher's exact test determines whether the two country groups differ in the proportions (use and non-use of personal interviews) (Siegel 1956, p. 97, SPSS 1996, p. 73). The result of this test agrees with that of Pearson chi-square on a high

significance level. The conclusion from the chi-square test of equal proportions is that the proportion of researchers in Europe using personal interviews is significantly greater than that in the US (by 16.7 percent).

The third null hypothesis, H_{03} , reads that there is no difference in the usage of mail surveys between European countries and the US. The dichotomously coded variable 'mail survey' and the variable 'country' (the US and Europe, respectively) form the table. The computed chi-square statistic for this table is 13.305 ($p=0.0001$). Zero cells have an expected frequency less than five, and no cell has an expected frequency less than one. The minimum expected count is 77.07. The result of Fisher's exact test verified that of the chi-square test ($p<0.0001$). Both results indicate significant differences between the proportions of researchers in Europe and in the US using mail surveys. Therefore, H_{03} is rejected. Moreover, the conclusion is that researchers in the US use significantly more mail surveys than in Europe (16.9 percent), since a one-tailed null hypothesis implying a direction is rejected at a lower significance level compared to a two-tailed one.

Hypothesis H_{14} implies that researchers in the US use more telephone surveys than in Europe. In other words, the proportion of researchers in the US using telephone surveys is greater than that for Europe. The chi-square test is used to test the null hypothesis of equality of proportions. A chi-square value of 0.008 was computed ($p=0.928$). The requirements for the Pearson-test are met since null cells have an

expected count less than five. The minimum expected count is 17.72. Fisher's exact test resulted in a significance of 1. Since the significance level is very high, the differences are not significant and the null hypothesis, H_04 , has to be accepted. In fact, the proportion of researchers using telephone surveys is almost equal for the US (9.2 percent) and Europe (9.5 percent).

Table 4.4 provides a summary of the null hypotheses and their acceptance or rejection. The most important conclusion to draw based on this study is that there are differences in survey methods between the US and Europe. The chi-square analysis resulted in significant differences between the proportion of researchers in the US and that in Europe using personal interviews. Researchers in the US use more mail surveys than those in Europe. There are no differences in use of telephone surveys.

Table 4.4 Summary of statistical significance tests

Hypothesis	Acceptation/ Rejection	Research findings
H₀1: There is no difference between Europe and the US in use of survey methods.	rejected at $p < 0.0001$	<ul style="list-style-type: none"> There are differences in survey methods between Europe and the US.
H₀2: Researchers in Europe do not use more personal interviews than in the US	rejected at $p < 0.0001$	<ul style="list-style-type: none"> Researchers in Europe use significantly more personal interviews than in US.
H₀3: There is no difference in usage of mail surveys between European countries and the US.	rejected at $p < 0.0001$	<ul style="list-style-type: none"> Researchers in the US use significantly more mail surveys than in Europe.
H₀4: Researchers in the US do not use more telephone surveys than in Europe.	accepted at $p = 0.928$	<ul style="list-style-type: none"> The proportions of researchers using telephone surveys are almost equal for the US (9.2 percent) and Europe (9.5 percent).

The next section discusses the interpretation of research findings referring to the comparison of the US and Europe. Later on, the European sample is disaggregated into three country-specific components (UK, Germany, and other European countries) in order to ascertain the variation in use of survey methods.

Differences in the Utilization of Personal Interviews

The statistical tests resulted in significant differences in the utilization of personal interviews between Europe and the US. In fact, the analysis verified that researchers in Europe use significantly more often personal interviews than in the US. A different historical development of survey methodology might explain the differences in utilization of survey methods today. Personal interviews are the oldest method of obtaining primary data and the most frequently utilized. It can attain very high response rates. The US Bureau of the Census, for example, still uses personal interviews by field workers to attain at least a response rate of 90 percent (Nicholls 1996). Personal interviews are not only conducted for initial contact but also for the approximately five percent of US households without telephones and other households unreachable by telephone.

However, costs for personal interviews can increase dramatically when covering a broad geographic area. For this reason, researchers in the US who have to cover a larger geographic area trying out alternative survey methods such as mail survey or telephone interview. European countries such as Germany and the UK have smaller land areas making the use of personal interviews less costly. Moreover, European countries such as the UK, Germany, France and Italy have a population density approximately six times higher than that of the US. This implies higher cost and time expended for researchers in the US to reach the same number of respondents when compared to Europe. Table 4.5

shows population densities and sizes of the geographic areas for the US and selected European countries.

Table 4.5 Population densities for the US, Germany, UK as well as Italy and France

Countries	US	UK	Germany	Italy	France
Population per square mile	75	625	601	513	276
Geographic area (square mile)	9,363,130	244,755	357,868	301,245	543,965

Source: US Bureau of the Census 1995, table 1361, Bartholomew 1995

Indeed, the Survey Methods Price Index published by ESOMAR indicates that a personal interview in the US costs about double (index = 209) that of an interview in Western European countries (100), including Germany (124) and the UK (93) (ESOMAR 1995b, p. 9,11 and 25).

The analysis showed that researchers in the US use mail surveys more often than researchers in Europe. In almost 20 percent of the studies examined, researchers in the US used a mail survey. Mail surveys are utilized as a less expensive alternative to personal interviews. In addition, researchers can send out a mail survey without hiring and training interviewers as they would have to for personal interviews or telephone surveys. As previously noted, at many academic institutions, researchers are restricted in terms of financial support needed to conduct a survey. They usually do not have a staff of

interviewers such as seen at most marketing research firms. Furthermore, more consumer lists are available in the US than in European countries, as discussed in Chapter two.

Researchers both in Europe and in the US conducted a relatively low percentage of telephone surveys (9.5 and 9.2 percent, respectively). This result points towards difficulties using telephone surveys considering the advantages this survey method has to offer. European and US marketing research firms conducted about 29 and 37 percent of their total interviews respectively as telephone surveys, a percentage much higher than in this study (9.4 percent of total articles) (ESOMAR 1995a, p. 23). However, as previously discussed, researchers affiliated with academic institutions presumably do not conduct surveys on a regular basis. Often, a telephone interview staff is not available such as the ones often found in marketing research firms. It is costly and time consuming to hire and to train interviewers when a survey is planned. Moreover, the larger the geographic area to be covered the greater the cost. In this study, many researchers have chosen mail over telephone surveys for financial reasons.

There are different reasons for researchers in the US versus those in Europe to select a survey method other than telephone. European countries encompass smaller geographic areas, so that telephone surveys should be less expensive. The ESOMAR's Survey Methods Price Index indicates that telephone surveys in the US are more expensive compared to Europe (155 versus 100 for a consumer survey). Nevertheless,

the index is 136 for Germany, one of the highest in Europe. This reflects higher telephone costs in Germany. Actually, Germany's state-owned company Deutsche Telekom AG raised charges (up to 161 percent) for local phone calls in January, 1996. Now, Germany has the world's highest charges for local calls (Anonymous 1996a). The conclusion is that in some European countries higher telephone rates which might hamper the efficient utilization of telephone surveys. Other problems might hinder the use of telephone surveys as well. As discussed in chapter two, the telephone density is still smaller than in the US. Moreover, the cultural acceptance of communication over the telephone is lower in many European countries than in the US (Naumann et al. 1994).

Surveying by telephone also involves other issues that might cause a researcher to choose an alternative survey method. As previously discussed, the respondent's willingness to answer telephone surveys is declining due to the growing numbers of calls from telemarketers trying to sell something. Consumers are annoyed by unsolicited calls and concerned about their privacy. The public's disgruntlement with telemarketing has developed legislative restrictions that often includes limitations on telephone research as well. For example, the new draft for the ISDN-regulation in Europe, which regulates telecommunications in general, contains legislation that unsolicited calls of private households are prohibited purposes on advertising and research (Jung 1995).

Table 4.6 summarizes the interpretation of research findings. The conclusion is that telephone surveys in the US are not used as frequently as other survey methods because of the large geographic area to cover and declining respondent cooperation. In Europe, however, higher telephone rates and a lower cultural acceptance of longer telephone conversations as well as increasing non-response rates are reasons to choose a different survey method. In both regions, response rates to telephone surveys are declining because people perceive unsolicited calls as an invasion of privacy, no matter whether they are called for telemarketing or research.

Table 4.6 Interpretation of research findings

Differences between the countries	Factors causing differences
<ul style="list-style-type: none"> • Researchers in Europe use more personal interviews than in US. 	<ul style="list-style-type: none"> • higher cost of personal interviews in US
<ul style="list-style-type: none"> • Researchers in the US use more mail surveys than in Europe. 	<ul style="list-style-type: none"> • low cost of mail surveys compared to personal interviews and telephone surveys, availability of lists
<ul style="list-style-type: none"> • The proportion of researchers using telephone surveys is almost equal for the US and Europe, but low compared to other survey methods. 	<ul style="list-style-type: none"> • US: higher cost, declining respondent cooperation • Europe: higher telephone rates, lower cultural acceptance of longer telephone conversations, declining respondent cooperation, stricter legislation,

Similarities between Countries

The following section focus on similarities and differences between the countries. The goal is to find groups of countries similar in the utilization of survey methodology. For this purpose, the statistical analysis follows three steps:

1. The focus is on studies by country. The 190 studies conducted in Europe are disaggregated into three components - samples containing studies in the UK and Germany and in the remaining European countries.

3. The frequencies of each survey method in the US and European countries are cross-tabulated and the chi-square test is applied to test the statistical significance of differences among these countries. If the test does not result in a significant Pearson-coefficient, countries were grouped together when 1) observed percentages of survey methods and 2) similar adjusted residuals for countries are similar.

The numerator of each adjusted residual is the difference between the observed count for that cell and its expected count adjusted to sample size. The denominator is an estimate of the residual's standard error normalized to have variance of one when data are from a multi-nominal distribution. The values can be read roughly as z scores (SPSS 1996, p. 71). Therefore, high absolute adjusted residuals in one cell point toward a significant difference between the expected and observed frequency (Buehl 1994, p. 183).

Researchers usually look for values well below -2 or above +2 to identify the cells that depart markedly from the hypothesis of independence (Buehl 1994, p. 183; SPSS 1996, p. 71).

Table 4.7 shows the percentages as well as the adjusted residuals for the four countries examining the utilization of personal interviews. The most extreme residual (-3.8) is shown for the US. If the table variables were independent, many more researchers in the US would be expected to use personal interviews. The percentages of researchers are similar for European countries. Variations among European countries were tested for significance but the chi-square tests did not result in any significant differences between European countries. Collapsing the European countries into one group would result in a formation already compared with the US.

Table 4.7 The use of personal interviews

	US	UK	Germany	Others
Percentage of personal interviews	24.4	40.4	37.7	45.3
Adjusted Residuals	-3.8	2.6	1.3	1.6

When comparing each of these countries separately with the US, the chi-square test produced significant Pearson values (US-UK: chi-square value= 6.0, $p= 0.014$; US-Germany: chi-square value = 4.9, $p= 0.026$; US-Others: chi-square value = 11.19, $p= 0.001$). These results verify the outcome of the chi-square tests discussed earlier.

Researchers in Europe use personal interviews significantly more often than researchers in the US.

No significant differences were found when comparing the utilization of telephone interviews in Europe and US. However, great variation between European countries is found when analyzing the three country groups. Table 4.8 shows the percentages as well as the adjusted residuals for four countries examining telephone surveys.

Table 4.8 The use of telephone surveys

	US	UK	Germany	Others
Percentage of telephone surveys	9.2	17.5	5.8	6.3
Adjusted Residuals	-0.1	2.3	-1.1	-0.9

Researchers in the UK use telephone surveys almost three times as often as researchers in other European countries including Germany, and twice as often than those in the US. Based on percentages as well as adjusted residuals, European countries except for the UK are grouped together and separately compared to the US and the UK. The chi-square test produced a significant Pearson-value of 6.279 ($p=0.048$). When comparing a group containing the US as well as the European countries to the UK, the chi-square test resulted in a significant difference (chi-square value = 5.192; $p=0.023$). This result indicates that researchers in the UK use significantly more telephone surveys than those

in other countries. Presumably, telephone surveys are more efficient to use in the UK because a smaller geographic area has to be covered. Furthermore, researchers in the UK might try telephone surveys as an alternative to more expensive personal interviews.

In contrast to the UK, the lowest percentage of telephone survey use was found for Germany with approximately six percent. This result indicates:

- different telephone penetration might hamper the conduct of telephone surveys. The penetration among households is approximately 97 percent in Western Germany and about 50 percent in Eastern Germany.
- respondents might be reluctant to have longer telephone conversations (cultural acceptance of telephone communication). They are not used to the telephone due to a low telephone penetration and high telephone rates compared to other countries in Europe.
- respondents in Germany are very concerned about their privacy (Anonymous 1996c). Therefore, cold calls by telemarketers are prohibited. However, outbound calling in telephone research is possible according Article 5 of the German constitution that supports activities for research purposes (ADM 1994).

Table 4.9 shows the percentages as well as the adjusted residuals for four country samples examining mail surveys. The percentages for the three European samples indicate a variation between the countries in the usage of mail surveys. Compared to the

other European countries, researchers in Germany conducted a high percentage of mail surveys (56.5 percent) while those in the UK use mail surveys less frequently. Presumably, researchers in the UK prefer to use telephone over mail surveys. Aggregating studies conducted in the US and other European countries to one group and comparing this with the UK, the chi-square test results in a significant Pearson-coefficient of 8.103 ($p=0.004$). Thus, researchers in the US and European countries use significantly more mail surveys compared to those in the UK.

Table 4.9 The use of mail surveys

	US	UK	Germany	Others
Percentage of mail surveys	66.4	42.1	56.5	48.4
Adjusted Residuals	3.6	-2.8	-0.5	-1.9

A different survey population, such as consumer studies or studies on businesses, might partly explain the selection of a survey method. Thus, the next section discusses differences between the US and Europe when differentiating between consumer surveys and surveys on businesses.

Consumer Surveys versus Surveys on Businesses

The descriptive analysis revealed that, compared to the US, researchers in Europe conducted slightly more studies on businesses and public organizations (focus of study). Within Europe, research indicates a strong focus on consumer studies in the UK while researchers in Germany conducted more surveys on businesses.

Table 4.10 shows the survey methods cross-classified by focus of study (consumer and businesses). In 75.9 percent of studies on businesses, mail surveys were used while for most of the consumer studies personal interviews were utilized (46.4 percent). Telephone surveys were used mainly for consumer surveys, however, 5.5 percent were conducted with businesses. Managers are not willing to answer questions over the telephone because they are often too busy. In a mail survey, they can decide when to fill out the questionnaire.

Table 4.10 Focus of study and survey methods

Survey method (in percent)/Focus of study	Consumers	Firms
Personal Interviews	46.4	18.6
Mail Surveys	39.1	75.9
Telephone Surveys	14.5	5.5

The chi-square test was used to examine differences in the utilization of survey methods when focusing on consumers and businesses. As significance level α is set at 0.05, the calculation of the chi-square resulted in a value of 61.842 ($p=0.0001$). This result indicates a highly significant difference in the selection of survey methods for consumers and businesses. Thus, the focus of the study might partly explain the differences between European countries in the utilization of survey methods. For example, researchers in Germany focused mainly on businesses (53.6 percent) resulting in the highest percentage of mail surveys in Europe (56.5 percent). In contrast to Germany, researchers in the UK focused on consumers (52.6 percent) resulting in a high percentage of personal interviews and telephone surveys (40.4 and 17.5 percent, respectively).

Considering these results, two subsamples, one for consumer and the other for business studies are created. These subsamples are used to compare the US and European countries in terms of survey methods. The goal is to measure differences among the countries for the two subsamples with regard to survey methods. Countries are cross-tabulated by each survey method. The variables representing survey methods are coded dichotomously. Three tables containing two rows and two columns are formed for each group, respectively.

Table 4.11 shows percentages of researchers for both subsamples using personal interviews, telephone or mail surveys. When focusing on consumers, personal interviews

dominate survey methods in Europe (55.0 percent) while in the US personal interviews and mail surveys are used almost equally (40.9 and 44.1 percent, respectively). In general, European researchers use more often personal interviews than researchers in the US (55.0 versus 40.9 percent) and fewer mail surveys (31.3 versus 44.1 percent). As previously discussed, personal interviews might be more cost effective in European countries where geographic areas are smaller. In contrast to Europe, researchers in the US use more mail surveys due to the low cost per interview when covering large geographic areas. It is interesting that researchers in the US use slightly more telephone interviews to survey consumers than researchers in Europe (15.0 versus 13.8 percent). This result verifies statements in the marketing literature implying a stronger use of telephone surveys in the US than in other countries, however, the difference is small. (Bauer 1995, p. 49; Douglas and Craig 1983, p. 224).

When studying businesses, the mail survey is the dominant survey method in both regions (85.3 percent in the US; 63.4 percent in Europe). Europeans have chosen personal interviews in approximately 30 percent of the cases compare to the US (10 percent). Europeans use slightly more telephone surveys. However, telephone surveys are not used very frequently to survey businesses in both regions (4.4 percent in the US; 6.9 percent in Europe).

Table 4.11 Survey methods for studies on consumers and businesses

Survey method (in percent)/Focus of study	Consumers		Businesses	
	US	Europe	US	Europe
Personal Interviews	40.9	55.0	10.3	29.7
Mail Surveys	44.1	31.3	85.3	63.4
Telephone Surveys	15.0	13.8	4.4	6.9

Again, chi-square tests were used to test for differences among the countries for consumer studies and studies on businesses. The computations resulted in the following:

- significant differences exist between the proportion of researchers in the US and Europe using personal interviews (chi-square value of 3.899 for consumers, $p=0.048$; chi-square value of 14.44 for businesses, $p=0.0001$). Europeans use significantly more personal interviews in studies for both consumers and businesses.
- no significant differences exist between the proportion of researchers in the US and Europe using telephone interviews (chi-square value of 0.058 for consumers, $p=0.810$; chi-square value of 0.709 for businesses, $p=0.4$). This result does not differ from earlier analysis.
- significant differences exist between the proportion of researchers focusing on businesses in the US and Europe using mail surveys (chi-square value of 15.25 for businesses, $p=0.0001$)

- no significant difference exist between the proportion of researchers focusing on consumers in the US and Europe using mail surveys (chi-square value of =3.4 for consumers, $p=0.065$). There are no significant differences between the US and Europe when focusing on consumer studies. The conclusion is that researchers in the US use significantly more mail surveys than those in Europe when surveying businesses.

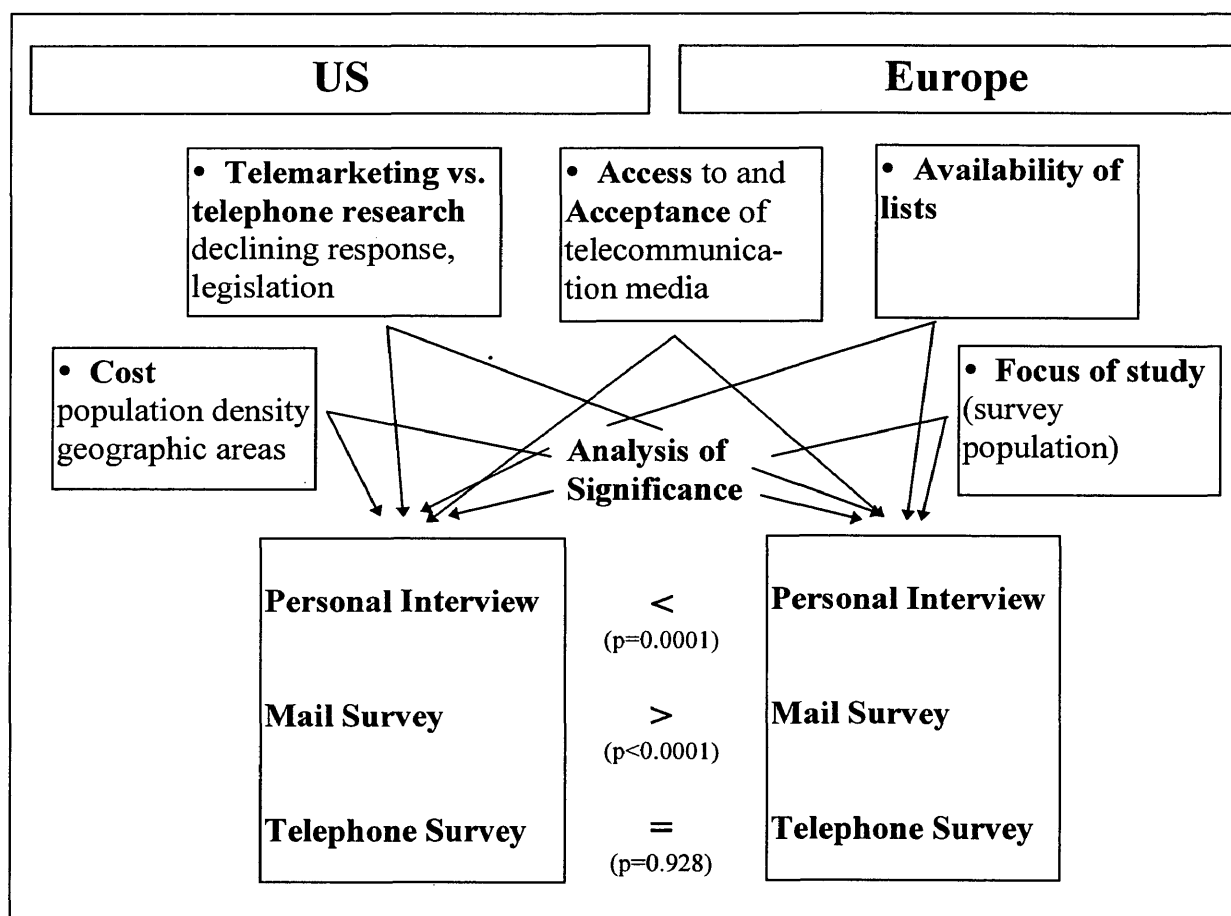
Table 4.12 summarizes the results of the comparison between consumer and business surveys.

Table 4.12 Summary of research findings: Consumer versus Business Surveys

Differences between the countries	Factors causing differences
<ul style="list-style-type: none"> • There is a significant difference between consumer and business studies in selection of the survey method ($p=0.0001$) 	<ul style="list-style-type: none"> • Mail surveys were used mainly for studies on businesses (75.9 percent) while personal interviews were employed for most of the consumer studies (46.4 percent). Telephone surveys were used mainly for consumer surveys.
<ul style="list-style-type: none"> • Comparing the percentages of researchers in the US using mail surveys to that in Europe, the chi-square calculation resulted in significant differences only for studies on businesses ($p= 0.0001$) 	<ul style="list-style-type: none"> • When studying businesses, researchers in the US use significantly more mail surveys than those in Europe.

5. Implications and Limitations

The comparison between the US and Europe was designed to identify differences and similarities in survey methodology. Figure 5.1 illustrates the model this comparison followed and summarizes statistical tests. Although the US and Western Europe are often relatively similar in regard to standard of living, it was argued that not only social-cultural differences exist but also differences in the telecommunications access and acceptance as well as in legislation or list availability. These factors influence the utilization of a specific survey method. Based on the theoretical discussion, hypotheses were introduced and tested. The analysis produced significant differences in two main areas: Compared to the US, researchers in Europe use a larger percentage of personal interviews. Researchers in the US utilize mail surveys more frequently. The US and European countries are similar only in the utilization of telephone surveys. Analysis also found that utilization of a survey method partly depends on the focus of study (survey population). Researchers in the US use a significantly larger percentage of mail surveys when surveying businesses than European researchers.

Figure 5.1 Comparison of survey methodology in the US and Europe


As discussed in the introductory chapter, standardization or differentiation is an important issue when searching for the most cost-effective survey methodologies in an unknown market. The differences found among the countries suggest a strategy of adaptation in order to utilize the most cost-effective method in a country. Researchers planning to conduct a survey limited to or including the US and European countries should be aware of differences in survey methodology used in these countries. Considering the results of the study, the following recommendations are given:

- Mail surveys are suggested as the most cost effective survey method in the US, in particular when surveying businesses.
- In Europe, personal interviews are the appropriate survey method in general, however, they are most often used when focusing on consumers. When focusing on businesses, mail surveys are the most efficient survey method.
- Telephone surveys are efficient for consumer research in the US and within Europe, in the UK.

In this research, analysis focused on a comparison between the US and Europe as two regions. However, the literature review and preliminary analysis revealed there is a great variation in use of survey methods between European countries. For this reason, the European sample was divided into three country groups (Germany, UK and Others) that better reflected the differences within Europe.

Since this research is based on marketing journals the potential of academic bias might exist. However, many academicians are strongly connected to practitioners through consulting activities; and practitioners are often co-authors of studies that are published. Therefore, the reviewed literature provides an appropriate reflection of how research is conducted in the US and European countries.

Another limitation of this research might be that the time frame is too short to really capture changes in technology. Apparently, there is a gap between theoretical discussion and implementation. Market research firms probably utilize advanced technology to improve traditional survey methods (CATI) more often since they have to handle larger volumes of surveys than a researcher at an academic institution.

Despite these potential limitations, this study enables marketing researchers to better understand the patterns of survey methodologies in the US and European countries. For future research, a comparison to survey methodologies in Asian countries would be interesting since European and American companies find Asian markets very attractive, but have only a limited knowledge of these markets. The less the familiarity with the markets the greater the need for research contributing to the immense growth of market research expenditures in these region (Steele 1990). In fact, research activities in Asia have accelerated dramatically in recent years due to the enormous size and growth of the markets there. Knowledge of differences in survey methodologies in the US, Europe and Asia is necessary to select the most efficient survey method in Asia. Furthermore, Bartram (1991, p. 104) states a high level of education and income plus a “considerable sophistication in inter-country coordination will make this a region whose innovations in research will be worth watching, as they will be applicable elsewhere too”.

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