
Processes of a case study methodology for postgraduate research in marketing

Processes of a
case study
methodology

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Introduction

Case studies are familiar to marketing educators and their students as a teaching device. For example, the Harvard Business School's cases are widely used to allow students to be emotionally involved and learn action-related analysis of real, complex situations (Christensen and Hansen, 1987). However, although case studies can also be used as a research methodology (Easton, 1994a; Parkhe, 1993; Tsoukas, 1989; Yin, 1993, 1994), no journal of research case studies or case study methods exists and the most common social science and evaluation research methods textbooks "hardly mention case studies" (Yin, 1993, p. xi). Indeed, one survey of PhD dissertations in six fields concluded that case studies were inappropriate in postgraduate research, that is, one way to rectify the "mindless empiricism" of many doctoral dissertations would be to "simply eliminate ... case study dissertations" (Adams and White, 1994, p. 573).

This paper reports the Australian development of a successful, structured approach to using the case study methodology in postgraduate research. The paper is designed for postgraduate research students in marketing and their supervisors, for its aim is to present and justify guidelines for using the case study research methodology in honours, masters and PhD research theses. That is, only case studies used in postgraduate theses are considered, and not those used for other purposes such as consulting (Yin, 1994), program evaluation (Patton, 1990) or market research.

The paper's contribution to marketing education derives from its focus on structured, postgraduate research processes and from its detailed treatment of prior theory and induction in case study research. Marketing education will benefit from its rigorous procedures for postgraduate students to research complex, contemporary topics relevant to their current or future careers, about which little academic research has been published. Recent examples of these topics are marketing on the Internet, business reengineering and customer

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service, home banking, marketing of community museums, and organizational accountability of the marketing communications function. In the marketing department of one Australian university in 1995, all five honours and three of the five masters by research students opted to use this methodology; all completed their thesis within normal time, indeed, the master's theses were finished three to five months before minimum time. Half the examiners passed the theses without revision and the other examiners' revisions required less than one day to complete. Refereed and unrefereed conference papers based on many case study theses have been presented at international conferences, and most of the students subsequently gained the jobs they had worked towards.

The paper has a structure that ranges from strategic to tactical issues, because both must be mastered for case studies to be understood and applied in postgraduate theses. First, the appropriate scientific paradigm and levels of induction and deduction are established. Implementation of the case study methodology is then examined, including the number of case studies and interviews. Use of theoretical replication to rigorously analyze case study data is illustrated from a postgraduate thesis. Finally, a framework is provided for constructing a thesis, emphasizing the key methodology chapter.

Because of the specific focus of this paper, case study research methodology is defined as "a research methodology based on interviews that is used in a postgraduate thesis involving a body of knowledge". The methodology usually investigates a contemporary phenomenon within its real-life context when the boundaries between phenomenon and context are not clearly evident (Yin, 1994, p. 13).

Scientific paradigms

There are two major approaches to theory development, deductive theory testing and inductive theory building (Bonoma, 1985; Parkhe, 1993; Romano, 1989). The difference between the two approaches can be viewed in terms of scientific paradigms, with the deductive approach representing the positivist paradigm and the inductive approach representing the phenomenological paradigm (Easterby-Smith *et al.*, 1991, p. 24). More precisely, the phenomenological paradigm can be divided into three: critical theory, constructivism and realism (Guba and Lincoln, 1994). Table I is a conceptual schema of these four paradigms, using three columns which allow the evaluation of each paradigm

Paradigm	Deduction/ induction	Dimension Objective/subjective	Commensurable/ incommensurable
Positivism	Deduction	Objective	Commensurable
Critical theory	Induction	Subjective	Commensurable
Constructivism	Induction	Subjective	Incommensurable
Realism	Induction	Objective	Commensurable

Table I.
A three dimensional
framework for
categorizing four
scientific paradigms

for case study research (based on Guba and Lincoln, 1994; Hunt 1991; Orlikowski and Baroudi, 1991; Parkhe, 1993; Tsoukas, 1989). The columns in Table I refer to the dimensions of deduction/induction, objective/subjective and commensurable/incommensurable. Each of those dimensions is discussed next.

Realism is the preferred paradigm for case study research for several reasons. First, case study research areas are usually contemporary and pre-paradigmatic, such as inter-organizational relationships and relationship marketing (Boing, 1994). That is, the research areas usually require inductive theory building for deduction from already existing principles of a "paradigm" is likely to be difficult where accepted principles and constructs have not been established or are clearly inadequate. Second, realism does not suffer from the limitations of relativism (Hunt, 1991) that constructivism and critical theory do, for realism is often characterized by some researcher objectivity. That is, it holds that there is an external reality (Tsoukas, 1989), although the complexity of that reality and the limitations of a researcher's mental capacity makes triangulation of data essential to refine fallible observations of that reality. The continuing efforts of many marketing researchers almost necessitates the belief that there is an external world which can be researched (Hunt, 1991; Leplin, 1986). In other words, case study research efforts usually involve the collection of perceptions of "unobservable" external world phenomena such as perceptions that are "unobservable" (Hunt, 1991, p. 282), for example, views about non-economic and non-technological motivations in relationship marketing. As has been noted in the marketing literature (Hunt, 1991), positivism requires that only observable phenomena can and should be researched, so realism rather than positivism is a more appropriate epistemological guide for case study research.

Coming to the third dimension in Table I, case study researchers expect that their knowledge claims can and will be evaluated through some common measures, like reliability and validity issues, careful evaluation of research topic and methodology, and through review by examiners. This commensurability is not so evident in constructivism and critical theory research. In brief, realism is the appropriate scientific paradigm for case study research. How this position justifies some procedures is noted next and later, as the procedures are discussed.

Given this appropriateness of realism for case study research, the research problems addressed in theses are more descriptive than prescriptive, for example, no positivist experiments or cause-and-effect paths are required to solve the research problem. That is, the research problem is usually a "how do?" problem rather than a "how should?" problem. This "how do" rather than "how should" problem captures the positive versus normative dichotomy, for case study research is concerned with describing real world phenomena rather than developing normative decision models. Because inductive, theory building rather than theory testing is the goal of the thesis, its final chapter must always present a proposed theory to solve the "how do" research problem based on a model of boxes and connecting lines. Moreover, the final "further research" section of the thesis will acknowledge that this theory will have to be tested for

statistical generalizability in later, more quantitative research. In brief, examples of appropriate research problems for case study research methodology are:

- How is relationship marketing implemented in a modern accounting practice?
- How does the marketing infrastructure of a foreign country impact on its internationalization processes?
- How do Australian high value-added manufacturing companies develop their market entry modes into China?

Induction and deduction

Realism's description in Table I as being inductive might suggest that deduction has little place in case study research, with theories being built without any reference to theory. This section points out that the position in Table I is one of relative emphasis and that case study research includes some deduction based on prior theory, although inductive theory building is more prominent. The discussion begins with pure induction and then moves to our preferred mixture of induction and deduction.

Pure induction

Grounded theory is at one extreme of the induction versus deduction continuum and emphasizes generating theory from data alone (Glasser and Strauss, 1967; Strauss, 1987).

On the premise that "the adequacy of a theory" cannot be dissociated from the process by which it was generated, some researchers (Glasser and Strauss, 1967, p. 5) claim that inductively developed, grounded theory is superior in terms of its usefulness to "logico-deductive" theory which is generated by logical deduction from prior assumptions. They claim there is a probability of molding the facts that appear to match a given theory (Maanen, 1983, p. 37). So the extreme position of grounded theory is one where there is "no theory under consideration and no hypothesis to test" (Eisenhardt, 1989, p. 536).

More recently, Glasser and Strauss (1987, p. 253) "refined" their position and conceded that in practice it is difficult to ignore the theory accrued in one's mind before commencing the research process. That is, common prior knowledge gained through the process of socialization will inevitably influence the researcher's formulation of the hypothesis (Manicas, 1989, p. 194), and the researcher should refrain from the uncritical appropriation of this reserve of ideas. Thus starting from scratch with an absolutely clean theoretical slate is neither practical nor preferred.

Mix of induction and deduction

In brief, it is unlikely that any researcher could genuinely separate the two processes of induction and deduction. Richards (1993, p. 40) suggests that "both (prior theory and theory emerging from the data) are always involved, often simultaneously", and that "it is impossible to go theory-free into any study".

And this more moderate, somewhat pluralistic position is apparently becoming preferred, even by earlier proponents of a grounded theory approach to case study research such as Eisenhardt (1991) when answering Dyer and Wilkins (1991).

Other researchers (e.g. Miles and Huberman, 1994, p. 17) also conclude that induction and deduction are linked research approaches. Although trade-offs might be made between “loose” and “tight” initial frameworks, the former being more locally focused and site-sensitive while the latter is more economical and facilitates comparison between sites, both provide potential for the analytical generalization of findings. Their own empirical experiences (Miles and Huberman, 1994, p. 17) have led them to emphasize the importance of “prestructured research” for new qualitative researchers working in areas where some understanding has already been achieved but where more theory building is required before theory testing can be done (as is the situation being discussed here).

Thus some prior theory can have a pivotal function in the design of the case study and analysis of its data. Pure induction might prevent the researcher from benefiting from existing theory, just as pure deduction might prevent the development of new and useful theory. Parkhe (1993, pp. 252, 256) argues that “both extremes are untenable and unnecessary” and that the process of ongoing theory advancement requires “continuous interplay” between the two. Indeed, prior theory can be viewed as some additional evidence that can be used to triangulate on the external reality of case study research’s realism paradigm.

Figure 1 illustrates these differences between induction and deduction in theory building case study research, between the “indigenous concepts” of the data and the “sensitizing concepts” from prior theory which the analyst brings to the research (Patton, 1990, p. 391). The left hand side of Figure 1 shows the more inductive or “exploratory” approach (Yin, 1993, p. 5) to case study research. The first case on the left hand side of the figure is almost pure

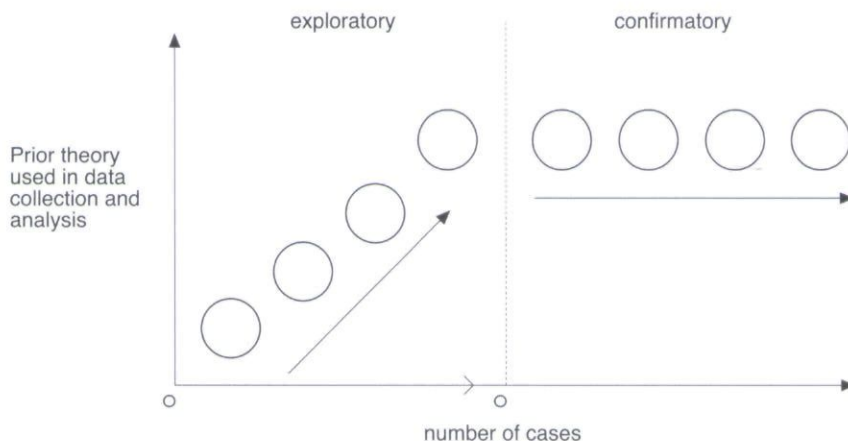


Figure 1. A comparison of two case study research positions: a purely inductive position (left hand side) and a preferred position (a blend of left hand and right hand sides)

grounded theory. But data collection and analysis of the next cases on the left hand side is informed by preliminary concepts from the first case and from prior theory. Without this structured process, "researchers who set out to practice the precepts of grounded theory frequently went aground in uncharted analytical terrain" (Jensen and Jankowski, 1991, p. 68). The disadvantage of this left hand side, very inductive approach is that all cases cannot be compared with each other (because there are different interview questions for each case) and the researcher runs the risk of "discovering" existing theory.

The left hand and right hand sides of Figure 1 together show our preferred position of "confirmatory" case study research (Miles and Huberman 1994, p. 17; similar to Yin, 1993, p. 18). Some prior theory is obtained from pilot cases, as shown on the left hand side. This prior theory then informs the interview protocol used for data collection in all the main cases, as shown on the right hand side. That is, the prior theory informs all main data collection equally and theory is generated from all cases in one operation of cross-case data analysis across all the main cases. Case study research is suited to studying theories in this way because it only takes one case that is inconsistent with a theory to disconfirm it (Easterby-Smith *et al.*, 1991, p. 139).

That is, prior theory does have some role in case study research. First, although the interviews begin with unstructured questions, some probe questions are also in the interview protocol to ensure interviewees' perceptions about concerns in the prior theory are raised, as noted below. Second, one or two pilot studies are done before the major data collection stage. These pilot studies are not a pre-test or "full dress rehearsal" of the interview protocol (Yin, 1994, p. 74), rather they are an integral part of developing the interview protocol, that is, of the "play writing" process. Third, a stage of convergent interviews with practitioners can be incorporated into doctoral and master's research design, while the literature's prior theory is being reviewed (Nair and Riege, 1995). In brief, the prior theory is developed from the literature and from pilot studies and/or convergent interviews, to be the first step in the theory-building process of case study research.

This two-step, theory building position is consistent with the realism paradigm's search for capabilities rather than regularities (Tsoukas, 1989), for analytic generalization rather than statistical generalization (Easton, 1994a; Ragin and Becker, 1992; Yin, 1994). In analytic generalization, "the investigator is striving to generalise a particular set of results to a broader theory" (Yin, 1994, p. 36), rather than to a population as in statistical generalization. To generalise to a theory is to provide some evidence that supports a theory but not necessarily proves it definitively (Firestone, 1993).

Thus, in a case study thesis, prior theory provides a focus to the data collection phase in the form of research issues that always conclude the literature review. The literature review chapter also has some initial theoretical frameworks modeled with boxes and arrows developed from the literature review and some pilot interviews. That is, the literature review chapter is the same as that of a conventional thesis, charting the body of knowledge and

identifying gaps. However, the gaps are not expressed as precise, testable, closed yes/no propositions or hypotheses, but as general broad, open research issues (Yin, 1994, p. 21) that will be used as section headings in the data analysis and concluding chapters of the thesis. As rough rules of thumb, there will be about four research issues in an honours' thesis of about 20,000 words, about five research issues in a master's thesis of about 50,000 words and about six to ten issues in a PhD thesis of about 80,000 words. Examples of research issues are:

- How does an accounting practice move from transaction marketing to relationship marketing?
- What is the role of the marketing manager in a modern relationship orientated accounting practice?
- How is an awareness of interpretive and rational approaches to strategic planning evident in a workshop?
- How do Hong Kong marketing managers treat pricing considerations when developing strategic marketing plans for China?

In conclusion, case study research fits within the critical realism paradigm and is essentially inductive, theory building research. Nevertheless, it also acknowledges that "fact and theory (induction and deduction) are each necessary for the other to be of value" (Emory and Cooper, 1991, pp. 62).

Implementing case study research methodology

Given that a blend of induction and deduction appears to be the most preferred position, how can it be implemented in a postgraduate thesis? This section details some of the specific practices of case study data collection and analysis: interview questions, selection and number of cases, and analysis of data.

Questions

The research issues presented at the end of the literature review are ignored at the start of the unstructured interviews used to collect data. Through trials, we have found the starting question after the preliminaries should invite the interviewee to tell the story of their experience of whatever the research is about, for example, "What is the story of your experiences of leading strategic marketing planning workshops?" Such first questions capture the interviewee's perceptions, and not the researcher's:

... the starting point is a question that is almost content-free. This is your warranty that the answers came from the respondent and did not arise simply because your questions created a self-fulfilling prophecy (Dick, 1990, p. 9).

Although the interviews start as induction by the interviewee, the analysis of their data will be deduction about prior theory by the interviewer/researcher, that is, the researcher/interviewer has some prior theoretical issues that were raised in the literature review and which must be discussed in the data analysis chapter. Within the realism paradigm of case study research, the perceptions of the

interviewee are of interest only because they provide triangulation data about the real world outside the interviewee and the interviewer. Thus some probe questions about the research issues must be prepared in case the interviewee does not raise them in the first, unstructured parts of the interview. However, one hopes that the answers to the probe questions are provided before the questions have to be put (Easton, 1994b, personal communication). The probe questions usually always start with "How...?" and can definitely not be answered with a yes or a no. Care should be taken to phrase the probe questions with the words used by interviewee (Carson, 1996, personal communication), for example, "link" rather than "interorganisational network". Other techniques for the unstructured parts of the interviews are in Dick (1990) and Armstrong (1985, pp. 28-31).

The probe questions form the major part of the prepared interview protocol (Yin, 1994) which is used to provide a reliable framework for cross-case analysis of data. An example of an interview protocol used in postgraduate research is in Larson (1992). We have found interview protocols should include Likert scaled questions summarizing the overall perceptions of an interviewee toward the issue addressed in each question, to be answered by the interviewer (Yin, 1994, p. 69) during or after the interview, for these assist in writing up the data analysis chapter of a thesis. For example, a Likert scale from "formal" to "informal" can summarize discursive answers about how strategic market planning is carried out, for each case.

Selecting cases

Procedures for each case were discussed above, but how many cases are required? A researcher can use one case study only if one or more of the three justifications in (Yin, 1994) apply, and the appropriateness of two or more theories can be tested with the case. However, several case studies should usually be used in postgraduate research because they allow cross-case analysis to be used for richer theory building. Yin (1994, pp. 45-50) advises that "multiple cases" should be regarded as "multiple experiments" and not "multiple respondents in a survey", and so replication logic and not sampling logic should be used for multiple-case studies. That is, representativeness is not the criteria for case selection (Stake, 1994), rather the guarded choice of each case should be made such that it either:

- predicts similar results for predictable reasons (that is, literal replication); or
- produces contrary results for predictable reasons (that is, theoretical replication) (Yin, 1994).

Other researchers support this method of case selection and highlight the inappropriateness of random sampling, for example, Eisenhardt (1989, p. 537) states that the "random selection of cases is neither necessary, nor even preferable".

So how should cases be selected? Patton (1990) lists 15 strategies of "purposeful sampling" (in contrast to "random sampling") which can be used to

select cases. Of these, "maximum variation" sampling is the most appropriate for our analytical and general purposes, for the other types of purposeful sampling such as "typical case", "critical case", or "homogeneous" are more appropriate for Patton's goal of evaluating one particular program, or for research that is more inductive than ours, that is, in situations where the major causes of variation between cases cannot even be estimated. Maximum variation sampling should include very extreme cases, for example, a researcher investigating company turnarounds found an outside-the-boundaries case which had continued to decline and not turned around, provided valuable insights into the turnaround process.

In brief, for qualitative research like the case study methodology, the selection of cases is purposeful and involves using replication logic and largely depends on the conceptual framework developed from prior theory. Whichever of the 15 case selection strategies is used, "the underlying principle that is common to all of these strategies is selecting *information rich cases*", that is, cases worthy of in-depth study (Patton, 1990, p. 181; emphases added). This issue of information richness is fundamental to deciding on the number of cases.

Number of cases

There are no precise guides to the number of cases to be included – "the literature recommending the use of case studies rarely specifies how many cases should be developed. This decision is left to the researcher ..." (Romano, 1989, p. 36). In a similar vein, Eisenhardt (1989) recommends that cases should be added until "theoretical saturation" is reached and Lincoln and Guba (1985, p. 204) recommend sampling selection "to the point of redundancy". Similarly, Patton (1990, p. 181) does not provide an exact number or range of cases that could serve as guidelines for researchers, claiming that "there are no rules" for sample size in qualitative research. However, the views of these writers ignore the real constraints of time and funding in postgraduate research, that is, postgraduate students need some guidelines to plan their program around.

Fortunately, other authorities on case study design have used their experience to recommend a range within which the number of cases for any research should fall. For example, Eisenhardt (1989, p. 545) suggests between four and ten cases:

While there is no ideal number of cases, a number between four and ten cases often works well. With fewer than four cases, it is often difficult to generate theory with much complexity, and its empirical grounding is likely to be unconvincing.

There are somewhat different views. Some advocate a minimum of two, but the usual view is that "in practice four to six groups probably form a reasonable minimum for a serious project" (Hedges, 1985, pp. 76-7). For the maximum, Hedges (1985) sets an upper limit of 12 because of the high costs involved in qualitative interviews and the quantity of qualitative data which can be effectively assimilated. In the same vein, Miles and Huberman (1994, p. 30) suggest that more than 15 cases makes a study "unwieldy". In brief, the widest

accepted range seems to fall between two to four as the minimum and ten, 12 or 15 as the maximum.

Turning from the number of cases to the number of interviews, our experience and anecdotal evidence suggests that an honours' thesis requires at least four interviews (that is, one interview in each of four case organizations), and a PhD thesis requires about 35 to 50 interviews. The PhD interviews would ideally involve about three interviews at different hierarchical levels within 15 case study organizations, for example. However, more than one interview in a small business or in any Asian organisation is difficult, so interviewees could be in the "context" of case organizations such as industry associations, consultants and government advisers. A master's research thesis would be somewhere between these two limits.

The above figures are merely rules of thumb that assist research design. For example, in one master's thesis of 60,000 words, only five cases were available. This was towards the lower end of the range and so the candidate spent more time on the literature review to provide enough probe questions toward the end of the interviews to ensure a very information-rich analysis of data.

Another master's student had been warned that his research focus on strategic marketing in China was too broad, and that he should focus on only one or two of the most critical four Ps. Before he could change his wide-ranging interview protocol to incorporate this advice, he flew to Hong Kong to interview marketing managers. After arduous searching, he could only find six marketing managers willing to be interviewed, and fortunately they represented a large variation of cases. With this small number of cases, the candidate had to ignore earlier advice, and continue with a wide-ranging study of all of strategic marketing, to provide sufficient information-richness for the thesis.

In conclusion, the student should use the above guidelines as starting points for research design, and then possibly use this quotation from Patton (1990, p. 185) to justify not slavishly following a rule:

The validity, meaningfulness and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the observational/analytical capabilities of the researcher than with sample size.

However many cases are used, they should be arranged in a pattern based on theoretical replication. Honours and master's theses usually have one dimension of theoretical replication, for example:

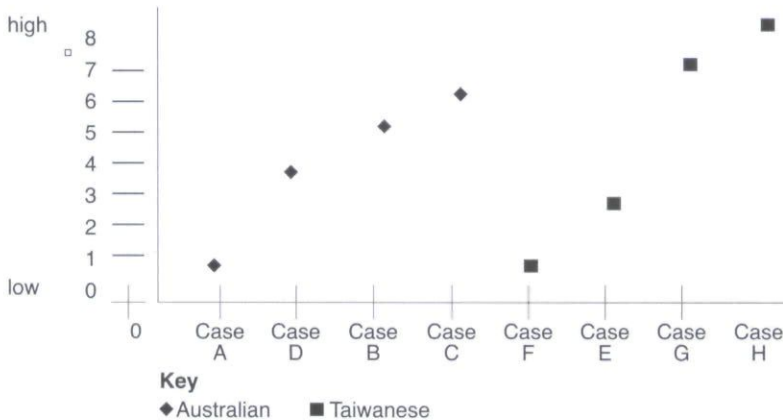
- experience/effectiveness of strategic marketing planning into China from Hong Kong;
- experience/effectiveness of market penetration into China from Australia;
- experience/effectiveness of Australian firms of internationalizing into world markets; and
- rational through to interpretive approaches toward strategic planning.

Some theses' research designs can become multi-dimensional blends of theoretical and literal replication. A master's thesis about trading companies had one dimension of "country" (that is, Australian and Taiwanese) and another dimension of "effectiveness" as measured with a multi-item index composed of size, number of products and number of countries exported to. Figure 2 illustrates the resulting arrangement of cases. In another example, after some convergent interviews and piloting of her interview protocol, a PhD candidate decided on three dimensions of theoretical replication (which had been discussed in the literature review, of course). She selected "high" and "low" levels of each and her research design showed the blend of theoretical and literal replication of Figure 3, with 16 cases and two interviews in each.

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Analysis of data

After selecting cases and conducting interviews, the student must analyze the data. The prior theory comes back to the forefront in the data analysis



Source: Case study interviews

Figure 2. Example of research design for theoretical replication of case studies on two dimensions of effectiveness (vertical axis) and country (horizontal axis)

Dimension 1: Industry				
Manufacturing			Services	
Dimension 2: Size				
Big		Small		
Dimension 3: Country				
Japan		XX		XX
New Zealand		XX		XX

Figure 3. Example of research based on three dimensions of theoretical replication and literal replication: the 16 cases are marked with X

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chapter, with a tight structure used to categorize the interviews into subsections of the data analysis chapter, and quotations from interviews frequently used to justify conclusions about differences between cases in the cross-case analysis. Case analysis should always precede cross-case analysis (Miles and Huberman, 1994; Patton, 1990), but it is during cross-case analysis where the student can most clearly display his or her analytical capabilities and escape the “mindless” description of many case study theses (Adams and White, 1994, p. 573). Thus the description of each case near the beginning of the data analysis chapter is restricted to less than half a page per case, with other descriptive material relegated to appendices or the database.

As noted above, theoretical replication is the key to the selection of cases, but it is also the key to the rigorous analysis of case study data. For each interview question, the cases are placed along the horizontal axis and the Likert scaled summary position of each is placed on the vertical axis. Then the cases are analysed in turn, with an emphasis on cross-case analysis, as noted above. On every question, the researcher is hypothesizing an association between the axis of theoretical replication and the interview question, that is, the pattern of the Likert scale points will be similar to the theoretical replication pattern shown in Figure 3. It does not matter whether this association is proven or not – the association is merely being used to generate insights during the cross-case analysis. Figure 4 shows the summary figure for one interview question in the trading companies thesis. Comparing it with Figure 2 clearly shows that neither country nor effectiveness explained the answers, and so the cross-case analysis examined the answers to the interview question in detail to find other explanations about why the answers varied. Figures like Figure 4 for each interview question supplemented by occasional case-ordered figures like some of those in Miles and Huberman (1994, Chapter 7), usually provide sufficient insights in the data analysis chapters of marketing theses.

In conclusion, prior theory from the literature review, pilot cases and convergent interviews are linked to the cases through practices of data collection and analysis:

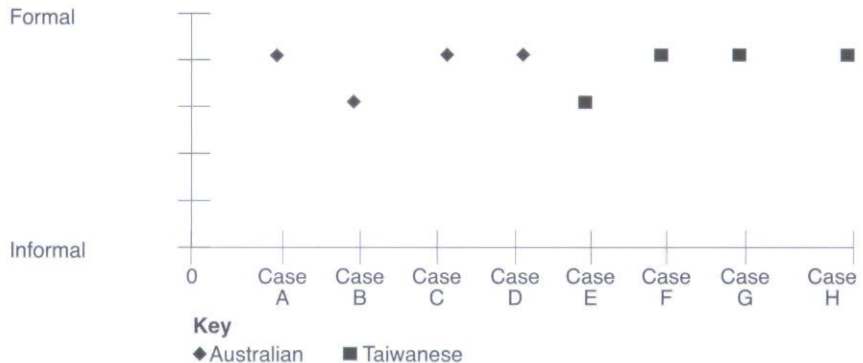


Figure 4.
Example of cross-case
analysis of competitors
for the research
designed in Figure 2

- the open research issues at the end of the literature review;
- the relatively more specific interview probe questions used to “flush out” quotations and ideas about aspects of those research issues, after more open questions have been posed;
- appropriately selected cases;
- the Likert scales used by the interviewer to summarize answers to the probe questions; and
- a return back through the Likert scales to compare cases against a priori expectations based on the research design’s theoretical replication range.

A thesis framework for case study research

To assist in its examination by examiners somewhat unfamiliar with qualitative research, a thesis using the case study research methodology can be structured like traditional theses. The Appendix gives example section headings for five chapters dealing with the introduction, literature review, methodology of data collection, analysis of data, and conclusions and implications (from Perry, 1998). These five chapters are usually adequate for an honours’ and master’s thesis, but a PhD thesis usually has one or two extra chapters to deal with the methodology of data collection and analysis of the first stage of a two-stage research project, such as convergent interviews or focus groups. Guidelines for a case study thesis’ data analysis chapter, usually chapter 4, have been provided in the previous sections; details for the numbered sections of the methodology chapter, usually chapter 3, are provided next.

First, the methodology chapter begins with a discussion of paradigms based on the discussion above, leading into the appropriateness of the realism paradigm. References to Bonoma (1985); Deshpande (1983); Dublin (1982); Easterby-Smith *et al.* (1991); Hunt (1991); Parkhe (1993); Ragin and Becker (1992) and Tsoukas (1989) will be helpful.

Second, the case study methodology should be justified, based on Yin’s (1994, p. 6) comparison of several alternatives, for example. Then validity and reliability should be addressed, based on Gabriel (1990); Lincoln and Guba (1985, Chapter 11); Parkhe (1993, p. 261); Sykes (1991) and Yin (1994, p. 33).

Selection and number of cases should then be described using the references noted above, with a description of the bases of theoretical replication and how it was the basis of the research design of case selection. Details of how interviewees were approached and how the interviews were conducted, should be provided. A table with the case letter, the organization’s name, the interviewee’s position and date of the interview must be added to reflect the importance of the temporal and physical context of case study research. Our experience of developing trust is that the interviewer should offer disguise for the interviewee’s name and organisation, unless the interviewer requests identification, which is the reverse of the normal procedure. Notes of the interview are required with quotation marks around quotations, for later transcription of audio tapes may be too time consuming and expensive to be

cost-effective, especially as the precise concern with every word of the interviewee found in constructivist, ethnographic research is not required in realism's case study research. However, an audiotape can be used to check the notes afterwards, and used as such is a desirable form of triangulation. Nevertheless, there is some controversy about the advisability of using a tape recorder during interviews (Dick, 1990; Lincoln and Guba 1985, p. 272) and they are rarely approved during interviews in Asia.

Another form of triangulation is to have more than one interviewee in case organizations, but this may not be possible in Asian organizations or small businesses, so additional interviewees from the "context" of the cases have to be included such as consultants, government advisers and industry association people. Other forms of triangulation include having more than one interviewer (for example, the student's spouse), and assembling as many relevant documents as possible, such as annual reports and magazine articles (these documents should be listed in an appendix and a note made that they are in the case study database held by the researcher and available to the reader if requested).

Then the use of a case study protocol to control the contextual environment of the case study (Yin, 1994) should be acknowledged. Controlling the contextual environment is an important consideration in the design and application of qualitative research approaches (Emory and Cooper, 1991; McDaniel and Gates, 1991), in addition to careful consideration of theoretical and literal replication.

The development of this case study protocol assists the research in two ways. First, the protocol allows the researcher to detail in advance the procedures and requirements to be followed during data collection. Second, the protocol provides direction for the researcher that might act to improve the reliability of the research findings. The essential components include an overview of the study, the field procedures to be followed, interview questions and a guide for the research report (Yin, 1994). A mere reference to the relevant chapters and sections of the thesis is usually all that is required in a postgraduate thesis (unlike in a consultancy project where the case study protocol's procedures must be spelt out separately from the final report (Yin, 1994)). However, generation of the interview protocol part of the case study protocol must be described in detail in a thesis – the interview protocol includes general instructions and probe questions for the interview, and must be included as an appendix.

Details of the pilot studies and their assistance in identifying research issues should be provided in this chapter, or in the literature review chapter if the influence of the pilot studies on the development of the research issues was considerable.

Then a section briefly discussing techniques of data analysis to be used in the next chapter could be added, referencing Yin (1994), and the matrix analysis of Miles and Huberman (1994). A brief discussion of the limitations of case study research based on Dick (1990) and Parkhe (1993) is also needed.

The final section of chapter 3 is the usual discussion of ethical considerations such as openness with interviewees and appropriate treatment of confidential

information (Emory and Cooper, 1992, pp. 23-34; Lincoln and Guba 1985, pp. 254-5; Miles and Huberman 1994, Chapter 11; Patton, 1992, pp. 353-60).

Conclusion

This paper described a case study research methodology that operates from within the realism paradigm. First, it showed that realism was a more appropriate paradigm than positivism, constructivism and critical theory based on dimensions of deduction/induction, objective/subjective and commensurable/incommensurable. The methodology emphasizes the building of theories but also incorporates prior theory, and so is a blend of induction and deduction. How to use the methodology was described, starting with the appropriate research issues, through selection of cases and analysis of their data based on theoretical and literal replication, to constructing the report. The development of trustworthy knowledge requires the careful documentation of procedures by researchers and the guidelines developed for case study research in this paper contribute to this objective.

In conclusion, the case study methodology is a rigorous, coherent one based on justified philosophical positions. It is appropriate for postgraduate researchers, whether they plan to have an academic career or a career outside of academia. Given the recent decline in openings within academia in Australia and New Zealand, the methodology may become even more attractive to students wanting to complete postgraduate theses that blend rigor with relevance to the complex processes of contemporary marketing management.

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Appendix. Sequence of a five chapter thesis using the case study research methodology

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Abstract (with keywords)

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Abbreviations

Statement of original authorship

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Bibliography

Appendices

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