The Seven Steps of Case Study Development:
A Strategic Qualitative Research Methodology in Female Leadership Field

Wanida PHONDEJ
Dhurakij Pundit University, DPU International College, Thailand,
Telephone: 668-18354676
E-mail: nuwanida@hotmail.com

Akkapong KITTISARN
Dhurakij Pundit University, Department of Human Resource Management,
Faculty of Business Administration, Thailand,
Telephone: 668-02458222
E-mail: akkapong67@hotmail.com

Philip A. NECK
Southern Cross University, International Centre for Professional Doctorates,
Graduate College of Management, Australia,
Telephone: 617- 5506 9365
E-mail: philip.neck@scu.edu.au

Abstract
This study examines the theme of female leadership as a complex concept and an embedded phenomenon. It is in a feminist paradigm that attempts to give voice to women, and works to correct the imbalance generally posited from a predominantly male oriented perspective. In this instance, a case study approach is considered entirely appropriate since it dealt with a process of complex real-life activities in considerable depth. This paper aims to establish the case study approach as a strategic qualitative research methodology in the female leadership field. It discusses the seven steps employed in a case study approach, namely: (1) Justification for the research paradigm and research methodology, (2) Justification for the case study method, (3) Criteria for judging the quality of case study design (4) Designing the case study, (5) Criteria for selecting a case design, (6) Data collection, (7) Case study analysis. While this article reviews the case study approach used to investigate female leadership in Thailand, it undoubtedly will also have application elsewhere.

Keywords: *case study, research methodology, qualitative research, female leadership*

JEL classification: C49

Introduction

This article describes the design and methodology when dealing with the research problem concerned with successful females in leadership positions. The purpose of this research study is to explain the conditions of possibilities of successful female leaders. A rationale is provided for adopting the case study methodology used for investigating the research problem and the research questions developed as a result of the literature review. It is undertaken using the qualitative method of case studies. The merit of this case study approach lies in its the ability to place people, events and experiences in their social and historical context (Veal, 2005), and the flexible data collection strategy highlights the research strategy as the research process. Consequently, providing relative freedom to explore the potential outcomes of qualitative research to provide insightful outcomes by confirming that this research approach is justified in using the case study method. This article helps to provide the basis for setting up a case study methodology by explaining each seven steps to be followed.

Step One: Justification for the research paradigm and research methodology

One of the critical decisions that researchers need to make when designing a study is the choice of an appropriate paradigm. Paradigms also typically include specific methodological strategies linked to these assumptions, and identify particular studies that are seen as exemplifying these assumptions and methods (Maxwell, 2005, p. 36). The paper considers research strategies at a deeper level than the induction/deduction level-considered in scientific paradigms. At a more specific level, positivist social science is a paradigm relevant to quantitative research (Neuman, 2006). From a different perspective, there are paradigms that are relevant to qualitative research, for example critical theory, feminism, and even more specific traditions within these (Maxwell, 2005).

Feminist research is less well known than positivism social science and critical social science. It uses multiple research techniques, often qualitative research and case studies, in an attempt to give voice to women, and work to correct the predominant male oriented perspective. Feminist research is flexible in choosing research techniques and crossing boundaries between academic fields (Neuman, 2006). This research, desires to understand the underlying factors that allow the possibility for females to attain leadership positions in Thai society, the knowledge raises awareness and empowers people to make changes (Neuman, 2006). In brief, feminist research was the best paradigm for supporting female leadership.

Leadership researchers typically use quantitative approaches (Antonakis, Schriesheim, Donovan, Gopalakrishna-Pillai, Pellegrini, & Rossomme, 2004); however, to better understand complex, embedded phenomena, qualitative approaches to studying leadership are also necessary (Antonakis et al.,2004). The

qualitative research style is flexible and encourages slowly focusing on the topic throughout the study. The researchers often combine focusing on a specific question with the process of deciding the details of study design that occur while they are gathering data. By contrast, quantitative research focuses on a specific problem within a broad topic. Researchers narrow a topic into a focused question as a discrete planning step before they finalise study design. They use it as step in the process of developing a testable hypothesis and guide the study design before they collect any data (Neuman, 2006; and Yin, 2003).

Due to the lack of prior research on the conditions of possibility for Thai female leaders the goal of this study is inductive theory building rather than theory testing. This study concerns the theme of leadership which is a complex concept and an embedded phenomenon. Thus the relative freedom to explore the potential outcomes of qualitative research can provide insightful outcomes. Subsequently, the qualitative approach is appropriate (Perry, 1998; and Yin, 2003). In brief, a qualitative method is appropriate for this research into an under-researched phenomenon.

Step Two: Justification for the case study method

A case study is a story about something unique, special, or interesting and can be about individuals, organisations, processes, programs, neighbourhoods, institutions, and even events (Yin, 2003). Case studies have been used in varied investigations, particularly in sociological studies, but increasingly, in instruction. Yin, Stake, and others who have wide experience in this methodology have developed robust procedures (Tellis, 1997). Veal (2005) summarised the particular merits of case study method as follows:

- The ability to place people, organisations, events and experiences in their social and historical context.
- Ability to treat the subject of the study as a whole, rather than abstracting a limited set of pre-selected features.
- Multiple methods - triangulation- are implicit and seen as strength.
- The single or limited number of cases offers a manageable data collection task when resources are limited.
- Flexibility in data collection strategy allows researchers to adapt their research strategy as the research proceeds.
- There is no need to generalise to a defined wider population.

Female leadership research is in a feminist paradigm that attempts to give voice to women, and works to correct the predominant male oriented perspective found in most leadership studies. In which case, the case method can be useful. The key issue is that case studies help researchers connect the micro level, or the actions of individual people, to the macro level, or large-scale social structures and processes. Case study research raises questions about the boundaries and defining characteristics of cases. Such questions help in the generation of new thinking and theory (Neuman, 2006; and Yin, 2003). "Case studies are likely to produce the best theory". (Walton, 1992, as cite in Neuman, 2006)

Step Three: Criteria for judging the quality of case study design

Quality is a predominant requisite in qualitative research and the researcher must ensure that it meets the required level of credibility. Reliability and validity are central issues in all measurement. Both concern connecting measure to constructs. Reliability and validity are silent often ambiguous, diffuse, and not directly observable. Perfect reliability and validity are virtually impossible to achieve. Rather, they are ideas researchers strive for (Neuman, 2006; and Yin, 2003). Most qualitative researchers accept the basic principle of reliability and validity, but rarely use the terms because of their association with quantitative measurement. In addition, qualitative researchers apply the principles differently (Neuman, 2006).

Validity in Qualitative Research means being truthful (Neuman, 2006). Qualitative researchers are more interested in authenticity than in the idea of single version of truth. Authenticity means giving a fair, honest, and balanced account of social life from the viewpoint of someone who lived it every day (Neuman, 2006; and Yin, 2003).

Reliability of Qualitative Research means dependability or consistency (Neumen, 2006; and Yin, 2003). Moreover, Yin (2003) pointed out that the idea of reliability refers to minimising the errors and bias in a study. Most qualitative researchers consider a range of data sources and employ multiple measurement techniques. Yin (2003) also summarises that reliability is demonstrating that the operations of a study such as the data collection procedures can be repeated with the same results.

Criteria for judging the quality of research designs are also essential. In empirical research, there are basically four tests to establish the quality of any empirical social research (Yin, 2003). Table 1 list the four tests and the case study tactic for dealing with them. It is more complex than the standard "validity" and "reliability" concepts to which most students have been exposed. This research employs all the design test and case study tactics described in Table 1.

Table 1 Case study tactics for four design tests

Test	Case study tactic	Phase of research in which tactic occurs
Construct validity	▪ Use multiple sources of evidence ▪ Establish chain of evidence ▪ Have key informants review draft case study report	data collection data collection composition
Internal validity	▪ Do pattern-matching ▪ Do explanation-building ▪ Address rival explanations ▪ Use logic models	data analysis data analysis data analysis data analysis

Test	Case study tactic	Phase of research in which tactic occurs
External validity	▪ Use theory in single-case studies ▪ Use replication logic in multiple-case studies	research design research design
Reliability	▪ Use case study protocol ▪ Develop case study database	data collection data collection

Source: Yin (2003, p.34) *Case Study Research* 3rd ed

Step Four: Designing the case study

A research design is the logic that links the data to be collected to the initial questions of a study. It is impossible to go theory-free into any study. Pure induction might prevent the researcher from benefiting from an existing theory, just as pure deduction might prevent the development of a new and useful theory (Perry, 1998). Given these conditions, a blend of induction and deduction appears to be the preferred position for female leadership research. For the case study, Yin (2003) recommended that there are five components of research design; a study's questions, propositions, units of analysis, the logic linking the data to the propositions and (5) the criteria for interpreting the findings.

- Study's Questions
  The case study strategy is most likely to be appropriate for "how" and "why" questions (Yin, 2003). For this research, the questions how and why have been used.
- Study's Propositions
  Study's Propositions refer to each proposition while directing attention to something that should be examined within the scope of the study. For this research, propositions are developed from the research questions.
- Unit of Analysis

The unit of analysis specifies whether the level of investigation will focus on the collection of data about individual people, groups, organisations, movements, institutions countries, and so forth (Neuman, 2006; and Zikmund, 2003). This research uses the concepts with analysis units to design a study and measure concepts. The unit of analysis is divided into three units as illustrated in Figure 1.

As Figure 1 shows, the unit of analysis for this research refers to the relationship between the level of investigation and the analysis. Firstly, Thailand has been selected as the country to be investigated. Secondly, the sectors to be examined were the private and the public sectors. Thirdly was the individual level, where interviews focused on executive female leaders.
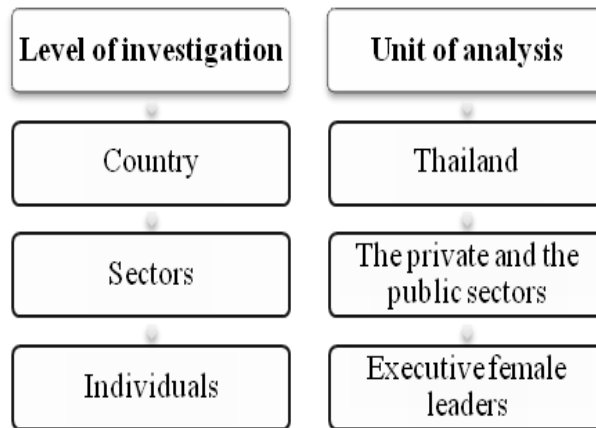
Figure 1 Unit of analysis
Source: Developed for this research

Step Five: Criteria for selecting case design

The first component of the process is the selection of either a single or a multiple case design. Single case design can be used in one of three environments, when the case represents a critical case to test an existing well-formulated theory, if the case is extreme or unique and when a case presents a phenomenon, which has previously not been presented (Yin, 2003). For this research none of these criteria were met, therefore, a single case design was not appropriate.

Multiple case designs depend on the type of research to be undertaken. This research is focus on executive female leaders. It aims to use the experiences and opinions of executive female leaders to build a broad theory of the condition of possibilities for females to attain leadership positions in Thai society. Thus a multiple holistic design was justified. This is illustrated in Figure 2.

Figure 2 Multiple holistic designs for female leaders case study
Source: Developed for this research

The multiple case designs follow a replication, not a sampling logic. The cases serve in a manner similar to multiple experiments, with similar results (a literal replication) or contrasting results (a theoretical replication) predicted explicitly at the outset of the investigation (Yin, 2003).

Step Six: Data collection

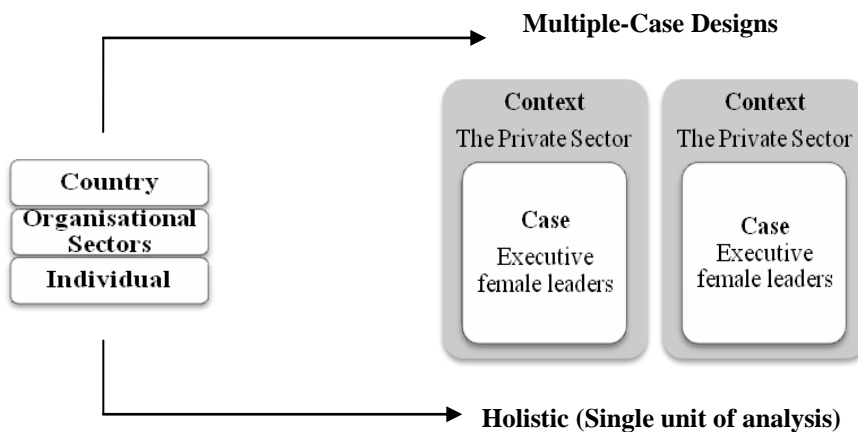There are three main elements that should be considered for data collection. First, the sources of data collection must be identified. This is followed by selection of the methodology for the actual collection and finally the time allocated to this task must be planned.

First, data collection for case studies can rely on many sources of evidence. This study uses construct validity and reliability by using multiple sources of data (Neuman, 2006; Veal, 2005; and Yin, 2003). Multiple methods are implicit and seen as the strength of the case study approach (Neuman, 2006; and Veal, 2005). Multiple sources of evidence can be obtained. In this research, data will be mainly draw from documentation and interviews. Documenting the data sources employed published sources, including magazine and biographies.

The principal source of data in this research comes from interviews as they provide valuable insights (Yin, 2003). Personal interviews are direct communications where interviewers in face-to-face situations ask respondents questions. This versatile and flexible method is a two-way conversation between an interviewer and a participant (Zikmund, 2003).

The thematic interviews consisted of female leadership talents themes, female leadership competencies themes, and female leadership contextual themes. A number of female leaders were selected to participate in face-to-face interviews to further explore specific personality traits, competencies, and issues. The interviews were recorded and notes made.

- **Interview Questions and Self Assessment Questionnaires**
  The questions in the case study protocol should reflect the set of concerns from the initial design.
  (1) Female Leadership Talents Themes
  Talent measures are "natural" personal characteristics associated with success in certain jobs and when appropriately matched to the job, are the best predictors of superior performance. They are also the most difficult to develop because they require "looking below the surface" at underlying skills, abilities and work styles (McCauley, 2004).
    1a. Personality interview questions
    1b. Personality trait self assessment questionnaire
  (2) Female Leadership Competencies Themes
  Behaviour competencies measures focus on what leaders actually do,
  namely their observable actions (McCauley, 2004).
    2a. Competencies interview questions
    2b. Competencies self assessment questionnaire

(3)   Female leadership contextual themes

In predicting leadership success, contextual variables are most often viewed as moderator variables that influence the degree to which particular individual difference variables are related to leadership success (McCauley, 2004).

The interview questions were related to the research propositions and research questions and also to the relevant theories draw from the literature reviewed, as shown in Figure 3.

Research Proposition 1:
That the underlying factors such as certain kinds of personality and leadership competencies possessing a specific bundle by successful female leaders contribute significantly to the prediction of leader effectiveness, leader emergence and leader advancement.

Research Question 1:
What are the underlying factors associated with successful females in leadership positions affecting both the private and the public sector?

- **Interview questions:**
- What do you consider as the key factors for women to reach the high positions?
- What are the personality characteristics that you feel have made you a successful leader?
- What are the first three words that close friends might use to describe you?
- Do you see yourself at the top of the hierarchy or in the middle of a web?
- Do you have a clear vision and concrete objectives in your life?
- What are the competencies that you feel have made you a successful leader?
- What part of this job comes easiest to you?
- What part of this job is most difficult for you?
- Tell me about an experience in the last year or two that you would consider a high point, something you were able to do of which you are proud.
- Tell me about an experience in the last year or two that you would consider a low point something you did that did not go as well as you would have liked

Research Proposition 2:
That successful female leadership development depends on organisational practices that will differ depending on the context of the private and the public sector.

Research Question 2:
How does organisational practice impact on female leadership development?

- **Interview questions:**
- What has supported you in your career?
- What formal development programs, training programs, etc., provided by this or other organisations, supported your leadership development?
- Have you ever experienced or felt any disregard or any kind of discrimination from your employees/ co-workers because of your sex?
- Do you think there are stereotypes of men and women in Thai culture? Do you think it is possible to erase them?
- What do you consider as the main barriers?

Research Proposition 3:
Successful female leaders are able to maintain harmony between their roles as women in Thai culture and their roles as leaders within gender-based organisational practice.

Research Question 3:
How do female leaders attain leadership positions in both the private and the public sectors?

- **Interview questions:**
- What have you performed done as an individual to reach your present position?
- Have you ever applied for any senior positions? Did you apply yourself? Promotion? Why-why not?
- What relationships with others have helped you advance and develop professionally?
- What is the role of home, education and social environment in growing to be a leader?
- How would you describe gender-role specific strengths and weaknesses in female leaders

Research Proposition 4:
That underlying factors associated with successful female leaders in Thai society can be matched with an ideal type of leadership profile, because no real-life leaders perfectly match the ideal type. When female leaders have a profile that is off-target, the way that they compensate is interesting.

Research Question 4:
How do factors such as personality traits and competencies benchmark the background of the global perspective?

- **Interview questions:**
- Do you think there are behavioural difference between successful female leaders and male leaders in Thailand?
- Do you think there are leadership profile difference between Thai female leaders and ideal type of leadership profiles?

- Other issues:
- Do you have still something in mind about our topic which we haven't yet covered?

**Figure 3 The interview questions which relate to the Research Propositions
and the Research Questions**
Source: Developed for this research

- The pilot case interviews

A pilot case study is the collective term used to describe small-scale exploratory research techniques that use sampling (Zikmund, 2003). Pilot case studies help the researchers to develop prior theory and general approaches for the data collection process and to review and revise their data collection plans before the main case studies are conducted (Yin, 2003). Pilot tests assisted the researcher to develop relevant lines of questioning and to provide conceptual clarifications for the research design (Yin, 2003) and develop the protocols used in the research.

Step Seven: Case study analysis

In general, data analysis means a search for a pattern in data-recurrent behaviours, objects, phases, or ideas. Once a pattern is identified, it is interpreted in terms of a social theory or the setting in which it occurred (Neuman, 2006; and Yin, 2003). Data analysis involves examining, sorting, categorising, evaluating, comparing, synthesising, and contemplating the coded data as well as reviewing the raw and recorded data.

Veal (2005) summarised the three main methods of analysis outlined by both Burns (1995) and Yin (2003):-

(1) *Pattern matching* – relating the features of the case to what might be expected from some existing theory;
(2) *Explanation building* – often an iterative process whereby a logical/causal explanation of what is discovered is developed by to-and-fro referencing between theory, explanation and data.
(3) *Time series analysis* – explanations are developed on the basis of observing change over time.

For case study analysis, one of the most desirable techniques is using a pattern-matching logic. Yin (2003) suggests that comparison be made between an empirical pattern and one or several predicted patterns. If the patterns coincide, the results can help a case study strengthen its internal validity. This study is a discerning one; pattern matching is relevant, because the predicted pattern of specific variables is defined prior to data collection, and pattern matching forms of analysis are possible within the context of this study. It is pulling together of the results of different sorts of analyses to form coherent conclusions that presents the challenge (Veal, 2005).

A second analytic technique is, in fact, a special type of pattern matching. The phenomenon is explained by a number of causal links (Yin, 2003). In this research, the process started by making an initial statement or proposition about the conditions and factors associated with female leadership in Thailand. This was followed by a comparison of the findings of one case against the statement or proposition. The statement or proposition was then revised and other details compared against the revision. The process was repeated against the other cases.

The use of multiple data sources suggests that triangulation is common in this case study (Veal, 2005). Different data sets provide information on the research questions and point to the conclusion as illustrated in Figure 4.
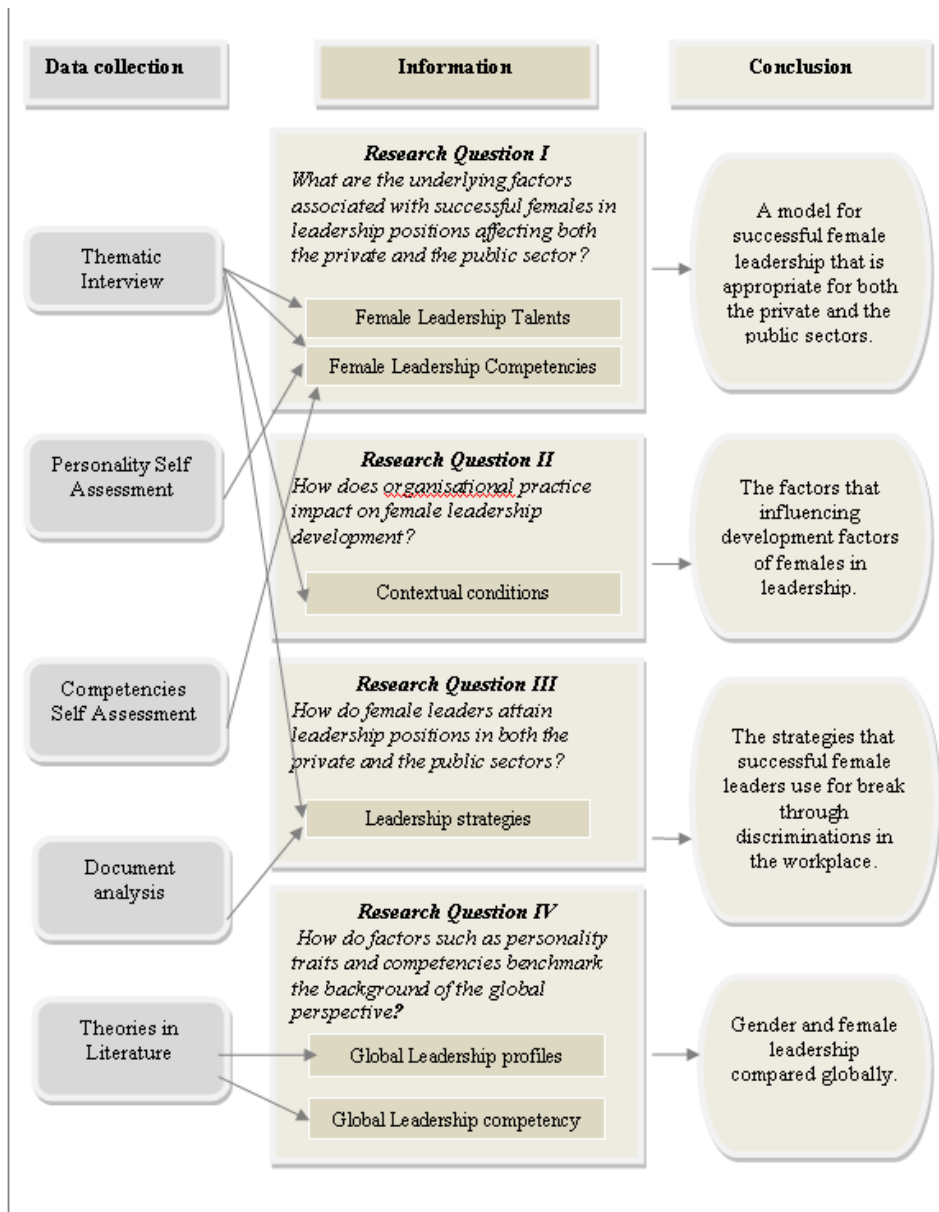

Figure 4 Triangulation of case study method for female leadership study
Source: Developed for this research

In summary, this research uses a multiple case studies design and selected two cases, the private and the public sectors, to provide literal replications. The replication approach to multiple-case studies is illustrated in Figure 5.
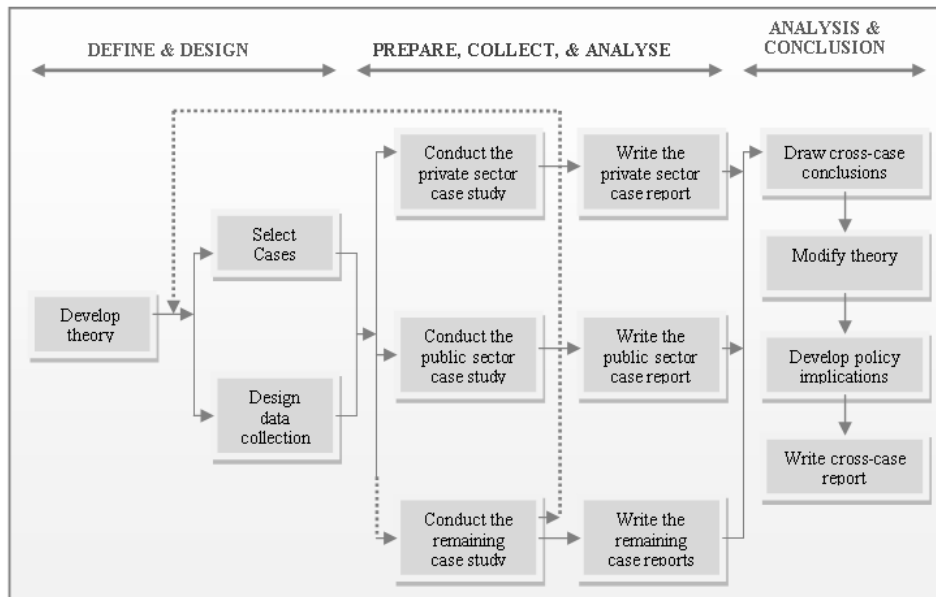
Figure 5 A summary of the of replication approach for this study
Source: Adapted from Yin (2003:50) *Case Study Research* 3rd ed

Figure 5 indicates that the initial step in designing the study must consist of theory development and then show that case selection and the definition of specific measures are important steps in the design and data collection process (Yin, 2003, p. 50). For this research, each individual case study, the private and the public sectors, consisted of a "whole" study, each case's conclusions are then considered to be the information needing replication by other individual case. Both the individual and multiple-case results are the focus of a summary report. For each individual case, the report indicates how and why a particular proposition was demonstrated (or not demonstrated). Across cases, the report indicates the extent of the replication logic and why certain cases are predicted to have certain results, whereas other cases, if any, are predicted to have contrasting results.

An important part of Figure 5 is the dotted line feedback loop. The loop represents the situation in which an important discovery occurs during the conduct of one of the individual case studies- for example, if one of the cases did not, in fact, suit the original design. Yin (2003) pointed out that a second feedback loop could represent the situation in which the discovery led to reconsidering one or more of the study's original theoretical propositions. Under either circumstance, "redesign" should take place before proceeding further.

Conclusions

This paper describes the research methodology utilised in this research. Based on qualitative data, the research uses case study research methodology found to be appropriate, since no particular theory had been developed for the special topic *"The need to identify and define the factors that allow the possibility for females to attain leadership positions in Thai society"*. Data collection was based on multiple sources of evidence. Interviews, self-assessment and content analysis were used in this study. Triangulation played an important role in the data collection and data analysis for this research being necessary to ensure a vigorous and diverse collection of information. The final aim of this research was to identify what is consistent and filter out what is inconsistent, so that meaningful conclusions could be made from the data.

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