

## Chapter 3

### Research Methodology

This study is a qualitative research method. Details about the research methods are as follows:

1. Research design
2. Population and sample size
3. Research instruments
4. Data collection
5. Data analysis

#### Research Design

The real estate industry was recognized for its intricate and dynamic nature, wherein effective project operation management played a pivotal role in ensuring successful outcomes. This qualitative research sought to investigate and propose options for optimizing project operation management within Company B, a prominent player in the industry. Utilizing a qualitative research design, the study delved deeply into the challenges, current practices, and potential improvements within the company's project management processes.

Project planning and operation constituted a scientific system formed by a series of principles and methods, characterized by strong flexibility and skills, necessitating constant exploration of experience and accumulation of knowledge in practice. Currently, although Company B paid attention to project planning and operation in the development process, its existing planning and operation system was deemed insufficient, requiring increased attention to the challenges and influencing factors from both inside and outside the company. Consequently, to better assist Company B in optimizing its project planning and operation system, this study decided to employ interviews combined with document studies to identify the challenges faced by Company B in the process of project planning and operation, as well as the current status of the project planning and operation system.

With this purpose in mind, the paper contended that the current practical challenges and the status quo of the planning and operation system at Company B should be addressed. The challenges encountered by Company B from the perspectives

of the company itself, government management, and industry operation were sorted out respectively. Simultaneously, the company's own project planning and operation status, project resource allocation scheme, and project cost and quality management were scrutinized. In accordance with these research objectives, targeted interviews and questionnaires were administered to employees at different levels of Company B.

To acquire tangible data concerning the current challenges and existing problems facing Company B, the paper conducted sample interviews with a diverse group of informants to comprehend their cognition of these challenges and the current situation. Additionally, to obtain more specific information, expert evaluations were conducted based on four key criteria: consistency, suitability, feasibility, and usefulness of initiatives.

### Population and Sample Size

The investigation employed purposeful sampling techniques to identify 8 key informants with expertise in project operation management. The informants encompassed a spectrum of roles, including top executives, project managers, and frontline employees. Additionally, the study incorporated maximum variation sampling, with the goal of encompassing a broad range of informants representing different departments, functions, and projects within the organization to obtain a comprehensive perspective. The selection of key informants adhered to the criteria outlined in Table 3.1.

**Table 3.1** Criteria for selecting key informants

Criteria	Details
Expertise and Experience	Select individuals with significant expertise and experience in project operation management within the real estate industry, ensuring that they have the knowledge to provide valuable insights.
Relevance to the Research Objective	Ensure that the chosen informants' roles and responsibilities align closely with the specific aspects of project operation management that your research aims to address.

**Table 3.1** Criteria for selecting key informants (cont.)

<b>Criteria</b>	<b>Details</b>
Direct Involvement	Prioritize informants who are actively involved in project planning, execution, and oversight, as they will possess firsthand knowledge and experiences related to the research objectives.
Knowledge of Challenges	Look for informants who can articulate the challenges and issues faced by B Real Estate Company in project operation management.

Based on the aforementioned criteria, the researchers meticulously identified key informants for data collection through the following avenues:

(1) High-level executives, including the CEO, COO, or CFO, were engaged to elicit perspectives on the company's strategic goals, priorities, and their vision for optimizing project management.

(2) Project Managers were interviewed within B Real Estate Company, offering valuable insights into the day-to-day challenges, strategies, and practices associated with project operational management.

(3) Project Team Members, individuals actively involved in the execution of projects at the ground level, were consulted to obtain firsthand accounts of challenges encountered during project operations and suggestions for improvement.

(4) Quality Assurance Experts, entrusted with ensuring project quality and compliance, were tapped for insights into quality control and assurance processes.

(5) Finance and Budgeting Specialists provided perspectives on budgeting practices, cost management, and financial strategies within the company.

(6) Technology and IT Specialists were consulted to explore the use of technology and tools in project management, as well as potential opportunities for technological optimization.

(7) HR and Training Specialists offered insights into the company's workforce development, training programs, and strategies for addressing challenges in the labor market.

(8) Stakeholders, including partners, suppliers, and regulatory authorities, were approached to gain insights into their interactions with B Real Estate Company and gather suggestions for improvement.

## Research Instruments

### 1. Interview guideline

This section predominantly elucidates the interview guidelines, aiming to gather data for addressing the research objectives. A series of questions were formulated by the researchers for conducting interviews on each topic, aligning with Research Objective 1: To analyze the challenges encountered by B Real Estate Company in project operation management, as delineated in Table 3.2.

**Table 3.2** Criteria for selecting key informants

Issues	Questions
Government regulation and related policies of the industry	<ol style="list-style-type: none"> <li>1. How have government regulations and industry policies affected the project operation management at B Real Estate Company?</li> <li>2. Can you provide examples of specific regulations or policies that have posed challenges to the company's project operations?</li> <li>3. How does B Real Estate Company ensure compliance with government regulations and industry policies in its project management?</li> </ol>
Macroeconomic conditions	<ol style="list-style-type: none"> <li>1. How do macroeconomic conditions, such as economic downturns or fluctuations, impact the project operation management at B Real Estate Company?</li> <li>2. Have there been instances where economic conditions have led to challenges or changes in project planning and execution?</li> <li>3. What strategies or approaches does the company employ to adapt to changing macroeconomic conditions in the real estate industry?</li> </ol>

**Table 3.2** Criteria for selecting key informants (cont.)

Issues	Questions
Social and cultural factors	<ol style="list-style-type: none"> <li>1. In what ways do social and cultural factors influence project operation management at B Real Estate Company?</li> <li>2. Can you provide examples of how social and cultural factors have affected project planning and execution?</li> <li>3. How does the company address challenges related to social and cultural factors in its projects?</li> </ol>
Technological Advancement	<ol style="list-style-type: none"> <li>1. How does market competition affect the project operation management strategies at B Real Estate Company?</li> <li>2. Have increased market competition led to changes or challenges in project planning and execution?</li> <li>3. What competitive strategies does the company employ in project management to maintain its position in the market?</li> </ol>
Market competition	<ol style="list-style-type: none"> <li>1. How does market competition affect the project operation management strategies at B Real Estate Company?</li> <li>2. Have increased market competition led to changes or challenges in project planning and execution?</li> <li>3. What competitive strategies does the company employ in project management to maintain its position in the market?</li> </ol>
Labor market and skills availability	<ol style="list-style-type: none"> <li>1. How does the availability of skilled labor impact the company's project operation management?</li> <li>2. Have there been instances where challenges related to labor market dynamics affected project outcomes?</li> </ol>

**Table 3.2** Criteria for selecting key informants (cont.)

Issues	Questions
	3. What initiatives or practices does B Real Estate Company implement to address issues related to labor market and skills availability in project management?

Interview guidelines were established to gather data for Research Objective 2, which aimed to investigate the historical state of project operations management within B Real Estate Company, as outlined in Table 3.3.

**Table 3.3** Interview guidelines for collecting data about the current state of project operation management in B Real Estate Company

Issues	Questions
Project planning and scheduling	1. Can you describe the current processes and methodologies used by B Real Estate Company for project planning and scheduling? 2. How does the company ensure that project timelines and schedules are effectively managed? 3. Are there any specific tools or software applications that the company relies on for project planning and scheduling?
Project resource allocation	1. How does B Real Estate Company allocate resources for its various projects? 2. Can you explain the criteria or factors considered when allocating resources to different projects? 3. What challenges, if any, does the company face in resource allocation, and how are they addressed?

**Table 3.3** Interview guidelines for collecting data about the current state of project operation management in B Real Estate Company (cont.)

Issues	Questions
Budget and cost management	<ol style="list-style-type: none"> <li>1. What procedures and practices does the company follow for budgeting and managing project costs?</li> <li>2. How does B Real Estate Company ensure that projects are completed within budgetary constraints?</li> <li>3. Are there any cost control measures or strategies that have been particularly effective?</li> </ol>
Project quality control and assurance	<ol style="list-style-type: none"> <li>1. How does the company maintain and ensure the quality of its projects throughout the project lifecycle?</li> <li>2. Can you provide examples of quality control and assurance processes in place?</li> <li>3. What measures are taken to address quality issues or deviations during project execution?</li> </ol>
Stakeholder engagement and communication	<ol style="list-style-type: none"> <li>1. How does B Real Estate Company engage with various stakeholders, including clients, partners, and regulatory authorities, during project management?</li> <li>2. Can you describe the company's communication strategies for keeping stakeholders informed and engaged?</li> <li>3. Have there been instances where effective stakeholder engagement and communication have significantly influenced project outcomes?</li> </ol>

In pursuit of research objective 3, which aimed to recommend initiatives for project operation management at B Real Estate Company, the interview guidelines were formulated as follows:

(1) What specific goals or objectives does B Real Estate Company aim to achieve through improvements in project operation management?

(2) Can you identify any critical areas within project operation management where you believe initiatives are needed?

(3) What initiatives do you believe should be taken to enhance project operation management at B Real Estate Company?

(4) How would you prioritize potential initiatives for project operation management improvement at B Real Estate Company?

(5) What resources, including budget and personnel, can be allocated for the implementation of new initiatives?

(6) What key performance indicators (KPIs) or metrics do you believe should be used to measure the success of these initiatives?

(7) What roles and responsibilities will various teams or individuals have in the execution of these initiatives?

(8) How will you ensure ongoing feedback and continuous improvement in the initiatives for project operation management?

## **Data Collection**

### **1. Document Study**

Examine internal project documents, reports, and historical project data to garner insights into the company's past practices and challenges.

### **2. In-depth Interviews**

Conducted semi-structured interviews with key informants, who were selected based on their expertise, relevance to the research objectives, direct involvement in project management, knowledge of challenges, and an innovative mindset. The interviews were audio-recorded, transcribed, and subsequently analyzed.

## **Data Analysis**

In this study, the data acquired was analyzed employing thematic analysis as the principal coding technique, complemented by the constant comparative method and data validation. The particulars are outlined as follows.

### **1. Thematic analysis**

Thematic analysis served as the chosen qualitative research method for the identification, analysis, and reporting of patterns or themes within the qualitative data examined. In the pursuit of enhancing project operation management at B Real Estate Company, the application of thematic analysis unfolded as follows:

(1) Data Preparation: The initial step involved a comprehensive review and preparation of interview transcripts and pertinent documents, such as project reports, for analysis. This encompassed the transcription of interviews if required, data cleansing, and organizing for subsequent coding.

(2) Open Coding: In the preliminary stage of thematic analysis, researchers systematically engaged in open coding. This entailed a thorough examination of the data to identify key concepts, phrases, or sentences that encapsulated ideas pertinent to project management. These codes, concise in nature, captured the essence of specific segments within the data.

(3) Axial Coding: Subsequent to open coding, researchers proceeded with axial coding. This phase involved the categorization of open codes into broader and more meaningful themes or categories. The development of these themes relied on identifying similarities, patterns, and relationships among the codes. For instance, codes related to project scheduling, resource allocation, and cost management were grouped under the overarching theme of "Project Planning and Execution."

(4) Data Exploration: With established themes, researchers delved into an in-depth exploration of each theme. This exploration entailed a comprehensive review of associated data segments by referring back to the original interview transcripts and documents. The goal was to gain a thorough understanding of the context and nuances surrounding each identified theme.

## **2. Coding Techniques**

Within the framework of thematic analysis, two coding techniques were employed by researchers: open coding and axial coding.

(1) Open Coding: In the initial phase of open coding, data segments were analyzed without preconceived categories. Interview transcripts and documents were carefully reviewed by researchers who identified and labeled concepts, ideas, or phrases relevant to project operation management. The initial codes generated were detailed and specific, capturing the diversity of responses and perspectives.

(2) Axial Coding: Following open coding, axial coding involved organizing the initial codes into meaningful categories or themes. This process required researchers to examine relationships between codes and group them into higher-level themes. For instance, codes related to "budget management" and "cost control" were grouped under the theme of "Financial Management".

### **3. Constant Comparative Method**

The constant comparative method played a crucial role in the execution of thematic analysis. It involved the continuous comparison of data across interviews and documents to refine emerging themes and formulate strategies.

(1) Comparison Across Interviews: Researchers compared the codes and themes identified in one interview with those from other interviews. This process facilitated the identification of both similarities and differences in participants' responses and experiences.

(2) Comparison Across Documents: Similar comparisons were made during the analysis of documents, such as project reports or company policies, to ensure that findings were aligned with the practical aspects of project management.

(3) Refinement and Development: Through these ongoing comparisons, researchers refined the themes and codes as new data were collected and analyzed. As themes gained robustness and patterns emerged, they served as the foundation for developing strategies and recommendations to optimize project operation management.

#### **4. Data Validation**

Member Checking was employed to share preliminary findings with informants, seeking validation and confirmation of the accuracy of their responses and interpretations.

Peer Debriefing was conducted through discussions with colleagues or experts in qualitative research to enhance the validity and rigor of the findings.

Thematic analysis, open and axial coding techniques, the constant comparative method, and data validation were utilized to systematically identify key themes and patterns within the data. This approach ensured that the proposed options for optimizing project operation management at B Real Estate Company were grounded in a comprehensive understanding of the challenges and opportunities identified in the research.