PART II

CONCEPTUAL FRAMEWORK AND METHODOLOGY
Chapter 5

Conceptual Framework for Analysis and Methodology

5.1 Introduction

In this chapter, we develop a conceptual framework and design the research methodology of the study. In section 5.2, we describe relevant issues for choosing a model and in section 5.3, we present the conceptual framework for analysis and discuss the justification for adopting the conceptual framework. In section 5.4, we present the research methodology followed in designing the research and collecting and analysing the data and in section 5.5, we show the typology of restructuring issues. Finally, in section 5.6, we conclude the chapter with a summary.

5.2 Relevant Issues in Choosing a Model

The reform process of former socialist countries is a new phenomenon in economic history. There were no obvious role models or experiences on which to draw. According to Marer [1991a, p. 108], “successful transition programmes in the former socialist countries will be those that will be able to duplicate those basic system features and policies that seem to account for much of the successes of the well-performing market economies irrespective of the economic, social cultural and political differences among them.”

The schemes to restructure enterprises in transition countries have been greatly influenced by the methodology and techniques developed in Western Europe and the USA [UNIDO, 1994]. These ideas and concepts were introduced by foreign consultants hired by multilateral agencies, government departments, banks and foreign and domestic investors. Inevitably some of these ideas and assumptions behind the ideas had to be modified in the light of experience of actual restructuring exercises, particularly the consequences of the weak legal, regulatory and financial services infrastructure typically found in the transition countries. Nevertheless, many of the lessons learned from restructuring western companies have proved to be useful guides on how to tackle the problems faced in restructuring the state-owned enterprises.

In the previous chapter, we identified and described alternative models of restructuring and value creation. In this section, we summarise the different frameworks discussed and the criteria that influenced us in choosing a framework for analysis for this study.

Firms could be evaluated by using a capital budgeting approach. Using this approach, the value of the firm is the discounted value of its expected cash flows. The key valuation variables in evaluating business are cash flows and the discount rate. In the literature review of restructuring experiences of developed and transition economies four relevant models are identified, that is, Copeland, Koller, Murrin’s [1990] restructuring pentagon, Porter’s [1985] value chain model and Rappaport’s [1986] value network model. These models are used in evaluating companies in the western market economies. In addition, Crum and Goldberg’s [1998] Potential and Resilience Evaluation model (PARE), which is used in evaluating companies in transition economies was also relevant for assessing the
viability of companies. Since the end goal of transformation is to achieve a Western style market economy, the above mentioned market economy models provide a useful framework for evaluating companies and for identifying measurements that should be used in assessing performance. However, since at present in Eritrea there are no financial markets and because the legal infrastructures are underdeveloped, these models should be applied cautiously.

A useful start in considering the best choice for designing a framework for privatising and restructuring enterprises in transition would be to 1) assess how far the model addresses the objective of this research, that is, improvement in performance and value creation and 2) identify its applicability in a privatisation situation of manufacturing firms in particular the case of Eritrea.

1) **Objective.** This study will address the problem of enhancing firm value during the transition to a market economy. Decades of state-ownership have ruined the financial capacity of many enterprises. Under these circumstances we need to describe how companies are coping with the objective of value creation in order to attract buyers and improve viability. How managers responses impact the value drivers to maximise and create value in order to make companies saleable and viable is relevant to the objective of this study and thus the framework has to incorporate enterprise restructuring and value creation at micro level (firm level). Therefore, the framework of this study has to link restructuring and value creation parameters to the value of a company.

2) **Applicability.** The privatisation situation of the former socialist state-owned enterprises is a special case. For example, there are no financial markets and the restructuring requirements are enormous. In Eritrea also the state-owned enterprises need restructuring to improve their value. The Eritrean Government has been rehabilitating these enterprises since the day of liberation (May 24, 1991). The value created during 1991-1997 and further value enhancement required to make companies viable and saleable is not yet assessed. Therefore, the conceptual framework has to be applicable in measuring value enhancement during privatisation.

In a nutshell, the design of a framework for this research will be based on the following criteria:

1. A good framework has to reflect primarily enterprise restructuring and privatisation at micro (firm) level where the unit of analysis [Yin, 1994] is an enterprise.
2. The framework has to link the management actions of value creation to the value of a company.
3. The framework has to fit the specific restructuring needs of the Eritrean state-owned enterprises, for instance financial, investment and cost restructuring.

Even though the four models identified from literature, Copeland, Koller and Murrin’s Restructuring Pentagon, Porter’s Value Chain and Rappaport’s Value Network model and Crum and Goldberg’s Potential and Resilience Evaluation model (PARE) are not mutually exclusive they differ in emphasis and objective.

The Copeland, Koller and Murrin’s restructuring pentagon aims at restructuring companies to increase their value in order to defend take-over attempts from raiders. It
also compares the value of the company with its market value to assess whether there is any perception gap. The concept of restructuring companies internally and externally to create value is also useful in privatisation situation. The Copeland, Koller and Murrin’s [1990] valuation framework used in analysing the current “as is” value of the company provides an insight that the value of a company depends on the expected cash flows and discount rate. 

The Porter’s value chain approach helps to identify whether there is competitive advantage, that is, cost leadership and differentiation to create value. The value system also reflects the inter-relationship among the suppliers, the firm, the channels (intermediaries) and buyers. This model is helpful for assessing whether manufacturing enterprises could be low cost producers or differentiate their products to charge premium prices. It also helps to see if a firm could reduce cost by co-operating with suppliers and charge premium prices by providing unique, high quality products to buyers in order to create value. It also helps in identifying the value creating activities in a business.

Rappaport has discussed in detail the link between Porter’s competitive strategy analysis using value chains and the cash flows fundamentals to the shareholders value approach to valuing business. Rappaport has argued that the Porter’s value system is incorporated in his value network model. For instance, the suppliers bargaining power will be reflected on the cost of raw materials of the firm and the buyers value chain will affect the price that the firm will charge. So the Porter’s value chain model is incorporated in the Rappaport’s value network model. For instance, the primary activity of marketing and sales will have an impact on sales and advertising expense of a company which are measured by sales growth and profit margin, which are value drivers of the Rappaport’s model. The Rappaport Value Network Model [1986] links the restructuring activities and value creation variables to the value of the company. The model is used in evaluating firm value at a micro level. It also depicts the restructuring needs of companies such as financing, investment and operations, which are relevant issues in the particular cases of manufacturing enterprises in Eritrea.

The Crum and Goldberg’s [1998] Potential and Resilience Evaluation (PARE) model is also based on cash flow and risk assessment of companies like that of Rappaport’s. The potential of a company is assessed using the innovation ability and implementation capability while the resilience of a company is evaluated using the conceptual vulnerability position and reserve capacity of the enterprise. The Potential and Resilience assessment reveals not only the present position of an enterprise, but also what future actions are needed. It answers the question of “what do we do now?”

In this research, we will adopt the Rappaport’s [1986] value network model as our main model, because it represents value creation at micro level and provides concepts and variables that are essential in evaluating companies. It is helpful in measuring the value performance of companies and links management action to the value drivers. In fact, “it has been used in acquisitions, divestments and restructuring processes in the western market economies” [Mills & Print, 1995, p. 35]. However, we will complement Rappaport’s model by some aspects of Porter’s value chain [1985], Copeland, Koller and Murrin’s restructuring pentagon [1990] and Crum and Goldberg’s [1998] Potential and Resilience Evaluation model (PARE). The Porter’s value chain [1985] helps in understanding the firm’s relationship with suppliers, intermediaries and buyers and also shows primary and support activities that help in creating value. The Copeland, Koller
and Murrin’s restructuring pentagon [1990] also provides internal and external restructuring requirements to create value in a company. The Crum and Goldberg’s [1998] Potential and Resilience Evaluation model provides additional highlights of actions to be taken to strengthen the innovation ability, implementation capacity, reserve capacity and the ability to defend the company. We have used mainly the Rappaport Value Network Model in designing our conceptual framework for this study, but we have also extended it by including enterprise environment such as government policy to reflect the situation in Eritrea.

5.3 Conceptual Framework for Analysis of this Study

Figure 5-1 shows the conceptual framework for analysis. This conceptual framework is used to focus the collection of data and to structure its analysis. Moreover, the framework is used to explore and explain how managers are trying to create value and how and why the privatisation process influences the value performance of the enterprises in transition. It is based on the concepts of enterprise environment, operations, investment and financing, governance and value creation.

Enterprise Environment. The environment of an enterprise influences its profitability and competitiveness. Porter [1985] identified five competitive forces that interact to define the characteristics of a particular market: threat of entry of new competitors, extent of rivalry among competitors, bargaining power of suppliers, bargaining power of customers and threat of substitute products. These characteristics determine the attractiveness of an industry and the way in which the individual company is positioned in the industry. Moreover, government policies affect the competitiveness of the companies and in particular we are emphasising the privatisation policy of the Eritrean government and the privatisation process in Eritrea.

Operations. The operations of an enterprise include production and marketing, which are primary activities [Porter, 1985] of an enterprise. Management actions taken to enhance sales, to minimise cost and to improve production efficiency contribute to the creation of value in a business. The literature reviewed has indicated that new product development, opening new distribution channels, increasing exports, reducing the number of employees and improving product quality signal operational restructuring. Identifying sales structure and cost structure of an enterprise helps in determining the constraints that the company is facing in creating value. Managers can improve the value created by solving these constraints and uncovering the hidden potential value of the company.

Investment and financing. An enterprise invests in working capital such as materials purchases and fixed capital such as machinery and equipment to produce goods. The level of investment in both working capital and fixed capital determines the asset structure of an enterprise and also effective and efficient management of these investments determines the creation of value in an enterprise. Investment in modern technology and upgrading of enterprise machinery can enhance the value created in a business by increasing productivity.
**Fig. 5-1 Conceptual Framework of this Study**

<table>
<thead>
<tr>
<th>Enterprise Environment</th>
<th>Market</th>
<th>Industry</th>
<th>Government Policies</th>
<th>Privatisation</th>
</tr>
</thead>
</table>

### Operations
- Increase sales by focussing to the customer and improving distribution channels
- Reduce costs of materials, labour and other costs
- Increase productivity by improving production efficiency and enhancing product quality

### Investment and Financing
- Efficient and effective management of fixed investments, machinery and equipment and upgrading technology
- Efficient and effective management of working capital, cash, receivables and inventory
- Effective and efficient management of finances, debt and owner's capital

### Value Creation
- Net
- Cash
- Inflows
- Risk

### Governance
- Decision
- Control
- Empowerment

### Ownership
- Owners
- Suppliers
- Other stakeholders
  - employees
  - creditors
  - the society

### Customer Relationships
- Backward linkage
- Forward linkage
- Customers
**Governance.** Effective governance implies managerial autonomy to set and implement business strategy and monitoring of this policy by the firm’s owners. The literature reviewed in chapter three shows that the owner-manager relationship is vital for creating value. Managers are the driving forces of creation of value in a business because management’s motivation, behaviour and empowerment influences the value created in a business. Owners also influence the creation of value in a business because they provide finances and control management. The better the alliance between management and owners, the more the value can be created. Moreover, as discussed in Porter’s [1985] value chain models, the value created by an enterprise is affected by the suppliers value chains and buyers value chains. In addition, other stakeholders such as banks and the community may influence the creation of value. The banks may help by providing finances and the community can benefit from the business as well as contribute to the creation for value by consuming company production and promoting the good name of the company.

**Value creation.** In order to assess the improvement of value of a company during a specified period, one of the main issues studied in this research is the creation of value. Measurement of value created or destroyed in a business helps in identifying the strengths as well as the problem areas of a business. It also helps to assess whether management policies and practices are enhancing firm value.

The arrows also indicate a relationship between concepts. For instance, the relationship between operations and investment and financing is represented by a line with double arrows. This indicates that the investment and financing influence the operations of a company (new machinery, for instance improves productivity) and the operations of a company also influences the investment and financing of a company (increase in operating profit of a company helps in financing the purchase of new machinery and upgrading the technology).

The advantages of adopting a value creation network model is summarised below:

**1) Value creation focus.** An organisation has to create value to survive in the market. The main research question of this study is whether and how state-owned enterprises in Eritrea are restructuring into value creating private enterprises. The sub-questions posed in this study such as research sub-question 3, what are the determinants of value creation; research sub-question 4, have enterprises in Eritrea been creating value during 1991-1997, to what extent and how; and research sub question 5, how are managers trying to enhance enterprise values focus on the creation of value. The conceptual framework for this study helps in identifying the determinants of value operations, investment and financing and governance, which are essential even during the transition to a market economy. Enhanced firm value attracts buyers and also helps companies to survive the competition of free market economy. Focussing on value creation helps managers to identify what actions are relevant and critical for creating value in a business. The conceptual framework is used in assessing the economic and financial viability of the enterprises in Eritrea during 1991-1997. Moreover, the framework is used in analysing the financial condition of the companies and in identifying management actions needed to enhance further the value created in an enterprise. Identification of the value drivers of a company helps managers to influence those value drivers to generate more value and at the same time to prevent value destruction.
The conceptual framework’s value focus and its orientation towards what is required to improve value fit the situation in the countries undergoing transition to a market economy. According to Crum and Goldberg [1998, p. 321], “privatisation does not spontaneously lead to competitive advantage, growth, or profitability. Joint ventures are not always needed or desired to strengthen the company. Restructuring does not always create additional value; indeed, without careful planning, it can decrease value. A state-owned enterprise can be transformed into a private company that thrives in the market place only when (1) the product markets in which the company competes are structurally attractive, and (2) competitive advantage is present and can be exploited by the company.” Privatisation and restructuring of enterprises in transition economies aims at transforming the enterprise from loss making socialist firms to value creating capitalist firms. Value creation is one of the pillars of the capitalist economy. Using a conceptual framework based on value creation for assessing the value performance and restructuring requirements of enterprises in transition is then appropriate.

The value creation model presented in this study does not only assess the cash inflows but also assesses the riskiness of the cash inflows by taking into consideration the cost of capital. It is also based on a financial model because the operations are indicated by the company’s income statement data and the investment and financing are represented by balance sheet data. However, it extends the financial basis of the model by including governance because the literature reviewed revealed that effective governance enhances firm value.

2) Managerial emphasis. The literature reviewed on corporate governance shows that management’s decision influences the value created in a business. Management empowerment and owners’ control influence the effectiveness of decision making in an enterprise. The conceptual framework links management decisions to the important drivers of value in a business, the operations, investment and financing. It also shows actions that management should take to influence the value drivers to generate more value. The conceptual framework focuses directly on actions that management can take to improve the company’s cash flows and risk. As such it is directly linked to the creation of value both in theory and in practice. Many quantitative techniques can measure value, but after measurement is completed, management is still left with the question of how to obtain value. This framework fills in the gap by pointing out what management actions are needed to increase firm value. It can also be used to identify the problem areas that the management actions should be pointed on. The framework is a means of indicating the direction of the action needed. It takes the analysis from measurement to solution. By focussing on the right questions and integrating the answers, the conceptual framework provides the basis for a solution to current problems that is tailored to the needs of the company.

The conceptual framework for analysis also is a useful guide for managers of enterprises, because it helps them to focus on the most important concepts of operations, investments and finances and governance of the enterprises. As the general manager of Barka Canneries commented during the interview, “we have been doing this every day but we were not connecting our decisions in this way. The format guides you to interconnect the concepts of operations, investment and financing and governance clearly. I have learned a lot by filling the questionnaire.” It helps managers to ask the right questions, to identify the proper priorities and to determine appropriate actions.
5.4 Research Methodology

Research methodology is “the application of scientific procedures towards acquiring answers to a wide variety of research questions” [Adams & Schvaneveldt, 1991, p. 16]. It provides tools for doing research for obtaining useful information. Methodology incorporates the entire process of a study, that is, conceptualising and observing the problem understudy and research questions to be investigated, data collection and data analysis and generalisation of the results.

In section 5.4.1, we describe the research design of this study and in section 5.4.2, we discuss the qualitative and quantitative data collected and in section 5.4.3, we indicate the data analysis techniques that we have used in interpreting the collected data. Finally, in section 5.4.4, we assess the credibility of the research findings.

5.4.1 Research Design.

The research questions of this study address the issues of restructuring and value creation in the manufacturing enterprises in a privatisation situation. This can in part be operationalised by identifying variables of sources of value in the manufacturing enterprises and describe the level of these key parameters (value drivers) using income statement and balance sheet data for the period of 1991-1997. In addition, managers play a key role in restructuring companies during a transition. The strategies and actions taken by management affect the value of a company to be privatised. This research will investigate how managers are trying to enhance value so that the manufacturing enterprises in Eritrea will be viable, valuable, saleable and competitive. It is therefore tried to link the management actions to operations, investment and financing of the business. Then, in order to know the actions that managers are undertaking to restructure companies, we conducted various interviews with different types of managers. Therefore, this study uses quantitative data, financial and non-financial, as well as qualitative data, like information on management actions.

There are different modes of research designs to be employed in conducting research. The two main modes of data collection and strategies for conducting research which have relevance for this study are 1) the survey method and 2) the case study method.

Survey Method

The word survey refers to the gathering of data or information from a sample or a specific population, usually by questionnaires, personal interviews or telephone surveys. The researcher does not manipulate independent variables and also does not apply control conditions to the subjects under study [Borden and Abbott, 1996].

In a survey method, samples are usually large and the focus is not an individual in a sample but rather on the generalised profiles or statistics derived from all the individual cases. A survey is usually a cross-sectional study (studying events at one point in time) and should stem from a random sample based on the whole population. Survey researchers are interested in accurate assessment of characteristics of a whole population and from the samples they infer the characteristics of the defined population or universe.
Case Study Method

A case study is defined as [Yin, 1994, p.13] "an empirical enquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident". A case study is confined to one or a few subjects (cases), the focus is usually broad in the type and quantities of variables that can be studied and the approach tends to be in-depth and comprehensive. Since a case study includes only one or a very few cases, it can afford to deal with all pertinent information or aspects of the case or the situation.

In case studies the researcher explores a single subject or phenomenon ("the case") bounded by time and activity (event, process) and collects detailed information by using a variety of data collection procedures during a sustained period of time. The case study's unique strength is its ability to deal with a full variety of evidence like documents, interviews and observations [Yin, 1994].

Comparison of Case Study and Survey Methods

The case study and survey methods are not mutually exclusive; therefore, one could have a case study within a survey or a survey complementing a case study. However, the case study approach is an in-depth study of one or of a limited number of cases in which each case is treated as a whole. The case study approach is particularly helpful when deeper understanding is needed and when there is little concern about generalising to a large population. The survey approach is a collection of data from a sample, typically a large sample, to a set number of defined questions. The survey is usually a cross-section of a stated population, with the emphasis on generalising statistics to the population, not on the individual, as is the focus for case studies.

For this study, we needed financial data for the years 1991-1997 and management actions in enhancing value of the firm during these years. In the transition to a market economy, analysis of sets of data presents only a partial picture. Many variables used to uncover patterns of adjustments are not part of standard financial reports. For instance, data often lack on firm input and output prices, managerial profiles, ownership changes, foreign partnerships and quality control. They are nevertheless essential in understanding the causes for firm restructuring and can only be obtained in enterprise visits. In addition, each enterprise's performance is affected by its previous history, which is relevant for an assessment of its performance. Therefore, the case study approach has been chosen for this study because the transition process has demonstrated the importance of the particular history of the state-owned enterprises. In addition, company visits and in-depth interviews are necessary to answer the qualitative (and some of the quantitative questions) asked in this research.

The case study approach has helped us to investigate the cases deeply over a period of time and to describe or measure the way managers strive for the enhancement of value. The survey method, which is usually a cross-sectional study, would not be useful in collecting qualitative data such as management strategies and actions taken in restructuring over a period of time. Since this research focuses on the privatisation phenomenon and the impact of managers’ decisions on value creation, the case study approach has helped us to conduct an in-depth study of selected cases.
Other Researchers are also using the case study as a method of investigation in restructuring and value creation studies. Baker [1992] described the history of Beatrice to investigate value creation using the case study method. He analysed the performance of the firm over 100 years to see how value is created and destroyed. Donaldson [1994] described twelve case studies that show voluntary as well as involuntary restructuring. These firms were followed for about two decades in order to have deeper insight in the firm’s actions and reactions in a changing environment. Estrin, Gelb and Singh [1995] also studied the impact of reform on the economic behaviour and choices of firms and on their responses to the new market environment using a case study approach. Carlin, Reenen and Wolfe [1995] also studied enterprise restructuring in early transition using case studies.

The choice of the case study method thus provides an opportunity to make an in-depth investigation, but has a limitation on the number of companies to be studied due to time and cost constraints. Therefore, this research will be limited to few cases in order to conduct an in-depth investigation of the cases.

**Cases Selected**

According to Yin [1994, p. 38], “there are four types of designs for the case study approach (a) single-case (holistic) designs, (b) single case (embedded) designs, (c) multiple-case (holistic) designs, and (d) multiple-case (embedded) designs.”

The three rationales for conducting a single case research according to Yin [1994] are: 1) when the case represents the critical case in testing a well-formulated theory, 2) when the case represents an extreme or unique case and 3) when the case represents the revelatory case, the situation exists when an investigator has an opportunity to observe and analyse a phenomenon previously inaccessible to scientific investigation. The rationale for conducting a multiple case research design is replication (when it produces similar results, literal replication or when it produces contrasting results, theoretical replication). Both case study designs can be holistic or embedded. If the case study examines the global nature of the phenomenon a holistic design is used, however, if the case study incorporates sub units of analyses, an embedded design is developed. The sub units often add significant opportunities for extensive analysis, enhancing the insights into the phenomenon investigated.

The transition from a socialist, centrally managed system to a capitalist, market system is a unique event. "There is no experience, there is not even a theory of successful transition from a command economy to a market economy” [Richard and Ericson, quoted in Nelson and Kuzes 1995, p 85]. In order to assess whether state-owned firms in Eritrea are creating value and in order to study their experiences during the transition to a market economy, we have selected cases from the manufacturing sector in Eritrea. The unit of analysis for this case study research is multiple cases of enterprises. The use of multiple cases allows for replication and theory development [Eisenhardt, 1989a; Scapens, 1990; Yin, 1994]. This method helps us to compare and contrast enterprises within the same industry as well as between industries.

The Eritrean Government owns several manufacturing, service rendering and utility companies. This study focused on the manufacturing sector because they are earmarked
for privatisation and are facing particular problems such as competition with imports due to the liberalisation of trade and prices.

The case study method emphasises depth rather than coverage and statistical generalisation. The aim of this research is to conduct an in depth study of manufacturing enterprises to assess the sources of value and how managers are restructuring and enhancing the value of the companies during the transition period. This requires an extensive, in depth investigation, which needs time and involves cost. Therefore, we have limited the focus within the manufacturing sector to a few cases.

In selecting cases from the manufacturing sector, we were looking for the following characteristics:

1) **Large enterprises**: The industry should contain large enterprises, which have a significant effect on the Eritrean economy in terms of employment, production and capital investment. This study included firms, which employ a relatively large number of employees (50 or more in 1991) and companies which had a large amount of capital (2 million Nakfa or more) in 1991.

2) **Good cases**: The enterprises under study should be suitable for an in-depth case study of the phenomenon under investigation.

3) **Comparability**: The companies should present comparable accounting information, but should also be distinctive on other aspects.

According to Eisenhardt [1989a, p. 545] "while there is no ideal number of cases, a number between 4 and 10 cases usually works well. With fewer than 4 cases, it is often difficult to generate theory with much complexity and its empirical grounding is likely to be unconvincing, unless the cases have several mini-cases within it. With more than 10 cases, it quickly becomes difficult to cope with the complexity and volume of the data.” Though, Eisenhardt suggests that a number of cases between 4 and 10 works well, we selected 4 industries that include 14 enterprises out of the 41 state-owned enterprises in Eritrea in 1993 (see table A5-1 in the appendices) in order to make an in-depth investigation.

Using the above listed criteria, we have selected enterprises in four industries, food processing, beverage, footwear and leather and textiles. In order to have an in-depth and comprehensive study of companies during transition and in order to make a cross analysis within industry and among industries we included 14 enterprises. The food processing enterprises selected are Barka Canneries, Red Sea Food Products, Alpha Foods and National Edible Oil Factory. We excluded two other companies, Asmara Milk Factory and Asmara Meat and Milk Factory from the food processing enterprises because these factories were spin-offs of the Commercial Agricultural Enterprises and thus, we were not able to find financial data for 1991-1995, which is prior to their spin-off date. These food processing enterprises are all state-owned. The beverage enterprises studied include three companies Asmara Brewery, Asmara Wine and Liquor Factory and Red Sea Bottlers. All state-owned enterprises in the beverage industry in Eritrea are included in this study. The footwear and leather enterprises studied include Dahlack Shoe Factory, Deluxe Shoe Factory, Red Sea Tannery and Asmara Pickling Tannery. All state-owned footwear manufacturing companies and tanneries are included in this study. The textile factories selected are Asmara Textile Factory, Eritrea Textile Factory and Lalmba Sack Factory, which are all state-owned enterprises.
The other enterprises are not selected due to the above mentioned criteria. For instance, the office furniture and household enterprises employ relatively few workers and have a relatively small book value of assets. The metal work firms also employ few workers.

The manufacturing industries in Eritrea are concentrated (96%) in Asmara (the capital city of Eritrea). All textiles, beverages, shoes and leather and food factories are located in Asmara. Therefore, this study was conducted in Asmara only.

5.4.2 Data Collection Approaches

Case study research can involve quantitative data only, qualitative data only or both [Yin, 1994]. Eisenhardt [1989a] argues that a combination of data types could be highly synergistic. He further elaborated that quantitative evidence can indicate relationships which may be salient to the researcher. It also can keep researchers from being carried away by vivid, but false, impressions in qualitative data, and it can bolster findings when it corroborates those findings from qualitative evidence. The qualitative data are useful for understanding the rationale or theory underlying relationships revealed in the quantitative data or may suggest directly theory which can then be strengthened by quantitative support.

In this study, primary data such as structured interviews with managers and questionnaires on restructuring activities have been collected. In addition, secondary data such as financial data from companies under study and policy documents have been collected for answering the research question and sub-questions posed. Multiple data collection methods provide a method for triangulation for stronger substantiation of constructs and hypotheses [Eisenhardt, 1989a; Scapens, 1990; Yin, 1994]. Therefore, we have collected quantitative and qualitative data.

Quantitative Data

The quantitative data collected include financial data such as income statements, balance sheets and other supporting financial documents and the questionnaires data collected to assess the responses of managers with respect to restructuring activities.

Financial Data

Accounting data measure the successes and failures of the firm and explain how and why its financial health changed over time. Accounting data also form the basis for planning future operations and for suggesting ways to improve the performance of the organisation. According to Crum and Goldberg, [1998, p. 47], "Almost every action taken by the company management is noted in the accounting system. Each interaction with suppliers, customers, workers and the government is recorded in the books of accounts."

We have collected financial data for the period of 1991/92 to 1997 because the state-owned enterprises were under the socialist government of Ethiopia prior to the liberation of Eritrea, May 24, 1991. However, upon the liberation of Eritrea, the Government proclaimed that it would follow a free market economy and it liberalised trade and reformed prices. In 1995, the government gave autonomy to state-owned manufacturing enterprises and in 1997, the government announced auctions for selected state-owned enterprises. The financial data indicate in terms of financial measures the responses of
managers to the economic reforms, whether they are adjusting to the new market environment and whether they are creating or destroying value.

In order to assess the value performance of the companies studied and in order to determine whether their value is enhanced or not during 1991/92-1997, we have collected financial variables relating to company operations (sales, costs and operating profits), company investments (total assets, fixed assets and working capital) and company finances (total debt, short-term debt, long-term debt, ownership equity and retained earnings). These variables are used to answer the value performance during 1991/92 to 1997 and to assess whether value is enhanced or not (research sub-question 4). The objective of collecting these financial variables is not only to assess the value performance indicators, but also to identify ways of affecting the value drivers and the behaviour of managers so that they can be assisted in creating viable and saleable companies.

Quality of the Financial Data

We have collected financial data for 1991/92 to 1997 from the selected companies for this study. The financial data of the sampled companies were collected during February 1998 to December 1998 at the time of company visits for interviews. The companies' income statements, balance sheets and other financial reports are prepared using standard accounting principles and Audit Service Corporation staff audits the statements of each fiscal period. The companies had been using UK Accounting Standards before nationalisation (1975) and the Socialist Government of Ethiopia also allowed the companies to follow the same system after nationalisation. The accounting data are reliable because the financial statements are prepared and audited using the accepted principles of accounting in the West. To enhance the reliability of financial data, we have collected audited statements. Though for the most recent years, when they were not yet audited in some companies, we collected draft statements. The audited reports evidence that there was no major problem of manipulation of accounting data in the state-owned enterprises in Eritrea. For these reasons the financial data can be compared between companies. Moreover, all companies are using the straight-line depreciation method for their fixed assets. This also helps to compare the data between factories.

Restructuring Activities Questionnaire Data

Scales are commonly used to measure ratings, feelings and opinions, especially in the fields of psychology and sociology. A scale is a ranked list of responses that runs from one pole to another (for instance, strongly agree to strongly disagree).

We have shown in chapter 3 that a manager’s decision-making influences the value created in enterprises. The management policies and practices followed have an impact on the value created in a business. The Porter [1985] value chain analysis model also shows primary activities and support activities as discussed in chapter 4 that influence the creation of value in an enterprise. Identifying value creating restructuring activities can help in enhancing the viability of the enterprises in Eritrea. We have asked managers to rate the relevance and influence they have on value creating restructuring activities identified from the literature and rank their criticality. The relevance score indicates how essential the managers think that an activity is in creating value. In reviewing the literature also we have emphasised that management empowerment as competent
influence on creating value. The empowerment-or competent influence-score shows to what extent managers think they can influence an activity to create value. Finally the criticality score of an activity indicates how crucial the managers feel the activity is.

In order to assess how managers of the state-owned enterprises in Eritrea evaluate the relevance, influence and criticality of value creating restructuring activities, we have distributed questionnaires to general managers, to financial managers, to production and technical managers and to marketing managers of the selected companies. We have distributed the questionnaires to the above mentioned top-level managers because they are responsible for the management of the company. The managers have knowledge of their company and they can assess what the firm has to do to enhance firm value.

The questions asked were structured in six parts, operations, investments, financing, governance and problems. In the operations section, we have asked managers to judge issues relating to revenue generation, cost reduction and other operating activities. In the investments section, we asked them to judge issues relating to fixed asset investments and working capital investments. In the financing section, we asked the managers on issues relating to debt and equity. In the governance section, we asked the managers on incentive systems, management, ownership and privatisation method used.

We identified from the literature reviewed on privatisation, governance, restructuring and value creation relevant activities for creating value in enterprises in transition. We used these activities in designing the questionnaires distributed to managers. As previously described in chapter 4, Earle, Estrin and Leshchenko [1996] in their study of Russian enterprises identified restructuring activities in production, employment, investment and marketing areas that enhance enterprise value [see table 4-1] and asked Russian managers to judge their importance. We mainly used these activities in designing operations, investment and financial restructuring questionnaires that we distributed to Eritrean managers. The cases studied in the literature review also helped us in identifying some more activities such as establishment of sales offices. The governance activities were identified from the literature reviewed in chapter 3. Moreover, Gurkov [1997] in his study of Russian enterprises identified problems that enterprises in transition encounter (see table 4-2) and he asked managers to judge the importance of these problems in their companies. We used these problems in designing the problems questionnaire of our study.

The managers rated the relevance, their influence, and company management's influence on operations, investments, financing and governance on a scale of 0 to 10, with 0 means irrelevant or no influence and 10 extremely relevant or can highly be influenced. In addition, we asked the managers to select three most critical issues and to assign a score of 3 to the most critical, a score of 2 to the second most critical issue and a score of 1 to the third most critical issue and 0 to all others, when evaluating the criticality of the issues in the past as well as in the future. Table A5-2 (in the appendices) shows an example of managers’ responses to operational restructuring activities of the beverage enterprises in Eritrea.

We distributed the questionnaires in person to the enterprises' management team of the 14 companies studied. We have left the questionnaire with the respondent for about a week and collected it during our appointment date for an interview. However, some respondents returned the filled questionnaire by a messenger. At the time of distribution, we explained the instructions for filling the questionnaire which were written on the front
cover and clarified if there were concepts that the respondents did not understand when they were scanning the questions. At the time of collection of the questionnaire we tried to explain if the respondents still had some questions or if they needed clarification.

As shown in table 5-1, we had distributed 51 questionnaires and received 47 filled questionnaires. The production manager of National Edible Oil Factory and the general managers of Asmara Wine and Liquor Factory and Red Sea Flour Mills did not fill in the questionnaire because of their busy work schedules.

Table 5-1 shows Summary of Questionnaires Returned and Managers Interviewed

<table>
<thead>
<tr>
<th>Enterprise Name</th>
<th>General Managers</th>
<th>Financial Managers</th>
<th>Production Managers</th>
<th>Marketing Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FOOD PROCESSING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Alpha Food Products</td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>v</em></td>
</tr>
<tr>
<td>2. Barka Canneries</td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td></td>
</tr>
<tr>
<td>3. National Edible Oil</td>
<td><em>v</em></td>
<td><em>b</em></td>
<td><em>x</em></td>
<td><em>b</em></td>
</tr>
<tr>
<td>4. Red Sea Flourmills</td>
<td><em>i</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
</tr>
<tr>
<td><strong>BEVERAGE PRODUCING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Asmara Brewery</td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
</tr>
<tr>
<td>6. Asmara Wine and Liquor</td>
<td><em>x</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
</tr>
<tr>
<td>7. Red Sea Bottlers</td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
</tr>
<tr>
<td><strong>FOOTWEAR AND LEATHER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Dahlack Shoe Factory</td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
</tr>
<tr>
<td>9. Deluxe Shoe Factory</td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>v</em></td>
<td><em>v</em></td>
</tr>
<tr>
<td>10. Red Sea Tannery</td>
<td><em>z</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
</tr>
<tr>
<td>11. Asmara Pickling Tannery</td>
<td><em>z</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
</tr>
<tr>
<td><strong>TEXTILES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Asmara Textiles Factory</td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
</tr>
<tr>
<td>13. Eritrean Textile Factory</td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
</tr>
<tr>
<td>14. Lalmba Sack Factory</td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>b</em></td>
<td><em>v</em></td>
</tr>
</tbody>
</table>

Notes: *b* = (both) the manager has returned the questionnaire and he was interviewed

*x* = the manager did not return the questionnaire and was not interviewed

*v* = the position was vacant

*i* = the manager did not return the questionnaire, but was interviewed.

*z* = One general manager administers Asmara Pickling and Red Sea Tanneries
Quality of the Questionnaires Data

The responses of the managers to the restructuring activities listed are subjective evaluations of respondents. In these kinds of data, the usual "hard rater" and "soft rater" problem and missing values may be encountered. In order to minimise the problem of rating, we have asked the managers to rate the issues using scores ranging from 0-10, which is customarily followed in grading students' tests in Eritrean schools. In addition, on the questionnaire itself, we have drawn a scale that shows 0-10 and also at the time of introduction, we have explained the scaling in order to make the managers understand the procedure easily. This approach minimised the problem of rating because managers were able to understand the scoring system.

Missing data are common in surveys for many legitimate reasons. There are generally three ways of data to become missing [SPSS, 1998]:

a) Not applicable. When a respondent skips a question because it does not apply.

b) Don't Know. It is perfectly acceptable for a respondent to indicate that he or she doesn't know the answer to a question.

c) No Response. Some respondents leave questions blank, which is often not equivalent to choosing don't know. A respondent may have forgotten to answer an item, may refuse to answer a question, or may not have found a choice that corresponds to the preferred responses.

There are missing data in the questionnaires returned. Too much missing data may indicate a problem with a question, either because of a misunderstanding by the respondents or a poorly written question. To assess the number of missing data, we counted the missing values (See table A5-3 in the appendices for the number of missing data from the returned questionnaires). Since the missing data from the returned questionnaires were small, we did not include them in calculating the average scores of relevance or the average scores of management team empowerment.

Qualitative Data

We also collected qualitative data in order to answer research sub-question 5 regarding how managers are trying to enhance enterprise value during a transition and research sub-question 6 regarding the influence of privatisation on manufacturing industries in Eritrea. We interviewed general managers, financial managers, production managers, and marketing managers of the companies selected for this study. The questions were related to company operations, investments, finances, governance, problems and other external factors such as government tax policies and competition. We have asked managers basically what efforts were done in the past to enhance operations, investments, finances and governance and what constraints were encountered in enhancing firm value. In addition, we have asked the interviewees, what further plans they have in improving company, operations, investments, finances and governance and how the privatisation policy is influencing their firm.

We asked different questions to the various types of managers because the questions were designed in such a way to extract relevant information from the expertise of the respondents. Due to this, we have asked general managers questions relating to sales, cost, investments, finances, governance, problems and other external factors. For the financial managers, we have asked them the same questions as those asked to general managers,
but in addition, we asked further detailed questions regarding the profitability, working capital elements and other financial aspects. We asked the marketing managers questions relating to sales, promotion and distribution channels and the production managers questions relating to operations (sales, cost and productivity) and investments in fixed assets.

We had asked 51 managers for an interview appointment and we secured 48 interviews. Two managers, production manager of National Edible Oil and General Manager of Asmara Wine and Liquor Factory were not interviewed because of their busy work schedule. The interviews took place at interviewees' offices from January 20, 1998 up to March 30, 1999. The average duration of the interviews with the respondents is given in the following table.

**Table 5-2 Interview Duration**

<table>
<thead>
<tr>
<th>Interviewees</th>
<th>Average duration of interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>General managers</td>
<td>67 minutes</td>
</tr>
<tr>
<td>Finance and administrative managers</td>
<td>64 minutes</td>
</tr>
<tr>
<td>Production and technical managers</td>
<td>59 minutes</td>
</tr>
<tr>
<td>Marketing managers</td>
<td>40 minutes</td>
</tr>
</tbody>
</table>

We asked open-ended questions to the managers, but in order to focus the interviews to the most important issues that will help us answer the research questions, we identified relevant concepts from the literature to be used as a signpost for us. However, this did not limit the responses of the interviewees. They were expressing and providing additional insights. We took notes during the interviews. In addition, we have taped the interviews, whenever it was not inconveniencing the respondents. The general managers' interviews were tape recorded, but only a few finance, production and marketing managers wanted to use the tape recorder because they were not accustomed to that devise. The interviewees responded in the local language, Tigrigna to facilitate communications and then, the researcher transcribed the interviews into English at the same day.

From the Government side, we interviewed three officers in the Ministry of Industry (Head of Research and Training Department, Head of Trade Department and a senior officer at the Eritrean Investment Centre] to assess the industrial policy of the country. We have also interviewed the Director of the National Agency for Supervision and Privatisation of Public Enterprises (NASPPE) to assess the progress and constraints encountered in restructuring and privatising enterprises in Eritrea. Finally, we interviewed a business consultant engaged in evaluating the companies to be privatised on the methods used in evaluating enterprises, in particular the computation of cost of capital in Eritrea. We used open-ended questions in interviewing these persons.
5.4.3 Data Analysis

Multiple data collection methods strengthen the grounding of theory by triangulation of evidence [Eisenhardt, 1989a; Scapens, 1990; Yin, 1994]. The financial data, managers' responses to the questionnaires and interview data are analysed to answer the research questions addressed in this study.

Financial Data Analysis

The financial data are used to answer the value performance of the selected companies for this study during 1991/92-1997 (research sub-question 4) and to determine whether companies have been creating or destroying value. In addition, it also helps in answering how the managers are trying to enhance value (research sub question 5). The Rappaport’s Value Network Model [1986] shows value drivers that indicate management decisions on operations, investments, and finances. These value drivers are sales growth, operating profit margin, income tax, working capital investment, fixed capital investment, cost of capital and value growth duration. A comprehensive and rigorous examination of firm's sales, cost structure, asset structure and capital structure is a base to any assessment of commercial viability. Financial measures are performance indicators based on monetary figures. They are valuable in summarising the readily measurable economic consequences of actions already taken. They also indicate improvement in value and play a vital role in gauging the successful growth of enterprises. Kaplan and Norton [1996] argue that every measure selected should be part of a cause-and-effect relationship that culminates in improving financial performance. For most organisations, the financial themes of increasing revenues, minimising cost, improving productivity and enhancing asset utilisation and financing are part of the necessary linkages in assessing value.

We have used financial analysis techniques in analysing the financial data collected from the companies selected for this study. Financial analysis can be seen as the analysis of a firm's store of productive resources and the usage of these resources expressed in money terms. Financial analysis provides information on profitability, cash position, working capital needs and fixed asset investment requirements. We have used absolute financial data such as sales, asset investments and debts as well as relative figures such as financial ratios. Ratios are derived from the recorded data of the company. Their advantage lies in the assessment of performance over time and the possibility of comparison of performance with similar companies of the sector. In particular, ratios assist in identifying and highlighting liquidity, asset and debt management and profitability problems. One of the important drivers of company value is the return on assets (ROA) ratio. Return on Assets is computed by dividing the operating profits of an enterprise to its total assets and it measures the return delivered to investors (creditors and owners). High return on assets reflects the firm’s success and it makes it easy to attract new funds. More funds enable a company to grow, which in turn leads to greater profits. All this leads to high value and continued growth in the value created in the business.

Financial analysis highlights both the strength and the possible areas of concern of a company and helps in identifying the fundamental problems and weaknesses of the business and helps in assessing the firm's competitive strengths. Financial analysis can also help in identifying the root causes of the problems that the enterprises are facing in creating value.
The financial data collected can be used in comparison with benchmarks. We are using three types of benchmarks for this study. First, the value performance of a company under study is assessed over time. Second, the value performance of a company is compared against the performance of the industry average. Third, the return on assets is compared against the cost of capital of the company. Cost of capital is a required rate of return on the firm’s total capital. A firm’s cost of capital is simply a weighted average of the rates of return required by investors in the firm’s securities (debt and equity). If a firm earns a rate of return higher than the cost of capital then the excess return will lead to an increase in owners’ wealth. The cost of capital serves as the linkage between a firm’s investment and financing decisions and helps in assessing the value of the firm and the risk of a business. Thus, if the return on investment is larger than the weighted average cost of capital (WACC), value is created.

In countries with developed financial markets, the cost of capital is computed using various valuation methods such as capital asset pricing, real options and others. However, even in these countries practitioners use weighted average cost of capital (WACC) most frequently [Geddes, 1999]. The weighted average cost of capital is estimated using the industry borrowing interest rate in Eritrea and consultation of consultants and the minimum required rate of returns that the companies estimate. The industrial lending rate in Eritrea is 8.5% [IMF, 1998] and consultants add a risk premium based on the risk of the industry. The riskier the industry the higher the risk premium assessed. We have also asked the financial managers of the enterprises studied the minimum required rate of return they use if they have any and what they think about the estimated weighted average cost of capital that the consultants are using in evaluating their enterprises. This process has helped us to use the weighted average cost of capital estimated by the consultants as a yardstick for evaluating value created or destroyed in enterprises.

**Questionnaires Data Analysis**

We collected managers’ responses to the relevance, respondent’s influence, company management’s influence as a team and criticality of the issues in the past and in the future of restructuring activities. However, during the analysis of the data we have found out that the managers’ responses to respondent’s influence and company management’s influence as a team of the restructuring activities were often similar. Moreover, the responses of the managers on criticality of the restructuring activities in the past and the future were also often similar. Due to this, we excluded the managers’ opinion on respondent’s influence and criticality of the restructuring activities in the past from the analysis in order to reduce the data to be analysed. To make an in depth analysis of the data, we concentrated on relevance, company management’s empowerment as a team and criticality in the future of the restructuring activities.

Earle, Estrin and Leshchenko [1996] in analysing the responses of Russian managers to restructuring activities questionnaire used a scale of 1 (not important) to 3 (very important). Similarly, in order to assess the relevance, company management’s team empowerment and criticality of the value creating restructuring activities and in order to reduce the data and enhance interpretation, we first re-scaled the management responses into three categories, **high**, **some** and **low** (see appendix A5-4 for a re-scaled responses of the beverage industry managers to the operating restructuring activities). The respondents were asked to rate the restructuring activities from 0-10 because the schools in Eritrea use this grading system and this system helps in minimising raters’ differences. However, this
also resulted in a high dispersion of data and in order to concentrate on the most important restructuring activities and enhance interpretation of the data, we re-scaled it into three categories. High (denoted with a score of 3) represents managers' responses of scores of 8, 9 and 10, some (denoted with a score of 2) represents managers' responses of 7 and 6 and low (denoted with a score of 1) represents managers' responses of 0-5 inclusive. Clustering of the data into these three categories helped us to concentrate on the most relevant issues that enterprises are facing during the transition to a market economy.

We have analysed the relevance of the value creating restructuring activities and company management’s empowerment on those activities using averages and ranges. The average scores of the re-scaled responses range from 1-3 (1 is the lowest value and 3 is the highest value). Similar to the procedure we have followed above, these averages were also clustered into three categories high, some and low. However, the above re-scaled values were integer values where 3, 2, and 1 represent high, some and low respectively. Unlike the integral values of the re-scaled scores, the averages of these scores result in interval values ranging from 1-3 and thus, we have selected cut off points to categorise the data into high, some and low. Average scores of 2.5-3.0 are classified as of high relevance or high empowerment, while average scores of 2.0-2.4 are classified as of some relevance or some empowerment. The rest average scores less than 2 indicate low relevance of activities or low empowerment of managers. The average scores are used to describe and analyse the relevance and company management empowerment of the value creating restructuring activities. The criticality of value creating restructuring activities in the future was a ranked data and to preserve the ranking, we have summed the rank scores of the activities. High criticality scores indicate aspects that are critical in creating value in the enterprises.

**Qualitative Data Analysis**

As discussed before, we have interviewed the managers of the companies selected for this study to know the efforts done to improve operations, investments, financing and governance; to identify the constraints that they are facing and to assess their future plans. In addition, we asked the managers regarding the influence of privatisation on company operations, investments, financing, governance, problems and other external factors such as competition and government policies. We used structured questions, which are based on the conceptual framework of the study for the interviews. In order to focus the interview, we identified prior to the interview categories of issues to be used as signposts. However, we did not hand in the interview questions to the managers to avoid bias and the interviewees responded freely and in this way other essential issues were raised during the interview.

The transcribed interviews were read and the essential issues reported were annotated. In addition, we assembled the meaningful themes identified from the transcripts and also gathered the interesting quotes from the transcripts. We used the management responses to illustrate the financial and questionnaire results. The structured interviews with the managers provided us with additional qualitative data that we were not able to get from the financial documents or the questionnaires and it helped us to corroborate the findings of the financial and questionnaire data.
Level of Analysis

There are two levels of analysis in this study, at the enterprise level and at the industry level. The main unit of analysis of this study is the enterprise. We are focussing on the micro approach because the main focus of the study is to examine the transformation of companies into value creating private enterprises. Within company analysis helped us to gain insight in the behaviour of managers, the operation structure, investment and financial structure, governance structure and management of the enterprise in transition to a market economy. In order to search for cross-case patterns [Eisenhardt, 1989a; Scapens, 1990], we compared and contrasted the enterprises under study in each industry. Cross-case analysis helped us to find out the within group similarities and inter-group differences. Furthermore, we made cross-cases study of the four industries analysed to assess industry similarities and differences.

The results of the within case and cross-cases analysis of food processing, beverage, footwear and leather, and textile enterprises is given in chapters 7-10 respectively. The cross-cases analysis of the industries studied is given in chapter 11.

5.4.4 The Credibility of the Research Findings

According to Yin [1994], reliability, construct validity, internal validity and generalisation (external validity) tests have been commonly used to establish the quality of any empirical social research. These tests are used to establish the trustworthiness of research results or an assessment tool.

Reliability relates to demonstrating that the operations of a study such as the data collection procedures can be repeated, with same results [Yin, 1994]. Reliability, according to Saunders, Lewis and Thornhill [2000], can be assessed by posing the following two questions: 1) Will the measure yield the same results on different occasions? 2) Will similar observations be made by different researchers on different occasions?

The objective of reliability is to minimise the errors and biases in a study. As previously described in this chapter, to enhance the reliability of the research findings, we collected audited financial statements as much as possible and in preparing the questionnaires, we used a scale of 1-10 (marking scale used in Eritrean schools) to enhance the understanding of the respondents. Moreover, Triangulation of information using multiple data sources enhances the reliability of the research findings [Scapens, 1990; Yin, 1994]. The use of multiple sources of evidence in case studies allows an investigator to a broader range of historical, attitudinal and behavioural issues. We have used financial data, questionnaires and interviews and this helps in triangulation of information and converging lines of inquiry. Yin [1994] also suggests, the use of case study protocol (documenting the procedures followed in detail) and the development of case study database (preserving data collected for future use). In this chapter, we documented the procedures followed in conducting the research and we assembled the financial, questionnaire data and the interview transcripts of each case to enhance future verifiability.

Construct validity relates to establishing correct operational measures for the concepts being studied [Yin, 1994]. This tests whether the instrument you are using actually
measures what you need to have measured. Yin [1994] recommends the use of multiple sources of evidence and to establish chain of evidence in data collection phase. In our study, we used multiple sources of evidences, qualitative and quantitative such as financial and management interviews to enhance construct validity. Moreover, the variables used are derived from the literature reviewed on privatisation and value creation.

Internal validity is establishing a causal relationship, whereby certain conditions are shown to lead to other condition, as distinguished from spurious relationships [Yin, 1994]. It means being able to conclude that the independent variable really does affect the dependent variable [Bryman, 1992].

In case study research, according to Yin [1994], pattern matching, explanation building and time-series study in data analysis phase enhances the internal validity. Pattern matching relates to comparing an empirically based pattern with a predicted one. If the patterns coincide, the results can help in strengthening internal validity. To ‘explain’ a phenomenon is to stipulate a set of causal links about it. According to Yin [1994], explanation building process is a result of a series of iterations: Making an initial theoretical statement or an initial proposition about policy or social behaviour. Comparing the findings of initial case against such a statement or proposition and then revising it based on the findings. The iterative process continues until plausible explanation is build. The ability to trace changes over time is a major strength of case studies and helps in developing an explanation of outcomes. It helps to examine “how” and “why” questions about the relationship of events over time, not merely to observe the time trend alone.

In this research, to enhance the internal validity, we used time series analysis of events. We evaluated value performance of the cases studied during 1991-1997 to assess whether and how value is created or destroyed. Moreover, in order to assess the influence of enterprise reform measures taken in 1995, we compared the value performance of pre-reform (1993 and 1994) and post-reform (1995 and 1996) performances. In order to assess the influence of privatisation announcement on value creation, we compared pre announcement (1995 and 1996) and post announcement (1997 and 1998) performances. In addition, we compared the 1997 performance of state-owned and of private enterprises in Eritrea to further explain the influence of privatisation announcement on creation of value.

Generalisation (external validity) deals with the problem of knowing whether a study’s findings are generalisable beyond the immediate case study. Yin [1994] categorises generalisation into statistical generalisation and analytical generalisation. In statistical generalisation an inference is made about a population (or universe) on the basis of empirical data collected about a sample. Yin [1994] argues that cases are not “sampling units” and thus, individual case studies are to be selected as a laboratory investigator selects the topic of a new experiment. Under these circumstances, the method of generalisation is ‘analytic generalisation’ in which a previously developed theory is used as a template with which to compare the empirical results of the case study. In analytical generalisation, the investigator is striving to generalise a particular set of results to some broader theory. Yin [1994] argues case studies should be evaluated in terms of the adequacy of the theoretical influences that are generated. The aim is not to infer the findings from a sample to a population, but to engender patterns and linkages of theoretical importance. The purpose of case study is primarily to generate new insights that are useful for building theory. Yin [1994] argues that the theory should be tested in
comparable contexts to see whether it fits other cases and calls this method a ‘replication logic’. It is a more appropriate framework within which to judge the external validity of case study evidence than in terms of sampling notions. Case study research which examines more than one case comprises its own ‘replication logic’.

In our study, we selected multiple case studies of food processing, beverage producing, footwear and leather and textile companies to enhance the generalisation of the findings. We reviewed theories such as property rights, agency, incomplete contracts and management empowerment to identify the issues to be studied. We have also prepared a conceptual framework mainly based on Rappaport Value Creation Network Model [1986] to structure and analyse data. Our objective is to generate theoretical insights rather than statistical generalisation.

Our study focussed on state-owned manufacturing enterprises in the food processing, beverage, footwear and leather industries. However, there are other state-owned manufacturing enterprises facing similar problems in other sectors such as metal manufacturing. Moreover, there are also state-owned hotels in Eritrea, which are offered for sale since 1993, but still unsold due lack of buyers. These hotels are also facing similar management problems. The privately owned manufacturing enterprises in the food processing, beverage, footwear and leather and textile industries are also working under similar conditions. In addition, governments in developing countries and in transition economy countries are striving to reform their economies like that of the government of Eritrea. Though each case has its own particularities, we hope some useful lessons can be learned that can help in restructuring, privatising and creating value in other enterprises as well.

5.5 Typology of Restructuring Issues

The financial statements of companies document value performance of companies and the survey of managers responses reveal restructuring actions needed to create value. The interviews of managers also indicate restructuring actions undertaken and constraints encountered. Table A5-5 (presented in the appendices) summarises restructuring actions and other aspects studied in the empirical part. The purpose of the tables is: 1) to show the dimension across which enterprises do and do not restructure; 2) to highlight the similarities and differences among the four industries and companies studied and 3) to provide a guide to the case studies themselves.

5.6 Summary

In this chapter, we developed a conceptual framework on the basis of the insights gained in the literature review. Moreover, we designed the research methodology for the study. In a nutshell, the research method used is a multiple case study of enterprises. The financial data are analysed using financial analysis techniques, while the management responses are described and analysed using averages and ranges. Interview responses of managers are, finally, used to illustrate the financial and management response questionnaire results. The restructuring issues are studied in order to find out similarities and differences of food processing, beverage, footwear and leather, and textile enterprises in Eritrea during privatisation.