

CHAPTER 3 - RESEARCH METHODOLOGY

*A journey of a thousand miles must start with a single step
- Chinese proverb*

3.1 Introduction

The intent of this chapter on the research methodology followed in the research, serves to highlight the fact that, underlying all research, the scientific foundation must be above question. This chapter will describe the scientific methodology and approach utilised during this study.

Thorough research generates scientifically dependable data, which enables the researcher to practice professional conduct in the process of responsible decision-making (Cooper and Schindler, 2001). According to Kerlinger (1986), scientific research should include the following:

- A scientifically researched and proven integrating theory. Public and open resources (preferably primary resources).
- Precise definitions.
- A systematic and cumulative approach.
- Replicable findings.
- Objective and scientific replicable data collection and sampling.
- A clear statement of the research problem.
- A clear understanding and explanation of the phenomenon, contextualised in its broader domain.

This study adheres to the scientific approach through the application of both quantitative and qualitative methodologies, and utilises both inductive and deductive reasoning. The study includes a combination of theoretical and interpretive findings, and due to the complexity of the subject as well as the high quantity of qualitative data, the study was performed through the combination of methodologies and reasoning methods, a technique referred to as triangulation. Triangulation refers to the use of several research frameworks of reference analysing the same set of data to ensure scientific validation with the aim to overcome intrinsic bias arising from single methodology research (Leedy, 1993).

This research project was divided into the following phases:

1. Research design
2. Planning
3. Data collection and analyses
4. Evaluation and approval

as illustrated in Figure 17) which serves as a visualisation of the research process in the context of this research.

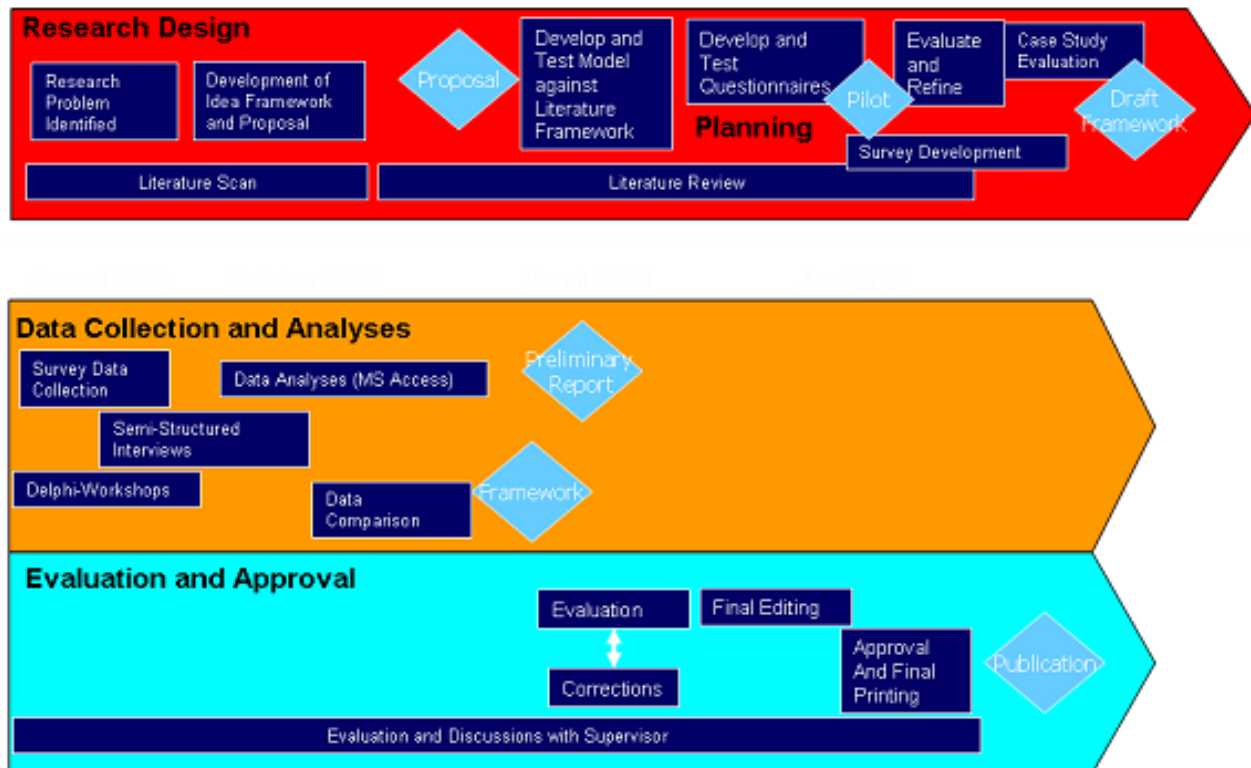


Figure 16: Research Process (author's own)

3.2 Theory

The study estimates (with the objective to optimise and improve) the value add of Human Capital to the bottom-line of organisations; i.e. value the Human Assets of an organisation; following a scientific approach by developing a framework for accounting Human Capital.

A company's ability to support its business strategies with Human Capital is an important indication of the company's future business performance. Traditional HR metrics fails to report on the level of performance, knowledgebase or value of their Human Capital, making it virtually impossible for stakeholders or valuers of companies to take this most important asset - Human Resources - into account in valuing the company against its competitors.

Consequently, resulting from the application of the value-add concept of Human Capital, an evolutionary HR Value-add Framework, open to validation and replication, is developed to enable companies to report on their Human Assets to shareholders and other stakeholders, to apply when

calculating the value of the company. This framework thus needs, amongst others (to be discussed later in this study) to include information that allows a holistic and informed assessment of the company's operations, finances, future strategies and prospects.

The study furthermore investigates the Human Resource Management (HRM) theories and defined activities which can have an effect on the company's Income and Expenditure Statement and/or Balance Sheet, to evaluate whether this has any correlation with the value of the Human Assets.

3.3 Detail of the chosen procedure

The research design is exploratory, aimed at developing a new model. As defined by Mouton (2001), good theories and models provide causal accounts of the world, allow one to make predictive claims under certain conditions, bring conceptual coherence to a domain of science, and simplify our understanding of the world. Please refer to Figure 18 which serves as a schematic of the research methods applied during this study.

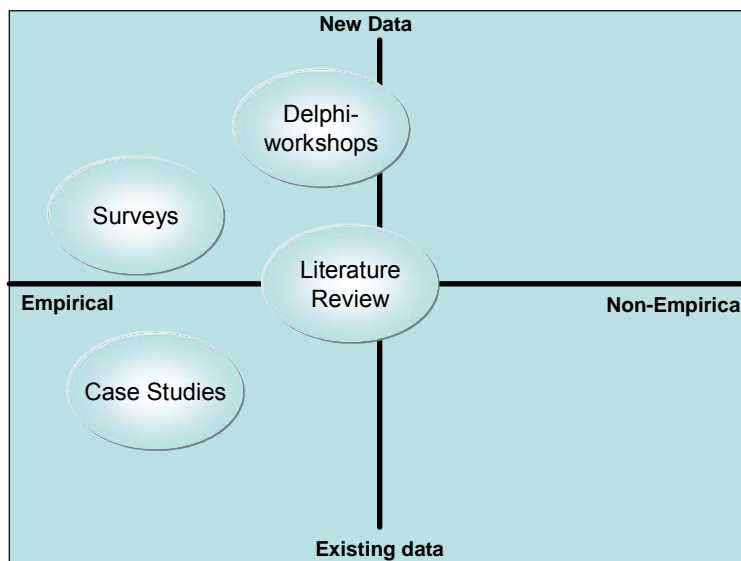


Figure 17: Research Methods (author's own)

The following research instruments were utilised to obtain data for the research:

- Literature review that provides an overview of the field of study to assist the researcher to identify and build the link between finance and HR.

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- Case studies which provides the researcher with an in-depth description of current practices globally in HR accounting from various companies and studies in Industry as input into the planning and design of the semi-structured interview questions.
 - Development of questionnaires to be used as a survey of the target groups.
 - Survey methodology, used with the objective of obtaining a broad overview of the current status as well as (perceived) limitations to the proposed model from a large population.
 - Semi-structured interviews; used to allow executives and HR practitioners to respond spontaneously to open questions, allowing different dimensions and viewpoints as well as the considerations specific to the company.
 - Delphi-technique used after the initial failing of the surveys to obtain enough responses (data) to enable the researcher to make the required inductive reasoning. Evaluating current practices and leveraging the experience of HR experts (HR practitioners, students and consultants in Deloitte), allowed the researcher to evaluate and refine the framework.

Triangulation is defined as a process by which the researcher guards against the accusation that a study's findings are simply an artefact of a single method, a single source or a single investigator's biases (Patton, 1987), and thus was used to verify and validate the research in order to conquer intrinsic bias.

The research process consisted of the following activities:

1. Literature review of Human Capital and Corporate Reporting to ensure that a thorough knowledge and understanding is developed (descriptive and qualitative).
2. Evaluation of International Case studies as obtained through literature reviews.
3. Development of a draft framework.

4. Development of a survey based on the draft framework (to use for verification), piloted for input from students in Organisational Behaviour.
5. Survey developed in Step 4 reviewed and adjusted according to pilot feedback.
6. Development of a survey for HR Practitioners.
7. Verification of the current practice and required Human Capital reporting requirements by industry by means of the qualitative survey, followed by semi-structured interviews of Human Capital practitioners.
8. Development of a Survey for Auditors based on information gathered in Step 1, 4, 6 and 7.
9. Survey of auditors to evaluate the relevance of the proposed categories of reporting for internal and external reporting as well as their ability to audit such information.
10. Refinement of the framework based on responses and further, in-dept literature reviews, steps 7 and 9.
11. Evaluation of the application and validity of the metrics identified with HR Consultants and students using the Delphi-technique and a questionnaire based on Step 10.
12. Testing of and final adjustments and refinement of the framework with input from Human Capital specialists.
13. Development of the final HC Framework and Index.

The steps followed in the research are illustrated below:

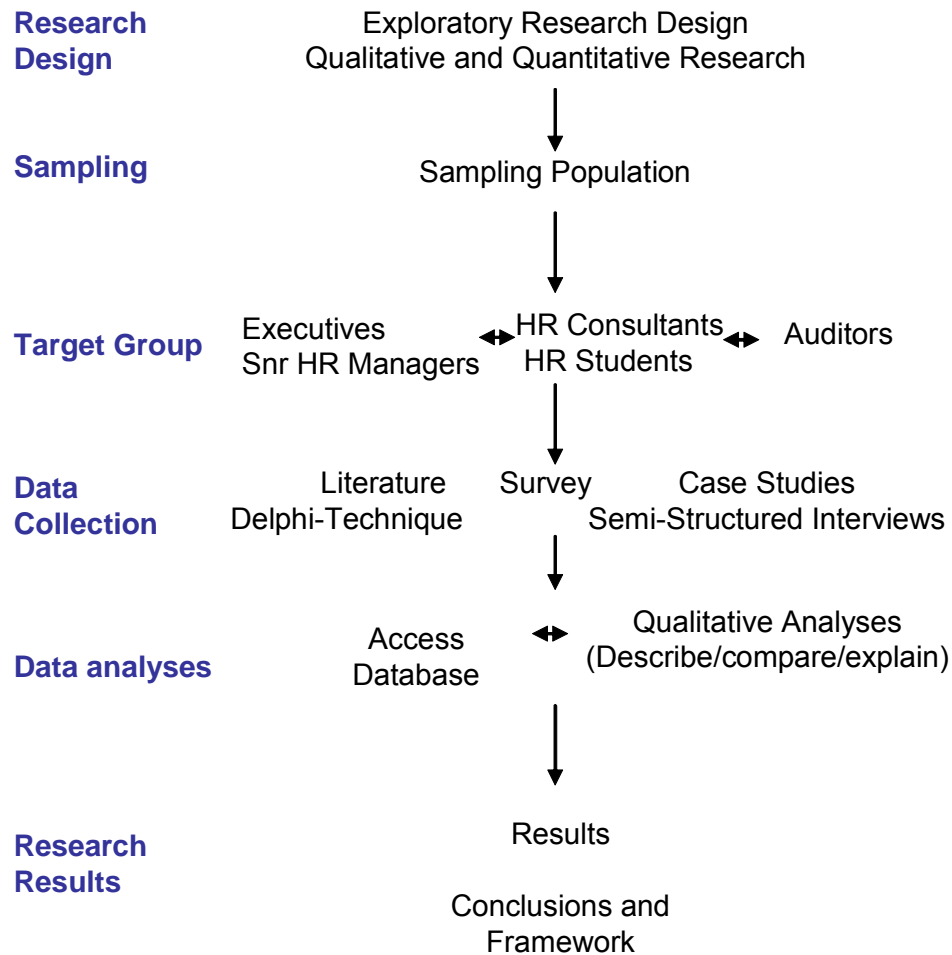


Figure 18: Steps followed in Research Methodology

3.4 Reasoning

There are three general approaches to reasoning (deductive, inductive and retroductive) used in research to facilitate the acquisition of new knowledge. For this study, both inductive and deductive reasoning were used.

Deductive reasoning - starts with generalisation and seeks to see if these generalisations apply to specific instances in order to test the theory (Guy and Diehl, 1992). Developing the model started with the generalisation that all activities within an organisation will lead to either an increase in the value (value seen here in the broader context) or a decrease in the value of the organisation. Following this, using the standards for financial reporting, and clarifying the concept as it relates to

the Human Resources function and activities, a framework was developed to be tested against existing theories and insight from experts in this field.

Inductive reasoning: - commences with the observation of specific instances and seeks to establish generalisations or theories. This reasoning method is especially prevalent in this study in the analyses of the case studies as well as the population used during the Delphi-workshops.

3.5 Participants and Sampling

Participants and sampling for the study required an understanding of the primary objective; i.e. to determine the current status and application of HR metrics, reporting and insight into HR accounting methodologies in South Africa, where such techniques or tools/models have been deployed.

In qualitative research, non-probability sampling techniques are used as the researcher's intended purpose is to research individuals, groups or settings where the specific phenomenon being studied is most likely to occur. De Vos, Strydom, Fouche & Delport (2002) expressed an opinion that data are derived from one or two cases and therefore it is unlikely that these cases are randomly selected. Judgement sampling (sample elements have a relationship on common ground; i.e. the Human Resources function) and snowball sampling (researcher gathers information from respondents that enables the location of other respondents that has the same common ground) was used during this study. The snowball sampling produced four additional sample elements for the executive and senior HR managers' group that were not identified through the initial survey, and this additional information from participants has been included in the data analyses (Leedy, 1993).

The empirical section of this study has three parts, and three target groups were identified and used during this study. In the following paragraphs the different methods used for data collection as well as the participants from each of the groups is described.

3.6 Target Groups

The target groups identified for this study consists of three separate groupings plus one specialist group:

3.6.1 Executives and Senior HR Managers

Senior HR managers and executives who have a reporting line function in HR were identified and their knowledge of the topic tested through the initial survey. These senior managers and executives have a direct responsibility for either HR or profitability from a line function perspective. As senior people within the organisation, their level of understanding of the organisation's key drivers and strategies, as well as their knowledge of the company's internal and external reporting, allowed them the insight into both the current status as well as the potential for the framework. The researcher selected this group specifically due to their involvement in the strategic focus of the organisation.

The nine sample elements that constitute the sample are presented in Figure 20 which graphically illustrates the element groupings for executives and senior HR managers.

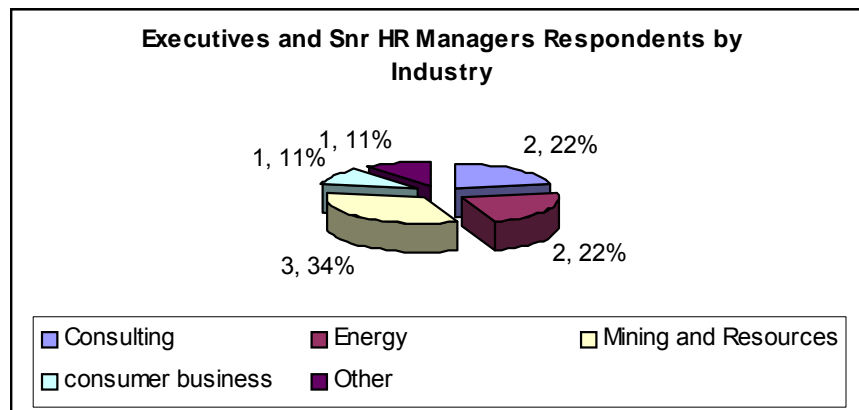


Figure 19: Executives and Senior Managers Respondents by Industry

Figure 20 indicates that 34% of sample elements are from Mining and Resources organisations, 22% from Consulting and Energy, 1% from Consumer Business and 1% from Other (not specified). A benefit of the above sampling methodology is that the respondents have indicated their knowledge and insight on the topic from their organisational specific viewpoint.

3.6.2 HR Consultants and Students

Consultants and students of Human Resources were identified from a database of employees in Deloitte as well as partner or sub-contracting companies. The pool of 119 HR consultants and students who were non-randomly chosen includes students who attended post-graduate studies which included Human Resource Management and/or Finance and consultants who specialise in Human Capital advisory services.

3.6.3 Auditors

Auditors were identified from a list of Deloitte & Touche employees, by selecting two audit teams. The snowball technique was used to solicit more respondents and this increased the number of elements by three not originally identified by the researcher. These auditors are qualified CAs (Chartered Accountants) and have at least 2 years' auditing experience. Figure 21 indicates that 57% of sample elements are between 30 – 45 years of age, and 43% between 20 – 30 years. None of the respondents are older than 45.

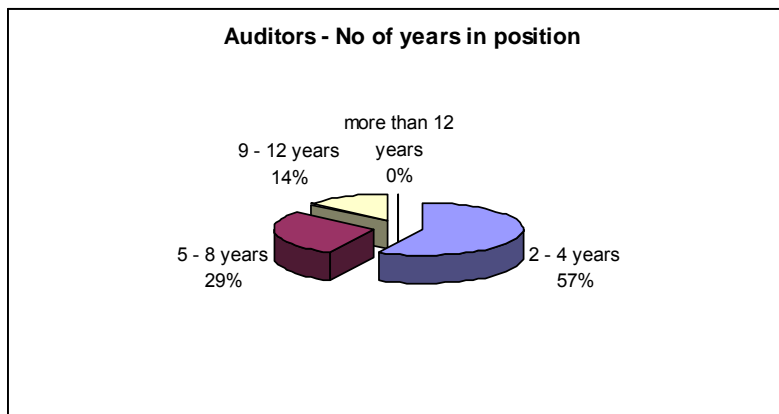


Figure 20: Auditors - Group Age Distribution

Whilst most of the respondents have between two and four years' experience as auditors, 14% have between 9 -12 years and 29% have between 5 – 8 years (refer Figure 23).



Figure 21: Auditors – Number of years in position

3.6.4 Human Capital Specialists

Human Capital specialists were identified using judgement sampling (purposely stratified / selected) from the group of respondents' HR specialists and students. This specialist group of five (40% male and 60% female) was asked to evaluate and comment on the final model. This group comprises specialist advisors in Deloitte Human Capital with six years or more experience in Human Resource Management and/or Human Capital and/or HR Strategy advisory services (refer to Figure 21 for a graphical illustration of their experience and educational qualifications).

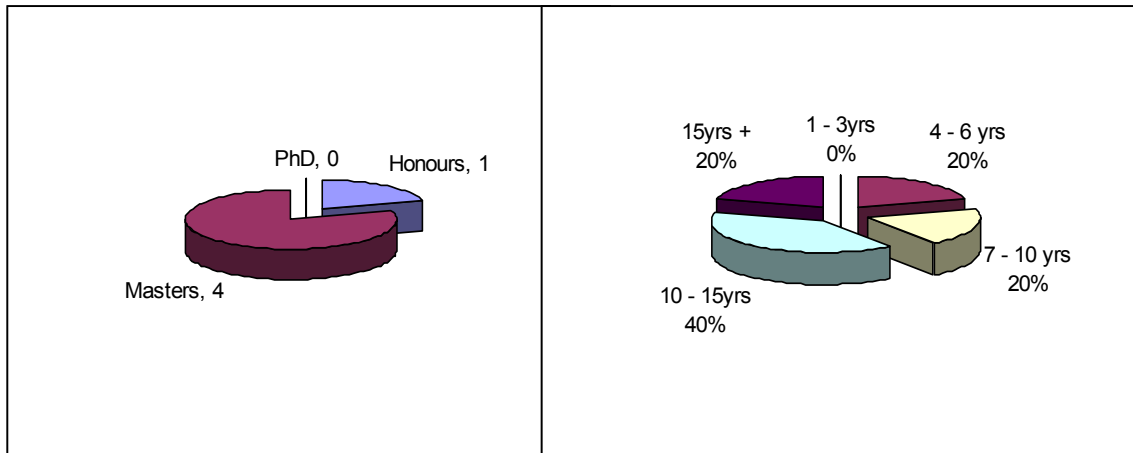


Figure 22: Specialists Education and Experience

3.7 Data Collection

Primary data sources such as journal and magazine articles, newspaper and media reports, and information available on the Internet was collected and integrated with the data obtained via the case studies, surveys, focus groups and interviews to add further information, trends and industry knowledge. This data is integrated in the conclusion of the study and used to confirm or contradict the researcher's proposed model.

3.7.1 Case Studies

The case studies obtained through the documentary sources are qualitative in nature, based on a number of different studies globally (refer Chapter 2). These cases were analysed to provide the researcher with insight into the current practices globally and provides for the ability to compare these with current practice in South Africa as well as providing the researcher with input to increase the relevance of the metric list and survey questionnaire.

3.7.2 Semi-structured Interviews with Executives and Senior HR Managers

The Executives and senior HR manager target group were surveyed with the intention of gathering knowledge and an understanding of the current situation, as well as to ascertain and develop additional ideas not necessarily found in the literature research, which may relate to the topic under

study in order to strengthen the implicit hypotheses generated by the research as it progressed. They were probed on their own perceptions of the value of the HR function, the value of Human Capital employed by the organisation, and most importantly, the methods they use to report on such matters.

A survey was first developed and distributed to this target group with the objective of:

1. Ascertaining the current status of HR reporting and level of understanding in the organisation.
2. Ascertaining the level of insight from the interviewee with regards to the topic.
3. Requesting names of organisations and/or other executives or senior HR management within the organisation that may be able to provide content to the research; i.e. using a “snowballing” technique.

Where applicable, the Likert-type rating scale, with a 1 - 5 agreement format was chosen for this survey. The scale was also described to ensure a higher level of consistency in evaluation. This survey was administered electronically to facilitate self-administration, whilst obtaining detailed information, which posed some challenges in it. Very few unspoiled returns were received (12 out of 19); however due to the exploratory nature of this questionnaire, this was acceptable to the researcher. Of the total returns received, 8 companies were selected to participate in this study, based on the answers and level of insight displayed in the returns.

3.7.3 Interviews

The interviews with respondents were aimed at gathering an understanding of the current “as-is” situation in the application of HR metrics and reporting.

The target group for interviews included senior managers and executives at the strategic and tactical level of the organisation. These manager and executives currently perform HR duties or have an HR function reporting to them. The interviews were conducted according to the semi-structured interview guide and schedule. According to Thietart (2001), the benefit of non-structured interviews is the possibility that respondents can identify elements related to the research that structured

interviews may miss. This point strengthens the methodology followed in this research. The objective of the interviews was to i) identify the current practices in South Africa, and ii), to understand the aspects which are considered as importance or of strategic nature to the organisation.

The interview guide used provided the researcher with prompts to probe to determine:

- Methods followed in HR reporting at the organisation of the respondent.
- Key indicators to measure Human Capital and the extent to which these measures are associated with other reporting or measuring within the organisation; specifically those relating to the company's profitability and/or competitiveness.
- The respondents' opinions regarding the importance of linking the HR and business strategy and how this should be demonstrated / reported.

The final section of the interview was to determine and prioritise the elements identified through the data collection and literature reviews that are required to ensure important HR information is included in reporting for companies as well as what the challenges or difficulties experienced in such reporting may be for their company.

3.7.4 Surveys (Questionnaires)

While qualitative data collection techniques aid in identifying relevant constructs and concepts to be examined, survey research provides a means of quantifying these concepts and examining relevant relationships in-depth. In this context an important consideration is the instrument design. Since the instrument used in this survey research is a self-administered questionnaire, the design and questionnaire formulation was designed to facilitate respondent comprehension and response accuracy.

The target group for the auditors' survey included qualified auditors employed by Deloitte and Touche. This group was surveyed to determine the relevance of the dimensions and descriptive elements of a model for Human Capital Reporting as well as to identify any additional elements that

are perceived to be relevant from an external auditors' perspective. The objective of the questionnaire was to identify which elements of the Human Capital information (data) is essential and should be shared i) only internally, and ii) internally and externally. This group was also asked what other information (if any) they considered important to share with external stakeholders.

3.7.4.1 Survey methodology

The survey was administered electronically. This survey method of collecting data lends itself to a high level of standardisation and therefore high reliability (Singleton et al., 1988). It is relatively inexpensive, not too time consuming and matches the sampling proposed.

The electronic administration of the questionnaire has the added benefit that it can be completed and data stored in near real time and respondents can easily be reached through an electronic medium, irrespective of their geographic location. This however, had received limited response and the researcher had to use the semi-structured interview process to increase the number of respondents.

3.7.5 Delphi Technique

The Delphi technique has been found to be an appropriate mechanism for ensuring that emergent differences between and within key stakeholder groups (that can arise from differences in focus, situation and context) can be accounted for in a systematic way.

The Delphi method, as a research methodology, has been presented widely as a survey, procedure method and technique. The aim of employing the Delphi technique is to achieve consensus through a process of iteration (Hanafin, 2004). A key advantage of the Delphi technique is the potential it holds to recognise and acknowledge the contribution of each participant. The key advantage of this technique however, relates to the use of questionnaires that have the capacity to capture a wide range of inter-related variables and multi-dimensional features (Gupta and Clarke, 1996).

For purposes of this study, the definition set out by Linstone and Turoff (quoted by Hanafin, 2004) "a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem", is used.

The target group for the Delphi facilitated session using quantitative questionnaire and focus groups included HR Consultants from Management Consulting Groups and/or specialists HR consultants to

include academic, strategic and operational thinking. The questionnaires were given to students of Organisational Behaviour as a pilot for electronic completion. Very few responses were received from the latter group - which can be construed as either due to a lack of understanding or ability to complete the questionnaires electronically. Due to this, a change in the methodology from the original intended electronic surveying was made and the Delphi facilitated sessions were used.

Three workshops were held using the Delphi technique, described as drawing on “group intelligence” and relying on the fact that although no one person may be able to provide reliable estimates confidently (Kendrick, 2004), the information gathered from these workshops were collated to enable the evaluation of the proposed framework. An observation from the researcher is that even though all participants agreed that there is a requirement for such a model, the lack of insight into the financial aspects of the business may have hindered the effectiveness of the detailed input. This was somewhat countered by the explanations and discussions during the sessions; however, the researcher balanced this with the literature research conducted.

Using focus groups, respondents were asked to complete a questionnaire at their leisure after a discussion of the topic and the context for the study. This reduces time pressures and allowed for more reflection and consideration of the responses. This method increased the number and quality of contributions and decreased the respondents’ burden by allowing participation during the time session. Participants evaluated the dimensions of the proposed framework as well as the metrics which was obtained from the literature review and semi-structured interviews. The latter was evaluated on nine dimensions (refer to Appendix D, Metric Questionnaire)

Snyder-Halpern (2002:185) summarises the primary advantages of the Delphi technique as “its adaptability to diverse data collection strategies, decreased peer pressure secondary to anonymity and the ease of condensing opinions of many and varied experts into a few precise statements”. Although many authors have questioned the reliability, validity and credibility of this research methodology, it needs to be noted that anonymity may lead to a lack of accountability. It is the opinion of the researcher that since the evaluation of the model has no personal gain or potential effect on the respondents, this is not a concern for this study.

The Delphi technique was also used to validate the final model with the judgement sample of specialists.

3.8 Data Analyses

The data analyses commenced with the case studies and semi-structured interviews. In the words of Rubin and Rubin (1995: 226-227), “data analysis begins while the interviews are still underway. The preliminary analyses tell you how to redesign your questions to focus on the central themes as you continue interviewing”. During the formal analyses, themes and concepts were identified and categorised into the framework to build the one theme: Shareholder Value.

The first step in the data analysis involved the categorising of the data. This involved the breaking down of the non-structured interview contents into units of analysis and performing content analysis on this data to interpret the words and statements recorded into themes. These categories were correlated with the categories of the surveys and workshops. The accuracy, stability and replicability of the data was tested by evaluating the data multiple times, using the database capability of Microsoft Access.

The data gathered from the HR consultants and students during the Delphi workshops were based on the theoretical model of the dimensions of the framework. 119 respondents completed this questionnaire. The categories and themes discovered during analyses were compared for variations and nuances in meaning and cross-compared with the goal of developing an accurate, detailed and understandable theory for the model.

The semi-structured nature of the questionnaire and method of data collection does not facilitate an easy coding of the data, however, the aim of the analysis was to understand the various constructive elements of the data through an inspection of relationships between concepts, constructs and variables, and to identify any patterns or trends that can be isolated, or to establish themes in the data (Mouton, 2001).

Data analysis was assembled using Microsoft Access, since this tool allows for the capturing of largely descriptive survey questions, summaries, calculations and flexibility in reporting, which is a very important factor due to the matrix structure of the questions.

3.9 Conclusion

The complexity of the model and the seemingly limited exposure and understanding by the groups in the target population is an accurate reflection of the current understanding and insight into the reporting of Human Capital in the industry. The research method was followed, and the stumbling blocks addressed by the researcher by changing the method applied to obtain useful information. Awareness of the pitfalls and limitations when conducting research of this nature always serve as caveats for future studies. The results and findings derived from implementing these methods are reported and discussed in the next chapter.

Chapter 4 will present the results and findings of the study.