CHAPTER 4: RESEARCH METHODOLOGY

This chapter on the research methodology consists of six sections. Section one deals with the variables, scales, and questionnaire construction. Section two is about Independent variables like organizational characteristics and market variables. Section three deals with the dependent variables like Amount of HRO and firm performance. Section four gives detailed account of Sample selection. Section five illustrates the data collection and Section six gives the information on the statistical tools used for data analysis. Each section further describes the procedure adopted in detail.

1.1 The Variables, Scales and Questionnaire Construction

In tune with the objectives of the study, the questionnaire was designed to measure Human Resource Outsourcing activities, organizational and market variables, and their impact on firm performance. The research model presented in Chapter 3 consisted of four sets of variables viz. Organizational Characteristics, Market Variables, Amount of HRO and the Firm Performance. Each set of variables has sub-dimensions. These sub-dimensions constituted the nature and structure of the constructs under study. The scale development process was followed as per previous studies in the field of HRO (Klaas et al., 1998; 1999; 2001; 2004)

Offline version (given in Appendix – A) and the online version (given in Appendix -B) of the questionnaires (using the Google document application template – email and social media) were created which included:

a) Background information about the purpose of the study,
b) Request for participation, and

c) Assurance about the confidentiality of the information provided by the respondents.

1.2 Independent Variables

The Organizational Characteristics and the Market Variables were the two independent sets of variables in the research model presented in Chapter 3 (see Figure 3.2).

1.2.1 Organizational Characteristics

Organizational characteristics were mainly related to seven types of HR practices of an organization. The scales to measure them were adapted from Klaas et al., (1998; 1999 and 2001 and 2004). The items are given in Appendix A (offline version) and Appendix B (online version).

a) Idiosyncratic HR practices: The extent to which the HR practices in a firm are seen as idiosyncratic or unique was measured by a four-item scale. e.g., Solving HR problems of our company requires knowledge of our business strategy (1- strongly disagree; 5- strongly agree).

b) HR strategic involvement: The degree to which the HR function in a firm is seen as being involved in the strategic management of overall business issues was measured by a scale comprising two items. e.g., In our firm, HR Department helps make decisions about broader business issues such as decision making, planning, etc. (1 - strongly disagree; 5 - strongly agree).
c) **Promotional opportunities**: The extent to which the firm is perceived to offer promotional opportunities to its HR staff was measured by a four-item scale. Items are related to both the availability of promotional opportunities and whether internal candidates received preferential treatment for promotion to higher level positions. *e.g.*, *In our firm, we believe in promoting people from within* *(1 - strongly disagree; 5 - strongly agree).*

d) **Demand Uncertainties**: Uncertainty about a firm’s demand for labor was measured by a five-item scale. Because uncertainty in demand for labor is determined by broader market conditions such as demand for a firm’s goods and services, the items examined the predictability of demand for a firm’s products, as well as uncertainty in the organization as a whole and its environment. *e.g.*, *The demand for our firm’s goods or services is hard to predict* *(1 - strongly disagree; 5 - strongly agree).*

e) **Cost pressures**: The degree to which a firm faces pressure to reduce costs was measured by a 9-item scale. *e.g.*, *Our firm emphasizes reducing administrative costs* *(1 - strongly disagree; 5 - strongly agree).*

f) **Pay level**: Pay level was measured by a single item regarding whether the firm led the market in terms of pay for its HR staff. *e.g.*, *Our firm is the pay master for its HR staff in the industry* *(1 - strongly disagree; 5 - strongly agree).*

g) **Firm size**: Firm size is measured in various ways by different researchers. It is measured in terms of number of employees (Klaas, 1998; 1999 and 2001 and Gilley, Greer and Rasheed, 2004), sales (Damanpour, 2010), market share (Damanpour, 2010; Jayaram, Ahire, and
Dreyfus, 2010), assets (Gerhart et al., 2000), etc. Most of the researchers, however, preferred number of employees. In this study, size was measured by simply asking respondents to indicate the number of full time employees working in their organization. e.g., *Number of full time employees work in our organization is________.*

1.2.2 Market Variable

Market variable comprised of only one dimension, which was adapted from Klaas et al. (1998; 1999 and 2001 and 2004). They suggested to measure market conditions in terms of HRO practices being practiced by the firm’s competitors.

**HR activities by competitors:** Competitor outsourcing was measured by a two-item scale. e.g., *Other firms like us have outsourced a good deal of their HR activities (1 - strongly disagree; 5 - strongly agree).*

In all, there were 30 items in these two sets of variables. And these were responded to on a 5-point Likert scale (*1 - strongly disagree; 2 - disagree; 3 – neutral; 4 – agree; 5 - strongly agree*).

1.3 Dependent Variables

There were two sets of dependent variables: (a) Amount of HR Outsourcing, and (b) Firm Performance. Each of these variables had sub-dimensions.

1.3.1 Amount of HR Outsourcing

As the name suggests, Amount of HRO is defined as the extent to which various HR practices of a firm are outsourced. The scale developed and used by Klaas et al. (1999; 2001) has been
adapted to measure this variable. The adapted scale has 9 items grouped in two dimensions: Core, and Transactional HR activities.

Amount of HRO was measured using these two dimensions and with 9 HR activities. Each of the 9 items were measured with percentages as anchor points on the extent of HRO (1 = 0% to 20%; 2 = 21% to 40%; 3 = 41% to 60%; 4 = 61% to 80%; 5 = 81% to 100%) which were later converted into equivalent of 5-point Likert type scale (0-20% to 1 - strongly disagree; 81-100% to 5 - strongly agree).

One of the objectives of the study was to capture the HRO at different levels in an organization, viz Top Management Level, Middle Management Level and Lower Management Level. Therefore, in order to obtain the outsourcing of HR at different hierarchical levels in a firm, the levels were also included in the questionnaire (See Appendix C). The same set of 9 items was used for measuring HRO at Top, Middle and Lower Management levels. Therefore, the scale had in total 27 items (9 items x 3 levels).

1.3.2 Firm Performance

Following Venkatraman and Ramanujam (1986) and Gilley, Greer and Rasheed (2004), three measures of firm performance were examined. The data obtained under this set of variables were obtained by 5-point Likert type rating scales.

1. Financial Performance: It was measured using 5-point Likert-type scale with three items in terms of return on assets, return on sales, and overall financial performance. e.g. The overall financial performance of our firm compared to similar firms (peers) in the industry is: _________ (1 – At the bottom; 3 – Average and 5 – At the top).
2. **Innovation Performance**: This is the firm’s performance in process and product innovations. Innovativeness was measured by three items 5-point Likert-type scale – R & D outlays, process innovations and product innovations. An example of items: *The funds allocated to R & D activities of our firm compared to similar firms (peers) in the industry is:________ (1 – At the bottom; 3 – Average, and 5 – At the top).*

3. **Stakeholders’ Performance**: Performance of the firm in meeting stakeholder expectations. This is measured by four items in a 5-point Likert-type scale. The items related to employment growth/stability, employee morale, customer relations, and supplier relations. An example of items: *The compensation of employees of our firm compared to similar firms (peers) in the industry is: ________ (1 – At the bottom; 3 – Average, and 5 – At the top).*

There were 10 items altogether to measure these three dimensions of the firm performance, which were rated on a 5-point Likert scale (1 - strongly disagree; 2- disagree; 3 – neutral, 4 – agree; and 5 - strongly agree). Apart from the independent and dependent variables, a total of 13 items comprising demographic variables like name (kept voluntary), age, gender, department, and designation were also captured. These demographic details were used for profiling of the sample.

The format and sequence of questionnaire items were suitably arranged to reduce the common method bias in the responses as far as possible. Chapter 5 has more details on the method by which common method bias is assessed. Following the Podsakoff et al. (2003) study, the layout
of the questionnaire was done in such a way that the separations between predictor and criterion variables were maintained.

1.4 Sample Selection

The quality of data depends on the quality of the respondents and their responses. It is one of the important attributes of the research to have good quality data for which the respondents are expected to have considerable knowledge on the subject matter (Quesada, 2004). For this study, efforts have been made to ensure that the respondents to whom the questionnaire was sent had sound knowledge in the HRO and firm performance of their organizations. Based on the earlier studies in the field of HRO and literature review and practitioners’ recommendations, the sample obtained for the current study is quantitative in nature. The sample is obtained from manufacturing and service sector firms. The selected respondents were top level managers at the rank of at least HR Manager, General Manager, Vice President (HR), Chief Financial Officers (CFOs), Chief Operation Officers (COOs), or Chief Executive Officers (CEOs) who have been working in the current organization for at least 2 years. The 2-year service criterion was used based on the literature and practitioners’ recommendations relating to the respondents’ decision making abilities and knowledge about the overall strategy of the firm and its performance (Chiang et al., 2010).

1.5 Data Collection Process

The process of data collection for this study began in November 2013 and continued until August 2014. The data for the study were obtained using two main methods: (a) Offline questionnaire survey, and (b) Online questionnaire survey – email and social media (see Appendix A and B).
In some cases, a small number of in-person or telephonic conversations were conducted to make the respondents understand the phenomena of HRO. These conversations helped the HR Managers to complete the survey questionnaire for and on behalf of their organizations. The HR managers were selected on the basis of their experience like those who have put in at least 2 years in the present organization, and who are sufficiently high in hierarchical position. The potential respondents were identified by using reputed national and state HR professional directories. A database of 1700 email addresses of the respondents from personal, professional and social media (LinkedIn and Google group) was compiled and the emails containing the covering letter and the web link were sent to these email Ids.

As many as 1500 questionnaires were emailed and 200 offline questionnaires were administered (making a total of 1700 sample size) to the respondents. The offline survey instruments were administered by the researcher to 15 individual respondents, all from Hyderabad, personally visiting their firms after taking prior appointment. Apart from personal visits, the researcher also kept attending various workshops/conferences within and outside the Hyderabad city to administer the questionnaire to the HR professionals. National Human Resource Development (NHRD) Hyderabad chapter monthly gathering in December, 2013 yielded 28 filled in responses (out of 70) from the HR professionals and managers. Besides, 25 questionnaires were administered to the participants of Confederation of Indian Industries (CII) convention held in Hyderabad in June 2014; 40 questionnaires to the participants of Hyderabad HR conclave in July 2014 (of which 20 were filled in and returned); 40 questionnaires were administered to the participants of Hyderabad HR conclave in July 2014, which yielded 22 were filled in
questionnaires; and 50 questionnaires were administered to the participants of yearly meeting of Federation of Andhra Pradesh Chambers of Commerce and Industry (FAPCCI) in March 2014 (of which 28 were filled in and returned).

Post sending the questionnaire through email and social media, a gentle reminder was also sent to those who did not complete the questionnaire after 15 days. This way, within a gap of 45 days, 3 reminders were sent to those who did not complete the questionnaire. Of which, 199 online (13.26%) and 114 (57%) offline questionnaires were completed and sent back to the researcher. The overall response rate is 18.41% which is comparable to other firm-level studies (Rynes, Orlitzy, and Bretz, 1997).

Recommendations of Hair et al. (2006) were followed to decide on the appropriate sample size of the study which is based on the number of items of corresponding constructs used in the study. The total number of items used in the questionnaire was 49. So the minimum sample should be at least 245 (at the rate of 5 responses per item) to use the advanced multivariate statistical analytical tools. The data collection process yielded a total of 313 usable responses both from online (199) and offline survey (114) sources. The sample is quite adequate for advanced statistical analyses (such as Structural Equation Modeling). The data obtained from online and offline sources were compiled in spread sheets for further analyses.

### 1.6 Statistical Tools Used

The statistical techniques used to analyze the data in this study were Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) for construct validation, and Structural Equation Modeling (SEM) for testing hypotheses. EFA technique is primarily used to identify the factors
that are latent in nature and hence difficult to observe. It is used to determine the degree to which
the items are related to the construct. On the other hand, CFA is by and large used to provide
confirmation test of the measurement theory. This is done using SEM technique. CFA model
focuses on the relationship between factors and their measured variables to check how well the
measured variables represent a particular construct.

Path Analysis or Structural Equation Modeling examines the cause and effect relationship. SEM
evaluates all the relationships in a research model simultaneously. Therefore, SEM is the
appropriate technique for research involving many complex relationships between dependent and
independent variables. Hence, SEM has an advantage over regression analysis which can test
only one relationship at a time. Further, SEM provides modification indices to improve the
research model.

The research model in this study is based on Transactional Cost Economics (TCE) and Resource
Based View of the Firm (RBV) using the HRO and firm performance, which was discussed in
Chapter 3. The model requires analysis of series of relationships between independent and
dependent relationships. Therefore, SEM fits perfectly for analyzing and interpreting the
research model used in this study. As the model used in this study requires analysis of series of
relationships between independent and dependent relationships, SEM is the most appropriate tool
for analyzing and interpreting the research model used in this study.
EFA was carried out using IBM SPSS Statistical Software package version 20.0. Structural Equation Modeling was conducted using IBM AMOS Software Package version 20.0. Results of the analysis using the above techniques along with their interpretation are presented in Chapter 5.