CHAPTER III

RESEARCH METHODOLOGY

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Introduction

The proposed research framework, the hypotheses development and the key variables considered for the study were discussed in Chapter 1. In this chapter the research method employed to investigate the research objectives is described.

The Research Method

In social sciences, the most commonly used methods to examine the characteristics and interrelationship of sociological and psychological variables is the survey method (Roberts, E.S., 1999; Nazari, J., Kline, T., Herremans, I., 2006). Researchers have used surveys to collect data on a variety of topics, for example, performance measurement, employee's perceptions, managers' perceptions, managers' participation, etc. The present study also employs the survey method to collect its data.

Why a Survey Method?

Most of the previous research in the HRM area employs an experimental research design to evaluate the perceptions and processes experiments; however, they do not explain the development of the performance measures. Roberts, 1999; Nazari et al., 2006 advocate that in the social sciences research, the survey method is used widely to examine empirically the characteristics and interrelation of sociological and psychological variables. Its development and application in the twentieth century has 'profoundly influenced the social sciences' (Kerlinger, F. N., 1986). The survey method has many advantages such as

being a cost-effective manner of collecting a large quantity of data which can be used to generalize results and at the same time avoid interviewer bias (Roberts, 1999).

Nazari et al. (2006) state, there are several underlying assumptions in survey research using self-report of attitudes, values, beliefs, opinions and/or intentions. First, the respondents are the most reliable source for certain types of information (Nazari et al., 2006). In the performance evaluation process, the fairness perception of the performance measures used in the process is crucial. Senior managers (in this case Heads of Academic Departments) play a major role as they are involved in the performance evaluation process both as an evaluator as well as the one being subject to the process. Second, those subjective perceptions actually matter. One can argue that perceptions may not be real; however, perceptions of reality can be more powerful than reality itself since very often people act on their perceptions (Nazari et al., 2006).

Perceptions can be demonstrated to be linked to outcomes of interest to organisations (Nazari et al., 2006). In other words, perceptions influence the behaviours that have real consequences for HEIs. The common-measure bias found in previous studies might increase the unfairness perceptions of the performance measures in the performance-evaluation process. Those perceptions can negatively influence the behaviour academic staff, such as lowering their performance, which impacts on the HEI or any organisation. Given the main objective in this study, as well as considering the above assumptions of the self-report survey, a survey method is appropriate for this research.

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Sources of Information

Secondary Data

The researcher collected information relevant to the subject for various available books, articles, journals, periodicals; industry reports, magazines, press / media publications, published and unpublished sources, electronic databases and World Wide Web facilities. Some of the sources of books and journals were the libraries at Indian Institute of Management, Bangalore and Ahmedabad, Jawaharlal Nehru University, New Delhi, Bharathiyar University Coimbatore, P.S.G.R Krishnammal College, Coimbatore and GRG School of Management Studies, Coimbatore.

Primary Data

The primary data was collected by using a structured questionnaire that was developed for the purpose of this study and administered to the respondents. The target population included all Indian academicians, expatriates in the context of Oman, who were employed in the HEIs.

The Questionnaire

For this study a specially designed questionnaire was developed. Although, it was not a standardized questionnaire, and not adapted from any one of the former researches, it considered various similar researches as bases. The questionnaire included questions relating to all variables in the present research model and some general questions such as the personal details of the respondents. The development of the questionnaire followed the guidelines of de Vaus (de Vaus, D. A., 1992) and Dillman (2007). The empirically based suggestions from Andrews (1984) were used where considered relevant. The set of questions is included in Appendix – A.

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Development of the Questionnaire

The questionnaire was developed adhering to the following criteria:

a. For the measurement of most variables in the research framework, a number of items for each variable were included so that multi-item scales could be developed. Operationalisation of a variable in this way captures the complexity of the construct, simplifies data analysis, increases reliability, enables more precision, and increases validity (de Vaus, 1992).

b. Language was kept as simple as possible, instructions were carefully worded, and definitions were given when considered necessary.

c. Questions were asked in a direct fashion and most were closed. Care was taken to avoid double-barreled and ambiguous questions.

d. The characteristics of the response scales were carefully considered in the light of Andrews (1984). Five-point Likert scales from one to five were used for most of the items requiring an opinion. In the present study the "Don't know" option was modified into "No Basis for Answering" option. Andrews (1984) found that the inclusion of an explicit "Don't know" option increases data quality as it provides an opportunity for respondents not to answer if they lack information to do so.

e. The length of each part was not considered explicitly in the development of the questionnaires; rather, the items relating to each variable were grouped together.

f. In line with suggestions from with Andrews (1984), the position of items within the questionnaire was considered carefully. In the present study, the 'easy' question (i.e., demographic data) was placed at the end of the questionnaire.

Pilot Testing

A thorough literature review related to each instrument was presented in previous Chapter (Chapter 2). Accordingly, most of the instruments in the current study were adapted and modified from previous studies, while some of the items were developed where necessary.

A pilot test was undertaken where the survey questionnaire, was sent to a few respondents. The pilot project was undertaken to test whether the questionnaire was valid and reliable.

Data Quality

Data quality is very important in conducting any research. Poor data quality can have significant effects on the analysis of relationships proposed in the research framework/model. There are two major sources of error in a survey study, namely, measurement error and sampling error.

Measurement Error

Measurement error is defined as 'inaccuracies of measuring the "true" variable values due to the weakness of the measurement instrument (i.e., inappropriate response scales), data entry errors, or respondent errors' (Hair, J. F. Jr., Black. W.C., Babin, B.J.,Anderson. R. E, Tatham, R.L.,, 2006). As a result, the observed value consists of the "true" value and the measurement error. When the observed value is used to compute correlations or means, the "true" effect is partially covered by the measurement error. As a result, the correlations become weaker and the means less precise. There are two important characteristics that should be addressed relating to measurement error:

i.   validity; and

ii. reliability

Validity, or construct validity, is the extent to which the constructs of theoretical interest are successfully used in the research in terms of how it incorporates both the extent to which the constructs are measured reliably and whether the measure used captured the construct of interest (Abernethy, M.A., W.F. Chua, P.F. Luckett and F.H. Selto, 1999) A thorough understanding of what is to be measured and then deciding an appropriate and precise instrument to measure is the most important way to ensure validity (Hair et al., 2006).

Reliability, on the other hand, is the degree to which the observed variable measures the "true" value. The more reliable measure will show greater consistency than a less reliable measure when the measure is used repeatedly (Hair et al., 2006). Therefore, to increase the validity and reliability, and thus minimise the measurement error, certain procedures (e.g., development and administration of the questionnaires) should be considered by the researcher.

Measurement error can result from both poor wording of the question and a faulty questionnaire construction (Dillman, D.A., 2007). Therefore, the development of the questionnaire should be considered carefully. In the present study, the development of the questionnaire followed the procedures suggested by Dillman (2007) and (Andrews, F. M, 1984).

Sampling Error

It is very unlikely that a sample will absolutely represent the population from which the sample is being drawn. The difference between the sample and the population, which is due to sampling, is referred to as sampling error. Sampling error is the expected

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variation in any estimated parameter (intercept or regression coefficient) that is due to the use of a sample rather than the population (Hair et al, 2006, p. 174).

The Population and Unit of Analysis of the Survey

The survey for this study was carried out over all the Higher Education Institutions in Oman which were classified as Colleges or University colleges. However, the Private and Public Universities were not considered in the study. All colleges were included in order to obtain a large enough sample and to provide sufficient range in the availability of data and analysis.

Revisions based on Pilot testing

The questionnaire was revised based in the basis of the results returned in the pilot test. After refining the questionnaire consisted of 5 major sections and a section on demographic variables. The 6 sections contained 86 questions grouped as follows:

The Sample

Sample Selection

There are two important issues that have to be considered in determining the initial sample size. These include:

a. statistical power; and

b. manageability of the administration of the survey.

The Sampling Frame and Size

Questionnaires were sent to the target population of Indian lecturers working in Oman which was around 750 members. However, the number of returned questionnaires

was 537 which formed the sample size for this study. The questionnaires were distributed and collected by requesting someone from each of the institutions through the researcher's network of academicians.

Analysis of Data

The data for the study was collected from primary sources through a structured questionnaire which was pilot-tested and modified before actual administration. The data collected were organized as simple tables and analyzed using appropriate statistical tools, such as percentage analysis, averages, standard deviation, ANOVA, t-tests and Discriminant Function Analysis. Apart from Multiple Regression Analysis and Factor Analysis, Structural Equation Modeling has been used to ascertain the relationship between the HR factors considered in the study. SPSS 15 and AMOS 20.0 were used to conduct the analyses. The justification of using the SEM approach is presented below.

Structural Equation Modelling (SEM)

The main objective of this research is to investigate the effect of various HR practices, Organisational factors etc., and to ascertain the mediation effect of these in perceptions of performance appraisal fairness, Organisational commitment and turnover intention. In order to test the model, SEM is considered appropriate. It is expected that the model is both substantively meaningful and statistically well-fitting with the data (Jöreskog, 1993). Structural equation modelling is a multi-variate technique that combines multi- variate regression and factor analysis to explain the relationship among multiple variables (Hair et al., 2006). Structural equation modelling is also known as path analysis with latent variables and has been used to represent dependency (arguable "causal") relations in multi-variate data analysis in behavioural and social science (McDonald and Ho, 2002). It takes a confirmatory (i.e., hypothesis testing) approach to analysis of a

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structural theory underlying some phenomenon (Byrne, 2001). In addition, it conveys two important aspects of the procedures which are:

1) that the causal processes under study are represented by a series of structural equations; and

2) that these structural relations can be modelled pictorially to enable a clearer conceptualisation of the theory under study (Byrne, 2001).

Compared with other multi-variate analyses, SEM extends analysis in at least two important ways. First, SEM allows researchers to model the relationship among variables after accounting for the measurement error. Second, SEM provides tests for goodness-of-fit which is a very important aspect to test whether the sample data supports the hypothesis tested in the model (Cunningham, 2008).

Therefore, by using SEM, the hypothesised model can be tested statistically in a simultaneous analysis of the entire system of variables to determine the extent to which it is consistent with the data. If the goodness-of-fit is adequate, it means that the relationships among variables in the hypothesised model are supported by the data. In contrast, if the goodness-of-fit is inadequate, the tenability of such relations is rejected (Byrne, 2001).