CHAPTER V

Research Methodology
5.1 Research Design

Research design is the glue that holds together the entire research work. It indicates the plan of action to be carried out for the successful completion of the research. It helps the researcher keep track of his steps and provides a beacon light to achieve the set goal. The steps in the research design involves the selection of the research problem, statement of the problem, formulation of the hypothesis, literature survey and documentation of bibliography, research methods and methodology, data collection, deciding the tools of analysis, testing of the hypotheses, interpretation and report writing.

The selection of a research topic is the prime issue that confronts any prospective researcher when he/she embarks upon undertaking research. The researcher finds that there is very little work already done on the topic of interest to help him/her get a foothold to start work. At times, the existing research on the topic does not align with the general understanding of the topic and it affects the confidence of a researcher in taking up the topic for research.

Nowadays, enough information is available on the Internet to start off a preliminary information search before deciding on a topic. After a detailed search of books, journals and databases on the internet, one finally gets the required confidence to embark upon a topic. The topic will usually be a contemporary area where lot of scope for research exists.
Inventory management has always been an area of concern for companies that wants to bring in efficiency by cutting down costs. Vendor Managed Inventory (VMI) being a recent innovation offers the researcher ample scope to research a hitherto less focussed area in the field of Inventory management in detail.

Retail management in India is one of fastest growing sectors and the sheer variety of products being transported to and fro the length and breadth of the nation makes the management of inventory complex. The study of the existing scenario of VMI implementations in Indian retail will help clear a lot of this complexity. The research has been conducted in two phases.

In Phase I, a survey of managers working at the operational level in the supply chain of selected organized retail firms has been made. The population of the study involves all stakeholders in the supply chain of the organized retail firms in India. A judgment sample of 100 managers working in the supply chain of selected organized retail firms across India was taken. This includes 20 manufacturers, 4 distributors, 20 wholesalers & 56 retailers.

Phase II deals with a comprehensive analysis of case studies of VMI in selected firms in the retail sector in India. VMI is a recent concept in inventory management & full fledged implementations are very few in numbers in India. This has led the researcher to go in for case studies of VMI implemented in India to supplement the survey data of Phase I.
According to P V Young, “Case Study is a method of exploring and analyzing the life of a social unit, person, family, institution, cultural group or an entire community.” A case study is an intensive qualitative analysis that emphasises on the combination of factors, description of processes and consequences of behaviours and events in different cases, which lead to final inferences.

5.2 Assumptions of case study method

i. Study of the unit as a whole entity

ii. Complexity of the Phenomena with many variables

iii. Historical significance due to the Time Factor of the case

5.3 Limitations of case study method

i. Case situations are seldom comparable due to the uniqueness of each one.

ii. Subjectivity of researcher and respondent in the information gathering.

iii. Danger of false generalizations.

iv. Consumes a lot of time and expenditure

The following organizations were selected for the case studies.

i. Marico Industries
ii. Subhiksha Retail

iii. Shoppers’ Stop

iv. Future Group

The VMI implementations at Maruti Udyog Limited & Mahindra and Mahindra, from the automobile sector, have also been studied for extracting information for the topic under study as these two organizations had adopted VMI successfully much before the retail sector did in India. Information from these two implementations has proved invaluable in understanding the benefits & flaws of VMI.

The implementation details from these six companies were assimilated and common factors that led to success in implementations as well as factors that led to failures at different stages in the implementations were identified. Conditions in the organizations that facilitate proper implementations were also identified and studied.

5.4 Tools Employed for Data collection

Following are the tools employed for data collection in this study

i. Interview schedule & questionnaire

ii. Case Study method
5.5 Statistical techniques Used

Following are the statistical tools that are used during this study

i. Descriptive Analysis

ii. Chi Square test

iii. ANOVA

iv. Reliability tests

SPSS package was used to analyse the collected primary data.

5.6 Reliability and Validity

Cronbach's Alpha is the most commonly used measure of reliability, which is based on the average correlation of items within a test, if the items are standardized. If the items are not standardized, it is based on the average covariance among the items. A scale with an Alpha reliability of 0.7 or more is considered adequately reliable. The questionnaire schedule was distributed among a few academicians and they commented favourably on the face validity and content validity of the same

5.7 Period of the Study

The study covers the period from year 2005 to 2010.
5.8 Limitations

Since the present study is an attempt to understand a new concept in Inventory management, there were a lot of limitations for the study.

i. The study is more on the lines of a conceptual study rather than an empirical data-based study, since the body of knowledge in this area is still nascent and growing.

ii. The scope of the study being the whole country, possible coverage by a single researcher was difficult.

iii. The study is not free from sampling and non-sampling errors.

iv. Most companies were reluctant to fully furnish classified data regarding latest technological innovations in their business.