Chapter- 4

RESEARCH METHODOLOGY
CHAPTER-4: RESEARCH METHODOLOGY

In this chapter the research design and the procedures for conducting the study have been described. It defines the instrument development, pilot testing, research design, data collection and data analysis procedure.

4.1. Instrument Development

This is an exploratory study and the major emphasis remained on discovery of ideas and insight for identifying the credit flow requirements & their use alongwith financial support system for the SMEs Sector in the post WTO regime. The following methods have been applied in the Research design :-

a) The Survey of concerning Literature.

b) The Experience Survey of SME Industries and Bankers/Policy Makers.

c) Case Study – Analysis and comparison of one Good Managed SME Account and one Bad Managed SME Account.

4.2. Pilot Testing

Pilot testing was conducted to validate the information required for this study and the questionnaire. This was necessitated because some of the measurement items were modified or developed specifically for this research leading to compilation of some new questions.

A preliminary questionnaire was developed by amalgamating item pools from previous studies and distributed to ten Small and Medium Enterprises and five Professionals (two experienced Bankers, two Senior Professors, one retired Professor from Delhi University and one Senior Professor from Aligarh Muslim University, Aligarh and one Senior Official from Ministry of Small and Medium Enterprises, Govt. of India, New Delhi). This was done to get their valuable feedback on the content, layout, wording and ease of comprehension of measurement items. Their feedback for improvements on clarity, readability, content enhancement and layout were incorporated in the second stage of the questionnaire development.

A set of twenty four Small and Medium Enterprises (12 each) was interviewed using the revised questionnaire. Verbal feedback was received and changes made accordingly. The pilot test results indicated a requirement of simplification of some words to cater to varied level of English language comprehension in India. The words flexibility and responsiveness were explained again with more clarity.
4.3. Research Design:

Research design is the basis upon which data is collected for the purpose of research work. Therefore it helps in carrying out research successfully. It starts from the advanced planning of the methods to be adopted for collecting the relevant data.

4.3.1. The Selected Region

The geographical area of Research has been selected “National Capital Region of Delhi”. It includes Delhi, Faridabad, Gurgaon, Bahadurgarh, Ghaziabad, Noida and Bhiwadi. The selected region hosts numerous Small and Medium Scale Industrial Units. In fact all the selected places are known clusters of Small and Medium Enterprises. While Delhi is known for its cluster of garment industry, Gurgaon and Faridabad are recognized clusters of Auto industry, Noida for the electronics industry and Bhiwadi for Iron & Steel Industries.

As a result, the selected region gives us access to a wider set of Small and Medium Scale industrial units. Faridabad, Gurgaon, Bahadurgarh, Ghaziabad, Bhiwadi and Noida being border towns and part of NCR of Delhi share the general business environment of Delhi. Hence, it can be presumed that the business environment of NCR of Delhi can be taken as the representative environment of the entire country. Further, NCR Delhi, being the National Capital and one of the four Metropolitan Centers of India, is considered to be relatively better off in terms of infrastructure, institutional support system, availability of raw materials & skills and market links.

Besides, N.C.R. of Delhi has many consultancy organizations for the Small and Medium Scale Industries like Technology Bureau for Small Enterprises (TBSE), National Small Industries Corporation (NSIC), Small Industries Service Institute (SISI) and a Regional Testing Centre (RTC) – all Central Government Organisations. In addition, it has state level agencies like Delhi State Industrial Development Corporation (DSIDC) to provide infrastructure facilities like developed shed plots and financial assistance. It has numerous Financial Institutions viz. Public Sector Banks, Private Sector Banks, Foreign Banks in addition to specialized banks like the Small Industry Development Bank of India (SIDBI) NABARD and Import and Export Bank of India (EXIM).

Further, Trade Fairs, both national and international, Seminars and Business Events are held regularly in many business areas in Delhi, which being the Capital of the Nation attracts Industrialist, Professional and Policy Makers too. In addition to having access to Delhi’s environment, other selected areas, being industrial towns have their own facilities. Thus, the selected region is expected to give Small and Medium Scale Industrial Units better access to information, input and output markets and can be placed at the upper end of the scale in terms of business environment, especially after the introduction of WTO regime.

By: G S Popli
4.3.2: The Questionnaire

Information relating to all the above mentioned characteristics of the units has been collected through a field survey of Small and Medium units using a structured questionnaire. We have structured the questionnaires separately for SMEs Entrepreneurs and for Bankers/Policy Makers.

The first questionnaire for SME Entrepreneur has been structured to have 11 blocks to collect the information under different headings like, Company’s identification, General information, Manager’s profile, Input and output, Production process, Taxation pattern, Existing technology, Change in technology, Market profile, Financing pattern and Government policy measures. The questionnaire includes questions of both objective and subjective type which are easily understandable to the respondents so as to capture the real state of affairs. The questionnaire is presented in the Appendix-A.

The second questionnaire for Bankers/Policy makers has been bifurcated in six parts. It covers questions under different headings like Official’s/Professional’s profile, Change in technology for SMEs Industry in the post WTO regime, Taxation pattern for SMEs industry, Financing pattern for SMEs industry, Recovery in SMEs accounts and Government policy measures for SMEs industry. In addition to this, an in-depth interview has been taken of these experienced bankers/officials. This questionnaire also includes questions of both objective and subjective type. The questionnaire is presented in the Appendix-B.

4.3.3. Data Collection Instruments

- Questionnaires
- Personal Discussions

4.4: Sample Selection

Using the above discussed questionnaire, information has been collected to examine the factors determining technological change, financial support system and uses of funds by the Small and Medium Enterprises, through a field survey of these units in the selected industries and professionals. For the purpose of survey, the official definition of Small and Medium Enterprises has been followed. Small Scale Industrial Units are defined in terms of a maximum ceiling limit on the original value of investment in plant and machinery. As per the “Policy Package for stepping up Credit to the SME Sector”, announced by the Union Finance Minister in the Parliament on August 10, 2005 and circulated by RBI as Master Circular No. RPCD.PLNFS.BC. No.02/06.02.31/2006-07 dated 01.07.2006, Small and Medium Enterprises Sector is defined as under:-

“Small Scale Industrial Units are those engaged in the manufacture, processing or preservation of goods and whose investment in Plant and Machinery (Original Cost) does not
exceed Rs. 1 Crore. These would, inter alia, include units engaged in mining or quarrying, servicing and repairing of machinery. The investment limit of Rs. 1 Crore for classification as SSI has been enhanced to Rs. 5 Crore in respect of certain specified items under hosiery, hand tools, drugs, pharmaceuticals and stationery items & sports goods by the Government of India."

Medium Enterprise is an undertaking in which investment in Plant and Machinery exceeds investment limit of SSI Sector (Rs.1 crore or Rs. 5 crore, as the case may be) and upto Rs. 10 crore.

As proposed in the Research proposal, data have been collected from the Small and Medium Enterprises in the National Capital Region of Delhi by bifurcating the firms in the undernoted two categories:

- **Group I**: Industries representing Small Scale Sector in India = 80
- **Group II**: Industries representing Medium Scale Industries in India = 80

In addition to above, the in-depth interview has been taken from 25 experienced Bankers/Officials from Nationalised Sector, Private Sector Banks, Small Industry Development Bank of India, Experienced Persons / Organizations in SMEs Sector and Ministry of Small Scale Industry Delhi and Govt. of India.

### 4.4.1. Sampling Procedure:

Within the broadly defined set, the sample has been selected using Purposive Sampling. The purposive sampling method has been preferred instead of Random Sampling for reasons of non-availability of the complete list of Small and Medium Units and the nature of study. Random Sampling requires a list of all the existing Small and Medium size industrial units in the specified region. In this regard, the only list which could be made available pertaining to Small and Medium Enterprises is of those units which are registered with the state Directorates of Industries. The selected region of the study necessitates obtaining the required list from four states viz. Delhi, Haryana, Rajasthan and Uttar Pradesh. Despite repeated visits, it could not be made available. Further, the list of Small and Medium size Units registered with the state Directorate of Industries, even if made available, does not cover the entire set of existing Small and Medium Enterprises as the registration is voluntary. Estimates reveal that at least one-fifth of the total Small Scale Units are not registered with the Directorate of Industries. The ultimate purpose of selecting a sample is to make judgments about the population in terms of the specified characteristics on the basis of the sample characteristics.

An efficient sampling design like the Random Sampling is expected to eliminate the sampling errors, i.e. the difference between the value of the estimator and true value of the population.
parameter to be estimated. However, random sampling or for that matter any other sampling
design cannot take care of non-sampling errors relating to non-response, incorrect response
and others which are often far more important than the sampling errors. Non Sampling errors
are particularly high in the context of Small and Medium Scale Industrial Units. Small and
Medium Scale Industrial Units especially the smaller ones are known for their poor response
to surveys. Even when they respond, most of the smaller units are not in a position to provide
reliable information as they hardly maintain their financial records.

In addition, if the research is to study any economic phenomenon closely, the sample has to
be smaller in size and richer in information relating to the phenomenon and respondents have
to be highly co-operative – conditions that a random sample can hardly satisfy. In such a
situation, the researcher may have to select his sample in such a way that it satisfies these pr-
requisites and conditions.

In the present study, the objective is to find out the various problems of SME Industries,
financial support system, deployment of funds and effects of Govt. policies on the growth and
development of this sector in India. So the sample needs to be selected in such a way that the
selected units are willing to respond and provide reliable information. There is a high
likelihood that at least some of the selected units have undergone technological change with
the effects of liberalization and WTO regime. Such a sample may not allow us to obtain
quantitative estimates to approximate population parameters, but yields qualitative
information that is relevant beyond the sample, to some extent to the entire population.

The researcher also approached the industry-specific associations like Automotive
Components Manufacturers Association, Electronics Components Industries Association,
Apparel Exporter and Manufacturer Association and Garment Exporters Association.
Though, it was found to be very difficult to get a readily available list of specified units who
are willing to participate in the study but few names were suggested by those association.

Thereafter, the local Industry Associations such as Okhla Industries Association, Narela
Industries Association, Faridabad Small Industries Association, Noida Small and Tiny
Industries Association, Gurgaon Small Industries Association were contacted. These
associations again could locate the names of a few more units but were not able to provide a
readily available list of units of their members who are willing to participate in this study.

Keeping the above mentioned parameter in mind and the researcher’s experience of more than
30 years in Banking, the Purposive Sampling has been opted. The researcher has financed
more than two hundred SMEs Units and has observed minutely the well managed Small
Industries growing to Medium Units and from Medium to large units and bad managed units
being referred to courts and BIFR for recovery of Bank dues.

By: G S Popli
The desired sample has been obtained by approaching the concerned Government Agencies like District Industries Centers, National Small Industries Corporation of India, Small Industries Development Bank of India, some branches of nationalized banks viz. Oriental Bank of Commerce, Canara Bank, Syndicate Bank, Punjab National Bank and State Bank of India, Private Sector Banks, VIZ. Axis Bank and South Indian Bank, and the relevant offices of Delhi Administration.

Finally, the sample was selected from the list of 1600 Registered and un-registered SMEs obtained from all the above-mentioned sources in the National Capital Region of Delhi.

The questionnaire was got filled by a direct interview with the Owners-Managers of the sample Small and Medium Enterprises and experienced Bankers/Officials. Along with the collection of information through the filling of the questionnaire, the factory premises of each selected unit were also visited to confirm the same. Thus collected information have been processed and analysed to examine the evidence for the research objective of the study in the next chapter.

4.4.2. Data Collection Methods

- Primary data collection.
- Secondary data collection.

Primary data from the sample units, as explained above, have been collected through Personal Interviews with the Owners/Managers and experienced Bankers/Officials on the basis of a pre-tested structured questionnaire. The Secondary data has been collected from the various journals, Reports and issues of SIDBI, RBI, IBA, CRISIL, National Institutes for Entrepreneurship and Small Business Development, Ministry of Small Scale Industry, Govt. of India, Research Papers, Reports of various Study Groups, Newspapers, Books and Internet sites and other relevant sources.

4.4.3. Data Analysis Tools:

Statistical tools like Co-relation, Frequency, Percentages, Chi-Square and Factor Analysis have been used for analyzing data.