CHAPTER -I

INTRODUCTION AND DESIGN OF THE STUDY

1.1 - INTRODUCTION

The development of public enterprises was seen as an appropriate policy to bring about improvements in the economy, both in the developed as well as the developing countries. There appeared to be an economic consensus around the world accepting public enterprises as an inevitable part of the economy, especially to manage natural monopolies and also the core industry. While the public sector contributed significantly to the development effort, the low rates of return on such investments and the inability of governments to finance the growing demands of such industries changed the consensus in favor of economic liberalisation and privatization from the 1970's, in almost all countries.

Industries could not have been developed by private sector during 1940's or 1950's as there was not enough money in the money market and entrepreneurship was limited. So Government used high rates of taxation and deficit inflationary financing to develop public industries. Government had to step in to rescue certain enterprises, whose closure would result in significant loss of jobs and also because of several other economic and social reasons. State investment and control of the strategic sectors of the economy was necessary for the economic development of those sectors and the security of the country. A few Public Sector Enterprises were established to balance or replace weak private sectors, to develop the industrially backward areas, to generate employment and to make goods available at lower cost.

Investments in Public Sector Enterprises were made to:

- Build infrastructure
- Promote rapid economic growth and industrialization
- Secure balanced regional development
- Create job opportunities, where persons belonging to socially-disadvantaged communities could have their due share
- Prevent concentration of economic power, and
- Reduce disparities in income and wealth.

The public sector presence is predominant in public utilities and infrastructure. In the tradable goods sector, the public sector is dominant in coal; oil and gas exploration,
development, extraction and transportation. The public sector is also a significant player in steel, fertilizer, aluminum and copper. In the engineering industry, the public sector has been losing market share except in electrical machinery, where Bharat Heavy Electricals Limited is a significant player. In construction and project services, the public sector is a minor player. The bulk of the remaining tradable sector is privately owned and managed.

The Industrial Policy Resolution of 1956 defined the role of Public Sector Undertakings in the Industrial development process in the post independence India. The Public Sector Units occupies “commanding heights” of economy. The compelling reasons of shortage of capital, adoption of ‘Socialist Pattern of Society” as a policy goal and the need for preventing monopoly and concentration of economic power in a few private hands justified the creation of Public Sector Undertaking as the leading thrust for country’s industrialisation during three decades from 1956 to 1985. This provided rationale for the establishment of heavy and basic industries in public sector, which required huge capital investment but promised low profitability. Since at that stage the capital market in India was in its insipid state, direct Government intervention and involvement in investment in capital intensive areas of economy such as infrastructure, heavy and basic industries, research and development and other strategic sectors of economy was conceived as an imperative need.

Nationalisation resulted in creation of Public Sector Undertakings like Coal India Ltd. and National Textile Corporation. It helped unscrupulous business houses to fop off loss making coalmines, textile mills and sugar factories to the Government on payment of handsome compensations. The Five Year Plans, Annual Plans and Perspective Plans treated Public Sector Units as ‘engines’ of development and growth in India. The external debt crisis of the early 1980s became unmanageable, leading to macro-economic instability, the painful economic adjustments and low or negative growth.

The Public Sector Units came under public gaze due to large amounts of capital locked up in them and their ever increasing need for investment stimulated by their poor performance and heavy dependence on public exchequer. The introduction of economic reforms in July 1991 aimed at Liberalization, Privatisation and Globalisation resulted in economic liberalisation and deregulation of the economy providing the environment for initiating privatisation and disinvestment of Government holdings in Public Sector Units. Disinvestment was considered as an opportunity for arresting fast growing deterioration
in fiscal discipline especially when the fiscal deficit of the Government of India (GOI) was over 8% of Gross Domestic Product (GDP)

**The Environment of Public Enterprises - Pre-Independence Era**

In 1905, the government established Department of Commerce and Industry to encourage industrialisation in the country. The Government’s pioneer oil mill was started at Kanpur under the management of a European firm. The Industrial Commission was appointed in 1916 recommending a very active policy of the Government’s encouragement of industry. Among its recommendations was the “national necessity of establishing certain key industries” such as magnetos, incandescent lamps, ferro tungsten, high speed steel, graphite crucible, special forms of porcelain for insulators, chemical glass, certain types of heavy chemicals, rubber and vulcanite. The constitutional reforms of 1919, development of industries became a provincial transferred subject, leaving only general direction, technical and industrial education to the Center.

In 1931, the congress party at its Karachi session resolved at the instance of Mr. Jawarhalal Nehru that “The State shall own or control key industries and services, mineral resources, waterways, shipping and other means of public transport”. The conference emphasized the need for industrialization and recommended drawing up of a comprehensive national plan for this purpose. This resulted in the appointment of the National Planning Committee in October, 1938, under the chairmanship of Pandit Jawarhalal Nehru, which classified industries into defence, key and public utility, and recommended that they be owned and operated by the State. The public utilities which could be owned by the central, provincial or local Governments were to cover distribution of electricity and gas, public transport and communication, water supply and sanitation. The key industries, among others, were, power generation, fuel including coal, mineral oil and natural gases, machine tools, industry for making machinery parts, heavy engineering industries for building of ships, locomotives, wagons, automobiles, aircrafts and the metals like ferrous and non-ferrous, heavy and fine chemicals including dyes, fertilizers and refractories.

**Industrial Policy Statement, April 1945**

In July 1944, the Department of Planning and Development was set up with Sir Ardesher Dalal, who was one of the signatories of the Bombay Plan, as member-in-charge. This department issued a statement on the industrial policy confirming the
continuation of ordnance factories, railway, post office and public utilities already under state ownership and operation. It also declared that basic industries of national importance be nationalized, provided, adequate capital was not forthcoming and it was essential in the national interest to promote such industries.

The hydro-electric project at Sivasamudram on the Cauvery River, put into operation in 1902, is credited with being the backbone of a large number of industries in the pre-independence era. Among the State owned industrial enterprises was the Mysore Iron & Steel Works, a sandalwood oil factory, a soap factory and a silk-weaving factory.

**Post-Independence Era**

All formal directives to Government Companies are issued in the name of the President, as prescribed by the Articles of these companies. For the statutory corporations, the directives are issued in the name of the Central Government as required by their statutes. The cabinet is the final arbiter in all important matters, capital expenditure beyond laid-down limits, schemes of grouping or regrouping of Public Enterprises, floatation of a Government Company, board level appointments, disinvestment and privatisation decisions. The Administrative Ministry has critical and frequent interactions with Public Enterprises, both at the formal and informal levels. Project Appraisal Division of Planning Commission and various sectoral divisions play an important role in the clearance of capital projects.

The main objectives for setting up the Public Sector Enterprises as stated in the Industrial Policy Resolution of 1956 were:

- To help in the rapid economic growth and industrialisation of the country and create the necessary infrastructure for economic development;
- To earn return on investment and generate resources for development;
- To promote redistribution of income and wealth;
- To create employment opportunities;
- To promote balanced regional development;
- To assist in the development of small-scale and ancillary industries; and
- To promote import substitutions, save and earn foreign exchange for the economy.

Other objectives

1. Revival of sick private enterprises
2. Fair treatment of labour
3. Control over “commanding heights” of the economy
4. Augment revenue of the State
5. To achieve socialist pattern of society
6. To provide a model for competition
7. Enhance production of essential goods
8. To achieve economic self-reliance

The 1991 Reforms

• Portfolio of public sector investment is reviewed to focus the public sector on strategic, high-tech and essential infrastructure. Reservation for the public sector was retained and some areas were opened up to the private sector selectively. Similarly, the public sector was allowed to enter areas not reserved for it.

• The list of industries reserved for public sector was reduced from 17 to eight by the July 1991 policy statement; subsequently, in March 1993, two more sectors were dereserved. The six industries for exclusive operation in public sector were, arms and ammunitions and the allied items of defence equipment, defence aircrafts and warships, atomic energy, coal and lignite, mineral oils, minerals specified in the Schedule to Atomic Energy (Control of Production and use) Order 1953, and railway transport.

• Public enterprises policy, guided by the Industrial Policy Resolution of 1956 played a strategic role in the economy. It stated that “all industries of basic and strategic importance, or in the nature of public utility services, should be in the public sector. Other industries which are essential and require investment on a scale which only the state could provide have also to be in public sector”.¹

• The introduction of economic reforms in July 1991 aimed at Liberalization, Privatisation and Globalisation (LPG), resulting in economic liberalisation and deregulation of the economy, providing an environment for initiating privatisation and disinvestment of Government holdings in Public Sector Units.

¹ Government of India, Resolution of Industrial Policy, dated 30th April, 1956.
1.2 STATEMENT OF THE PROBLEM

The objective of balanced regional development, despite six decades of attempted industrialisation through the Central Public Sector Enterprises (CPSEs), especially in the eastern and north eastern parts of the country, woefully lack in industrial growth and infrastructure. The objectives of import substitution, earning and saving foreign exchange through the CPSEs too, have met with limited success.

The CPSEs have no commercial motivation. Their financial needs have often to be subordinated to other macro-economic considerations and face shortage of funds. They generally survive on monopolistic profits. Apart from all this, the increasing integration of the Indian financial, capital and foreign exchange markets with global markets, starting with the economic reforms of July 1991 and the World Trade Organisation (WTO) Agreements have exposed the public sector to market forces.

The performance of a very large number of public industries is disappointing, often owing to reasons beyond the management’s control. Performance is particularly poor in public sector manufacturing industries. The public industries in monopoly sectors like Petroleum, Power and Telecom, where prices are determined by Government on a cost plus basis have been performing well. If the monopoly structure is removed public industries will be under severe pressure and become loss making.

Privatisation is driven by the primary objectives of disinvestment. The cornerstone for privatisation should be efficient allocation of scarce resources, both monetary and non-monetary, that meets the uppermost social objectives of the country. The concerns on the social priorities are basic health, family welfare, primary education, and development of infrastructure and the retirement of public debt. The resources currently blocked in non-strategic CPSEs, should be released through sale of Government stake in such CPSEs for redeployment in the priority social sectors. It is also ensured that there is no further flow of resources to these CPSEs and no new PSEs are formed in non-strategic sectors. The mission of disinvestment and privatisation is to disinvest or sell non-strategic Central Public Sector Units and to restructure or privatise all loss-making non-strategic Central Public Sector Units / Undertakings. The unviable Central Public Sector Units / Undertakings should be closed preventing wastage of public funds invested in these units.

With the onset of economic liberalization, several Central Public Sector Units / Undertakings have come under severe financial stress. Economic growth and self-
reliance can be generated by making the Indian economy more efficient and competitive and by raising the level of investment to a level appropriate for high growth. The Public Enterprises environment is a complex phenomenon and has not been adequately conceptualized.

Lord Beeching, a former chairman of the British Railways stated that “In the case of private industry there is a single, clear and unchanging primary objective, and the management is free to optimize its behaviour in pursuit of that objective within a general framework of conditions imposed by law, practice, and opinion, which it hopes and expects, will also be reasonably stable. Therefore, its action can and should be compatible and coherent. In the case of a national industry, on the other hand, objectives are more numerous, more ambiguous and less distinguishable from qualifying conditions. They fluctuate in their supposed order of priority, not merely from government, not even just from year to year, but almost from day-to-day at the whim of public and parliamentary opinion.”

The industrial policy statement tabled by the then Union finance minister, Manmohan Singh, clarified the policy, which was to divest part of government holdings in selected Central Public Sector Units / Undertakings. "In the case of selected enterprises, part of Government holdings in the equity share capital of these enterprises will be disinvested in order to provide further market discipline to the performance of public enterprises." ²

The World Bank already detailed out each and every step, the Indian rulers have been taking since 1991 to dismantle the public sector network in the country including the various modalities of privatisation. The current privatisation through ‘strategic disinvestments’ is as per model given by the World Bank. The ‘Research Report’ of the World Bank has prescribed that: “If potential buyers cannot otherwise raise the funds, the enterprise can be sold in trenches (passing management control immediately to private, allowing them time to raise the funds to buy out rest of the share gradually) with freedom to hire and fire, which is an important factor in successful management contracts.” ³

The Labour Ministry has noted that, “private sector has matured into vibrant sector; the public sector has been reduced to a symbol of ineffectiveness.”

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The immeasurable contributions of the Central Public Sector Units / Undertakings in the socio-economic fields of the country are: “ancillary industries development, overall development of rural areas, special programmes for welfare and rehabilitation of physically handicapped and mentally retarded persons, ecological balance promotion of cultural and sports activities, preservation of Indian’s heritage and culture etc.”

The reasons for perceptible change of the government's attitude in favour of disinvestment are:

- Public enterprises seldom take advantage of profit maximisation in market economy.
- Public enterprises are encountered with numerous non-commercial objectives and operate in non-competitive markets.
- The management is bureaucratic in nature.
- Executive, legislative and judiciary system impede the management decisions.
- Lack of accountability in performance
- Few initiatives and innovations in improving performance.

Privatisation of non-strategic sectors of Central Public Sector Units / Undertakings are necessary for improving efficiency in utilisation of resources, to mobilise and invest lump sum amount of funds in technological upgradation and technical know-how, to negotiate and enter into strategic collaborations of development and expansion of operations and finally to meet the ever increasing and challenging competition posed by Multinational Companies (MNCs) and Transnational Companies (TNCs) in the era of open market economy.

Privatisation takes different forms in various countries. In advanced countries, it involves an attempt to reinvigorate poorly run state enterprises. In developing economies, it involves liquidation of CPSU due to unviable and unfeasible operational techniques, policy reforms such as deregulation and liberalisation. The modalities of privatisation vary according to the nature of the country's economy, investment capacity, transformation speed of the economy and its perspectives in market environment and competition. The techniques of privatisation are classified on the bases of ownership, organisation and operational measures. Disinvestment should be done to the units which

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4 Kaleidoscope, March 2002.
are unreserved for the public and which does not cause irreparable loss to the economic stability and performance.

This study attempts to disclose the policy, procedure and process of disinvestment of non-strategic Central Public Sector Units / Undertakings and measures that can be taken to overcome the difficulty in continuing disvestment of the Central Public Sector Units / Undertakings by the Government. It also analyses the present scenario of disinvestment programme and suggestive changes that can be considered as solutions to overcome the backlog in disinvestment and privatisation of Central Public Sector Units / Undertakings. This study also focuses on the opinions and suggestions elicited from employees of Central Public Sector Units / Undertakings, General public and Experts in the financial sector.

This research study attempts to bring to light the disinvestment process of Central Public Sector Units / Undertakings and the unexplored and unidentified problems in implementing disinvestment programme. The Government policy in the era of Liberalisation, Privatisation and Globalisation and the economic reforms envisaging the current scenario of disinvestment are considered for the study. It evaluates the performance of the non-strategic Central Public Sector Units / Undertakings before disinvestment and the impact of it on the Government and that of the general public. The benefits of privatisation of non-strategic Central Public Sector Units / Undertakings are analysed. The different modalities of disinvestments are analysed and the appropriate methods of disinvestments are ascertained.

The present research study is different from the earlier studies conducted in India about the disinvestment and privatization of non-strategic Central Public Sector Units/ Undertakings as it attempts to review the procedures and methods of disinvestment and analyses the disinvestment programme and privatization process. Further, in earlier studies there were no attempt made to seek the opinion of the general public, employees of Central Public Sector Units/ Undertakings and the experts on disinvestment programme and privatization policy. The problems relating to disinvestment and privatization were not identified. The earlier studies related to disinvestment of particular Central Public Sector Unit/ Undertaking and its implication on the Government, public, economic policy and reforms. Further, the research studies had not considered the present procedure and methods of disinvestment or suggested a new model for disinvestment of
Central Public Sector Units/ Undertakings which shall provide a remedy for backlog in disinvestment.

1.3 OBJECTIVES OF THE STUDY

The objectives of the present research study are outlined below:

1. To review the disinvestment procedure and methods and privatization of non-strategic Central Public Sector Units / Undertakings

2. To study the methods of disinvestment programme and privatisation process.

3. To analyse the disinvestment and privatization policies and methods of central public sector units / undertakings based on opinion from general public, employees of Central Public Sector Units / Undertakings and experts.

4. To identify the problems relating to disinvestment and privatisation.

5. To put forth suggestions for the future disinvestment policy for successful disinvestment and privatisation of Central Public Sector Units / Undertakings.

1.4 OPERATIONAL DEFINITIONS OF THE STUDY

Central Public Sector Units / Undertakings

Central Public Sector Units / Undertakings are public enterprises owned and control by the central government with 100 or less percentage of equity participation indulging in industrial, commercial and economic activities, as a legal entity, autonomous in it management, responsible to public, government and parliament.

A comprehensive definition of Friedman covering all the important features of public enterprise states that “an institution operating a service of an economic or social character, on behalf of the government, but as an independent legal entity, largely autonomous in its management, though responsible to the public, government and parliament and subject to some direction, by the government, equipped on the other hand with independent and separate funds of its own and the legal and commercial attributes of a commercial enterprise”.
Disinvestment

Disinvestment is reducing or diluting the Government equity in non-strategic Central Public Sector Units / Undertakings to a level were there is no changes in the control or dilution of equity resulting in transfer of management for the purpose of restructure revival or closure.

Privatisation

Privatisation is transfer of ownership from the public to the private sector, or transfer of control over the assets or activities through leasing, retaining ownership and leaving management of assets and activity to private parties.

1.5 SCOPE OF THE STUDY

The Central Government has taken innumerable decisions in implementing the disinvestment programme. The research study attempts to enlighten the disinvestment programme and the methods adopted in implementing it. This also finds the appropriate modality for disinvestment and method of privatisation. The scope of the study extends to whole categories of non-strategic Central Public Sector Units / Undertakings irrespective of the size, core and non-core sectors, manufacturing and service industries and the degree of financial performance. This study has not considered non-strategic Central Public Sector Units / Undertakings in banking, insurance, information technology, power generation and distribution, metals and minerals, fertiliser, chemical and pharmaceutical drugs Agro-based units, transportation, industrial development and technical consultancy and construction and infrastructure. An attempt is made to bring out the difficulties and problems of the present policy and probable changes to be incorporated in the existing policies and methods.

1.5. A - HYPOTHESES

Null hypotheses were formulated to test the significance and association between two or more variables in the three instruments of research administered to general public, employees of Central Public Sector Units / Undertakings and the experts to analyse their opinion on different factors relating to the government policies and reforms, disinvestment strategies, disinvestment procedures, disinvestment techniques,
privatization methods, ownership and equity capital structure, delegation of powers, limit of disinvestment, allowing foreign investment, lower efficiency, and creation of national investment fund with that of independent variables like age, gender, position, education, occupation, present policies and methods.

The following null hypotheses were framed for the purpose of the study:

**Null Hypothesis – General public**

<table>
<thead>
<tr>
<th>Ho I:</th>
<th>There is no significant difference between gender with respect to their opinion on government policy and reforms</th>
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<tbody>
<tr>
<td>Ho II:</td>
<td>There is no significant difference between gender with respect to their opinion on disinvestment and privatization of Central Pubic Sector Units / Undertakings.</td>
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<td>Ho III:</td>
<td>There is no significant difference between gender with respect to their opinion on long term objectives of disinvestment strategy of disinvestment commission</td>
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<td>Ho IV:</td>
<td>There is no significant difference between age group with respect to overall opinion about disinvestment and privatization</td>
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<td>Ho V:</td>
<td>There is no significant difference between age group with respect to opinion on long term objectives of disinvestment strategy of disinvestment commission</td>
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<td>Ho VI:</td>
<td>There is no significant difference between educational qualifications with respect to long-term objectives of disinvestment strategy of Disinvestment Commission.</td>
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<td>Ho VII:</td>
<td>There is no association between allowing foreign investment and the limit of disinvestment in Central Pubic Sector Units / Undertakings</td>
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<td>Ho VIII:</td>
<td>There is no relation between allowing foreign investment and the category of units to be privatized</td>
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<td>Ho IX:</td>
<td>There is no association between gender and limit of disinvestment.</td>
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<td>Ho X:</td>
<td>There is no association between age group and opinion on limit of disinvestment in Central Pubic Sector Units / Undertakings</td>
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<td>Ho XI:</td>
<td>There is no association between age group and category of Central Pubic Sector Units / Undertakings for privatisation</td>
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<td>Ho XII:</td>
<td>There is no association between educational qualification and category of Central Pubic Sector Units / Undertakings for privatisation</td>
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<td>Ho XIII:</td>
<td>There is no association between gender and role of government in controlling Central Pubic Sector Units / Undertakings</td>
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<td>Ho XIV:</td>
<td>There is no association between gender and opinion on powers delegated to MD/CEOs of Central Pubic Sector Units / Undertakings</td>
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<td>Ho XV:</td>
<td>There is no association between gender and opinion on methods of privatization</td>
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<td>Ho XVI:</td>
<td>There is no association between age group on methods of privatisation</td>
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<tr>
<td>Ho XVII:</td>
<td>There is no association between educational qualification and methods of privatisation</td>
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<tr>
<td>Ho XVIII:</td>
<td>There is no significant difference between mean rank towards categories of Central Pubic Sector Units / Undertakings for disinvestment</td>
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<tr>
<td>Ho XIX:</td>
<td>There is no significant difference between mean rank towards recommendation of disinvestment techniques</td>
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</tbody>
</table>
There is no significant difference between mean rank towards equity capital structure of Central Public Sector Units / Undertakings

There is no significant difference between mean rank towards causes of lower efficiency in Central Public Sector Units / Undertakings

**Null Hypothesis – Employees**

<table>
<thead>
<tr>
<th>Ho XXII:</th>
<th>There is no association between opinion on combination of equity capital and ownership pattern of Central Public Sector Units / Undertakings.</th>
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<tr>
<td>Ho XXIII:</td>
<td>There is no association between opinion on forms of workers participation in management and its impact on higher productivity and production</td>
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<td>Ho XXIV:</td>
<td>There is no significant difference between nature of employment with respect to overall opinion on long-term objectives of disinvestment strategy of disinvestment commission.</td>
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<td>Ho XXV:</td>
<td>There is no significant difference between position with respect to overall opinion on WPM.</td>
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<td>Ho XXVI:</td>
<td>There is no significant difference between educational qualifications with respect to overall opinion on long-term objectives of disinvestment strategy of disinvestment commission.</td>
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<td>Ho XXVII:</td>
<td>There is no significant difference between age group with respect to overall opinion on long-term objectives of disinvestment strategy of disinvestment commission.</td>
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<tr>
<td>Ho XXVIII:</td>
<td>There is no significant difference between experiences with respect to overall opinion on forms of WPM.</td>
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<tr>
<td>Ho XXIX:</td>
<td>There is no significant difference between position of employees with respect to overall opinion on labour policy.</td>
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<td>Ho XXX:</td>
<td>There is no association between age group with respect to overall opinion on training and development programme.</td>
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<tr>
<td>Ho XXXI:</td>
<td>There is no association between experience with respect to overall opinion on work culture in Central Public Sector Units / Undertakings.</td>
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<tr>
<td>Ho XXXII:</td>
<td>There is no significant difference between educational qualification with respect to prevailing work culture.</td>
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<td>Ho XXXIII:</td>
<td>There is no association between position of employees with respect to uniform promotion policy.</td>
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<tr>
<td>Ho XXXIV:</td>
<td>There is no association between experience of employees with respect to their opinion on authority for promotion.</td>
</tr>
<tr>
<td>Ho XXXV:</td>
<td>There is no association between position of employees with respect to agreement with disinvestment and privatization of Central Public Sector Units / Undertakings.</td>
</tr>
<tr>
<td>Ho XXXVI:</td>
<td>There is no relationship on the opinion of the employees on issue of shares at higher rate of discount to employees than to other investors and the rate of discount to be offered on shares under stock option scheme.</td>
</tr>
<tr>
<td>Ho XXXVII:</td>
<td>There is no association between opinion on disinvestment and privatization of Central Public Sector Units / Undertakings with respect to policy of government in protection of interest of employees in divested Central Public Sector Units / Undertakings.</td>
</tr>
<tr>
<td>Ho XXXVIII:</td>
<td>There is no association between the opinions of employees on promotion programmes.</td>
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<tr>
<td>Ho XXXIX:</td>
<td>There is no association between the opinion of employees on the factors influencing WPM.</td>
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<tr>
<td>Ho XL:</td>
<td>There is no association between opinion on forms of WPM and its influence on higher productivity/production.</td>
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<tr>
<td>Ho XLI:</td>
<td>There is no association between opinion on long-term objectives of disinvestment strategy of disinvestment commission</td>
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<tr>
<td>Ho XLII:</td>
<td>There is no association between the opinion of employees on the category of Central Public Sector Units / Undertakings for disinvestment</td>
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**Null Hypothesis – Experts**

| Ho XLIII: | There is no significant difference between the opinion of experts on essentials factors of disinvestment in Central Public Sector Units / Undertakings. |
| Ho XLIV: | There is no significant difference between the opinion of experts on category of Central Public Sector Units / Undertakings for disinvestment |
| Ho XLV: | There is no significant difference between the opinion of respondents relating to disinvestment techniques. |
| Ho XLVI: | There is no significant difference between the opinion of respondents relating to forms of privatizing Central Public Sector Units / Undertakings through capital market disinvestment. |
| Ho XLVII: | There is no significant difference between the opinion of respondents relating to the approaches for judging efficiency of Central Public Sector Units / Undertakings |
| Ho XLVIII: | There is no significant difference between the opinion of respondents on the measures suitable for disinvestment vis-a-vis privatization |
| Ho XLIX: | There is no significant difference between gender and their opinion on disinvestment strategies for Central Public Sector Units / Undertakings. |
| Ho L: | There is no significant difference between gender and their opinion on procedure for disinvestment. |
| Ho LI: | There is no significant difference between occupation and their opinion on disinvestment strategies for Central Public Sector Units / Undertakings |
| Ho LII: | There is no significant difference between occupation and their opinion on disinvestment strategy should be based on privatization perspective. |
| Ho LIII: | There is no association between the opinion on disinvestment strategy should be based on privatization and advisability on disinvestment without privatization. |
| Ho LIV: | There is no association between the opinion on disinvestment strategy should be based on privatization and necessity of disinvestment at moderate level with privatization of certain Central Public Sector Units / Undertakings |
| Ho LV: | There is no association between the opinion on disinvestment carried out with privatization and necessity of disinvestment at moderate level with privatization of certain Central Public Sector Units / Undertakings. |
1.6 METHODOLOGY

The study is descriptive research, based on sample survey method. This study is intended to identify the present disinvestment procedures and the method of privatisation of non-strategic Central Public Sector Undertakings. The study focuses on the primary data collected from the respondents (General public, employees of CPSUs and experts) about present disinvestment procedures and privatisation and the secondary sources through descriptive and analytical research. The questionnaire and interview schedule have been formulated and framed accordingly. The suggestions of the study emanate from the inferences drawn from the analysis of primary and secondary data.

1.7 RESEARCH TOOL AND COLLECTION OF DATA

The data relevant for this research study were collected from primary and secondary sources. The primary source of data were collected through administering questionnaire to selected employees of non-strategic Central Public Sector Units / Undertakings to get their opinion on the government policy, working environment, participation in management and policy, process and procedure of disinvestment and privatisation. The opinion of experts from financial sector was collected through interview method on disinvestment policies, strategies, procedures and techniques. The opinion on privatization and improving efficiency of Central Public Sector Units / Undertakings was also gathered. The third source of respondents was general public who were potential and prospective investors. The opinion on Government policy and reforms and the policies, objectives and techniques of disinvestment were collected. The secondary sources of data were collected from published reports of government of India, standard journals, magazines, newspapers, books and websites. The data were also sourced from committee reports on economic and financial reforms.

Reliability test

Cronbach's alpha determines the internal consistency or average correlation of items in a survey instrument to gauge its reliability. When a variable generated from a set of questions implies that return is a stable response, then variable is said to be reliable. Cronbach's alpha is an index of reliability associated with the variation accounted for by the true score of the "underlying construct." Construct is the hypothetical variable that is being measured. Alpha coefficient ranges in value from 0 to 1 and may be used to
describe the reliability of factors extracted from dichotomous and/or multi-point formatted questionnaire or scales. The higher the score, the more reliable the generated scale is. Nunnaly (1978) has indicated 0.7 to be an acceptable reliability coefficient but lower thresholds are sometimes used in the literature.\(^5\) In this research study Reliability analysis is done through Cronbach's alpha and the determined value is 0.8276 which indicates nearly 83% of the information is reliable and consistent with the collected data.

The chart given below depicts the basis of selection of sample units.

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<chart>

Chart 1.1
Sampling Design

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<thead>
<tr>
<th>Profitable</th>
<th>Loss Making</th>
<th>Unspecified</th>
</tr>
</thead>
<tbody>
<tr>
<td>160</td>
<td>54</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Holding</th>
<th>Subsidiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>147</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Positive Net worth</th>
<th>Negative Net worth</th>
</tr>
</thead>
<tbody>
<tr>
<td>99</td>
<td>48</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended for disinvestment</th>
<th>Referred to BRPSE by DPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>58+4</td>
<td>62</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disinvested</th>
<th>Sample units</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>6</td>
</tr>
</tbody>
</table>

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\(^5\) Journal of extension, www.joe.org
1.8. SAMPLING DESIGN

This research design of the study considers all the 242 centrally owned public sector companies, of which only 160 are profitable, 54 are making losses and 28 others are unspecified. Among the 160 profit-making companies 13 are subsidiaries. Only 99 profit making companies have a positive net worth, while the remaining 48 companies have a negative net worth. The number of Central Public Sector Units / Undertakings referred to Board for Reconstruction of Public Sector Enterprises (BRPSE) for revival/rehabilitation or closure/winding up proposals by Department of Public Enterprises (DPE) was 62 in total. The BRPSE have recommended 53 Central Public Sector Units / Undertakings for revival/rehabilitation or closure/winding-up.

From this total of 242 Central Public Sector Units / Undertakings 58 units were recommended for disinvestment and 48 were disinvested till 2007-2008. There are further four Central Public Sector Units / Undertakings under the proposal for disinvestment in 2009-10. The selection of the disinvested Central Public Sector Units / Undertakings and proposed Central Public Sector Units / Undertakings is made based on their contribution to national economy. The availability of data of Central Public Sector Units / Undertakings and approachability of the respondents are the basic criteria for selection.

The area of the study for the research is selected Central Public Sector Units/Enterprises belonging to non-strategic sector spread over the southern region/states in the country with high-end investment by the central government.

The researcher considered six CPSUs as sample units from out of 48 disinvested CPSUs on the basis of judgment sampling. The sample units were drawn from southern India belonging to the core and non-core sectors both from manufacturing and service industry in the non-strategic sector category. From the selected total sample of six units, two units represented core sectors which were profit making, the second two represented non-core sectors which were loss making and non-viable and the other two belonged to service sector one representing core and the other non-core.

1.9. SAMPLE SIZE AND SAMPLING FRAME

The total number of employees as on 31.03.2008-09 engaged in non-strategic sector of core and non-core areas were selected from the selected six Central Public Sector Units / Undertakings. The employees belonged to manufacturing and service industries
excluding banking and insurance. The employees of public departments, local bodies and state level public enterprises were not considered for collection of data.

The employee respondents were selected from the universe of 8206 individual employees of the six sample units through simple random sampling. From the population of 1894 employees in the position of supervisory, technical, clerical and non-technical nature 150 were randomly selected, excluding the employees in the cadre of officers, managers and middle level executives.

The technique of selecting the general public sample respondents were through purposive sampling. From the population of unlimited capital market investors, 200 sample respondents were drawn from Tamil Nadu State and Puducherry Union Territory with graduate, postgraduate and professional qualifications who were potential stock market investors, mutual fund investors, academic investors, general investors, stock market and financial consultants, accounting and secretarial professionals.

The data were sourced by interview method from expert respondents representing 50 in number who were chosen through judgment sampling technique from Tamil Nadu State and Puducherry Union Territory engaged in field of banking, finance, accounts and audit, law and business. The sample respondents were chosen based on their knowledge about disinvestment and privatization, who were either employed, or practicing professionals or doing business.
1.10 STATISTICAL TOOLS EMPLOYED

The collected data were edited, coded, classified and tabulated before analysis. The following statistical tools were applied for analysis and interpretation of collected data.

1. The Chi-square test
2. Student t test.
3. Anova followed by Duncan Multiple Range Tests.
4. Freidman test.
5. Correlation.
6. Multiple regression
7. In addition to the above percentile analysis is also applied.

Chi-square test

Chi-square is a non-parametric test used to determine the categorical dependency or the two classifications are independent. It is also used to determine whether two variables are independent by comparing their observed joint occurrence with their expected joint occurrence. It determines whether categories of a single variable are represented in the same proportions in two or more populations. In present research Chi-square test is used to study whether there is any association between two or more variables. It is represented as $X^2$.

Student t test

Student t test is applied to small data sets and it is similar to F test. An equation is formed when two sets of data are compared. Standard deviation is applied with degree of freedom. This test is applied by formulating null hypothesis. The present research applies the student t test for finding the significance of two variables.

ANOVA followed by Duncan Multiple Range Tests

“Analysis of Variance (ANOVA) is the separation of variance ascribable to one group of causes from the variance ascribable to other group” – Prof. R.A.Fisher.

The variance in the sample data due to independent factors or source is analysed using ANOVA technique. One way classification is used to find the variation between classes and within classes. Two way classifications are applied for finding the variance
ratio of two factors with variate values. The null hypothesis is formulated to test the significance at 1% or 5% level. The Duncan Multiple Range Test is both simple and powerful for data involving more than two treatment groups in a random design. Up to six groups with any number of replicates may be analyzed with this program. Analysis of variance and testing of significance of differences between each mean and every other mean by Duncan's New Multiple Range Test is calculated.

**Friedman's Test**

Friedman’s test is non-parametric repeated Measures comparison used to compare observations repeated on the same subject called a non-parametric randomized block analysis of variance. This test is an alternative to the repeated measures ANOVA, when the assumption of normality or equality of variance is not met. This uses the ranks of the data rather than their raw values to calculate the statistics. The present research applies this test for comparing across repeated measures which are same or different by framing a hypothesis. The test statistic for the Friedman's test is a Chi-square with a-1 degree of freedom, where ‘a’ is the number of repeated measures. When the P-value for this test is <0.05 the null hypothesis is rejected.

**Correlation analysis**

Correlation analysis is a technique for measuring or quantifying the degree or strength of a linear association between any two variables or among many variables using correlation coefficient. Correlation coefficient is a numerical measure of linear association between two variables that takes the values between -1 to +1 showing indirect and direct relationship. The present research uses correlation analysis for studying the linear or non-linear association between two or more variables.

**Multiple regressions**

Multiple regressions are a statistical technique for measuring or quantifying the type of casual relationship among dependent and independent variables. Multiple regressions are applied in the present research for studying relationship between one dependent variable and more than two independent variables.
1.11 LIMITATIONS OF STUDY

The limitations of the study are:

1. The inherent weakness of primary source of data applies to this research study.
2. The samples and the data collection are based on the reaction and attitude of the respondents.
3. The inadequate knowledge of the respondents about the disinvestment policies, procedures and methods and that of privatization have not provided an opportunity to increase the sample size for the purpose minimizing the sampling error.
4. The process of disinvestment is an ongoing process and the conclusions based on collected information may not suffice for the study.
5. As the reforms are continuous, the findings of the study in the light of evaluation of data may change from time to time.

1.12 CHAPTER SCHEME

Chapter I titled “Introduction and design of the study” deals with introduction of the study, environment of public enterprises in pre-and post independence era, the 1991 reforms, statement of the problem, objectives of the study, operational definitions of the study, scope of the study, hypotheses, methodology, collection of data, sampling design, sample size and sampling frame, statistical tools employed, limitations of the study and scheme of research report.

Chapter II entitled “Review of related literature” summarizes the earlier research studies on disinvestment and privatisation in abroad and in India.

Chapter III captioned “Non strategic central public sector undertakings in India- an overview” presents an overview of non-strategic central public sector undertakings in India, its classification, administration and management.
Chapter IV titled “Disinvestment and privatisation in India” discusses the objectives of disinvestment and privatisation, operational definitions, disinvestment authority, disinvestment policy, procedures and methods and privatisation strategies in India.

Chapter V captioned “Analysis of divested and privatised non strategic CPSUs” presents the analysis on divested and privatised non-strategic CPSUs in India, performance of CPSUs pre and post disinvestment and privatisation and discloses the opinion, suggestions and critics on disinvestment and privatisation.

Chapter VI christened “Analysis of survey data” deals with data collected from General Public, Employees of CPSUs and Experts.

Chapter VII consolidates the Findings, Suggestions and Conclusion about disinvestment and privatisation of non-strategic CPSUs in India.