CHAPTER-I

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1.1. Introduction

Privatization in the last two decades has swept the world, embracing the developed economies, the transition economies of East Europe and of late, the less developed world alike. The causes of this trend are various and in many cases they are country-specific. Privatization, which is normally associated with meaning relating to the sale of public owned enterprises, also includes policies of deregulation, liberalization and franchising\(^1\). Some of the terms such as denationalization (selling entire equity share to the private sector), partial liquidation of public enterprise, deregulation or liberalization, management and employee buyouts, and franchising or contracting out are different forms of privatisation.

Denationalization, which means total privatisation of public sector by selling all equity shares to the private sector, can be easily achieved in developed countries where capital markets or stock exchanges are efficient and well developed. In countries mostly under-developed where capital markets are either non-operational or underdeveloped, privatisation may take the form of an outright sale of a public enterprise to the private sector. The essential feature of denationalization is the transfer of the ownership or proprietary rights. In case of partial liquidation of public enterprise, Government sells only a certain proportion of the total equity, thereby retaining an overall control of the enterprise. In case of deregulation or liberalization, the Government removes restrictions

on private sector, to enable it enter fields hitherto exclusively reserved for the public sector.

Management and employee buyouts involves induction of 'worker capitalism' in which case a certain percentage of the shares of the public sector are sold to the labour force employed therein. This makes them part of the ownership and this process expects to increase efficiency and profitability of the enterprise. Franchising or "contracting out" is an attempt to introduce an element of competition to markets, which are unavoidably monopolistic. In fact, this creates competition for the market rather than competition in the market. Franchising is considered in areas where the chances of competition are really bleak. Potential monopoly power in the market is checked by the competitively determined terms of franchise contract. The simplest method of franchising is to hold an auction for the right to the monopoly, in which the winner is the bidder who offers the franchiser the largest monetary sum\(^2\). These different forms of privatization are not exclusive from the point of view of implementation by any country. In fact, one or many forms of privatization are implemented simultaneously.

Privatisation has been recognised as a legitimate phenomenon and effective tool in the hands of the Government for economic transformation and development to which attention has been attracted in the recent years. It is accepted world-wide that the role of state in the economic affairs has to be reduced and it should be opened to the private sector. Government should shrink its investment in public sector except in some strategic sector and private sector should be allowed to take the lead.

\(^2\)Ibid., p. 645.
Privatisation is principally aimed at maximization of output and growth rates with particular focus on industrial sector. It has assumed the overtones of an international economic movement for reducing state control and cutting to size of the public sector. The policy is in accordance with the thinking of classical economists who regarded government meddling into economy as fundamentally wrong and likely to lead to wastes, inefficiencies, and sub-optimal allocation of scarce resources. They firmly believed in the magical "invisible hand" of Adam Smith, more commonly known as the market mechanism, which unmistakably spurs both businessmen and consumers to rational decisions aimed at maximisation of profits and satisfaction. Privatisation is thus an economic movement for "rolling back" the public sector which believes in the efficacy of a market economy for meeting the major economic challenges confronting all countries both developing and developed alike.

Privatisation has been a predominant global ideology of the 1980s. With the electoral victory of the conservatives in a number of Western industrialized countries, a deep commitment to the ideals of smaller governments and bigger private participation in economic development had been the economic ideology. This was especially true in case of Mrs. Margaret Thatcher's victory in United Kingdom (UK) and Reagan's coming to power in United States (US). Moreover, the Western economies were also in the process of structural changes and adjustments and policy of privatisation/deregulation was expected to facilitate this process. As such privatisation in the liberalised economic scenario first gained prominence in UK under the impetus of strong support by the international donor community and also as an austerity measure in the face of fiscal crisis after the oil shocks of the 1970s. From Britain, privatisation has swiftly traveled to other
Western European countries such as France, Italy, Spain, West Germany, Turkey and Portugal. Even the hard-core socialist countries such as USSR, China, Cuba, and Hungary are making in-roads to privatisation. Gorbachev's ideas of "Perestroika" (reconstruction) and "Glasnost" (change) seem to have the germs of privatisation. The socialist countries, without impairing the strength of the public sector, want to make it more productive, efficient and accountable. Also, under developed countries and Asian economies alike are under the pursuit of privatisation since 1990s. Thus the idea of privatisation has become popular in the world irrespective of the differences of ideology. South Asian countries including India and Pakistan are no exception to this policy of privatisation.

The case for privatization in developing countries especially like India and Pakistan are based on the premise that public sectors have become 'over-weight' and there is a 'health risk' for the economy. In the process most public sector units have become unwieldy, loss making and inefficient. Inefficiency is the most formidable reason for privatisation. There have been strong evidences that public enterprises in less developed countries (LDCs)/developing countries (DCs) including India and Pakistan have generally (although not always and necessarily) been less efficient comparing that of private enterprises. The low efficiency in public enterprises is caused due to operation of factors such as political interferences, staffing by bureaucrats instead of professionals, the corruption syndrome, financial 'kick-backs' and 'perks of the job', the false notion of job security and delinking of promotions from performance, non-payment of competitive salaries, limited operational independence etc.² The separation of ownership and

management and lack of fear of bankruptcy and the prevalence of monopoly conditions also account for the inefficiency of the public sector. To break this inefficiency iceberg from the public sector it is commonly argued that privatisation is the suitable option.

The privatization strategy in India and Pakistan was aimed at integrating their economy with the global economy, to attain the type of growth that the countries of Asia Pacific have experienced over the past two decades. It is argued that the shift from public to private management is so profound that it will produce a panoply of significant improvements, boosting the efficiency and quality of remaining government activities, reducing taxes and shrinking the size of the Government. In the functions that are privatised, it is argued, the profit-seeking behaviour of the new private sector management will lead to cost-cutting and greater attention to customer satisfaction. It is further argued that the act of privatisation itself promotes both economic efficiency and public confidence in the system of industrial capitalism, and thus PSEs must be sold off to private investors before efficiency gains can be realised.

Privatization is one of the major components of economic reform. Privatization can be conceptualized at three different levels: macro level, sectoral level and unit level. At the macro level a rising share of private sector in the total economy will indicate the privatization. Similarly for a particular sector of the economy, a rising share of private sector will be considered as privatization. While in a particular company if the share of private holding goes up gradually, we find the case of unit level privatization. In most countries all the three levels of privatization goes together. At the same time it is possible to have macro level and

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sectoral level privatization together while keeping the unit level existing public sector unchanged. 

1.2. Electric Power Privatisation

Energy is one of the important constituents of infrastructure required for development of a country. Therefore, development of infrastructure sector is key for the prosperity of the country. Lack of development of the less developed societies is directly associated with the inadequate availability of infrastructure. Moreover, development of infrastructure is generally based upon the scope and priorities of the country concerned. It is the demand, which make the planners to select an appropriate item for fitting in their own environment.

The energy sector plays a key role in the development and growth of the economy as the availability of adequate supplies of energy is a pre-requisite to generate economic activities. The main objectives of the energy sector are ensuring adequate, secure, and cost-effective supplies, utilising the resources efficiently and minimising its losses. The Governments all over world are making concerted efforts to ensure that the development of energy resources continue to contribute to the nation's economic growth and well-being. Most of the countries are following a multi-pronged strategy for energy sector basically for two principal reasons. First, the Governments want to increase the supply of

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energy (generation) to meet the growing demands. Secondly, they want to expand and upgrade the transmission and distribution system of infrastructure to conserve energy.

There are different forms of energy. Among the notable are coal, oil, falling water, natural gas and fissile uranium. All these are primary fuel. The electricity is a secondary fuel but one of the convenient ways that man has devised to make use of energy. Electricity is generated from these primary fuels.

Cheap electric power is essential for the development of a country. In fact, modern life depends so largely on the use of electricity that the quantity of electricity used per capita is an index of its material development and of the standard of living attained in it. Apart from its use in the industrial undertakings, electricity has a remarkable diversity of application. Electricity can provide cheap power for pumping water for irrigation and for numerous operations in agriculture and at home. Extensive use of electricity can bring about the much-needed change in rural life in countries like India and Pakistan. It not only improves methods of production in agriculture and encourages cottage and small scale industries, but also makes life in rural areas much more attractive and thus helps in arresting the influx of rural population into cities.

Sources of power can be divided broadly into two classes i.e. exhaustible and inexhaustible. The exhaustible sources of power represent accumulation of fossil energy resources gradually formed under the action of the sun's light. The examples are coal, mineral oil, peat, and natural gases. The inexhaustible sources of power, which are replenished by nature as fast as they are utilized, are waterfalls, winds and tides. The production of power from sources like tides and winds is by its nature limited. Until

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atomic power and solar energy come into the field, the development of power resources in India and Pakistan were only from coal, oil and water.

While deciding particular methods of power generation suited to different areas, the basic factors to be considered are, the capital cost per kilowatt of installed capacity, the foreign exchange component, the cost per kilowatt-hour generated, the period required for construction, impact on other allied development activities such as coal mining, washeries, irrigation, exploitation of natural gas, stimulus to the development of new technology etc. The average costs of production per kilowatt-hour in the increasing order are the hydro, coal fired, atomic generation, and diesel power stations. The foreign exchange component of coal-based power stations is two to three times that of hydro-stations, while nuclear stations require still more foreign exchange. Because of different characteristics of the various types of generation, optimum economy can be achieved by proper balance in different modes of generation and by interconnecting them as far as possible to meet the varying conditions of power demand such as base, peak and seasonal loads in a grid.\textsuperscript{10}

The supply of electricity is a central feature of all modern economic systems. It is one of the basic inputs on which economic development rests. In Indian and Pakistani context it has been the prime factor for economic development of the present form from their wretched past, especially during the days of independence. For technical reasons inherent in the nature of electricity as a commodity it required a massive state contribution in the early years of its development. This is because of the capital-intensive nature of electricity industry. The technical reasons may be summarised as generation,

distribution and research. Since these activities accounts for heavy financial requirements, only the state with its coercive powers can guarantee an efficient distribution system and only large states or economic communities can afford to finance the investigation of new sources of energy. Moreover, in most developing countries, the power sector has been publicly owned, viewed as public service and often dominated by a central planning philosophy. Universal electrification is frequently a national policy objective, as is the provision of electricity services to low-income customers at subsidized rates. Rural electrification has also generally been the responsibility of the Government\textsuperscript{11}. This has exactly been the case in India and Pakistan since independence to develop this area by the public sector.

The above considerations, however, do not rule out a large role for the private sector particularly as both generation and distribution have been systematised in most countries over the years as a form of state countrywide capitalism. India and Pakistan, which have been the land of public enterprises are in one sense in good position to increase the role of private sector and are under pressure to do so. This is because of the poor cost recovery, managerial inefficiency, and inability to attract sufficient capital, the gaps between electricity supply and demand are widening in many developing countries. To address the critical challenges facing their power sector, many developing countries are now reforming the way that electricity services are provided. They are opening power generation to private investment, further privatizing transmission and distribution, and even restructuring the sector to introduce competition and independent regulation.

Governments are reforming the electricity sector to stimulate private investment thereby freeing up large amounts of public capital for other uses. It will also promote managerial accountability, better customer service, and reduce Government deficits and international debt\textsuperscript{12}.

Commercialisation involves introducing commercial objectives into the management and operation of a state-owned enterprise. Subsidies are often removed, including state guarantees for borrowing, and the enterprises become subject to the same tax laws, prices, and accounting rules as other companies in the private sector. To make the company more attractive to private investor, the state-owned enterprise may assume past debts, reduce staff, and provide new operating capital. As a part of commercialization, cost accounting is separated for generation, transmission, and distribution services. Most countries view commercialization as an intermediate step toward privatisation and other reforms, although some have commercialized their power sectors but may never privatise them\textsuperscript{13}.

An important part of broader managerial reforms is recovering the actual costs of electricity service. This is often required as a condition for receiving concessionary loans from multilateral development banks. Cost recovery is improved by adjusting rates to better reflect the costs of serving individual customer classes, by upgrading revenue collection with more effective metering and billing practices, and by reducing energy theft. A few countries have begun to charge customers different rates according to the time of day when power is demanded\textsuperscript{14}.

\textsuperscript{12} Ibid., pp. 1-2/4.
\textsuperscript{13} Ibid. p. 2/4.
\textsuperscript{14} Ibid.
Privatisation transfers existing power sector assets to private ownership and allow private development of some or all-new power sector infrastructure. While privatisation of public enterprises in various economic sectors has been a widespread phenomenon among both Organisations for Economic Cooperation and Development (OECD) and non-OECD countries over the past decade, the electric power sector is typically one of the last enterprises to be affected because its functions are considered by politicians to be vital to the state.\(^{15}\)

The electric power industry has undergone a substantial degree of privatization in a number of countries all over the world over the past few years and some are in the process of reform. The general theme of the reform programme has mainly been separation of the vertically integrated system on functional basis to bring efficiency in the industry and market structure on commercial basis. Since restructuring alters the existing organization of the electric industry, vertically integrated utilities (providing generation, transmission, distribution, and retailing services) are unbundled into legally and functionally distinct companies. Chile, England, and Wales pioneered unbundling models in the 1980s. Since then, developing countries in which generation, transmission, and distribution assets have been or are being separated include Argentina, Bolivia, El Salvador, Nicaragua, Philippines, Pakistan, and India. Unbundling is also popular in Eastern Europe.\(^{16}\) The reasons for electric utility privatization are numerous and vary from country to country. However, some of the evident reasons include the following:

\(^{15}\) Ibid.

\(^{16}\) Ibid. p. 3/4.
• Raising revenues for the state through asset sales
• Acquiring investment capital
• Moving toward market-determined prices
• Improving managerial performance
• Technology transfer
• Reducing the frequency of power shortages
• Raising revenue collection by the private power distributing companies
• Reducing the cost of electricity to consumers through efficiency gain
• Taking advantage of creating national and regional power grids, and
• Re-thinking whether electric power generation in today's economy constitutes a natural monopoly.

The demand for electricity is expected to grow fastest in the developing nations, particularly those with the rapidly growing populations and economies. For developing countries, privatization is one means of obtaining badly needed foreign capital. It is also a means of transferring western technology to developing and underdeveloped countries.

Privatisation of the erstwhile state-owned electric power utilities has opened up enormous investment opportunities throughout the world. For foreign investors, investments in overseas electricity utilities offers opportunities to achieve potentially higher returns and, in many cases, to realize greater growth opportunities than are available domestically. In recent years, financing of power projects around the world has changed dramatically. Non-private sources of investment funds have grown increasingly scarce, and the critical role such publicly-financed institutions, such as the World Bank, have played in financing electrical projects has diminished significantly. Several new

entrants, however, in financing overseas electric power investment have recently emerged particularly in the areas of equity finance. Some of the new sources of capital include the world's major petroleum companies, natural gas pipeline companies, electric utilities, and also of the world's major construction and power equipment manufacturing companies. Construction companies are increasingly setting up project financing departments and committing their own capital to financing power projects. United States investors have been the leading source of capital for many of these projects.

There are a number of ways to privatize electric power sector. The traditional method of assigning new projects for private sector development is for the utility to draw up expansion plans and assign specific projects for private financing. The second is to specify capacity requirements and let the private sector identify least-cost sources. The third common way of doing so is the sale of state-owned electric power assets. The fourth one involves allowing less restricted or unrestricted investment in new power assets - the independent power project. Several models exist for private participation in power generation - for example, Build-Own-Operate (BOO), Build-Own-Operate-Transfer (BOOT), Build-Maintain-Transfer (BMT), and Build-Lease-Transfer (BLT). In build, own, operate, the arrangement involves the fact that the foreign company builds a power unit, owns it and operates the unit forever. In build-own-operate-transfer or BOOT where the arrangement involves that a foreign company builds a power unit, owns and operates the unit for an agreed - upon number of years before transferring ownership

19 Keith Kozloff, op. cit., n. 11, p. 2/4.
to the host country has been another important vehicle for financing electric power. Privatisation also involves foreign utilities purchasing one or more utilities in other countries. Some privatization efforts have involved consortiums of foreign and domestic companies. Joint ventures with host nation companies have been another avenue of privatization. In other cases, foreign companies or investors have purchased shares in newly privatised electric utilities. In few cases, recently privatised companies have acquired ownership interests in other recently privatised companies\(^\text{20}\).

Power Purchase Agreement (PPA) is a key component of schemes in which private developers retain ownership of generation facility (BOO). A PPA's single most important provision is the price at which the utility agrees to buy power from the developer.

There is a growing convergence of petroleum-related activities (particularly natural gas) and electric power-related activities on the eve of privatisation. In some regions, natural gas is becoming the fuel of choice for new electricity generation projects partly because of the relative environmental advantage that natural gas has over coal or oil. Over the last couple of years the much-improved efficiency of gas-fired electricity generation units has also improved natural gas's relative competitiveness as a fuel for the generation of electricity. Furthermore, in several countries natural gas deregulation has accompanied in the deregulation of electric power\(^\text{21}\).

There is a growing consensus globally for privatization of electric utilities. As such, the privatization of electric utilities has occurred and is continuing to occur in both developing and developed countries across the globe. The extent of privatization,


\(^{21}\) *Ibid.*
however, varies in degree and method. Countries like India and Pakistan have exposed their electric power generation industries to greater market forces. Chile led the electric utility privatization in late 1980's, followed by United Kingdom. Most of the Latin American countries currently are privatizing their electric power industries to some extent. Currently, privatization efforts are also underway in Australia, Canada, China, Scandinavian countries, Indonesia, Morocco, the Philippines, and the Eastern Europe\textsuperscript{22}. In South Asian region similar efforts are underway in every country, prominent being India and Pakistan.

On the eve of the privatisation of power sector the role of regulator in electricity sector cannot be ignored. In case of some privatised industries, independent regulation will be needed until a fully competitive market has developed. The Governments of the privatised industries must address this need at an early stage in the sale preparations. A primary duty of regulators is to promote competition, as this is the most effective means of protecting customers and encouraging efficiency and innovation. As competition will take some time to develop, and in some cases cannot be introduced at all, regulation must also aim to protect customers from abuse of monopoly power. This requires control of prices and quality of service. Regulation may also promote certain social and national objectives, for example, provision of special services to the elderly and disabled persons, etc.

\textsuperscript{22}Ibid., p. 3/17.
Thus, the changing structure of the power sector in many countries has pushed the need for an effective regulator. This is required in order to ensure transparency and fairness in pricing. At the same time, regulator will enable the utilities to be financially viable and also to improve the quality of service to the customers. This is possible by regulator by bringing regulation especially on three broad areas, such as economic regulation, technical regulation and customer service standards\textsuperscript{23}. This requires the broad characteristics of the regulatory authority to be independent, autonomous, accountable and transparent.

Various types of regulatory agencies are prevailing in different countries. These agencies do vary from industry-specific to sector-specific to multi-sectoral. For example, in UK the regulatory agencies are industry-specific such as gas, electricity, water and telecommunication. In case of USA, there is multi-sectoral State level regulatory agencies. There are advantages as well as disadvantages in both these options. One of the greatest advantages of the multi-sectoral agency is sharing of expertise. This is important particularly for countries where expertise is scarce. Broader responsibility of a multi-sector agency guards against the agency's capture by the regulated industry and against political authority\textsuperscript{24}. It can also take appropriate investment decision across various sectors and hence avoid economic distortion. In multi-sectoral agency, the effect of regulatory rules on one industry to another can also be avoided. The major disadvantage could be to pool all kinds of experts for all industries to regulate. Another disadvantage is put "all eggs in one basket" i.e. agencies' failure would have cost all to


\textsuperscript{24} Ibid.
Therefore the important issue, which a Government should decide at the beginning is the breadth of the regulatory authority.

1.3. Significance of the Study

Adequate infrastructure facilities are necessary for inducing and sustaining economic development. Infrastructure development and the efficient delivery of its services directly get reflected in the achievement of macro-economic objectives. Thus, the ongoing economic reforms attach a high priority to the better utilisation of existing infrastructure assets and fresh development of infrastructure so that existing bottlenecks do not inhibit the overall economic growth and export dynamism. In fact, infrastructure outputs like power constitute direct inputs to the production process and help achieving economic growth. Infrastructure services till 1980’s had been considered natural monopolies to be owned and controlled by the government as they involve high levels of investment characterised by lumpiness with long gestation periods, high risks, low rates of return and externalities which make it difficult to implement a system of "paying users only". However, over the last decade there has been a move towards privatisation of infrastructure services basically to augment resource mobilisation and deliver the services efficiently made possible by new technologies, which allows precise delivery of services and collection of user charges. It is in this context that to study privatisation of power sector assumes significant.

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25 Ibid.
In regard to delivery of power (electricity) services, it is considered that certain kind of services can be provided more efficiently by the private sector. Privatisation can also improve collection of user charges, which would boost availability of resources for their sector. It is expected that private sector would be efficient enough to collect the user charges of electricity more frequently than the public sector. On the other hand, if they are not paid on time, the private sector may resort to action like disconnection, etc which the public sectors normally don't do due to obvious reasons. So comparatively private sectors are expected to increase the revenue collection. In this context it is important to study privatisation of power sector.

Power sector development is characterised by long gestation periods, huge investments and considerable externalities which make funding for this services a difficult proposition particularly for developing economies like India and Pakistan with limited resources to be allocated among a host of competing sectors. In view of this resources crunch, private sector investment on the eve of privatisation of power sector is interesting to study.

It is imperative to provide the basic services to a larger segment of the population with growing modernisation and urbanisation, rising economic growth rates from a social point of view. To enable this, commercialisation of electricity investment has gained importance over the last few years. Commercialisation of electricity is possible in a better way through privatisation. Given the generation of electricity in private sector and hence their investment, they cannot afford to provide the same to the people at the rate which will not cover their cost plus profit margin. In other words private sector cannot provide electricity at subsidised rate, unless the state desires so and bears that part of
burden, which many states are skeptical about. Thus, private sector is expected to commercialise the power sector in a better way. It is therefore, significant to study privatisation from the point of view of commercialisation of electricity services.

As the proposed study intends to analyse the privatisation of power sector in both India and Pakistan, it is significant to examine the necessity of a power policy in both the countries. During March 1994 the total installed capacity in Pakistan was 10,800 MW and in India it was 76,718 MW. These capacities were hardly sufficient to meet the growing demand on a year-to-year round basis for both the countries. As a result at different times of the year particularly during the period of low river flow (summer), the consumers have to be subjected to load shedding (forced power cuts). Electricity per capita consumption which was 300 kWh in Pakistan and 270 kWh in India in 1994 are the lowest in world comparing to the level of consumption in developed countries which ranges from 8000 kWh to 25,000 kWh per annum. This phenomenon is characterised by a high degree of suppressed demand. The Government of Pakistan’s conservative projections for annual average increase demand are nearly 8 per cent annum, which means approximately 54,000 MW of additional capacity need to be generated by 2016. Likewise in India, the generation expansion planning studies carried out by the Central Electricity Authority (CEA) for the period 1992-2007 revealed that an additional capacity of about 142,000 MW would have to be added to meet the growing demand over this period. The ambitious programme like this in India and Pakistan cannot be financed in the public sector primarily due to financial constraints. Accordingly, governments of both the countries have adopted strategies including supply-side enhancement and demand-side management to bridge the gap. One of the important strategies adopted by these
countries to augment power supply is through private power development programme. Therefore, it is significant to study the privatisation in power sector to augment the power generation in the wake of privatisation.

Depending upon time and necessity, governments of both the countries have been formulating different policies and hence opening new and additional avenues to encourage private sector participation in power sector. In fact, both the countries since the adoption of privatisation policy have been bringing different incentives from time to time in the name of new guidelines to encourage private sector in a big way. It is important to study these policy changes from time to time encouraging private sector in order to see why there was a departure from the previous policy and what and how much these new guidelines or modifications can do for private participation in the power sector.

Fiscal policies in India and Pakistan give a great deal of incentives to the private companies from corporate income tax. In both these countries, custom duties and sales taxes have been reduced substantially and in many cases it is nil. As such, private power companies are allowed to register anywhere in Pakistan to avail reduction in stamp tax and registration fee for registration of loan documents by the federal Government. Both the countries allowed 100 per cent foreign-owned companies to set up power projects and to repatriate the equity along with the dividends without any export obligation. Foreign lenders to the private power companies have been exempted from income tax in Pakistan whereas five-year tax holidays have been allowed in India for all private power companies. Power sector has been declared as an industry and companies are eligible for all concessions, which are available to industrial projects in both the countries. Private parties may raise local and foreign finance in accordance with regulations applicable to
industry in general. Along with these various other fiscal measures have been formulated. These policies, which aim to boost the initiative of the private sector in the development of infrastructure sector are of considerable significance.

In the wake of privatisation in the power sector it is noteworthy to study the different security packages. In other words, it is important to study the packages such as Model Implementation Agreement, Power Purchase Agreement and Fuel Supply Agreements guaranteed by the government of India and Pakistan to the private power enterprises.

The gap between supply-demand in power services has to be bridged for economic development. For this privatisation has been taken as the last option since all other options of the governments of both the countries were exhausted. In power sector the programme of Renovation and Modernisation of the existing power plants are going on in India and Pakistan intending to increase power availability with limited investment in short period. The Governments of Pakistan and India financed this programme to their respective existing plants {especially through State Electricity Boards (SEBs) in India}. Lack of sufficient resources with the center and State (more particularly SEBs in India) has been identified as the major cause for the slow implementation of this programme. In order to accelerate the programme, this field has been opened to the private sector. Also, Government of India exempted all Renovation and Modernisation Programme costing up to Rs. 100 crores from clearance by the Central Electricity Authority. So, it is significant to study the privatisation of power sector, which intends to bridge the supply-demand gap.
It has been stated earlier that these two countries faced severe balance of payment deficit and hence resources crunch. This is true for the public sector electricity projects/corporations, which are constrained due to lack of resources. This has forced many states government to privatise several of their proposed projects in India. States like Andhra Pradesh, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu, Karnataka, Kerala and Uttar Pradesh have already initiated the privatisation process. It is significant to study this because even though electricity being in the concurrent list, the central government formulation of private power policy has no binding force on the state governments. But state governments due to their lack of financial viability formulated same kind of private power policy on their own and hence are going for it.

1.4. Review of Literature

There is a growing literature available on liberalisation and privatisation ever since India and Pakistan adopted the reform policy slowly in 1980s and considerably in 1990s. Since our focus is on power sector the following are some selected works which are relevant to our focused topic.

The article "Performance of the Public Sector" by P.S. Bami in the edited work Privatisation: Options and Challenges (1991) by S.R. Mohnot reviews the growth and development of Indian power sector from 1950 to 1990. Regarding privatisation of power sector, he addresses the questions relating to the extent of privatisation, methodology to be adopted and pitfalls so that the move does not falter. He opines that mere change in ownership would not result in abundance of power; it has to be accompanied by reduced

government controls and proper incentives to the manager for good performance. In fact, he does not rule out the public sector and notes that considering the extent of expansion foreseen in the power sector, a mix of public and private sector is definitely desirable. He argues that this co-existence would bring about comparisons and introduce healthy competition. As a matter of fact, he only discusses the performance of National Thermal Power Corporation (NTPC), which was created in 1975 as a Central Generating Company whose performance was remarkable. He fails to discuss the performance of National Hydro Power Corporation (NHPC) and other public sector units as such, for which privatisation policy is embarked in India.

The article "Sequencing Power Sector Privatisation: Is Reform its Precondition or Result?" by Michael B Rosenzweig, Sarah P Voll in *Pacific and Asian Journal of Energy* (Vol. 7, No.2, 1997) analyses the role of privatisation in power sector reform, and discusses the prerequisites for successfully privatising power sector assets. The cases cited in this article are only for five countries i.e. India, Chile, Argentina, New Zealand and Brazil where privatisation fails, either wholly or partially because of missing pieces in the reform programme. In these instances, private investment in generation has been inhibited by inadequate commercialisation of the purchasing distribution companies (India) and persistence of market power of and potential for political interference in the state-owned enterprises (New Zealand). Privatisation of distribution has been stalled by, again, inadequate commercialisation (India) and ill-defined regulatory regimes (Brazil). Investor requirements at privatisation and ambiguous regulatory structures foster monopoly abuses and risk a return to inefficiency (Chile), and regulatory misalignment of

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investment incentives limit investment in transmission and engender competition in generation (Argentina). Privatisation programmes also suffer because of the pressure for hasty implementation generally because of revenue or political constraints. Hurrying up the reform programme may lead to missed opportunities or the introduction of inappropriate policies, which increase the costs of the programme.

The article "Power Sector Reform in Orissa: An Ex-post Analysis of the Causal Factors" by A. Thillai Rajan in *Energy Policy* (Vol.28, 2000) brings out the Orissa power sector reform programme and the three compelling factors that led to reform. The first is the contextual factors that are defined as those factors that formed the primary drivers for initiating the change process (e.g. performance of Orissa State Electricity Board and World Bank conditionalities). The second is trigger factor, which is defined as the critical event that created a compelling necessity for Government of Orissa to implement power sector reform. The third is the facilitating factors, which is defined as those factors the presence of which would create a favourable environment for implementing reform programme. It is worth-mentioning that with the New Economic Policy in 1991, Government of India started opening up this sector in 1992, which was immediately initiated by Orissa Government in November 1993. As a result of reform, all hydro generating plants of Department of Energy (Orissa) and OSEB were vested with Orissa Hydro Power Corporation. The transmission assets of OSEB were vested with Grid Corporation of Orissa. In regard to distribution, which was the important aspect of reform programme Government of Orissa decided to privatise distribution forming four zones as separate distribution companies. This reform programme was completed only in 1998.

middle of 1999 with the privatisation of distribution. The author rightly points out that as this sector is in a transitory stage it is slightly premature to find out whether reforms have brought about any improvement in the performance of the power sector in Orissa. The benefits of the reform programme will become clearer with the passage of time.

V. Ranganathan in his article "Electricity Privatisation Revisited: A Commentary on the Case for New Initiatives in India" in *Energy Policy* (Vol. 23, No.9, 1996) observes that electricity privatisation in India is without strategy since this decision is imposed from outside (IMF/ WB) which resulted in not even achieving the main purpose of attracting capital. The main constraint is the non-commercial nature of the state electricity boards with a political pricing for agriculture thrust on them. Politicians are interested in generation privatisation because they would be bringing power; it is the future generations of consumers who would be paying for it. But they are not interested in distribution privatisation for the whole state because that would deprive them of a potent tool of patronage. Agriculture in India is highly subsidised by most of the states and hence there have been political unwillingness to privatise the distribution. The author rightly explained that Orissa was perhaps chosen carefully since it had a low agricultural load of about 8.7% in contrast to say Andhra Pradesh that had 34% agricultural load. Secondly, the people of Orissa were mild mannered; so resistance to reforms was not significant. Regarding privatisation of distribution, political willingness would be there to privatise the distribution in cities, but not in rural areas. This would leave two different market segments, one, high cost good quality commercial power for the cities and

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another low cost, poor quality social electricity for rural areas possibly domestic consumers and agriculture.

The paper "Indian Wind Energy Programme: Performance and Future Directions" in *Energy Policy* (Vol. 27, 1999) by B. Rajsekhar, F. Van Hulle, and J.C. Jansen studies the characteristics of the Indian wind energy programme while setting out the developments that have taken place so far. India with 968 MW of installed capacity (March 1998), stands fourth in the world wind energy installation ranking list with around 95% contribution being made by the private sector. This was the outcome of Government's liberalised private sector participation policy in 1992 in wind energy sector supported by policy initiatives, fiscal incentives and institutional arrangements. However, the private sector's yearly capacity additions, which peaked in 1995-96, have subsided since. The authors attribute this to the market dynamics/barriers. Major undercurrents to that effect in terms of policy, institutional and technical factors are analysed. The authors suggest new policy initiatives, which address the involved technical and commercial concerns of both the State-run utility and wind-power plant entrepreneurs to spur sustained development in the next millennium.

The article "Hydropower and Environment in India" in *Energy Policy* (Vol. 25, No. 4, 1997) by V. Ranganathan brings out the reasons why despite hydropower being cheap has not been encouraged throughout the world, especially in India. The environmental activist objection regarding submergence and related issue of resettlement along with Government's environmental decision-making process and structure that has

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several flaws are also brought out in this paper. No doubt, this hydropower project involves lot of environmental costs by way of submergence and settlement, but at the same time they also yield economic benefits. Therefore, the author opines for trade-off between economic benefits and environmental costs, which lacked on the part of the Ministry of Environment and Forest. Finally, the author calls for a middle path to be struck between environmental extremism and bureaucratic rigidity that will enable growth of hydropower generation.

The article "India's Power Sector Liberalisation: An Overview" by Antonette D'Sa, K. V. Narasimha Murthy and Amulya K. N. Reddy32 in Economic and Political Weekly (June 5, 1999) analyses the reasons for privatisation, response to private policy, problems of Independent Power Producers (IPPs) and SEBs etc. As response to this policy, generation had commenced at private plants totaling less than 2,000 MW till early 1999. The claims of IPPs that their progress has been hindered by problems such as litigation, financial arrangements, and obtaining clearances and fuel supply agreements have been highlighted. The SEBs have been burdened by power purchase agreement (PPAs) that favour the IPPs with such clauses as availability payment irrespective of plant utilisation, tariff reflecting high capital costs and return on equity, etc. are also highlighted. It has been found that the process of inviting private participation in the power sector and the problems experienced seem to have spurred on the restructuring of power sector including the setting up of Central and State Electricity Regulatory Commissions. But some of the other important problems have not been addressed properly in the policy agenda. The important among all is the corresponding

improvement in the transmission and distribution facilities along with addition to generation capacity, which may undermine the system efficiency. Also, the issues like reduction of commercial losses appear to have been ignored.

S.A. Mirza, a lawyer, in his book *Privatisation in Pakistan (1995)* has devoted a chapter on "Privatisation of Power Sector" where he describes that there was no legal backup for privatising public utility organisation like Water and Power Development Authority of (WAPDA) from the beginning. There were court cases by the provinces against the policy to privatise the power sector. Despite these, Government of Pakistan has gone a long way in privatising the power sector including WAPDA. Finally, WAPDA Act of 1958 was amended to facilitate privatisation of WAPDA and hence privatisation of power sector. It is true that there is no legal backup for privatising power sector in Pakistan. In the context of power shortage and related economic problems privatisation is definitely a panacea and for this necessary legal provision has to be made.

Parvez Hasan in his book *Pakistan's Economy at the Crossroads: Past Policies and Present Imperatives* (1998) points out the economic compulsion/economic crisis that Pakistan had faced which made it to resort to privatisation. Parvez Hasan examines the post-1988 period where the IMF and World Bank are central actors in Pakistan. He finds fault with the IMF "for repeatedly accepting an approach to fiscal adjustment in Pakistan that was not working". Also, he finds that "Pakistan might have been better off if more realistic conditionalities had been strictly implemented and access to IMF and World Bank resources had been more restricted". He criticises the World Bank "for

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excessive enthusiasm about foreign private sector involvement" in energy policy. But given the present economic situation it is not probably possible to privatise the energy sector including electricity without foreign private sector.

The article "Electricity Sector Decision Making and Performance: A Case Study in Pakistan" by M. Amjad Adil, Deepak Sharma and James Parkin\textsuperscript{35} in \textit{International R&D Conference} (Water & Energy 2001: Needs Development Utilisation, Select Papers, 1996) discusses the institutional aspects of decision making in electricity planning in Pakistan. It has been shown that decision making affects sectoral performance. Case examples are provided by two gas turbine power projects namely Gas Turbine Power Station Kot Addu and Combined Cycle Plant Guddu. Their study shows that plans for projects under consideration were not prepared using the factual data by the policy maker and while approving Kot Addu Project the aspects of natural gas availability to gas turbines were not given due considerations. The effects of using furnace oil on gas turbine units were ignored resulting in much higher maintenance costs than anticipated. They also pointed out that coordination between the key organisations involved in energy planning and implementation seems to be poor. Such practices caused crosshauling of energy, which proved to be very inefficient and costly for the country. Apart from the experience at combined cycle power stations in Pakistan the experience of other developing countries also shows that these stations have lesser availabilities and lower efficiencies than claimed for such technology.

The article, "Privatisation of Electric Power Sector in Pakistan: Some Important Issues" by Abdul Ghafoor and John Weiss36 in Pakistan Development Review (Vol. 38, No.1, Spring 1999) reviews the salient features of electric power sector in Pakistan such as structure, growth, technical performance, financial performance, economic performance, economies of scale etc. The authors point out that there are higher system losses, low financial profitability and very low total factor productivity. This below standard performance may be due to a variety of reasons. Apart from technical problems underpricing and subsidising are found to be more critical. Moreover, default payments also played a significant role in the financial crises of electric power sector. These problems led Pakistan to search for alternative policy options such as privatisation. The authors also point out the salient features of privatisation policy of electric power sector in Pakistan where generation and distribution have been opened to the private sector while transmission remains under state control. They analyse that since Pakistan is following a partial disintegration policy in case of electric power; the question of competition, political interference and other development policies will remain unanswered. It has been brought out in this article is that the incentive package for independent power producer system under the privatisation policy was so attractive that large number of private investors came forward and Pakistan is now facing the fear of a power glut. This situation led to search for an international market to export surplus electric power such as India. At the same time, they point out that since the IPPs are using only gas turbines and combine cycle power plants Pakistan might lose the benefits of economies of scale. Therefore, the authors opine that such a privatisation strategy may

not generate competitive environment needed to have an efficient electric power sector, which can lead to a cheap and high quality service. Since the importance of electric power sector in social and economic development process of a country is well recognised it is necessary to improve the performance and the environmental culture of the power sector. Finally, the authors have argued that current problem stems primarily from the institutional and organisational constraints faced by the public sector power enterprises. Properly restructuring the sector and using a variety of mechanisms to encourage greater private involvement will be necessary. The issue should not be the ownership, either public or private as implied by privatisation-based reform but rather to find an appropriate reform package based on either a public or private or mixed ownership structure that will function well in the specific environment of Pakistan.

Muhammad Iqbal Khan's article, "Power Sector Development in Pakistan and Economic Policy Issues"\(^{37}\) in the *Pakistan Development Review* (Vol.37, No.4, Winter 1998) consists of three parts. Part I reviews the power sector in Pakistan including addition in installed generation capacity over period from 1960 to 1998 along with private sector share particularly after the adoption of private power policy in 1994. Economic beneficiaries and progress of village electrification province-wise over period are also explicitly depicted. Growth of power demand, electricity production by technology type, patterns of power consumption and per capita consumption over the period 1960 to 1998 was reviewed. Part II of the paper deals with economic policy issues. It starts with the financial management problem that has resulted from internal inefficiencies and increasing financial burden due to the agreements with Independent

Power Projects. On pricing strategy, the author suggests that tariff increases should either occur after 2-4 years or there should be an annual increase according to the inflation (CPI) rate plus some mark-up. After a review of the capacity of the existing hydel plants and the potential for hydro electricity the paper provides projections of electricity consumption by 2010. Finally the paper concludes with a list of recommendation at Part III. The critical observation made from this paper is that the electricity mix of Pakistan. Accepting the fact that thermal plants provide sustained level of electricity one still cannot resist mentioning the fact that Pakistan has a vast potential for hydro-electricity, which has not been exploited properly over the past fifty years. Indeed, if hydel potential of Pakistan efficiently operated, it is a cheaper source of energy as compared to the electricity from thermal plants, which also need foreign exchange for furnace oil. In this regard, two questions crop up which have left unanswered in the paper. One, why has WAPDA been pursuing expensive sources of electricity over the years when cheaper sources are available? Two, when the share of hydel plant is so low, why is loadshedding exercised on the pretext that the water level has dropped in different reservoirs?

The work of Hafiz A. Pasha, Aisha Ghaus and Salman Malik titled as "The Differential Impact of Power Loadshedding on Industrial Units in Pakistan", 38 in Pakistan Journal of Applied Economics, (Vol. IX, No.2, 1990) is based on the data for which sample survey was conducted in 1984-85. The stratified random sampling procedure of 840 units- large-scale, medium-scale and small-scale units were drawn from all the four provinces of Pakistan. It has been found from the data that not only the overall level of output and value-added been affected by loadshedding, but the impact has

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been highly differentiated in character. This has meant that the burden of adjustment to energy shortage has fallen primarily on small and medium-sized distribution of income in Pakistan. It is likely; therefore, that loadshedding will exacerbate the inter-personal distribution of income in the country. As such, policy in the energy sector will, of necessity, also have to incorporate equity considerations.

B. Bowonder and V.L.V.S.S. Subha Rao's article "Energy Cooperation in South Asia: A Perspective" in (Ed.) South Asian Cooperation in Industry, Energy and Technology (1987) by Arif A Waqif39 examined the details of country-wise energy resources available in South Asia and their consumption patterns. Their paper brings out the similarity in the dimensions of energy problems among the South Asian countries. These common problems are (i) dependence upon imported oil resources; (ii) dwindling forest resources with threatening environmental implications; (iii) inadequate availability of physical exploration data and capacity to process this data; (iv) limited design and engineering technology, particularly for exploration. It focuses on the supply-demand gaps that exist with regard to the fossil fuels in all the South Asian countries. It then suggests that in view of the similarities in the nature of energy problems in South Asian countries cooperation is possible in several areas, which would help optimize the utilisation of the existing resources. Some of the areas are exchange of information, training of personnel, trade in energy resources, sharing of technology, and joint research and development, etc.

M.P. Lama’s work *Energy Cooperation in South Asia: Challenges and Potential* (1999) highlights the potential of the region in hydropower endowment and composition of installed power capacities such as hydro, thermal and nuclear in the region. The emerging challenges in this region are low energy prices, T&D losses including non-technical losses like the theft and pilferage, inefficient and technical unsound distribution network, overstaffing, poor management, weak administration, undisciplined employees and corruption both at utility and consumers level. Hence there is a call for restructuring of power sector and hence privatisation of this sector. It is understood that availability of electricity to rural South Asia will lead to rural transformation, which will retard rural-urban migration and enhance opportunities for income and employment in rural areas. In regard to pricing issue the author has rightly pointed out that private sector participation in energy generation has changed the entire landscape of debate on subsidy and pricing. Moreover, the author is of the opinion that for pricing a regulatory framework to manage the private power projects would be highly needed. In both the countries in last couple of years the terms of agreement with the Independent Power Producers have already started contentious. The delays in delivering goods by the IPPs have been so much that many of the Governments in South Asia have been asking IPPs to achieve financial closure. In fact, there has been a serious tussle between the IPPs and the Government of Pakistan in recent years; which was also seen in case of Enron projects in Maharashtra in India. In this kind of situation the author asks what lessons could be learnt from the experiences of each other in the management of power sector in the post-liberalised scenario is a critical question the South Asian Association for Regional Cooperation (SAARC) will have to

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address itself. This is particularly so as the generated power will have to be marketed across the region in the coming years. The author also outlined the approaches to cooperation in South Asia. He rightly points out that despite much of liberalised regimes for foreign investor to enter into power sector in South Asia their participation continues to remain at a dismal level basically due to physical bottlenecks and their details have been spelt out. Finally, the author outlines suggestions for facilitating cooperation in energy particularly power sector in South Asia region.

M.P. Lama and Rasul Bakhsh Rais's work *Pipelines and Powergrids for Peace*\(^1\) (2001) highlights the poor quality of energy infrastructure in India and Pakistan coupled with high transmission and distribution losses in both the countries. Inadequate revenue flows are the norm and private participation is required. They have also pointed that both India and Pakistan are heavy energy importers and face an ever-widening gap between demand and supply. In India and Pakistan there has been an increasing amount of private sector participation in energy generation activities. Reform of this sector is an ongoing process characterised by increasing investments through Independent Power Producers (IPPs) and joint ventures. They have also pointed out that there is a lot that both countries can share with each other about their experiences in this process of liberalisation. In fact, the surplus power Pakistan has produced can be exported to India. This calls for sorting out some practical problems that comes in the way especially determination of tariffs and payment mechanism. However, it is in the long interests of both the countries that they should find ways of cooperating in this field. They have also pointed out another area where India and Pakistan can co-operate in the field of energy is sharing of natural gas.

Both countries have sizeable shortfalls in natural gas, which is why the option of importing natural gas from neighbouring countries like Qatar, Iran, Bangladesh and Turkemenistan are being pursued. The recent discoveries of natural gas in the field of Tabnak in Iran has led to an added impetus to project for supplying gas to India through overland pipelines in Pakistan. The setting up of this pipeline could serve as a catalyst for more regional pipelines. This will have significant economic benefits for both India and Pakistan to set up this pipeline. Cross-border ventures between India and Pakistan, whether in the field of electricity gridlines or gas pipelines, besides benefiting both the countries economically will act as the single biggest confidence building measure between the two countries.

M.P. Lama's article "Economic Reforms and the Energy Sector in South Asia: Scope for Cross-border Power Trade" in *South Asian Survey* (Vol. 7, No. 1, 2000) reviewed the power situation in all South Asian countries. He observes that most of the South Asian countries are largely energy importers. Most of them have increasingly faced serious power shortfall because of the excess industrial and residential demand over their power-generating capacities. He has mentioned that in South Asia power generation and its supply remained a state monopoly over a long period of time. Respective governments owned, operated and regulated the power entities. According to him, this has resulted in overlapping and, to a large extent, nebulous responsibilities with the lack of accountability in terms of sector entities, operational performance and service standards and codes. The performance of utilities therefore remained far from satisfactory. Most of the power-generating units were highly dependent on the subsidies provided by the state

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and completely deprived of a competitive and efficient atmosphere. They started becoming sick. The power distribution units lacked commercial independence, suffered from an unclear definition of the corporate structure and ill-defined responsibilities. The author points out that in addition to the low tariff rate in relation to the financial requirements of the operating entities, high system loss and low collection from the consumers ultimately made these entities both defaulters and sick. This was aggravated by the decline in domestic public investment as well as development partners. All these drawbacks made the reforms inevitable. Then the author in gist analyses the power policy in major South Asian countries including India and Pakistan. In this article he has mentioned that Pakistan is likely to have surplus power which has opened the possibility of power trade between India and Pakistan. The key issue he points out to be settled before the cross-border flow is concretized are the laying of transmission line; the cost of the transmission line and its sharing mechanism; the determination of tariff; payment mechanism, including the currency to be used and the channel. His paper highlights the existing power trade between India and Bhutan and also between India and Nepal. Finally, he points out some of the suggestions for facilitating cooperation in the energy particularly power sector in South Asia.

Upali Wickramasinghe's article "Energy for Economic Development in South Asia: Present Status, Future Requirements, and Potential for Regional Cooperation" in *South Asia Economic Journal* (Vol. 2, No. 2, 2001) reviews the energy market in South Asia taking into account resources, demand conditions, market reforms and potential for regional cooperation. It mentioned that all South Asian governments have embraced

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market reforms as a necessary step in meeting energy demand. These reforms, if properly implemented, can have a snowballing effect on the investment climate and pave the way for harnessing hitherto unexploited resources. Within this process, it argues that regional cooperation can play a catalytic role in bringing diverse partners together—governments, the business community, multilateral agencies and foreign investors. Regional cooperation by itself is not a sufficient condition for harnessing resources more efficiently; a necessary condition is the market reforms in individual countries, which would remove existing bottlenecks and create a more conducive climate for attracting investment into the energy sector.

From the above review we find that there are divergent views on privatisation of power sector. As noted while, some people oppose the power reform policy, other support it. Since it is comparatively a new field of interest, there is hardly any academic in-depth study. More particularly, there is no comparative study in this sector so far as India and Pakistan are concerned. The present study intends to cover this gap.

1.5. Scope and Objectives

The study is intended to make a comparative study of privatisation of power in India and Pakistan. Motivation behind selecting India and Pakistan as the area of research is that these two countries in the South Asia region have a greater degree of similarity in economic structure than seen anywhere else in the region. They have similar socio-economic profile and problems. The change in their perception towards openness of economy was witnessed around approximately the same time i.e. slowly in the 1980s and rapidly in the 1990s. This was the result of crisis that they faced similarly during this
period. As the problems in the late 1980s or early 1990s were acute for both the countries, they adopted this policy with a greater degree in almost all areas including the power sector. The nature of problems in these areas and their solution in the form of policy prescription are similar in these two countries. Of late, the debate is ongoing on Indo-Pak cooperation in power trade. No doubt, the potential of these two countries in power generation is quite high. Since governments of both the countries are financially constrained, private sector will explore this potentiality. Given the privatisation, there will be surplus power in the region, especially in Pakistan, which can trade with India. It is expected that this power trade will improve cooperation in the region.

The present work addresses to the complex issues relating to the privatisation of power sector in India and Pakistan. In this work the word "power" and "electricity" has been used interchangeably. The time frame for the research project has been taken a decade. It has already been noted earlier that after 1990 these countries adopted the privatisation policy in a large way. Since this is a current topic where policy modifications/changes are still going on, the study restricts the time period till 2002 with the culmination of military regime in Pakistan and with its election for democracy. The following objectives have been kept in mind while analysing the power scenario in India and Pakistan.

- To review the theoretical work on privatisation of power sector in India and Pakistan;
- To examine the infrastructure policy broadly with respect to power;
- To study the programme of privatisation of both the countries, which aim to increase electricity availability with limited investments in the short period;
- To examine the policy that enables the investors to propose site, opt type of technology and propose projects based on hydro, or other renewable and/or non-conventional sources of energy such as solar, wind, geothermal, etc;

- To study the safety nets provided by the government to the private investor to purchase their power under a long-term contract covering concession period.

- To examine various incentives in the form of "Bulk Power Tariff" and "Levelized Tariff" which are applicable to different types of projects, which depends also upon capacity of the projects;

- To study the financial arrangements of the power projects as different categories of projects had different financial arrangements;

- To analyse different fiscal incentives in the form of custom duty and excise duty, which have been reduced substantially enabling import of capital goods and instruments in the power sector;

- To highlight the detailed guidelines for encouraging private sector participation in renovation and modernisation of power projects and setting up of captive power plants and mega power project policy which facilitate the establishment of large capacity plants in the private sector;

- To examine the security package ensured by the Government of India and Pakistan for performance obligations of these utilities;

- To study the prospect of power trade between India and Pakistan as a result of privatisation;

- To comparatively assess the power policy of both the countries;

- To examine impact of policy measures on the inflow of private capital- both foreign and domestic; and

- To assess the long-term impact of privatisation of power sector on socio-economic indicators like employment, rural electrification etc. and short-term impact like reduction in transmission and distribution (T&D) losses, increase in plant load factor (PLF), proper billing and revenue collection, reduction in frequent power failure etc.
1.6. Hypotheses

The study attempts to test the following hypotheses:

I. Economic policy in general, and privatisation of power sector in particular, which gave stress to the private sector investment in India and Pakistan had been promoted due to the poor performance of the public sector, budget deficit and the balance of payments problems, and resource crunch.

II. Given the attractive policy packages, political stability in the countries will attract more foreign investment.

III. Privatisation in these countries was in a large measure, the result of the conditionalities by donor agencies such as WB, IMF, and ADB.

IV. The likely long-term impact of privatisation of power sector on socio-economic indicators such as employment, rural electrification and public welfare are positive.

V. The likely short-term impact of privatisation of power sector is reduction in T&D losses, increase in plant load factor, proper billing and revenue collection, reduction in frequent power failure (shortage / disruption) resulting increase in production in overall economy.

1.7. Sources and Methodology

The source for this study consists of both the primary as well as the secondary sources of these countries. Primary sources consist of Government of India publications of various Five Year Plans. Economic Surveys during this period will be consulted. Annual Reports of Department of Power, Planning Commission, Reports of Central Electricity Authority (CEA), Parliamentary Amendment enabling privatisation of power sector have been consulted. Likewise, primary sources for Pakistan has been Government...
of Pakistan publications of various Five Year Plans as well as Pakistan Economic Surveys covering this period. Reports of WAPDA, KESC, Ministry of Water and Power etc. have been consulted. Reports of the World Bank on the power sector reform of India and Pakistan have been consulted. The study also relies on secondary sources like books, articles in periodicals and press clippings.

The proposed study is an analytical as well as empirical in nature. Some of the mathematical indices like percentage and growth rate analysis have been used to ascertain the nature of change. For example, percentage has been used in the composition of the type of electricity such as hydro, thermal and nuclear and ownership pattern i.e. private and public in the wake of privatisation as compared to the preceding period. The compound growth in the electricity generation and installed capacity for different types of electricity over period for both the countries has been ascertained. Graphical representation like pie diagram and bar diagram has also been used wherever required.

1.8. Chapterisation

Apart from the introductory chapter, there are another four chapters in this project. Chapter II entitled "Power Sector Development in Historical Perspective" in brief touches upon the economic history, strategies of development and dynamics of economic policy formulation since 1947 in India and Pakistan. It also highlights the power profile (historical) of both the countries concerning installed capacity, production, demand-supply scenario, etc. prior to 1990s along with the then power policy.

Chapter III entitled "Privatisation of Power Sector - the Current Scenario" discusses the new power policy adopted to boost the private initiative for both the
countries in 1990s. It deals with privatisation effort, which continued throughout 1990s. It analyses the policies such as research and modernisation, bulk power tariff, fiscal policies, financial incentives, trade policy (custom and excise duty), mega power project policy, captive power policy, hydel policy, power purchase agreement, financial arrangements, safety-nets intending to provide incentives to the private sector to build power projects. Privatisation of distribution of electricity, which is central to the success of privatisation of power sector, has also been discussed. Each of the policy has been examined separately and compared for both the countries.

Chapter IV is titled as "Private Sector Response to Current Power Policy". Here the private sector's enthusiastic response to the government policy initiative has been discussed. The impact of this policy in installing generating capacity, generation of electricity, reducing T&D losses, increase in plant load factor (PLF), proper billing etc. has been assessed. The impact of this policy on social sectors like rural electrification and employment, have been highlighted for both the countries. Despite some of the positive response as a result of power policy, the power sector in both the countries still was facing some of the constraints. These constraints are bought out in this chapter. Another important part of this chapter is the Indo-Pak Cooperation in Power Trade. The highlights of the portion are the potentiality of these two countries in power generation, which is quite high. It is expected that since Governments of both the countries are financially constrained, private sector will explore this potentiality. Given the privatisation, there will be surplus power in the region, especially with Pakistan, which can be sold to India. As a result of trade, the possibility of cooperation will improve in the region. Prospect of the power trade between India and Pakistan has also been
highlighted. Each and every aspect of the response of the private sector and their constraints have been examined separately and compared for both the countries.

Last but not the least, Chapter V is the conclusion, which summarises the major findings of the study. Some of the policy implications and validity of hypotheses have also been highlighted.