

## Sectoral Impact of World Bank Loans to India in the Pre and Early Liberalisation Period: An Assessment of Agriculture, Social and Power Sectors

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**Abstract.** India's relations with the World Bank can be traced back to the latter's origin. India was one of the 17 countries, prepared the agenda for the Bretton Woods Conference (June 1944). It was also one of the 44 countries which signed the final agreement for the establishment of the Bank. As the Bank operates in India through many kinds of projects, the country obviously offers an experimental ground for learning lessons and getting insights. In the mid of 20<sup>th</sup> century India assisted the World Bank, by facilitating it to study various problems in sectors like agricultural, social and power sectors to learn and, to "increase its understanding of the fundamental interactions of agriculture, poverty alleviation, and environment development efforts". Based on these studies World Bank started to suggest policy prescriptions to various problems in these sectors and subsequently what was emerged as and conditionalities based funding. The article provides an insight understanding of the impact of these loans in general and in Agriculture, Social and Power sectors in particular. It confines till the middle of 1990's from when the actual liberalization period started before engaging the country to a rapid economic growth.

**Keywords.** World Bank and India, Economic policy, Adjustment, Macro economy, Agricultural sector, Social sector, Power sector.

**JEL.** A10, E20, H50, N40, O12.

### 1. Introduction

Policy-based lending and policy conditionality are two sides of the same coin. The first importance of adjustment lending is that the country has to undertake reforms even though if these are costly or there will be a specific time before which the benefits of results come through. In both ways the country requires support over the reform process and this support will include the benefits of reducing payment pressures and allowing debt service (Gilbert & Vines, 2000). On the other hand, aid conditionality on the part of multilateral organizations dominated by the rich countries has been seen as 'neo-colonialism', imposition of western values and ideology on developing countries (Gilbert & Vines, 2000).

Economic theory suggests that a benevolent government should adopt the best policies without external coercion. If a potentially beneficial reform is too costly, the government will rationally choose not to implement it. "The central political dilemma of reform is that though significant benefits may accrue to society as a whole, policy adjustment involves significant start up costs and the reduction of rents to particular groups (Hoggard & Kauffman, 1992).

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## Journal of Economics Bibliography

If the governments are required to adopt policies or reforms, one of the following conditions holds (Gilbert & Vines, 2000).

The multilateral agency can reduce the costs of adjustment, for example, by lowering interest rates or increase the benefits of reform through its superior knowledge and experience. Aid conditionality can allow governments to pre-commit and thereby avoiding time-consistency problems. They can also, to a more limited extent, commit their successors. The agency can make government to adopt reforms, which are in the best interests of its population, but run against the narrow interests of the governments or its clients.

The central question in the political economy of reform is why governments do not adopt policies, which are in the best interests of their people. One answer is that the model fails to accord with political realities (Bates & Kruegar, 1993). And the groups whose interests are threatened are often more organized than potential groups who would benefit from reform. Crucial sectors that might constitute the core of reform coalitions, such as small peasants and landless laborers, informal sector workers and non-traditional export industries are less well organized and must overcome significant barriers to collective action to become politically effective (Hoggard & Kauffman, 1992). These considerations may be broadened by electoral cycles. In this kind of environment, policy conditionally may be seen as strengthening the hand of the pro-reform groups. Further, strategic considerations and support from developed countries confer governments with a degree of monopoly power in enforcing of reforms. Only a few countries have sufficient monopoly power to be able to get good amount, more normally, adjustment reform offers 'stringent reform for a modest amount of financing' (Kauler, 1990). The political economy perception is that the frequent failure of governments to adopt beneficial policies are due to the fact that the economic status quo reinforces the political interests which is in its interest (Gilbert & Vines, 2000).

### 2. World Bank Loan and Agricultural Sector

If we are studying the World Bank loans to Indian agriculture, we will have to look at its lending and policy conditionalities right since the Green Revolution era of 1960s. India was the world's second largest cereal importer in 1967, and by the end of 1979 it produced enough food to feed its population (Catherine, 1996). According to the World Bank's spokesman, "India can feed itself" and "... is a tribute to sensible government policies as well as assistance from development agencies such as the World Bank". But most of surplus production emanating from the Green Revolution is exported and not consumed by the country's malnourished millions. In testimony to a committee of the Canadian parliament in 1992, Kothari, director of the New Delhi based Independent research centre Lokayan, said, "in terms of aggregate numbers the country has become self sufficient in its food production. There has been an increase in cash crop production. There has been an increase in the food piles and food stocks of the country. But there has been a decline in the production of pulses, which is the basic protein for a large number of people lining in the rural areas. There has been a decline in crops grown for local consumption" (Catherine, 1996).

Two independent scientists, Lele and Bumb, credit the Green Revolution with having increased food production, but warn that its benefits have not spread to the poor. Clearly much remains to be done to ensure that South Asia's 300 million poor do not have to go to bed hungry, and create adequate employment and income to buy the increased food supplied by the Green Revolution. Lele and Bumb also list the problems caused by the policies and institutions introduced to propel the Green Revolution. They state that "excessive use of chemicals, the peaking in

## Journal of Economics Bibliography

yields, increased salinization, silting of dams, water logging, interregional disparities, and mounting agricultural subsidies” (Lele & Bumb, 1994), could lead to disastrous situations.

In recent years, the institutions that so far promoted the Green Revolution most vigorously have concluded that many of the farming techniques they induced Third World farmers to adopt have in fact been counter productive. In 1993, the then World Bank Vice president Visvanathan Rajgopalan, also the chairman of the Consultative Group for International Agricultural Research (CGIAR which is financed by World Bank) observed, “the research over the last four or five years has shown that continuous application of fertilizers and pesticides does not lead to a continuous increase in yield. Infact, some decline has been noted” (Catherine, 1996). Although we can't say that the World Bank loans and conditionality attached the main factor in improving the India economic growth, the poor growth of which was slow during the 1950s improved substantially in 1970s averaging about 3.5 percent. It showed further signs of considerable improvement in the 1980s with the GDP growth accelerating to 5.9 percent (Rangarajan, 2000).

### 3. Macro Economic Impact

During the tragic economic scenario in the beginning of 1990s World Bank initiated Structural Adjustment Programme lending to India. After this programme was implemented the growth registered 6.5 percent during 1992-93 to 1996-97. Significantly the high growth rate of the economy has been accompanied by an impressive performance of some of the macro economic parameters of the economy (Rangarajan, 2000). On the resources side, improvement in the domestic savings rate constitute the most critical element of the effort to accelerate growth. From an average of around 20 percent in the 1980s, the savings rate reached 25.2 percent in 1995-96. This rise helped in sustaining an investment rate of 27 percent in 1995-96, with a net resource flow from abroad of 1.8 percent of the GDP (Rangarajan, 2000).

On the internal side, the fiscal deficit of the Central Government has been brought to around five percent. Guided by tax reform, expenditure adjustment and disinvestment programmes. However, the combined fiscal deficit of the centre and the state runs over seven percent, which is relatively higher for a long run sustainability of the macro-economic condition in the economy (Rangarajan, 2000). The economy has moved into a moderate inflation range, with a decline in average rate of inflation from 13.6 percent in 1991-92 to 6.4 percent in 1996-97 and 3.6 in 1997-98. On the external side, the strengthening of external stability has been evident from a substantial reduction of current account deficit as a percentage of GDP from 3.2 percent in 1990-91 to about an average of 1.1 percent between 1991-92 and 1996-97 (Rangarajan, 2000).

### 4. Impact of Reforms on Social Sector

On the social sector, which is directly related to economic development or which faces the direct impact due to the government policies, the plan expenditure has been declined from 33.5 percentage of total expenditure during 1985-90 to 28.3 percent during 1991-97. Similarly, it declined from 6.80 percent as a percentage of total GDP to 4.8 percent. The development expenditure of social sector declined from 11.5 percent of total GDP to 8.5 percent. The capital expenditure, which was 30.1 percentage of total expenditure in 1985-90, declined to 22.7 percent in 1991-97 (Kumar, 2000).

According to the National Policy on Education, government is required to spend at least six percent of GDP on education. But even the priority sector of primary

## Journal of Economics Bibliography

education does not seem to have received significantly large allocations. If we look at the average annual growth rate of per pupil expenditure on education, we find that the elementary education recorded 6.9 percent growth rate during 1985-1990. This however, declined to 1.2 percent during 1990-96. Similarly, the secondary education witnessed five percent growth rate, in 1985-90 which came down to zero growth rate during 1990-96. The share of university education recorded 0.2 percent growth rate but declined to 4.4 percent in 1990-1996 period (Kumar, 2000).

These show that during the 1985-1990 economic reforms, not only the total allocations to education have suffered, but also the intra-sectoral allocation within the educational sector. Share of technical education in the budget expenditure on education of central government has also shown a declining trend. This share was around 22 to 29 percent during the period of 1971-91, which declined to around 18.4 percent during 1991-96 (Kumar, 2000). These trends of plan expenditures, non plan expenditures, capital expenditures, revenue expenditures in relation to the total expenditure show that during the reform period, they have not registered increase. On the other hand, they have shown a relatively declining trend (Kumar, 2000). The adverse effects on the social sector expenditures would have a long-term damage on the economy in the form of showing down of human capital formation. Even in the immediate future, reductions in non-plan expenditures would imply lower levels of maintenance of the buildings, libraries, hospitals, laboratories, equipment etc., in the social sector (Kumar, 2000).

### 5. Impact on Agriculture

Agriculture is the main occupation in rural areas, and commercial farmers benefit when food prices rise, though that benefit may have been concealed out by the higher prices charged for imported pesticides and fertilizers once the local currency is devalued. The share croppers and farmers without legal title are likely to lose their access to land if government support for export crops causes large farmers to expand production (Catherine, 1996).

The net social gain turns out to be positive when the country receives international prices for its exports. If trade liberalization enables India to obtain a higher net price for wheat exports, equivalent to the price in international market, there is a very strong impact on producer surplus as well as consumer surplus with small net social loss to the country. The free import of Soybean oil benefits consumer but the losses caused to producer are much more. However, in the case of pulses, there is a positive net social gain from free imports (Acharya & Choudhary, 2001).

According to the World Bank, agricultural sector is not consistently at the top position in its agenda during the first half of the nineties (Pellekaan, 1991). But the 1991 Country Economic Memorandum of World Bank studied the Indian agriculture and underlined the importance of agricultural policy issues and concluded that agricultural policy is in crisis. It stated that "given the importance of agricultural sector development for the adequacy, equality and sustainability of the Indian government's overall development effort, adjustments in agricultural policy deserve to be pursued with priority in the context of the broader program of stabilization and reform" (World Bank, 1991).

During the last 10 years, India has undertaken several policy changes toward liberalization of agricultural trade as a part of a broad economic reforms programme initiated in the year 1991. It had to do so also to meet its commitments as a World Trade Organization (WTO) member country. The changes involve desalination and removal of quantitative restrictions on imports and exports and gradual reduction in tariff rates. As a consequence of these changes, the volume of

## Journal of Economics Bibliography

agricultural exports and imports has increased sharply. Moreover, the share of agricultural trade in agricultural GDP has increased from about six percent in 1989 to about nine percent after 1991 economic liberalization process (World Bank, 1991). Agricultural exports and imports in the country were until 1991 strictly regulated through quantitative restriction such as quotas and licenses or channeled through some trading organizations or some combination of both (Acharya & Choudhary, 2001).

With the new trade policy initiated in 1991, three major changes occurred in agricultural export-import. Firstly, channeling of trade was abandoned so that the Government does not determine the value or nature of imports or exports, except for exports of onion and import of cereals, pulses and edible oils. Secondly, most of the quantitative restrictions on agricultural trade flows were dismantled and thirdly, import tariffs were drastically reduced (Acharya & Choudhary, 2001).

Agricultural trade is also said to be indirectly affected by some economic policy changes that took place under economic reforms initiated in 1991. Since independence, India protected its industry through Trade Policy insulating it from foreign markets. Agriculture was neglected in trade policy. It is felt that under free trade, industry prices are expected to decline and agricultural prices are expected to rise from their existing level, which would lead to more favorable terms of trade for agriculture (Gulati & Sharma, 1995).

It is felt that the impact of trade liberalization on domestic prices would, to a large extent, depend on the reduction in the aggregate measure of support to agriculture stipulated under General Agreement on Trade and Tariff (GATT). As the Uruguay round seeks to boost agricultural trade via substantial reduction in subsidies, prices in member countries are expected to move closer to international prices. This would lead to a rise in prices which are below the international level and a fall in prices where they are above international prices (Chand, 1997).

Another view is that the prices of various agricultural commodities in India are well below the international prices. This is very favorable condition for exports. The implication of this is that the liberalization will increase the exports and domestic agricultural prices (Gulati & Sharma, 1994). To be internationally competitive, India will have to increase productivity and improve efficiency. Another important aspect of prices is their volatility. The world prices have been more volatile than Indian prices. Based on this, it is assumed that dismantling trade barriers on imports would increase the volatility of Indian prices and farm incomes, and that the majority of small and marginal farmers would not be able to withstand such price shocks. Since in India an overwhelming majority of farmers are small and marginal, they by themselves are not able to take advantage of liberalization and the attractive prices available for export crops. Therefore, suggestions have been made to encourage contract-type, corporate-type farming in such areas. Alternatively, farmers cooperatives can play a major role in enabling small farmers to harness the potential of the export market (Acharya & Choudhary, 2001). Trade liberalization in agriculture is expected to encourage business-oriented agricultural activities such as the production and marketing of specialty items in the field of horticulture, floriculture, fisheries etc (Rao, 1994).

For the Green Revolution sector which has received maximum government support, freedom from restrictions and exposure of this sub-sector to market-determined prices, is expected to enable it to operate without state support. Without a long-term perspective and a strong commitment to help the under developed areas, liberalization instead of promoting growth, would only intensify the existing crises in the Indian economy (Rao & Gulati, 1994).

Trade liberalization should be coupled with government action that induces the needed structural changes in the processing in marketing sectors. Such changes will

## Journal of Economics Bibliography

require reevaluating existing financial and technical assistance mechanisms to the rural poor in order to achieve less distortionary and more efficient use of rural resources (Rao & Gulati, 1994). The dry land areas, where wages are low and poverty is widespread may benefit significantly from trade liberalization as they have a comparative advantage in horticulture and livestock products but this would require large investments in agro-processing and other infrastructure (Rao, 1992).

### 6. Livestock sector

The economic liberalization opened significant market led opportunities for the livestock sector. In between 1985 and 1992 the value of livestock sector output grew by 6 percent per annum from Rs.196 billion to Rs. 302 billion. In 1990 livestock accounted for 32 per cent of the value of agricultural output (The World Bank, 1995).

By using the indicators such as future prices and profitability and effective incentives, it is predicted that in a liberalized environment crop pattern would shift in favour of rice, wheat, chick peas and cotton, whereas crops like rapeseed, mustard and ground nut are expected to face deceleration in their area expansion (Gulati & Sharma, 1997). The liberalization of agricultural exports would shift the crop pattern towards high value crops and result in diversion of foodgrains to livestock feed. This would adversely affect the food security of vulnerable population groups. Under the economic liberalization process, food subsidies to consumers for basic cereals have fallen sharply, and this has impacted upon the nutritional intakes of the poor (Swaminathan, 1996). The removal of quantitative restrictions on imports would pave the way for the entry of the private trade into the import business, which responds to the consumer needs, but the profit motive is very strong. Removal of quantitative restrictions on private trade in regard to agricultural imports would promote competition and would benefit consumers (Acharya & Choudhary, 2001).

India's agricultural exports increased about 150 million dollars between 1988-89 and 1992-93 and started increasing after that. During the next six years, agricultural exports have more than doubled showing an increase of about \$320 million. Agricultural imports also witnessed sharp growth after 1991 economic reforms. During the 1990s levels of agricultural imports remained at less than half the level of agricultural exports. Agricultural exports comprise about 18 percent of the total exports from India during 1988/89 and increased to 20 percent during 1996-97 (Acharya & Choudhary, 2001).

In the irrigation sector, for which the World Bank has given much importance, average food grains nation-wide increased from 1.0 tons per hectare to 1.5 tons per hectare between 1980-1981 to 1995-96. Irrigation expansion has also imparted greater degree of stability to farm production. The incremental employment generated by the irrigation potential created during the Eighth Plan has been estimated by the government at 8.7 million per year. Since irrigation development forges inter-sectoral and inter-regional linkages through output growth and income flow, its employment and income impacts have powerful multiple effects. As per World Bank estimation, a 100 rupee worth of irrigation is induced to generate Rs.105 worth of additional output in manufacturing and Rs.114 in the tertiary service sector, implying an overall non-farm output multiplier of 2.19 (World Bank, 1999).

Irrigation also played an important role in poverty alleviation. From World Bank propounded Green Revolution in mid 1960s to 1994 the national average prices of rice and wheat which are the major Indian food staple, declined by 2.2 percent as 3.3 percent per annum in real terms, respectively because of the

## Journal of Economics Bibliography

increased food production. While the incidence of poverty is high as 69 percent in districts with less than ten percent of cropped area under irrigation, which covers more than 50 percent of cropped area. And just ten percent of poverty in the total poverty of India are in Punjab and Haryana, with over 70 percent of their cropped area under cultivation ([World Bank, 1999](#)).

Rural poverty, employment and wages are causally linked to the agricultural sector growth process. The policies of the growth process would have a direct impact on them but they would significantly influence the growth itself ([World Bank, 1999](#)). Generally the emphasis in credit support upon capital intensive modern technologies not only 'unemployed' workers, but also discourages adoption among the smallest, labor-intensive unskilled, and risk averse entrepreneurs. This is particularly so, if apart from scale and indivisibility, the risk equipment is experimental, or new to its environment or culture. Both employment and income distribution tend to suffer from high tech, unless very carefully selected to suit the requirements of local poverty groups or symbiotic with non-aid, labor intensive investments ([Lipton & Toye, 1990](#)).

The Public Distribution System (PDS) has been successful in reaching the staple cereals to the poor and vulnerable sections during severe droughts and other natural calamities. The subsidized distribution of food grains also contributed significantly in improving the economic access of masses to food. The dual policy of providing market support to the farmers and supplying at least a part of the requirement to consumers at reasonable prices, along with the policy of maintaining a buffer-stock for national food security, involved costs in the form of meeting the differences between the economic cost and issue prices of food grains. Due to these things the food subsidy has been increasing in absolute terms over the years from 1980-90 was Rs.650 crores to Rs.9000 crores in 1998-99 ([Lipton & Toye, 1990](#)).

The changes in cropping pattern have been taking place as a result of substitution from low productivity crops to those crops which have shown impressive performance in productivity growth. Some of these crops are paddy, wheat, maize, groundnut, rapeseed and mustard and sugarcane. Coarse cereals and pulses showed a steady decline in the area. About 58 percent increase in crop area is due to substitution effect and 42 percent is due to the expansion effect. Most of the increase in agriculture output in India during 1990s is brought by yield growth. Changes in the cropping pattern have also contributed to output growth. For example, rice production rose from 63.8 million tone in 1985-86 to 81.3 million tone during 1996-97 mainly on account of dwarf rice varieties which has risen from 25 million hectare to 43.3 million hectare of area under rice in the country. The boost in increased production is a cumulative effect of research efforts, extension of area, development of irrigation, infrastructure and enhanced use of modern inputs. Adoption of modern varieties, investment in irrigation, infrastructure and research and favorable input pricing policies appear to have lowered the unit cost mainly of rice and wheat production and benefited both consumer and producer ([Lipton & Toye, 1990](#)).

During the liberalized economic environment, the farm situation is characterized with reduction in farm labour, higher use of fertilizers and mechanization. Rural literacy was found to be an important source of growth in adoption of technology, use of modern inputs and yield. In the liberalized economic environment, efficiency and growth orientation will attract maximum attention and literacy will play a far more important role ([Lipton & Toye, 1990](#)).

After 1980s and in the decade of 1990s the per capita on the basis of agricultural growth is improving than the previous decades of 1980s. This is partly due to decelerating population pressure. But in the 1990s, the food grain output

## Journal of Economics Bibliography

was decreasing. The nutrition level of the bottom 30 percent of the poor between 1972-73 and 1993-94 slightly improved on an all India basis. Despite this improvement, however per capita calorie intake by the poor was still below the required daily allowance (Lipton & Toye, 1990). The estimates of expenditure and price elasticity of the very poor and poor generated from the household data of National Sample Survey 1993-94 are much higher for coarse cereals which accounted for only a small part of total food grains distributed under public distribution system, than those for rice and wheat (Lipton & Toye, 1990). Rural child labour has been declining since 1981 and it is estimated to be about nine million with huge variations across states. Of all child labour in India 92 percent is in the rural sector and about 80 percent is in the agricultural sector. Strategies of providing nutritional security to the poor and social safety nets created through various rural development schemes integrated or otherwise as part of the agricultural development policy have not succeeded in dissolving rural poverty in India (Lipton & Toye, 1990).

But the 1999 World Bank Rural Development Report concluded that in the 1990s reforms like the devaluation of exchange rate and relaxation of some trade regimes that improved the overall terms of trade for agricultural producers and traders of agricultural products were over regulated and the allocation of subsidies are effecting the allocations of public investments in rural areas such as roads and infrastructure. This is affecting the development adversely (Pellekan, 1999).

The success of Green Revolution increasing crop product by High Yielding Varieties (HYV) paved a way for genetically modified crops in India. The opening of the country to multinational firms has seen the establishment of the South Asian division of the Monsanto in Mumbai and a series of experienced crops testing across South India. They may well offer remarkable new yields but there may be biological implications also. Another side to this, is the patented seed, particularly if it contains the 'terminator' genes. There have been farmers' protest and fields of cotton have been burned (Shrumer-Smith, 2000).

### 7. Impact on Power Sector

Electrical power generation in India on commercial basis is a century old practice. India's first steam power plant was established in 1899 at Calcutta to meet the needs of the city. At the time of India's independence total installed electrical power generating capacity was 2300MW, including 1360MW available for public utilities. In its origin the generation of electrical power was in the hands of private companies (Khanna, 1997). World Bank insisted on tariff insulation setting from political pressures through the creation of an independent regulator with powers over licensing of service providers and tariff setting. This was further to create distribution entities run on commercial lines, which would take measures to reduce the current high level or non technical losses. These conditionalities insisted on state level restructuring of the State Electricity Boards (SEBs). The states like Haryana, Andhra Pradesh and Orissa implemented these policies by setting up an independent regulatory body. The SEB's divided the power sector generation and distribution companies (Khate, 1999). The power sector in India continues to be dominated by public undertakings. At the end of 1994-95, the SEBs operated 58 percent and the Central Public Sector Units like National Thermal Power Corporation (NTPC) generated another 37 percent and private sector another 4 percent of total generation (Bajaj, 1998).

In the transmission and distribution segment 58 percent of the capacity of lines above 440KV was with central PSUs, while the rest of the system was largely controlled by the SEBs (Bajaj, 1998). The financial performance of state PSUs has

## Journal of Economics Bibliography

been deteriorating over the years. The commercial losses of the SEBs increased from Rs.4357 crores in 1992-93 to Rs.6332 crores in 1994-95. The largest losers were the SEBs of Uttar Pradesh with Rs.1351 crores, Punjab with Rs. 945.6 crores and Gujarat Rs.845 crores taking into account the subsidy received from the respective state governments (Bajaj, 1998).

The average rate of return without subsidy in 1994-95 amounted to 13.5 percent even with subsidy. The position improved only marginally as there was a return of 9.6 percent. The negative rates of return have restricted the ability of the SEBs to make much needed additional investments in capacity addition, expand distribution and towards technological advancement and greater efficiency (Bajaj, 1998). In 1994-95 revenue as a ratio of cost constituted only 56 percent in Assam, 67 percent in Haryana, 61.34 in Punjab and 67.34 percent in Uttar Pradesh. This clearly underscores the need to revise the average tariff level in all states. Amongst the different categories of consumers, the share of Agriculture in 1994-95 was about 29 percent but agriculture contributed only 4.78 percent to the total sales revenue of the SEBs. As a result of this gap the effective subsidy for the agricultural consumers was in excess of Rs.10,000 crores in 1994-95. Of this Rs.1376 crores accrued in Gujarat, Rs.1319 crores in Maharashtra, Rs.1260 crores in Uttar Pradesh and Rs.1045 crores in Andhra Pradesh. The consequence of subsidy on this scale was to push up tariff, in particular for industrial consumers (Bajaj, 1998). According to the data available from the Ministry of Energy, the cumulative installed capacity of power generation by the end of the Seventh Five Year Plan had been placed at 643,823MW, out of which 19,110MW is contributed by hydro generation 43,913MW by thermal and 1,800MW by nuclear energy (Khanna, 1997).

Despite growth in power generation, the power sector is suffering from critical shortages. The deficit in power supply in relation to its demand had declined from 14.1 percent in 1974-75 to 10.9 percent during 1987-88. In 1993-94 there was 22 percent shortfall during the peak demand season. Capacity generation has not kept pace with the growing demand for power. According to the figures available of power shortage at peak demand of various regions during 1992-93, power deficit was increasing. In the eastern region, the power shortfall has been to the extent of 36 percent. Similarly for the western region 16.5, northern region 15.1, southern region 25, northeastern region 14.5 and all India average short fall had been 20.5 percent (Khanna, 1997). One of the main reasons identified for power shortage is extremely low plant load factor of power plants and unusually 23 percent transmission and distribution losses of almost all the electricity boards due to pilferage and theft of power (Khanna, 1997).

Power has the great importance. It is estimated that one percent increase in industries calls for two percent increase in power generation. The remedy lies in early and timely commissioning of power projects. It is a fact, even a day delay in commissioning a 200MW power plant will result in a loss of Rs.0.16 crore to power utility and a loss of about Rs.2 crores to the country's economy. Growing power demand has to be met by attracting foreign or private investment to the extent of Rs.40,000 crores to generate additional 10,000 MW, of power. Looking at a big gap in demand and supply of power, the Government of India has no alternative but to involve private sector in the generation of energy. Several leading foreign power companies like Enron, Cogentrix, Mission Energy and AES corporation and a number of Indian companies have shown keen interest in the setting up of power plants. In all forty one companies including twenty six foreign ones are prepared to make an investment of Rs. 51,986 crore, which will generate additional 19,914.5 MW.

## Journal of Economics Bibliography

But the failure of the tie up between the Hindujas and Mission Energy of USA for a 1,000 MW power station at Visakapatnam, the withdrawal of Southern Electric from the \$ 1 billion project in Orissa and World Bank's rejection of a \$900 million loan to Enron for its mega-project in Maharashtra and its scam-ridden collapse have been discouraging the private sector participation in the production of electric power (Khanna, 1997). Besides these, to attract more foreign investment into power sector, Government of India has made a number of incentives and commitments. The basic commitment is a minimum guaranteed sixteen percent return on equity based on hard currency and a cost plus consolation for the electricity generated. In some cases, power purchase agreements have been submitted to state utilities for which state electricity boards will have to enter into long term agreements to ensure the sixteen percent return payment which will be backed by the Government of India's guarantee (Khanna, 1997).

In the present context of proposed investment of the cost of a generated unit is going to be Rs.4 per unit. SEBs will have to charge Rs.5 a unit from the consumers as against current rate of 81 paise per unit. It calls for tariff revision other wise the SEBs will not come out themselves into a loss of Rs.10,000 to Rs.15,000 crores. To offset the huge amount they would have to be paid to the proposed private foreign or Indian companies under the sixteen percent guaranteed return, the tariff will have to be revised by 300 percent for consumers of all sectors including agriculture to make it economically viable (Khanna, 1997). To solve these problems and secure an average rational tariff based on cost of generation, a National Power Tariff Board at the centre and five regional Tariff Boards have been constituted. Inadequate funding had led to time and cost over runs. This was followed by diversion of funds from the transmission and distribution schemes which has led to further transmission and distribution losses, voltage fluctuations and frequent break downs (Khanna, 1997).

The proposed remedy by way of huge investment and hike in tariffs schedule is worse than the disease. If no tariff changes take place, the loss to SEBs on account of paying for such power to the private companies is going to be colossal (Khanna, 1997). The growth of electric power represents an important factor in a country's economic growth. In India despite increase in generation, there has been a void between demand and supply. An irrational tariff structure combined with increasing consumption of a fast developing economy have resulted in massive power shortages (Hans, 1986). The financial provisions of the Electricity Act deal with revenue collected in the form of tariff from sale of power, licence fee and meter rents. The expenses include those relating to maintenance and management and interest on loans while the balance can be spent on development. Rising prices and low tariff have meant increasing losses to the SEBs, which are in charge of collection of revenues. The power sector has not been able to overcome its financial problems (Hans, 1986).

The SEBs, which are supposed to be semi autonomous organizations, are not so because of political and bureaucratic pressures. Its high investment characteristic and large employment facilities make it an area of high and intense political interference and patronage of the party in power and results in the erosion of its independence character. Political involvement means subsidization of certain sectors, keeping the votes in view. Political leverage in a critical area has meant inefficiency which cannot be overcome unless these drawbacks are removed (Hans, 1986).

## Journal of Economics Bibliography

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