International Journal of Engineering Research & Management Technology ISSN: 2348-4039

Email: editor@ijermt.org November- 2014 Volume 1, Issue-6 www.ijermt.org

Cost and Benefit Analysis of Foreign Collaborated Projects in Energy Sector for India

Sunny Gupta
Assistant professor
Forte Institute of Technology
Meerut

ABSTRACT

India is a country with more than 1.25 billion people accounting for more than 17% of world's population. It is the seventh largest country in the world with total land area of 3,297,265 sq kilometers. India measures 3227 km from north to south and 2995 km from east to west. It has a land frontier of 15,220 km and coastline of 7,519 km. India has more than 28 states and 7 union territories. It faces a formidable challenge in providing adequate energy supplies to users at a reasonable cost. It is anticipated that India's nominal GDP will exceed US $ 2.2 trillion by March 2014. India's nominal GDP crossed the US $ 1.3 trillion mark in 2012-2013 which means that the annual growth rate of nominal GDP during the period is stupendous 18 percent. Thus the energy challenge is of fundamental importance. In the last six decades, India's energy use has increased 17 times and the installed electricity capacity by 85 times. In 2013, India's energy use was the fifth highest in the world. Nevertheless, India as a country suffers from significant energy poverty and pervasive electricity deficits. In recent years, India's energy consumption has been increasing at a relatively fast rate due to population growth and economic development, even though the base rate may be somewhat low. With an economy projected to grow at 8-9% per annum, rapid urbanization and improving -standards of living for millions of Indian households, the demand is likely to grow significantly. As per the estimates made in the Integrated Energy Policy Report of Planning Commission of India, 2012, if the country is to progress on the path of this sustained GDP growth rate during the next 25 years.

Key words: energy consumption, population growth, economic development

INTRODUCTION

The history of many developed countries has proved that during the early stages of their development the availability of internal resources has been seldom adequate to meet the demand of goods needed for a modern industrial economy, and advance technical expertise and know-how. It is now widely recognized that foreign collaboration, by performing the gap-filling' function in the growth process of developing countries, plays an important role in accelerating the pace of their economic development. This chapter seeks to examine the rationale of foreign collaboration in the development of Energy sectors in India. It also attempts to appraise the Government of India's policy towards foreign capital and collaboration with a view to assessing its adequacy for promoting the objective of self-reliance.

In the context of planned and spurt in industrial development in the post independence era of the country, the role of foreign financial and technical resources has always been considered significant in India as elsewhere in other developing countries. Besides providing the needed assistance in laying and strengthening the basic economic infrastructure like energy and transport which is of crucial importance to the economic development of a country, the inflow of external resources in the form of technology, finance and managerial know-how also help in speedier industrialization and increasing the level of production. Besides, the import of technology from advanced overseas

nations also help in bringing qualitative improvement in the goods manufactured and thus results in enhancing the developing countries competitive capabilities with reference to foreign markets.

India suffers from the lack of generation of internal resources sufficient to sustain the process of development. Consequently tapping of external resources for unretired pace of economic development become inevitable. The pre-independence era of India presented nearly all the characteristics of an under developed country. Prevalence of acute poverty due to chronic unemployment, heavy population pressure with lower living standards, low per capital income and low rate of capital formation, poor quality of human capita, low level of technology, poor economic organization, etc., all of which were witnessed at the advent of independence. The foremost task before our Government was, therefore, the removal of poverty and acceleration of the pace of economic development of the country. To face the almost stagnant state of economic development coupled with the above mentioned adverse factors, it was found unavoidable to fill the financial and technological gaps by inviting external resources.

The importance of foreign capital in the development of India was recognized even before the era of planning, not only because of the need to supplement the domestic capital but also because technical and managerial know-how are best secured along with foreign finance. Every developed country has had the assistance of foreign finance and technology to supplement its own meager saving in the early stages of its development. England borrowed from Holland in the seventeenth and eighteenth centuries, and in turn came to lend to almost every country of the world in the nineteenth and twentieth centuries. The United States of America, now the richest country in the world heavily relied on foreign loans and investments in the nineteenth century, and is now the major lender of the twentieth century. India is, therefore, following the well-trodden historic path in drawing upon the richer sections of the world to build up her productive capacity and augment her economic and technical assistance. Of course one may mention the case of two countries which have developed without any significant foreign capital, viz., Japan and Russia. So far as Russia's case, is concerned, she inherited an industrial base built during the period 1881-1913 with import of foreign capital particularly from France. Besides, the rate of forced domestic saving was extra-ordinarily high which can not be achieved in a democratic society like India. In the case of Japan, which could do without considerable amounts of foreign capital because of certain favorable factors which do not exist in India? Firstly, Japan had a large export surplus with the continental countries mainly because of their huge demand for Japanese silk; this enabled her to import capital goods and technical know-how required for the development programme. Secondly, most of Japan's industries were on a small scale requiring less capital and more labour which was available in plenty of extra-ordinary cheap rates. Thirdly, the rate of domestic savings was very high because of the absence of noticeable consumption among the weal their classes owing the technology and know-how generally accompany foreign investments, Japan hired foreign technicians and sent her own people abroad for training.

The need for foreign collaboration for a developing country like India arises on account of various crisis prevailing in the country such as capital scarcity, lack of foreign exchange resources, lack of technical and management skills, etc. The rate of domestic savings in India is recognisedly insufficient to sustain her development programmes. Since an overwhelming majority of the people is living on the subsistence level, any significant increase in the rate of domestic savings is not possible without lowering the standard of living below the subsistence level, which is unlikely in a democratic society. Import of foreign capital, which permits a rate of investment appreciably higher than the rate of domestic savings, is indispensable if India is to develop at a fairly rapid rate.

During the early years of their development, underdeveloped economies like India normally face the problem of foreign exchange scarcity, partly due to their needs for increased 'development imports' and 'maintenance imports' and partly due to imports of consumer goods. Given the need for imports of capital goods and technical know-how in the initial stages of economic development and low level of domestic savings together with the scarcity of foreign exchange resources to meet the rising import bills, inflow of foreign capital becomes necessary to augment her capacity to import capital goods, equipment and technical know-how desired for her speedy economic

transformation. Besides, the need for import of capital goods, development plans also generates demand for the imports of consumer's goods. This is so because development involves diversion of financial resources for the expansion of the economic infrastructure as well as for the establishment of basic industries and capital goods sector, and thus less domestic resources are available for the production of consumer goods. Besides, development programmers also increase the income of people, which in turn leads to rising demand for consumer goods. Since, domestically consumers goods are short in supply for the reason stated above, these have to be imported if the vicious circle of rise in prices is to be contained. Under these conditions a poor country like India has no alternative than to invite foreign capital for her unrewarded rapid pace of economic growth.

India, being a developing country, suffers not only from a shortage of capital but also lacks in advance technology, managerial ability, skills, etc. Foreign financial collaboration brings with it these complementary factors which are essential for the development of a country like India. Foreign investment creates an industrial atmosphere which induces domestic capital and enterprise to participate in the speedy growth of the country. Besides this, foreign investments also provide opportunities of technical training for local people, and thus promote the diffusion of technical know-how and expertise moreover, the promotion of new projects involves a good deal of risk. For want of experience and inherent risk involved in new ventures, domestic capital and entrepreneurship may not flow into certain lines of production like minerals and mineral oil. Foreign investments perform the important function of starting new lines of production and bear huge losses inherent in new ventures. If these ventures are successful, the domestic capital may also participate and reap benefits without suffering the initial losses. Further, in the initial years of economic development it is difficult to mobilize domestic savings for financing the projects of strategic economic significance, as the domestic capital market in this stage remains itself under-developed. Foreign capital, therefore, becomes essential as a timely measure to sustain the process of economic development. The wide acceptance of the foregoing importance of foreign resources is manifested in the establishment and growth of international institutions providing development funds and in the policies of governments in developing countries which encourage the inflow of public and private foreign investments.

NEED OF FOREIGN COLLABORATION IN INFRASTRUCTURAL DEVELOPMENT

An adequate and well-synchronized development of the economic infrastructure like energy and transport is of crucial importance to the economic development. It is an essential prerequisite for the balanced growth of our economy. Infrastructural facilities, in fact, determine the country's capacity to grow. Economic infrastructure or 'public overhead' is an economy's capital in the form of railways, roads, energy sectors and other public utilities in the nature of facilitative structure that promotes general economic activities within the country. Since these installations involve large gestation period, high capital-output ratio, huge initial investment, the infrastructural development can not be left to private enterprise. Hence, normally it is the responsibility of the Government. The contributions of economic infrastructure in breaking the stagnancy and paving the path for the development and expansion of economy are many and varied. Indian economy represented almost a state of stagnancy in the pre-independence era, mainly due to the lack of adequate infrastructural facilities under which an economy continuously expands. The most serious problem facing the economy was limited and partial' development of and administrative points of view. Besides being a basic condition for the economic development, establishment of an adequate infrastructure helps in generating considerable investment and thereby employment opportunities in the country. Thus, the construction of adequate infrastructure is inevitable for the accelerated pace of economic development.

RATIONALE OF FOREIGN COLLABORATION

The role of foreign collaboration is now intimately linked to development planning and most developing countries like India view their need for foreign collaboration from the standpoint of their development plans. Developed countries have even encouraged the practice of development planning as a pre-requisite for the receipt of public foreign investment. Through a variety of policy measures, India, like other developing countries, is also influencing the magnitude, composition and use of foreign resources.

In India, the need for foreign capital and technology for the influencing the magnitude, composition and use of foreign resources. In India, the need for foreign capital and technology for the rapid economic development was recognized even before the planning era was initiated. The India's economy presented a gloomy picture for making rapid strides towards her economic growth. Even India's capacity to absorb foreign capital was much lower due to a number of factors like sport ages of competitive, administrative, managerial and technical personnel's required to utilize the foreign capital, inadequate and under-developed state of economic infrastructure, particularly of such vital infrastructural ingredients of energy and fuel, transport and communication, etc. In general, the capacity to utilize the foreign resources productively will be low when there are inadequate infrastructural facilities, administrative and organizational bottlenecks, power, low geographical and occupational mobility of labor, and narrow localized market. Most of these factors, besides restricting domestic investments also limited India's capacity to absorb foreign resources. The necessity for foreign collaboration in India was identified with reference to her requirements for additional financial and technical resources to achieve the objective set forth in the successive development plans entailing greater investments than could be sustained by the level of domestic savings. This excess of developments over the domestic availability was apparently found desirable to be covered by foreign resources. It is worth mentioning that since the need for additional resources to finance the proposed development programmes is based on projections of foreign exchange earnings and foreign exchange expenditure during the plan period, the estimates for foreign capital are necessarily inexact either on account of over estimation of exports or under estimation of development and maintenance import requirements during the proposed plan period. Regardless of eras in estimating the extent of external financing for the fulfillment of plan objectives, the fundamental principle remains, the dependence on foreign resources limits the size of the plan, and hence the speedy growth of a developing economy is unlikely resorting to foreign capital and technology.

It will be deceptively simple to consider foreign capital as the residual means of financing the development plan. The full implications of foreign capital cannot be appreciated by a simple arithmetic exercise of calculating the amount of investment needed to achieve a desired growth rate, the estimation of domestic financial resources available for the diversion towards the development plan, and then desiring to cover the balance. Instead, a more comprehensive analysis considering how the inflow of foreign capital and technology relates to a great national effort to encourage the rate of growth is needed. More specifically, it should examine the differential impact of various forms of foreign capital receipts, their costs and benefits and the transfer problems.

BENEFITS FROM FOREIGN COLLABORATION

Going beyond these general comments on the need for foreign collaboration in the planned economic development of India and her absorptive capacity, we may analysis more directly the contribution of foreign capital and technology in the socio-economic transformation and development of the country. This requires us to weigh the benefits of external finance against its costs. There is a net national gain from more capital imports if the value added to output by foreign collaboration is greater than the amount appropriated by the investor, social returns exceed private returns. It foreign investment raises productivity and this increase is not wholly appropriated by the investor, the direct benefit so arising would then accrue to local factors of production in the form of higher real income to consumers by way of lower prices, and to the Government through higher tax revenue. In addition, highly substantial indirect gains through the realization of external economics are also likely to emerge from foreign investments. Besides this, inflow of foreign resources also allows a larger labor force to be employed in the country, where chronic unemployment and underemployment exists, particularly in the rural sector. If adequate infrastructure is developed, rapid industrialization is bound to take place as more foreign investments can be attracted. It has ever since independence been contended that shortage of capital is the primary limiting factor for the adequate development of the basic constituents of infrastructure like transport and power as well as for rapid industrialization and thereby for the employment of the existing surplus labor force in India. Thus foreign collaboration, by filling up the existing financial and technological gaps in India's planned economic development, would make possible more employment of surplus labor. It will also lead to a purposeful migration of labor from

rural areas to the advanced industrial sector, where wages are higher. Obviously, the inflow of foreign capital and technology would not only serve as an alternative to the migration of labour from India when outlets to the emigration of surplus labor are restricted, but also increase in marginal productivity of the newly employed. In this way, the social benefits from foreign collaboration in the development of infrastructure in general and in the development of energy sector in particular, would be greater than the quantitative benefits arising there form, and this excess should be added as a national gain.

Considering the role of energy in the rapid industrialization and is giving impacts to other economic activities, it may be visualized that some of the benefits of foreign investment also accrue to consumers. In the first instance, energy encourages the establishment of modern industries leading to an increase in the level, range and spectrum of production. Hence, foreign collaboration may benefit consumers by providing them more and more new products. Further, the development of infrastructure, particularly the development of energy is also cost-reducing. This would ultimately benefit the consumers through lower product prices. Thus, given the financial technological gaps, foreign collaboration in the development of energy sectors contributes indirectly to the increased productivity of the local factors of production and benefit consumers. Even if the entire quantifiable increase in productivity is withdrawn by the foreign investor in the form of interest, royalty, dividend, etc., the direct benefit will still continue as the Government taxes foreign profits.

The most substantial benefit from foreign collaboration will arise from external economies. From the standpoint of contributing to the development process, foreign collaboration brings to India not only capital but also technical personnel's, technological knowledge, innovations in products and production techniques, etc. and thus help to promote the diffusion of technological advance to the rest of the economy. In addition, foreign collaboration generally results in the training of labour in new skills, and the knowledge gained by three workers may spread to other parts of labour force.

Foreign assistance in the development of energy sectors, will also prove a strong stimulus to additional domestic investment. Development of transport, power and fuels would, in addition to increasing the absorptive capacity of India for more foreign investment, would also result in increased mobility of domestic resources, diversification in economic activities, diffusion of knowledge, and open avenues for increased employment opportunities for the surplus labour force and domestic resources which hitherto remained neglected. It is, therefore, desirable to seek the assistance of foreign resources for the installation of the infrastructural facilities, which are, indeed, indispensable precondition not only for the general economic progress of the country but also for attracting foreign as well as domestic resources for the rapid economic growth of India, in a big way.

POSSIBLE COSTS OF FOREIGN COLLABORATION

The foregoing effects of foreign collaboration are beneficial; they must also be qualified by possible costs to India. Against the direct and indirect gains arising from foreign collaboration in the development of energy sectors in India, import of foreign capital and technology may also possibly affect our domestic saving adversely, deteriorate the terms of trade, and create the problems of balance of payments adjustment.

In so far, as foreign investment result in higher income in the country, it should also lead to a higher level of domestic savings. This effect may be obstructed, however, by a redistribution of income away from capital, if the foreign investment reduces profits on domestic capital. Although this indirect cost of foreign collaboration should theoretically be recognized, it is unlikely to be of much consequence in practice. It is more probable that foreign capital and technology being complementary with domestic resources will give rise higher income and profits in other sectors. Obviously, foreign capital and technology employed for the development of infrastructure, particularly in energy development, is unlikely to extent any adverse effect on domestic savings, rather this would lead to increased income and profits in other sectors. However, since an increase in the marginal rate of domestic savings is of predominant importance for a self-sustaining progress of India's economic development, it is essential that the full potential from the foreign collaboration be realized through domestic measures that mobilise, as savings, a large part of the income generated by foreign capital. In view of the fact that foreign collaboration helps

in the development of energy sectors which serves as a catalyst to the rapid economic growth, it is unlikely that foreign capital may reduce profits on domestic capital and the rate of savings. Conversely, it would add to increased domestic savings.

The possible effects of foreign investment on the terms of trade are usually related to the transfer problem in terms of trade normally tend to improve with an inflow of foreign capital, then tend to worsen when there is subsequently an outflow of capital from the recipient country. Besides these transfer effects, foreign investment may also affect the terms of trade through structural changes associated with the pattern of development that results from the capital inflow. If the pattern of development associated with foreign investment involves deterioration in the commodity terms of trade, then the next gain from foreign investment will be diminished. However, foreign collaboration is unlikely to cause any substantial deterioration in the country's terms of trade, because an unfavorable shift in consumption resulting from an export bias is probably controllable through import restrictions. On the other hand, if it results from an export bias in production, it will be most likely due to private foreign direct investment in the export prices fell, thereby limiting the deterioration in the terms of trade. Moreover, if the deterioration comes through an export bias in production, it is possible that factorial and the income terms of trade might still improve even though the commodity terms worsen. It can, however, be visualized that inflow of foreign capital and technology for the development of infrastructure in general, and the energy sectors in particular, is much promising for improving India's adverse balance of trade, for the obvious reason that such public' overheads' give a big push to speedier industrial expansion.

More important than the foregoing, are the possible adverse effects of foreign collaboration upon the balance of payments. Although foreign collaboration will case the development of infrastructural projects in India, it may give rise to the problems of balance of payments adjustment. Initially, India may comfort transfer problems with the accomplishment of the real transfer of the capital, then with the need to confine the current account deficit to the capital account surplus, and subsequently with the servicing of the debt or the repatriation of the foreign capital. If the transfer mechanism does not operate rapidly and smoothly, disequilibrium will persist in the balance of payments of India as well as in that of the collaborating country. A developing country like India is particularly sensitive to a large potential deficit on current account. The problem of affecting the real transfer may, therefore, be not so much that of acquiring an import surplus on long-term capital account as that of preventing a potential deficit on current account from becoming actually realized, in other words, restraining the demand for foreign exchange within limits given by the supply of foreign exchange. Subsequently, the amount of foreign exchange required to service the foreign debts might become larger than the amount of foreign exchange being supplied by new inflows of foreign capital, the transfer mechanism will then have to create a surplus on current account equal to the items on account of the payment of interest, profits and amortization on the foreign capital.

Since the foreign capital is for development purposes, import from the lending or collaborating country frequently follows directly on the imported capital. To the extent that the capital is directly spent in the country of its origin, there is no transfer problem. If, however, the foreign investment is autonomous rather than a tied loan, only a portion of the investment is likely to induce imports directly from the collaborating country. In both of these circumstances, the problem of successfully transferring the foreign capital in the form of an export surplus from the creditor country can not be ignored.

The development of basic economic infrastructure like power, transport and ports in the recipient country facilitate the initial transfer of capital, they may at the same time create so high a demand for imports that the host country has to avoid a "transfer problem in reverse." For a developing country like India, the more crucial question posed by foreign investment is likely to be how to limit the import-surplus to the total amount of foreign capital available, rather then how to create an import - surplus in order to achieve the transfer in the first instance. This type of negative transfer problem emerges when the complementary demand of the recipient country, says India, are so strong as a consequent to infrastructural development that they give rise to an increased demand for foreign exchange that exceeds the increase in foreign exchange available from the inflow of foreign capital. This is

because the use of foreign resources for the development of energy and transport, etc., not only entail its own demand for imports, but is also likely to raise the level of domestic spending and add to inflationary pressures, thereby including additional imports. As we have already noted, the inflow of foreign capital for the development of infrastructure may stimulate domestic investment by producing investment incentives elsewhere in the economy. If this increased investment is financed by credit creation, it may cause higher demand for imports in excess of the supply of foreign exchange. Thus, when the inflow of foreign capital leads to negative transfer problem, the debtor country has to suffer a loss of international reserves, or else bears the costs or policy measures aimed at adjusting the balance of payments. External measures like input quote, tariffs and exchange restrictions may suppress the demand for imports but at the expense of productivity and efficiency. Internal disinflationary measures like higher taxation and credit tightness aimed at the elimination of the excess demand for imports are necessary, but involve the costs of reduced consumption and investment. Alternatively, the country may have to devaluate its currency and incur the costs of a possible deterioration in its terms of trade, change in income distribution, and necessary shifts of resources.

The costs of balance of payments adjustment are likely to be more pronounced when the recipient country encounters the problem of debt service. Sooner or later, the outward flow of interests, dividends and payment of the principal amount may exceed the rate of new capital inflow. When the return-flow of income in the form of interest, dividends, etc., and the amortization payments exceed the rate of new capital inflow, the country become a "mature dibtor" and confronts a transfer problem in servicing the debt. This requires the recipient country to generate an export-surplus equivalent to the net outward transfer of amortization on capital account, and the income payments on current account. This, further calls for a reallocation of resources so as to expand or replace import. To accomplish this, India may have to impose internal and external controls or devaluate currency, and the adverse effects of these measures on balance of payments adjustment, as stated in the above paragraph, must then be considered as indirect costs of foreign collaboration, to be added to the direct costs of foreign payments.
Since the development of energy sectors is the responsibility of the Government requiring sizable foreign investment to supplement the merge domestic savings available for this purpose, direct costs of foreign investment do not cause much concern in themselves. Because, a part of the increased production from the use of foreign capital can be paid abroad in interest or profits; and this is a deduction which would not be necessary if the savings are provided at home. However, it is significant to ensure that the benefit exceed the direct costs of foreign investments. In this regard, it is of prime concern that the indirect costs of foreign capital should be avoided by instituting measures for balance of payments adjustment so that sufficient foreign exchange could be found for the remittance of external service payments - To escape, or at least minimize, the foregoing indirect costs towards foreign capital, a development programme pertinent to the installation of energy sectors should give attention to the debt servicing capacity of the country. Since the development of infrastructure has a high component of government investment, the criteria for allocating capital must acknowledge the effects of foreign investment on the balance of payments. In order to provide for adequate servicing of foreign debt, it is necessary to ensure that the imported capital raise productivity sufficiently to yield an increase in real income greater than the interest and amortization charges. If this is done, the economy will have the capacity to raise the necessary funds either through a direct commercial return or an increase in the taxable capacity.

GOVERNMENT POLICY TOWARDS FOREIGN INVESTMENT & COLLABORATION

The foreign investment and collaboration policy of the Government of India was set out in the industrial Policy Resolution of April 6, 1948. This was subsequently further amplified by Prime Minister Jawaharlal Nehru's statement of foreign capital made exactly a year later in the Indian Parliament on April 6, 1949. This statement explicitly recognized foreign capital as an important supplement to domestic saving for the development of the country and for securing scientific, technical and industrial know-how. In the second Industrial Policy Resolution of 1956, when the Government adopted the 'Socialistic Pattern of Society', the basic features of the policy under study remained unchanged. For a brief period of two years, till December 1979, a few deviations were introduced

in the policy in December 1977 by the then Janata Government. However, the policy announcement of July 1980, which came in the wake of change in the government at the Centre, restored the 1956 policy in all its essentials. Thus, the Industrial Policy Resolution of 1948 as amplified in the then Prime Minister's statement of 1949 and the Industrial Policy Resolution 1956, 1980 and Apri11991 constitute the basis and lay down the framework of the Government's policy on foreign capital and collaboration.

The essence of foreign collaboration policy may be outlined as follows: (1) treatment of foreign enterprises on par with Indian enterprises, (2) freedom of current remittances and capital repatriation subject to the foreign exchange consideration, (3) working ownership and effective control in Indian hands, (4) guarantee of fair and equitable compensation to foreign investors in case of nationalization of the undertaking, and (5) progressive indianisation in employment. There was no explicit reference to import of technology because the Government did not at the time realize the need for such reference. In the course of time, the country had broadened her industrial base, the industrial structure had become diversified and many sophisticated industries had been set up. Technologically also the country had advanced, and this was true of both the pubic and private sectors. Hence there was an understandable feeling that technology should not be imported to the detriment of indigenous talent and skill. The Government of India has been following the same consistent line of approach, viz. that Indian know-how should be preferred to foreign, and should be progressively utilized. Greater care had to be exercised in obtaining foreign technology which were highly capital intensive and labor saving and which would tend to accentuate, at least in the short run, problem of unemployment. In the view of these factors, the Government of India constituted a Committee on 19th February, 1966 headed by Dr. A. Ramaswamy Mudaliar as Chairman to recommend to the Government some guidelines regarding the utilization of indigenous know-how and the type of cases in which foreign collaboration may be allowed. Following the recommendation and the Government's decision on Mudaliar Committee Report on Foreign Collaboration, a Foreign Investment Board was constituted on December 1, 1968 for screening collaboration proposals, both of private and public sectors.

Presently the Government welcomes foreign investment in desirable fields to selective capital resources and know-how for rapid industrial development. Its policy towards foreign investment in selective and aims at stimulating industrial growth through induction of advanced technology and promoting exports. Foreign capital generally is permitted in special financial services, selective entry is considered. Normal limit for foreign equity participation is 40 percent which is relax able on merits in individual cases, main considerations being technology and exports. With in broad framework of the selective policy, a process of consultation and dialogue on a continuing basis has been initiated with major capital and know-how exporting countries to identify and smoothen out bottlenecks in larger inflow of direct foreign investment. Certain liberalized facilities for investment in India have also been made available to investors from oil exporting developing countries and non-resident Indians.

Recently, Government has set-up two inter-ministerial committees, one each for Japanese and FRG investments in India, in Department of Economic Affairs. Other members are from Ministry of Industry and Ministry of External Affairs. These committees also invite representative of embassies, trade and industries of Japan and FRG, for its meeting, to deliberate on procedure and how they can be removed to improve investment climate. In the present stage of our economic development, the industrial infrastructure and technological skills that we have built up so far, the balance of payments and our aims to achieve self-reliance economic growth as soon as possible, the policy of the Government of India has become highly selective, but it may be changed according to their requirements. We are giving to preference for foreign investment in fields which require advanced technology or where critical production gaps exist or which would help expand our export potential. We are not permitting foreign investment in high profit yielding industries and where considerable indigenous technical advance has already been made.

Notwithstanding, the Government never constitute the certain criteria for foreign investment and collaboration. The flexibility in the foreign investment policy of India provided sufficient room for discretion in decision making. Due to this reason a number of government department in decision-making process regarding foreign collaboration, there always remained gap between the intention implied in the policy measures and the actual

decision. These policy 'swing' and the 'gap' between intention and implementation have been extensively studied and interpreted by research scholars in various ways. Some explaining in the context of political forces within, while other mainly to economic constraints on balance of payment reasons.

The misconceived role of foreign collaboration in expanding our exports is also evident from the Government's policy on foreign capital and collaboration. Empirical studies have demonstrated that the expected benefits of export trade expansion by encouraging unregulated inflow of capital and technology from abroad is unlikely to be significant. The stand of the India's foreign investment policy for encouragement of foreign collaboration guided by its possible export generating considerations is likely to have negative development impact. It is possible that such collaboration may lead to the development of inappropriate technology and disport the development priorities, and hence resource allocation. Conversely, the policy under review, making an explicit reference to appropriate technology, states that the Government will ensure that important area gets adequate attention. Although the policy in question has stipulated that implant research and development should be set up so that imported technology if properly adapted and assimilated, however, the first essential step towards adaptation is a proper selection among various alternatives, including local. But the policy lacks in giving adequate emphasis on a system for technological selection and appraisal in its regulatory framework. In addition, the policy for encouraging in plant research and development for adapting imported technology may be constrained by the huge initial investment on research and development in the small Indian market, unless by such policy measures as the systems of centralized technology purchase and interaction of research and development efforts.

The foreign collaboration policy of the Government of India has been oriented generally towards encouraging the inflow of foreign capital and technology on the assumption that foreign collaboration augment the foreign exchange resources for the import of capital goods and know-how, and thereby enable the country to meet its balance of payments problems. The validity of this assumption is also doubtful. Empirical studies in this respect have highlighted marked reluctance of foreign investors to commit their own corporate saving in free foreign exchange for investment in India. Foreign collaborators have managed the imports of capital goods by arranging foreign exchanges loans or by importing from rupee payment areas. This means that loan finance for the import of capital goods has added cumulatively to India's foreign liabilities, foreign collaboration has not been very useful instrument for preventing the foreign exchange problems. In the ultimate analysis, the Government of lndia's policy on Foreign Collaboration and Investment is inadequate to meet the consequence of technological dependence arising from foreign collaboration as well as it is inconsistent with the plan objectives. The policy, therefore, calls for a fresh review.

FOREIGN COLLABORATION IN PUBLIC SECTOR

Since India has opted for "Socialistic pattern of society" wherein the public sector has an increasingly important role to play in socio-economic development of the country, and that the development of basic economic infrastructure is the state responsibility, it is worthwhile to assess whether the public sector has been successful in securing better terms and conditions for the transfer of foreign financial and technological resources and thus promote the objective of self-reliance.

Obviously, the increasing involvement of the public sector, particularly in priority areas, is aimed at laying and strengthening the foundations for independent economic development and deal with the basic problem of external dependence. In this context, the development of entire energy sector-power, coal, petroleum, etc., constituting significant ingredients of the economic infrastructure, has been undertaken by the Government. Given the technological and financial gaps in the production of goods needed for the development of economic infrastructure like power and transport, import of critical input like capital and technology from developed countries was found expedient, both for public as well as for the private sectors, although the routes for the importation have been somewhat different as between the two sectors. Presently, foreign financial and technical collaboration as a quicker way to achieve the objectives has been the common form of foreign investment in India, both in private and the

public sectors. The reliance of the public sector in India has been mostly on foreign technical collaboration, and the suppliers, of technology to this sector are mostly multinational corporations

.

Given the strength of the Government and wider socioeconomic considerations it entertains, the public sector possesses a wider spectrum of choice than a profit-motivated private entrepreneur in. the selection of technology and its sources, and may thus secure better terms and condition in technology transfer. The following reasons may support this line of argument; (i) that the Government has access to better information than the private entrepreneurs about the alternative sources of technology, and hence is capable in acquiring it an better terms and conditions; and (ii) that the Government has control over important assets and income flows, the implication of which is that, it can shape and direct policy to reduce to the minimum the restrictive practices widely spread in collaboration agreements.

The present policy on foreign capital and collaboration, therefore, needs a fresh review. In this respect the present state of the country's industrial and technical advance and the national priorities, the policy needs to be modified in such a way as to reduce, if not eliminate, the technological dependence. In this context, possibilities should be explored for horizontal transfer of technology from one undertaking to another. In view of the fact that technology transfer has to be mutuality of needs of the supplying and recipient undertakings and can not be made compulsory or dictated by the Government, it is advisable to stipulate that if technology is available with any public sector undertaking there should be only a horizontal transfer of such technology to a private enterprise and that no import of technology on repetitive basis will be allowed. Besides, with a view to minimize the technological dependence, adequate research and development activities should be encouraged at national level so as to keep pace with the rapidly changing international technological advancements.

CONCLUSION

A final conclusion on whether the benefits of foreign collaboration in the development of energy sectors in India outweigh its costs can not be reached solely in quantitative terms. Although the direct benefits and costs may be capable of quantitative assessment, it is impossible to measure all the indirect benefits and costs. Qualitative considerations must, therefore, enter into any final judgment on the contribution of foreign capital and technology in the development of infrastructure like power, transport and ports in India. In spite of simply reflecting an attitude of either easy optimism or undue skepticism or doubt, the policies undertaken by the developing country should be more discriminating among the various forms and uses of foreign capital by attempting to minimize the costs of overseas investment and making the benefits outweigh the drawbacks as much as possible. To gain the greatest possible contribution from foreign capital, a development programme should incorporate policies that will stimulate a large and more stable inflow of foreign capital, attract foreign investment in its most desired form, and achieve the most effective utilization of international financing. Although specific policies in respect of foreign collaboration and capital can not be formulated here without detailed factual studies of the particular conditions in each economic sector, we can at least recognize some of the major considerations that may shape these policies.

If foreign capital does not compete with domestic investment and the country adopts other measures to reduce the cost of foreign capital, India as a developing country can undertake a more extensive development programme when a large volume of foreign investment adds to its available market supplies. India can further stimulate foreign investment by adopting policies like tax benefits, restraining inflation, providing adequate public overhead facilities and removing foreign exchange controls and quantitative restrictions.

While the volume of capital imports is influenced in maintaining a higher level of national expenditure, the allocation of the foreign capital is decisive in determining whether it contributes as much as / possible to raising the growth potentiality of India to achieve the most effective utilization of foreign investment, the national regulation of foreign capital must be undertaken in terms of the country's entire development programme-not simply on the basis of single investment projects. A programme approach, not a project approach, not a project approach, must determine the criteria for productive use of foreign capital. In this context, the use of foreign resources for the development of economic infrastructure in general and the development of economic

infrastructure in general and the development of powder projects in particular, is not only productive for the overall economic development of the country but also an inescapable precondition in this regard.

The all policy considerations most be centered on the dictum that' capital is made at home and the basic principle that 'the productivity of investment' within a single nation, is largely a matter of its external environment, it has a connection, which is usually a close connection, with the gains from trade. Since the effective utilization of foreign resources is highly dependent on the recipient country's ability and willingness to adopt complementary domestic policies, there can be no single equivalence between the amount of the foreign investment with the country and its role of development. Although the use of foreign capital in the initial stages of the country's entire development programmers in beneficial, but over the long run, development cannot be sustained with the use of foreign resources. Keeping in view the state of India's economic development at the advent of independence, low level of domestic savings and technical advance, tapping to external resource of sustain the process of development become inevitable rather a force to reckon with. Since, by and large, development of economic infrastructure is the state responsibility which calls for huge capital investment and is a pre-condition for accelerating the growth process in a capital scarce economy like India, the participation of foreign resources in this respect becomes much desirable on a whole array of reasons. So far as the forms in which foreign financial, technical and managerial resources can participate in this laudable task of structuring the infrastructural facilities in India is concerned, it is understandable that an overwhelming inflow of foreign resources has been on government-to-government basis, although private foreign investments have also contributed in the development of energy sectors in India. In the pages that follow, a detailed discussion on the contribution of 'official' and 'private' foreign resources in the development of powder resources in India has been made.

India needs to realize the vast potential of renewable energy and need to step up effort for attaining the goal of "2011 to 20 20" by 2020 i.e. 20% reduction in GHG, 11% reduction in consumption of energy by bringing about attitudinal changes, 20% share of renewable energy and 20% conservation of energy from the year 2011 till 2020. These targets are attainable and not only provide cleaner energy but also open a new field for providing employment opportunities to millions of people who are unemployed or disguised employment. This momentum then needs to be maintained so that India attains a target of having 70% renewable energy use by 2050.

REFERENCES:

1. Government of India, Ministry of Commerce Monthly Statistics of the Foreign Trade of India, Calcutta.
2. Government of India, Ministry of Commerce Department of Commercial Intelligence and Statistics, Monthly.
3. Government of India, Ministry of Finance Deptt. of Economic Affairs Foreign Trade Statistics, New Delhi, The Author, Annual.
4. Government of India, Ministry of Energy External Assistance, Annual 1964-65 to 2013-14, New Delhi, the Author.
5. Government of India, Ministry of Energy Report of the Fuel Policy Committee, New Delhi, Manager of Publication.
6. Government of India, Ministry of Petroleum and Chemicals Public Electricity Supply : All India Statistical Summary, Annual New Delhi, The Author.
7. Geological Survey of India. Annual Report, New Delhi, The Author. Coal Resources in India, Delhi Publications Division.
8. Reserve Bank of India Foreign Collaboration in Indian Industries – Second Survey Report
9. Reserve Bank of India India's Balance for Payments 1948-2013 Bombay, RBI.
10. United Nations World Economic Survey, New York, The Author.