CHAPTER 6

DISCUSSIONS

6.1 Introduction

Chapter Five has attempted a detailed analysis of data collected in the course of this research with the aim of determining the stated objectives of this research. As a result of detailed analysis, determinants of FDI in Indian Power Sector have been identified. Analysis has also highlighted impacts of FDI on Indian Power Sector. This chapter discusses all relevant observations that can be drawn from the literature review and the empirical research of this thesis and aggregates the main findings from the research results with the aim of arriving at conclusions that will underpin strategies and recommendations prescribed in chapter seven.

The economic progress of countries depends to a large extent on the opportunity of making profitable investments and accumulating capital. Foreign investment can make a valuable contribution to development. India has not received much FDI in the power sector so far and not fully exploited the potential benefits. By identifying the various factors, this study contributed to a greater understanding of the constraints and benefits, which would enable Indian power sector to attract more FDI and to benefit more from these capital inflows.

6.2 Determinants of FDI in Power Sector: An Integrative Approach

To analyze Determinants of FDI in Indian Power Sector, an integrative approach of considering macro-, micro-, and meso-economic variables was adopted. The macro-level envelops the entire economy, the micro-level denotes firms, and the meso-level
represents institutions linking the two, for example government agencies issuing investment policy to enterprises.

What distinguishes integrative FDI theory from its predecessors is that it accords more importance than previous theories to the meso-level, the sphere where macro- and micro-variables meet, and public and private sectors interact. It is in this arena that public policies are established and implemented. Thus, the meso-level is pivotal to the successful implementation of public policies. It is at the meso-level where day-to-day challenges in FDI policy implementation occur and structural rigidities are revealed. Structural rigidities may be expressed in phenomena such as corruption and bureaucracy that can be ameliorated through measures such as appropriate training and pay for public servants. Despite its importance, the meso-level, has not received the attention it deserves because theorists are not always aware of the daily challenges that developing countries encounter in implementing economic and investment reforms. At the same time policy-makers often hesitate to speak out due to local sensibilities.

Unfortunately, foreign investors encounter large variances between written and operational codes and between the law on the books and the law as perceived by regulators. Evidence suggests that many prospective foreign investors were deterred from establishing an FDI project once they begun to deal with a country’s governmental institutions because of the variance between official and unofficial business practices.

Based on the integrative school, this study has been designed as a further stepping stone toward explaining FDI in emerging economies as shown in Figure 6.1.
This study is unique as it identifies the strong association between project management process and FDI flows apart from established factors namely Effective policy and regulatory environment, Country performance and pace and sequencing of power sector reforms. Power sector projects have long gestation period coupled with capital intensity. The bureaucratic system of long list of clearances required for initiation of the project in itself acts as deterrent to the foreign investors.

(i) Effective policy and regulatory environment

Policy reforms coupled with the legislative framework provide a guiding tool for reforming developing countries. A comparative analysis of the policy and regulatory environment in the power sector in Argentina, Brazil, China, India, Mexico and Thailand
(Singh, 2006) has shown that Argentina and Brazil are almost textbook examples of reforming the power sector. The uncertainties associated with the emerging policy and regulatory environment in the sector were minimal in both cases as critical reform steps were undertaken almost simultaneously. India, China, Mexico and Thailand continue to be riddled with reform hiccups. Sharma & Vohra (2008) find that Indian approach towards power sector reforms is more haphazard than the more orderly and sensitive growth model of Singapore and Latin American economies. Respondents to our study also reinforce the same. It is useful to define an FDI strategy, and stand by the implementation of policies to achieve this strategy. Further, the credible policies and predictable regulation for the sector help in mitigating risk for investors.

(ii) Country performance

Investment in the power sector involves a long-term commitment from investors, who expect to repay debt and earn return over the life of the project. The stable macroeconomic policies support foreign investment inflow in developing countries (Rolfe et al., 1993). There need to be greater coordination between the centre and states to ensure that the substantial foreign interest in investing in India gets translated into actual investment flows to the state. The most successful countries have been those that have found the political will to abandon a long history of subsidized tariffs and to establish regulatory frameworks that offer credible commitments to investors. Further, good infrastructure (ports, roads, railways, water pipelines, electricity, telecommunications, etc.) helps to attract more FDI flows (ADB, 2006). In addition our study finds that (i) political will and support to reforms affect FDI flows in power sector and (ii) inflexibility in labour laws affects FDI flows in power sector.
(iii) **Pace and sequencing of power sector reforms**

Result of our study is in sync with earlier studies pointing that introducing private participation in generation without first—or at least simultaneously—undertaking deeper sectoral reforms is potentially problematic. Timing as well as sequencing of major reform steps has important bearing on the efficacy, acceptability, continuity and success of the reform process (Singh, 2006). The paradox is that without reforming distribution (which will eventually require privatisation to sustain the reforms) private investment in generation may fail (Newbery, 2005). Therefore, power distribution is recognized as the centre of economic reforms in the industry, and is a critical link in the value chain of the sector.

(iv) **Government guarantees**

Private investors will require assurances that the necessary contractual underpinnings (PPA, fuel purchase agreements, sovereign guarantees, and so on) will be honoured, that legal disputes are efficiently and fairly resolved, subject to fall-back international arbitration, and that their purchasers are credit-worthy. On the legal front, good governance involves creating institutions that resolves disputes impartially, enforces contracts, sanctions wrong doing and protects property rights (Globerman & Shapiro, 2002). Investors respond to the trade-off between risk and return. They seek returns commensurate with the risk of doing business in the power sector in developing countries. When Government went in to attract foreign investors with 100% foreign equity, the arrangement was for the IPPs to sell power to the State Electricity Boards at a unit price adjusted for cost of capital and exchange rate risks, especially since much of
the fuel used was to be imported. In case of Dabhol Power Company, the government commitments were not honoured.

Learning from the past experiences, the Indian Government has undertaken several policies and initiatives. The recent emphasis of policy and regulatory framework, as guided by the provisions of the Electricity Act, 2003, is on bringing in competition, private sector participation and independent regulation. The fresh initiative of large size UMPP (Ultra Mega Power Projects) awarded through competitive bidding to the private producers is bringing good results. The attractiveness of these projects is that it addresses the challenges of Power Purchase Agreements, Fuel Supply Agreements (coal-linkages, allotment of captive coal fields or enabling coal imports), water linkage, environment impact assessments etc. It seems government guarantees is no more a determinant of FDI. Therefore in this study the groups of Indian investors and Policy Makers & regulators have significantly different from each other due to latest developments took place in Indian Power Sector.

The previous research findings confirm government guarantees affects FDI flows in Indian Power Sector. This study finds that the government guarantees do not affect FDI flows in Indian Power Sector due to various policies and initiatives recently taken by Indian government from the past experiences. However, what is required is to have strong and independent dispute resolutions mechanisms.

**(v) Project management process**

In addition to the approval for bringing FDI in India, other clearances and approvals, such as registration of company, environment and forest clearance, permission for import of
plants and machinery, land acquisition, power and water connection, etc. may be required for starting a business in India. Problems in land acquisition have resulted in massive delays for several infrastructure projects. A recent strategy to attract private interest for Ultra Mega Power Project (UMPP) is the creation of shell companies, in a kind of reverse turnkey project where the initial groundwork such as land acquisition, coal-linkage/allotment of coal blocks, water linkage, environment impact assessments and the preparation of feasibility reports is to be performed by the shell companies prior to inviting bids (CEA, 2007). In order to maximise the benefits of deregulation, other fuel sectors should be deregulated simultaneously, so that power generators can choose the most economic fuel for power generation, and avoid the risk of stranding their assets at a later date when other fuel sectors do become more competitive due to market opening.

Proper consultation and coordination mechanisms between central and state governments need to be strengthened at both the approval and project implementation stages for proper and efficient investment attraction (ESCAP, 2002; FICCI, 2001). Otherwise this leads to time and cost overruns which affect the financial viability of the project. Foreign investors are after all interested in good returns on investment.

In spite of the global economic downturn, the Indian economy continues to exhibit envious growth. However investors will look for higher and safer returns before investing in markets where there is both country risk and commercial risk to any investment in the power sector. The findings from the first part of the study confirm much of literature on determinants of FDI in power sector (Sader, 1999; FICCI, 2001; FICCI, 2003; Kirkpatrick et al., 2006; Woodhouse, 2005; Singh, 2007; Sharma & Vohra, 2008). In particular, it reinforces that countries need to compete increasingly for FDI not only by
improving their policy and economic determinants but also by implementing pro-active investment facilitation measures that go beyond policy liberalization. Successful attraction of FDI should also be followed up by efficient facilitation and implementation of investment projects and by ensuring that local investment regulation and procedures are consistent with the central government policies, laws and regulations.

6.3 Impacts of FDI on Indian Power Sector

Attracting FDI in power sector assumes importance on account of its potential to augment sustainable economic growth. The factor analysis of second set of data identified the following five potential impacts of FDI. These five factors out of thirty variables cumulatively explain 70.734% of the variance in the original data set.

(i) Greater energy efficiency

The entire gamut of the operation in power sector will be revolving around better availability of quality power and efficient management of energy while maintaining the eco-friendliness all along. It is not possible to achieve a change in energy technology overnight, largely because technology is embodied in the existing capital stock, and that capital must be replaced in order to make new technology available. FDI must be increased, since FDI is the engine worldwide for technology transfer to developing countries. Technologies that are transferred to developing countries in connection with FDI generally tend to be more modern, energy-efficient and climate-friendly than what is locally available, perhaps lowering the business-as-usual emissions baseline (Blackman & Wu, 1999; UNCTAD, 1999; Worrell, 2001; Watson at al., 2000; Hansen, 2003; Li & Liu, 2005). In Indian context such studies are limited. All stake holders foreign investors,
policy makers, power sector experts, officials of different ministries, regulators, utilities and associations such as ASSOCHAM, FICCI, CII, etc. echo the same perception.

(ii) Adoption of global best practices

Foreign investment in power has a major advantage but one obvious disadvantage. The advantage is that it brings best practice in terms of contracting and efficiency (both in construction and operation) that puts pressure on the country’s electricity supply industry to shape up, make necessary reforms, and establish sensible regulatory bodies and tariff-setting practice. The disadvantage is that the cost of finance is likely to be high, as sovereign and regulatory risk are perceived as high (Newbery, 2005). Foreign investment in a firm significantly and positively increases the firm’s output and productivity (Sarkar & Lai, 2009). However, the competition in electricity generation is more important than privatisation or the establishment of independent regulation in bringing about performance improvements (Zhang et al., 2008). Greater environmental commitment can also bring long term corporate gains for e.g. greater efficiency and better quality of practice. Such benefits are expected due to greater FDI flows in power sector, as per our study this will pave the way forward for an eco-friendly, efficient and affordable energy scenario.

(iii) Renewable sources of energy

Renewables have indeed caught the imagination of India in the backdrop of rising domestic demand for electricity. The growing popularity and demand for renewable energy has spawned new business opportunities for investors scouting for high returns. The government policies should encourage more private participation for rapid
commercialization of Renewable Energy Technologies and in market infrastructure development. Since India generates enormous amount of Municipal solid waste/industrial waste, implementation of CDM projects for power generation is incredibly viable. Such type of projects could be very significant for the economy of the country. Apart from improving the environment, it would not only contribute sustainability to the overall power generation capacity but can also give a good return on investment. According to Fankhauser & Lavric (2003), FDI might serve as a useful, albeit incomplete, indicator of potential CDM flows. In this study it is conclusively endorsed by the stake holders. Distributed energy can provide an alternative solution for many low-demand users – at lower cost than grid extension – and a growing market niche for small types rural energy service companies.

(iv) Reduction in demand-supply gap

Planners have to make decisions regarding the best ways to bridge the gap between supply and demand. Developing countries are confronted with power scarcity, even with the present level of home electrification, with about 801 million people in the Indian subcontinent and 509 million in Africa living in unelectrified homes (IEA, 2002). Adding to their problems is the projected capital requirement, far greater than that their utilities and/or governments can meet. In fact, the financial scarcity was identified as one of the chief problems of the power sector in the cases of Brazil, Ghana, India, and Indonesia, from a study of six countries (IEI, 2003). Private sector has an important role to play in closing the investment gap in many countries, but association of private sector makes far greater demands on the quality and sophistication of governance. In view of the large quantum of finances required to install additional capacity, the optimisation of generation
from the existing generating capacity through R&M has been considered to be the best option to achieve additional generation at a much lower cost and in a shorter time. Therefore, the priority area has to be arranging financial assistance and applying CDM to make the R&M projects financially viable. The PLFs would have been higher if more of the state utilities had implemented the planned R&M of old plants. 1% increase in PLF effectively means capacity addition of approx 1000 MW (Sinha & Kumar, 2009). Balachandra (2006), from a study of the electricity scenario in the South Indian state of Karnataka, shows that private sector participation in power generation reduce demand-supply gap. In addition our study finds that (i) FDI helps in promoting innovative trading practices for electricity through power exchanges and (ii) FDI has the ability to make “Open Access” effective and efficient.

**(v) Socio-economic development**

Electricity is one of the key inputs for socio-economic development. Secure, reliable, clean and affordable energy resources are fundamental to India’s sustained economic development. Rural India still largely relies on the use of animal power and non-commercial fuels. This lack of modern energy services severely limits the level of socio-economic development. Assimilation of emerging technologies, to a greater extent will depend on the adequacy of investments. The current shortfall of investments, if continued will alter India’s energy balance. The government has to orient its policy towards attracting more FDI in this sector. FDI facilitates a range of spillover effects within the local economy including the expansion of new business start-ups to provide goods and services to the FDI Company (Mortimore, 2000). Globalization and the integration of the world economy have amplified the role of corporate social responsibilities. FDI-friendly
policies in host countries can be usefully complemented by multilateral initiatives that seek to enhance the social benefits of inward FDI by promoting responsible business conduct amongst foreign investors.

The findings of energy efficiency, best practices and demand-supply gap from the second part of the study confirm literature on potential impacts of FDI on power sector (Blackman & Wu, 1999; UNCTAD, 1999; Watson et al., 2000; Worrell, 2001; Hansen, 2003; Newbery, 2005; Li & Liu, 2005; Balachandra, 2006). While the other positive impacts derived from the second part of the study such as renewable sources of energy and socio-economic development are significant contribution.

In the ensuing chapter, the major conclusions and recommendations of this study will be summarised. The chapter also discusses the limitations of the study and makes recommendations for areas of needed future research.