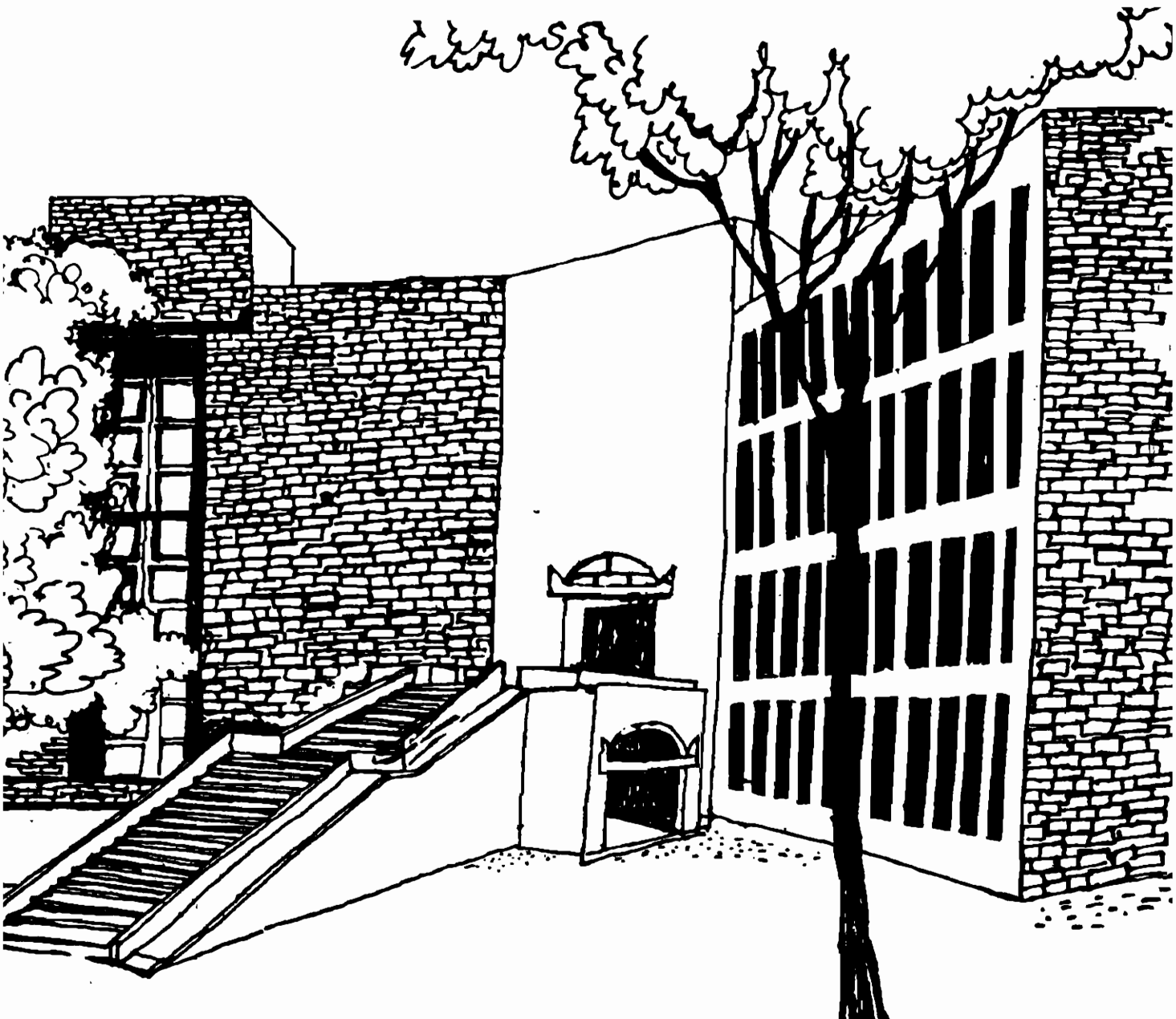




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Working Paper



**EURO INDIA COLLABORATION IN
TELECOMMUNICATIONS OPPORTUNITIES AND
ROAD BLOCKS**

By

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Euro India Collaboration in Telecommunications Opportunities and Road Blocks

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1. Introduction

'Telecommunication for all and telecommunication within the reach of all' is the focus of the new telecom policy announced in 1994 by the Government of India. The policy aims at eliminating the current waiting list and providing telephone on demand by 1997 and covering all villages by the telecom net. It also aims at offering a wide range of telecommunication services at international standards and developing the manufacturing base for telecommunication equipments to meet the domestic and export demand. The most significant aspect of the policy is that it throws open even the basic services to the private sector and introduces competition in all segments of the telecom business.

Achievement of the policy objectives would bring about a major transformation of the Indian telecom sector, characterized today by low telephone density, long waiting list, rural urban imbalance, employee agitations, internal conflicts, co-existence of old and new technologies, lower productivity, complaints about poor service and overbilling, and overall pessimism despite efforts by the Department of Telecommunications (DOT) to improve the situation in the immediate past.

1.1 The Context of the New Telecom Policy

The changes in telecom policy need to be viewed in the larger context of the economic policy reforms of the Government of India and the global changes in the telecom technology. The economic policy reforms favour direct foreign investment, joint ventures, technology transfer and competition. The changes in the telecom technologies support modernization of the existing telecom network, building new and intelligent networks, and introduction of value added services and new features in traditional telecom products. Together they have created new opportunities for foreign investment and collaborations in the telecommunication sector.

1.2 Plan of the Paper

The objective of this paper is to discuss the scope for Euro India Collaboration in the telecommunication sector in India. We try to visualize the opportunities and road blocks for the European companies as they shape their strategies in the face of competition from the Japanese and American companies in bidding for a share of the telecom pie in India. It is argued that the earlier experience of European companies in India could be an entry facilitator but they need to be more competitive and customer oriented in their strategy than before. In some cases they need to rebuild their credibility.

The plan of this paper in the subsequent sections is as follows. In section 2 we provide a background of the developments in the telecommunication sector in India. The public policy and technological context for the new telecom policy has been described in this section. The scope for collaboration is discussed in section 3. The Euro India experience of collaboration so far is discussed

in section 4. The roadblocks are discussed in section 5. Section 6 concludes the paper with some implications for European companies.

2. Developments in the Indian Telecom Sector

2.1 Slow Initial Progress

Till 1984, the telecommunication sector was a neglected sector in India. It did not receive funds for augmenting the capacity to meet the excess demand. There was a long waiting line of customers. For example, in 1980-81 the number of telephone lines was 2,149,000 and 336,000 aspirants were in the waiting list. The quality of service was unsatisfactory. The telephone users used to resort to public demonstrations, gherao the telecommunications officials to force them to listen to their grievances. The technologies were outdated and there was resistance to change from the employees of telecom factories owned by the government. The operations of these enterprises were characterized by bureaucratic culture and conservatism.

Manufacturing, procurement and provision of telecom equipment and facilities were the monopoly of fully government owned enterprises and departmentally run telecommunication factories and offices.

The Department of Post and Telegraph held the monopoly for building the infrastructure and offering the telephone services. The postal and telecommunication services were clubbed together. This came in the way of using the telecom revenues for improving the telecom infrastructure. The surplus from the telecommunications services was used to finance the deficit of the postal services.

2.2 Changing Gears

In 1984 the Government decided to change its orientation towards the telecom sector. The principal objectives guiding the reorientation were

- * to improve the quality of telecommunication services
- * build sufficient production capabilities to provide telephone on demand by 2000 AD.

The first change in telecom policy was announced in 1984. It allowed the private sector to participate in the end user segment of the telecommunications sector thus marking the move towards greater private sector participation and competitiveness. The private sector could produce the Electronic Private Automatic Branch Exchanges (EPABX) and telephone instruments. Foreign investment, however, was not allowed at this stage. It was allowed subsequently. Import of technologies and components was centralized by the Government. The response of the private sector to the new opportunity was tremendous. In fact, excess capacity got created in both the EPABX and telephone instruments segments.

In 1985, the Post and Telegraph Department was bifurcated. To give independent attention to the development of telecommunication activities. Telecommunication received the highest attention in 1987 when it was accorded a place among the five technology missions set up by the Government of India to accelerate its development process. Telecom came to be viewed as an element of infrastructure for accelerating development.

2.3 Telecom Policy of 1994

In the context of above developments the telecom policy of 1994 was announced. The policy has created opportunities for the private sector and competition. The total investment in the sector is likely to be in the range of \$1,500 million in the next five years. The targets of the telecom policy are ambitious but they are desirable targets as their achievement would aid the process of globalization

and acceleration of the speed of development. The achievement of the target would call for collaborative effort with those who have the experience.

2.4 The Technology Context of Indian Telecom

On the telecom technology front, the Indian experience is mixed. Indian telecom technology has lagged behind the developments in the West. Only recently the government decided to phase out the mechanical and electromechanical exchanges. New transmission technologies like fibre optics and wireless have been introduced in the Indian network recently. The R&D efforts have been within the government sector. The Indian Telephone Industries (ITI), a public sector undertaking in the telecom sector, has an inhouse research and development cell to design and develop switches, transmission equipment and components. Its successes have been dominantly in the electro- mechanical context. The direction of R&D has been in favour of indigenisation and assimilation of technologies received from leading telecom companies. Recently it has taken up research projects in electronic circuit design. The Telecom Research Center (TRC) attached to the Department of Telecommunication (DOT) was engaged in improvement and product upgradation type of research and development activities. Also, it tested equipments and components for use in the network. In the recent years its efforts were engaged in developing an indigenous version of cross bar exchange. It was too late when the design was perfected. There was a technological a shift in favour of electronic technology.

In 1984 the Government of India set up the Center for Development of Telematics(C-DOT) to develop digital electronic switches. C-DoT succeeded in developing the basic switch. TRC was merged with C-DoT. Another contribution of C-DoT has been the development of a Rural Automatic Exchange (RAX) for installation in the rural areas. The technologies developed by C-DOT were transferred to the Indian Industry.

In a nutshell, the direction of R&D efforts have been towards bridging the technology gap and supporting indigenisation.

3. Scope for Collaboration

3.1 Need for Collaboration

The scope for collaboration between Indian businessmen and foreign partners in the telecommunication sector arises from the following. The opportunity for telecom investment and reaping the returns is now and quick start is the essence of entry. The Indian private sector entrants have neither the experience nor the knowledge of telecom business. The foreign partner can provide this start up. Telecom requires enormous investment and the resources available with the Indian partner are not adequate. The foreign collaborator on his side can offer both expertise and financial support needed by the Indian partner. In return he can gain access to a ready, large and growing market for services and equipments. He would also have access to large potential market for new products and services. The potential can be gazed from the fact that the telephone density is 8 per thousand persons against the world average of 100 per thousand. there is a waiting list of 2.15 million lines. 436,000 villages are yet to be covered by telecom services. The demand by 1997 is expected to be for 15.8 million lines. this is expected to increase further. The financial returns are expected to be reasonable. The liberalized policy of the Government permits repatriation. The collaborator can not enter India on his own either. As the sector has opened up recently and the government is also learning to manage liberalization he needs an Indian partner to share the political and policy risks.

3.2 Opportunities for Collaboration

3.2.1 Products and services

The prospective collaborator has options in the choice of partners and the range of products and services he could offer. Even within the erstwhile regulatory setup several private business houses

have grown in India and have diversified their product range. The foreign company can choose any of these business houses as partners. Alternatively he can choose to partner with those who entered the telecom sector in the wake of the 1984 liberalization. It may be mentioned that the policy liberalization of 1984 provided an opportunity to several new entrants who did not have any background in telecommunication or electronics. Those who faced competition and succeeded could be identified as partners.

The other choice is that of the range of products and services to offer. This spreads from the telephone instrument to exchanges. New technologies in telecommunication like fibre optics, cellular phone, and multi media create opportunities outside the plain old telephone system. New products like mobile phones, cordless phones and fibre optics can be introduced.

The telecom service sector is another opportunity area. The European companies can offer services, both basic and value added. The value added service sector has just opened up in the Indian context. With the augmentation of the telecom network the market size for value added services would increase. The market for such services has to be developed in both rural and urban segments. The European service providers can step in to offer these services. The European telecom service providers were also monopolists like the DoT and had confined their operations to meet the domestic demand. In the deregulated setup in Europe the service providers were converted into corporations asked to face competition in new services. They were also required to develop a business orientation. This has necessitated the search for opportunities in the international markets. India offers an opportunity to share their experience.

3.2.2 Scope for Investment in Joint Research and Development Projects

The European companies can think of investing in joint research projects with the existing research organization or new organizations for developing new services, upgradation of equipment and development of new technologies. In this context it can be mentioned that the European Economic Commission has taken unique steps in promoting joint R&D projects like ESPIRIT, RACE AND STAR. These projects have brought the equipment manufacturers across Europe together to work on frontier telecommunication technologies and projects. The STAR programme aims at modernizing telecom services of underdeveloped regions like Greece and Spain. Ventures similar to these joint projects can be thought of. India has created a research environment in telecommunications earlier through the telecom research center and later through C-DoT. It is not necessary that investment opportunities be explored only with these government organizations. Opportunities could also be explored with technical institutions like the Indian Institutes of Technologies, engineering colleges, universities and regional laboratories.

3.2.3 Scope for Training

The demand for training in telecom technology and management would increase as the sector grows. This would create opportunities for developing and offering training jointly with telecom training institutions, engineering colleges and technology institutes, management institutes and telecom companies.

Before concluding this section it may be worth noting that the opportunities are there in both private and public sectors. The public sector would continue to play a significant role in the Indian telecom environment.

4. The Experience of Euro India Collaboration So Far

Leading European players in the telecom equipment manufacturing sector have been associated with the Indian telecom business in the past. Support from European companies has been received by

the public sector undertakings in telecom sector like ITI and Hindustan Teleprinters. In the initial period of liberation in 1984 Belgium, German, French, Italian and Swedish companies, offered technologies for producing EPABXs and telephone instruments. With subsequent liberalization Danish, German and Swedish companies collaborated with business groups in India to produce optical fibers and transmission equipment. The technology for large electronic exchanges has been provided by a French company. A German company has also planned to set up a unit to produce large exchanges. The collaborative experience so far has been mixed. There were difficulties in assimilating the technology transferred, proving the equipment supplied, delays in project implementation leading to cost over runs and at times making the redundancy of the technology transferred. There is also a perception that the European technology may not be the state of art and the Indian partners may not receive sufficient support from the European partners. In a competitive context this may be a deterrent.

Beyond the domains strictly limited to telecommunications, the Indo-French economic cooperation for example, has already been in operation in various sectors. A greater part of French technology and investment is directed to public sector companies in India.

Some of the areas which have offered good scope for joint ventures are

- Air pollution control system
- alternative energy system
- construction and public works
- electronic and data processing
- food processing and machinery
- ophthalmic glass
- transport equipment
- petro chemicals
- drugs and pharmaceutical
- oil exploration, nuclear plants.

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4.1 Mixed Company Experiences

The experience of individual European companies has been mixed. Some are encouraging and worth building on. Some others are disappointing and worth forgetting. We discuss the experience of two companies.

ALCATEL which had a 1993 turnover equivalent to US \$ 20 billion, has been a significant player in the Indian telecom scene. It was the first company to transfer electronic technology for large exchanges to a public sector undertaking in telecom sector. In the context of liberalization it has established contracts or joint ventures with other enterprises in India. An illustrative list is given in table 1.

Table 1
An Illustrative list of ALCATEL'S Business Interests in India

* Contract signed with the Indian government for technology transfer to India Telephone Industries (ITI) and direct supply of 200,000 lines of switching equipment to Department of Telecommunications (DoT).
* Contract for a turnkey project of communications for the 50 km. long gas pipeline.
* Joint venture with the Modi Group for producing data switches
* Joint venture with Punjab Communications Alcatel PCL Radio Systems
* Joint venture with BPL, an Electronic Group in Bangalore Alcatel BPL Systems India.
Source: Discussion with ALCATEL executives and company advertisements.

5.1 Uncertainty and Delays in Decision Making

Investments in Telecommunications are often of large scale and do not result in fair returns, they have high long term returns. One of the key issues is to make clear, before setting up any new joint ventures, how and according to which interests the profits and revenues of telecom operations are going to be shared. The other issues is the criteria for selection of service providers.

Latest example in the area is that of Cellular Mobile Radio Telephone Service. The Department of Telecommunications decided in 1991 to make available cellular telephones in the Indian National telephone network. Tenders were invited for licensing this service to Indian companies in four cities: Delhi, Bombay, Calcutta, and Madras. The French company France Telecom formed a joint venture with BPL, in Bangalore and obtained a license to create in Bombay a network for cellular mobile radio telephone. However, the granted license was objected by a defeated bidder and a new license was given to Hutchison company from Hong Kong. As a result, nothing was implemented regarding cellular telephones till middle of 1994. The licenses were awarded recently. Similarly, though the new telecom policy was announced in May 1994, the guidelines were not finalized till September 1994. This shows that delays and lack of transparency could be a road block in joint ventures. This would mean that the joint venture partner need to wait to get started or rely on the local partner to follow up the case to accelerate decision making.

5.2 Competition and Competitiveness

It is clear that opportunities for Euro-India cooperation in Telecom have never been as important given the liberalization process in which India has committed itself. A liberalized economy means competition. The European companies need to win the business against competition from American, Japanese and Korean companies. It is the competitiveness of European companies in respect of technology, terms of transfer, extent of financial support provided, ability to understand the heterogenous requirements of Indian telecom that would decide the success in getting partners and exploiting the opportunities. Already several foreign companies have taken a toehold and shown their interest in investing in India. The list of enthusiasts is given below.

- *Multinational Companies:* AT&T, Bell Canada, Bell South, COMSAT, DATACOM, Ericson, France Telecom, Fujitsu, Malaysia Telecom, Motorola, Nokia, NKT, Siemens, Singapore Telecom, Sprint International, Telstra, Telecom Newzealand, US West.
- *Prospective Indian partners:* Modi Group, Archana, Bharti, BPL, Escorts, Mahindra, RPG Group, Thapars, Tata, Shyam, J.K. Etc.

The Indian partners are new to the field. Hence they need considerable hand holding in the initial years. This would also mean that they would need substantial training support. Companies not able to provide this support may not gain in the short and long run.

We could summarize both challenges and roadblocks of the Euro India cooperation in Telecom for the future by the following set of questions of which most still remain to be answered or at least clarified:

- * What will be the role of the Department of Telecommunication of India in the future ? Of the Telecom commission ? Will it act as an independent department ?
- * What transformations is the Department of Telecommunication of India ready to undertake ?
- * Could Telecom Bids and Tenders be more clear and transparent?

- * Will future Telecom investments be only private ?
- * How will the profits or revenues of Telecom operations be shared in the future ?
- * Will Bureaucracy decrease in the future ? And at what pace ? What possible comparisons with other countries ?
- * How fast will foreign investors be able to act ?
- * What competitive advantage Europeans have more than Americans ? Japanese ? Koreans ?
- * What can bring European Telecom specifically to India ?
- * Are they better in cost ? In quality ? Are they faster, harder workers?
- * Telecom: Is it temporary or a real and long term opportunity ?
- * How will we split the roles between the partners ?

6. Conclusion

With the opening of the Indian telecom sector in the overall context of favorable policies for foreign direct investment, changing telecom technologies and aspirations to develop a telecom sector on par with the best in the world, new opportunities for collaboration have been created. There are opportunities for offering both new products and services. The foreign companies can even support research and development to gain advantage mutually. With their earlier association with Indian telecom sector the European companies can exploit this opportunity. They need to be clear about the long term gains and the need to build competitiveness vis- vis the Japanese and American contenders. In addition, clarity regarding the role of DOT and the public sector undertakings in the Indian telecom sector would help to initiate mutually rewarding collaborative relationships.

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