

STRATEGIC PERSPECTIVES OF FLEXIBILITY AND COMPETITIVENESS: A STUDY OF MOBILE TELECOMMUNICATION SERVICE PROVIDERS

By

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CERTIFICATE

This is to certify that the thesis entitled '**Strategic Perspectives of Flexibility and Competitiveness: A Study of Mobile Telecommunication Service Providers**' being submitted by Mr. Manoj Kumar Sharma to the Indian Institute of Technology Delhi for the award of the degree of **Doctor of Philosophy (Ph.D.)**, is a record of *bona fide* research work carried out by him. He has worked under our guidance and supervision and fulfilled the requirements for the submission of the thesis, which has attained the standard required for a Ph.D. degree of the Institute. The results presented in this thesis have not been submitted elsewhere for the award of any degree or diploma.

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Abstract

Information and communication technologies usually play an important role in determining competitiveness, employment and economic growth. They create new opportunities which, in turn, concurrently affect existing production, communication and distribution processes. In doing so, they hold the potentials to change the spatial division of labor and production within, and across, countries, sectors and enterprises. By increasing rapid access to both information and people, mobile technology, in particular, might help markets work more efficiently, by allowing consumers to seek the lowest price and enabling firms to get quotes from more suppliers. It can also reduce transactional costs and barriers to entry. Farmers can, for instance, get instant information on weather, prices and crop conditions in order to be accurately informed of the value of their produce.

Globally, telecom sector, in general, and mobile telecom sector, in particular, faces very dynamic business environment and therefore mobile telecom business is highly competitive. This characteristic of telecom sector has created an imperative emergent need of continuously scanning the business environment as well as to make response at a desired fast pace. This can be achieved by creating / innovating /attempting various options in time. Therefore, in order to be agile, this sector needs effective management of flexibilities to respond to the changes in business environment to survive and remain competitive.

Telecommunication is a major infrastructure for development of National economy and it has been recognized globally as a catalyst for competitiveness and investments. Telecommunication sector is witnessing tremendous technical and structural changes coupled with major growth. There are two key drivers of this sector: first, the increasingly flexible policy environment and second, accelerated technological advancements. The liberal policy environment is being achieved through privatization of public telecommunication service providers and through introducing competition in

this sector. The introduction of competition has changed the industry structure from monopoly to many service providers. Many authors have suggested that privatization has a positive impact on the performance of the telecommunication firms.

During the 1990s, the mobile subscriber base increased, due to the easing of spectrum constraints with the deployment of digital services that enabled greater network roll out, introduction of more licenses and the lower prices of services. Further, the telecom sector in most European and Asian countries was deregulated, usually with the introduction of competitive mobile services. Thirdly, technological and commercial development resulted in the introduction of pre-paid, roaming and text messaging, which increased the utility of mobile services. In many lower income countries, the inadequate development of fixed line infrastructure also contributed to the fast adoption of mobile services.

By drawing upon the concept of flexibility resulting into competitiveness, a conceptual model is developed to link the characteristics of Telecom Companies providing mobile service and their long-term performance together. Flexibility is viewed as freedom of choice, externally and internally and competitiveness is viewed as a threefold concept comprising the potential, the process and the performance. To remain competitive, an organization needs to satisfy the four conditions of sustainability, controllability, relativity, and dynamism. The potential dimension is addressed by both the competitive scope and the organizational capabilities of the firm, whereas the performance dimension comprises multiple indicators. Finally, this study points out the needs to further identify the flexibilities leading to competencies so that such companies can compete with the prior awareness of competitiveness in their segment through flexibility route.

New regulations have also enabled virtual operators to enter the industry and thereby increase the competition and further stimulate untraditional co-operation. The mobile telecom industry is rapidly changing and the mobile operators, network operators as well as virtual operators are facing difficult but exciting challenges. In order to meet such challenges, organizations would require flexibility driven competitiveness and the

regulators would also be required to incorporate flexibility in their regulatory mechanism.

The objectives of the study are to develop measures of various components of flexibility and competitiveness, to assess the status of flexibility and competitiveness in mobile telecommunication service providers in Indian context within the larger macro Asian perspective, to develop a model interrelating various flexibility and competitiveness indicators, to compare the flexibility and competitiveness indicators of different clusters, such as, public sector and private sector, large size and moderate size, and high performing and moderately performing firms and interpret the validated model in 'case' situations for developing implementation guidelines for incorporating flexibility in various strategic domains of organization, in particular, mobile telecommunication service providers.

Finally, this study points out the needs to further identify the flexibilities leading to competitiveness so that such companies can compete with the prior awareness of competitiveness in their segment through flexibility route. Further, this research work reported here can at best be considered as a stepping stone in establishing relationship between flexibility and competitiveness.

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