ROLE OF COMMUNICATIONS IN RURAL DEVELOPMENT AND DISPERSAL OF INDUSTRIES

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CERTIFICATE

This is to certify that the thesis entitled, 'ROLE OF COMMUNICATIONS IN RURAL DEVELOPMENT AND DISPERSAL OF INDUSTRIES', being submitted by Mr. Pramod P. Deo to the Indian Institute of Technology, Delhi, India, for the award of the degree of DOCTOR OF PHILOSOPHY, is a record of bonafide research work carried out by him under our supervision and guidance. The thesis work, in our opinion, has reached the standard, fulfilling the requirements for DOCTOR of PHILOSOPHY degree. The research report and the results presented in this thesis have not been submitted, in part or in full, to any other University or Institute, for the award of any degree or diploma.

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A B S T R A C T

A generalised model for financial analysis of telecommunications networks is proposed to evaluate commercial viability of such projects. Its application to integrated digital network for Raigad district is demonstrated. Micro-economic studies of rural telephone users and industrial subscribers in Raigad shows that the conventional methods of evaluating benefits of telephone service (in terms of estimated revenue) overlook social and economic dimensions of the service. Hence a detailed framework for social benefit cost analysis of telecommunications projects is formulated and economic evaluation of the network for Raigad secondary area is carried out in three stages: First this appraisal is limited to rural (non-industrial) exchanges sub-system. For this, a methodology is suggested for extrapolating the micro-level estimates of 'consumer surplus' accruing to the sample rural telephone users to the regional (project) level. Second, economic evaluation of industrial exchange sub-system is undertaken. In this the estimates of efficiency gains (costs) by industries in Raigad from improved telecommunications calculated on the basis of the above referred field - survey are used as a proxy for economic benefits. Finally, an integrated economic analysis of the two sub-systems of the network highlights the role of telecommunications in rural development and dispersal of industries by emphasising the "public" approach as opposed to "private" approach in project evaluation.

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