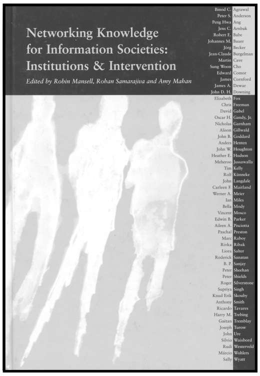
Book review

Networking Knowledge for Information Societies: institutions and intervention



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This book contains a wealth of information about the convergence of information and communication technologies, which it will bring to the information society in the 21st century. It is a magnificent tribute to Melody’s outstanding contribution to both policy and regulatory research in North America. This legacy is brought forth in this book with contributions by Melody’s colleagues and students. The editors have chosen some excellent short contributions made by more than 50 eminent economists and telecommunication professionals. From varied areas of telecommunication, IT (information technology), and broadcasting, the contributors have had the privilege of undertaking policy research under William Melody’s guidance. Articles pertaining to convergence, information societies, telecommunication, economy, and regulation are of significance to policy-makers and regulators in India.

It was Melody who first challenged AT&T’s contention that long-distance telecommunication is a natural monopoly, and therefore bar MCI from providing point-to-point long distance telecommunication links to interconnect private networks in the US. Melody, who worked with FCC (Federal Communications Commissions), made original contributions related to network costing and fixing of retail and wholesale prices by regulators globally.

The book structured is around five themes – 'Inquiry', 'Change', 'Next', 'Bias' and 'What' – which have been chosen to capsulate the central ideas behind Melody's contribution to the creation, networking, and application of knowledge about interactions between changing technologies and societies. As the contributions are varied and many, only those relevant to the Indian telecommunication sector have been discussed here.

Although Melody contributed to areas beside telecommunications – such as IT, media and broadcasting, etc. – a major part of his professional career was spent in dealing with telecommunication reforms.

Change

The third theme contains interesting articles on telecommunication reforms – for example,'Utility deregulation in the US', 'Telecom policy for information economies', and 'Toppling of natural monopoly doctrine policy and regulatory challenges of access and affordability' – and an important contribution entitled 'A competitive market approach to interconnection payments'.

Utility regulation

The contribution entitled 'Utility deregulation in the US' reviews deregulation of public utility industries. The deregulation movement started in the US on the assumption that the emerging competition would put the most efficient infrastructure in place, market power of the incumbent would not be sustainable in the long run because of the new players' entry, and network economies could be easily realized through full interconnections. However, real world experience turned out to be quite different. The decline in economic regulation has seen a parallel growth in market concentration at national and global levels. Market concentration in turn has created new opportunities for collusive pricing and investment strategies, which will adversely affect both the industry's performance and society as whole.

Trebing in his contribution points out that due to concentration of market power in telecommunications among a few players with deep pockets and a capacity to cross-subsidize one industry segment with another will result in oligopoly. Oligopoly market structure in areas such as IXCs (inter exchange carriers) in the US, and NLD (National Long

Distance) carriers in India will try to gain lead in prices. He illustrates this point with some interesting examples of collusive behaviour in the power sector where a shortage of electricity was created artificially by electricity companies in California resulting in overcharging of customers. The telecom sector too raised the prices of the long-distance carrier artificially despite the significant fall in the access fees paid by them to local phone companies in the US. Trebing states that although oligopoly facilitates investment, it increases market dominance of a few players through mergers, acquisition and a variety of alliances and joint ventures. There has been horizontal, vertical, and conglomerate mergers in electricity, telecom and natural gas in the US. The IXCs in telecom, however, have merged vertically, seeking to reach their final customers directly. All these actions have reduced the level of competition, which was the objective of deregulation in the first place. Based on the analysis of the deregulation movement during the past 20 years, the author points to the need for critical industry analysis and new policy reforms. Here the author brings out Melody's past contribution to policy analysis and research, which will be a rich source of knowledge for anyone carrying on this task. According to the author, of particular value will be Melody's effort to create meaningful cost of service standards to control cross subsidization as part of the public policy reform. Trebing highlights the urgency of both task by stating that electricity and telecom industries are in the state of crisis in the US. He briefly touches upon the Enron scandal, which has shown that market failure and remedial public intervention must be considered in holistic context.

Another interesting contribution in a similar light related to the telecom policy for information economies is the contribution by Pisciotta who points that mere deregulation is not enough. He says that the new information services provided by the so called enhance service providers, who have been classified as end users are exempt from access charges. They are permitted to use inter-state access services under local tariffs. This has skewed the interconnection service market, as some of them provide service through the Internet and are treated differently from the basic service providers. After discussing the difficulties faced by the US in regulating information, telecommunication and cable services, the author concludes that information and telecom policy should ideally be zero-based. He explains this concept by stating that the regulator should assume as if there was no public telephone voice legacy based on this assumption and develop an understanding on how the information network operates. He also makes a case incentive based on regulation. To spread information services, the author recommends a non-discriminatory interconnection for all technologies/services. This will require an intensive regulatory focus on standards of interconnection as well as swift resolution of disputes. His conclusions are quite relevant to the Indian telecom market where interconnection usage is a current topic.

Another interesting contribution relevant to the Indian market is entitled 'Policy and regulatory challenges of access and affordability' by Gillwald. Gillwald states that throughout the developing world, monopolies have failed to meet the mandates of universal and affordable service. This was due to the inability to provide quality service norms and incapability of product innovation. The first round of privatization and liberalization in many developing countries has not demonstrated significant gains related to universal access and service. Despite privatization of basic services in 1994 in the Indian telecom sector basic service operators have made insignificant contribution for raising the tele-density in rural and remote areas, as well as in providing the much needed VPTs (village public telephones). BSNL continues to provide most of the basic telephones in uneconomic areas and uneconomic planes in economic areas. Majority of private basic operators have failed to fulfill even their contractual obligation of VPTs.

Spectrum allocation

The contributions related to spectrum allocation – by Cave and Ure – are of particular relevance to Indian policy-makers. This is so because of the government's decision of a unified licensing regime for fixed services to end the impasse created by court cases between fixed and mobile operators. The first contribution entitled 'Spectrum allocation controversies' by Cave brings out the pros and cons of the two methods of frequency allocation; one based on administrative assignment and the other based on 'auctions'. Melody in his work on spectrum had identified the fundamental nature of the problem that is the inefficiency associated with the administrative method of allocating frequencies. Melody recommends administrative pricing and a combination of markets with increased flexibility for spectrum use.

The second contribution on spectrum entitled '3G auctions: a change of course' discusses the telecom industry debacle, which was the result of the European auction of 3G (third generation) mobile telephone licences. The author who is a critic of the auction believes that managers and owners of 3G companies in European countries who bid for astronomical amounts for the spectrum were incapable of working out the real estimate of the licences. This was mainly because of the uncertainty surrounding the business of 3G. The author believes that though the auctions were held in 2002 no one knew what services would be available, which of them would sell, who would buy or how the revenue would be collected. The author has given a mathematical model to determine the correct market price of the spectrum. Hopefully, this will help future operators. As a policy decision on 3G services is still pending, these two contributions on spectrum allocation and management will be of great interest to Indian policy-makers and regulators.

Interconnection arrangements

A very topical contribution is by Gabel entitled 'A competitive market approach to interconnection payments'. It will be of a great interest to TRAI (Telecom Regulatory Authority of India), which is grappling with the task of setting the correct price for interconnection under the IUC (interconnection user charges) regime. The author in the introduction points out that establishing the price for interconnection is a challenging task for regulatory commissions globally. He says that such commissions have come under pressure to adopt interconnection arrangements that set termination charges at zero. This is due to the perception that regulators in the past were unable to estimate accurate costs and, therefore, chose interconnection prices that were too high. Gabel in his contribution discusses the concept of 'bill-and-keep' where the calling party's network does not have to pay for the receiving party's network termination charges.

The author also discusses some practical constraints of interconnection arrangements based on cost and benefit of a call, involving the calling and the called party. After examining the various pricing models, Gabel concludes that the interconnection payment schemes should be based on market forces. He also recommends the 'calling party pays' principle for all types of calls instead of the even distribution between the caller and receiver. His conclusion seems to vindicate some of the recent decisions of TRAI to introduce the calling party regime for fixed to cellular calls, where the called party was required to pay for the called mobile leg. This was an exception to the calling party principle, which has been applicable to all network calls since the advent of PSTN (public switched telephone network) about 100 years ago.

Next

Section 4 entitled 'Next' contains 11 interesting contributions. These contributions deal mainly with the advent of the information society in the 1980s. Although Melody was mainly engaged in preparing the testimony for regulatory agencies during 1960–80, he was concerned with the impact of information services on the functioning of societies. Melody foresaw the profound effect availability of information through networking would have on all institutions. The contributions under this section have been made by either Melody's colleagues or students. They have brought to light the unfolding of the information society and the unequal distribution of information. This brings its own risks.

Some of the contributors are from developing countries, such as Sanatan who worked in the Caribbean region and was responsible for telecom reforms. He had worked with Melody to develop training programmes to tap the potential of information and communication technology. Like Melody, Sanatan wants equitable reform that will sustain the growth of economies in the region. Sanatan, in his article, reveals the difficulty of capacity building in small, low-income countries.

Sanjay, in his contribution, brings into sharp focus the risks developing economies like India face if they see investment in the new technologies as a panacea for all developmental problems. His article reflects the observation made by William Melody in 1985 in which he states that third world nations might face the risk of instability associated with information technology markets. Sanjay highlights the problems that could arise as a result of commercialization of scientific data. He concludes that investment in telecom infrastructure cannot serve in a straightforward way as a catalyst for development. He believes that many other measures are required.

In a similar vein, Jussawalla's contribution contrasts the potential of new technologies to enhance global information flows with the risk of the expanding digital divide. Citing China's example, she explains that the national institutions are still able to influence investment strategies. Just as Melody, in 1989, had argued that social and economic diversity would mean diversity in the institutions of regulation and market liberalization, Jussawalla shows that China and other countries in the region are seeking distinctive ways to manage their participation in the 'new economy'. Advances in the information infrastructure in these countries tend to aggravate political concerns regarding potential threat to sovereign decision making. Despite a growing view that nations can no longer enforce distinctive policies in the face of globalization, Jussawalla identifies an emergent and distinctive policy regime in China.

Bias

The fifth section entitled 'Bias' is inspired by Innis' concept who refers to bias as an emphasis on one aspect to the neglect of another. Harold Adams Innis was a Canadian political economist, an economic historian, and a communication scholar. The authors feel that Innis' work has influenced Melody and many of his colleagues. Some of the contributors, like P Preston, identified Innis' work as the starting point for the analysis of issues on information society. Preston and Comor in their contribution have highlighted the paradox of information '...more information everywhere but less knowledge; more channels for communication, but less interaction...'.

The contribution entitled 'C for convergence (and communication, content and competition)' by Wyatt is of special relevance to Indian policy-makers with regard to the communication convergence bill, which was introduced in the Indian Parliament last year. The author provides details of her interaction with Melody whom she met in 1986 while interviewing for a programme on information and communication technology. She brings to light the contribution by Melody and how he impressed upon the author the long-term economic impact of the convergence of information and communication technologies. She goes on to say how Melody focused not only on the technical aspect of convergence but rather lay emphasis on the importance of information and communication processes of economic and social reform in a country.

What

The last section entitled 'What' deals with the circulation of knowledge—from production to distribution to consumption. These aspects of knowledge economy stressed upon by Melody as early as 1977 have been highlighted by the authors in this section. Melody's analysis of these developments are closely related to regulatory reform and to his critiques of the emerging information society. He examined advertising and public service broadcasting markets where he found evidence of market dominance or practices that he argued were not in the interest of the public, and called for public policy reforms in this sector. The contributors in this section have shown concern regarding policy objectives and rationale for regulation of media industries. The contributions made by them draw upon experiences in the national contexts of Canada, India, Israel, Switzerland, the UK, and the US as well as Latin America. Silverstone calls for a fundamental re-examination of the rationale for media regulation. Smith like Silverstone emphasizes the need for a moral stance, one that acknowledges the role of the media in assisting the construction of a shared media. He points out that with the intensification of global distribution of media content facilitated by satellite and internet, media regulation and copy right protection are global and no longer the concern of natural regulates alone. Melody in his contribution on media policy had examined this issue about two decades ago and observed that television programmes produced for the international global market must be different from those produced for the domestic market.

Agarwal from India, in an interesting contribution, examines the issue of digital divide in the south Asian region, which will manifest in creating divisions in societies between those who have access to information and those who do not. He argues that policy-makers are 'indifferent' towards measures that might facilitate greater equity in the distribution of potential benefits of digital infrastructure. He calls for a vision of a distinctive Indian information society that can guide a coordinated policy action. The last contribution in this section by Turow and Ribak cautions against the tendency to treat the Internet and the World Wide Web as undifferentiated phenomena. They argue that many comparative studies oversimplify and fail to acknowledge that these media are fundamentally associated with identity formation.

Conclusion

After going through all the five themes, one can conclude that Melody made wide-scale contributions not only to telecom reforms but also to the rise of the information revolution and convergence. These have established him as one of the original contributors to policy reforms in the area of telecom information, media, and public broadcasting in the 20th century.

The editors of the book need to be congratulated on their choice of excellent contributions, which are short and interesting and provide an insight in to many global policy and regulatory issues.