

happen — whether its funds have to be raised or come from the taxpayer — these seem sensible questions to ask. Having asked them, it becomes difficult to escape the impression that they have not crossed the minds of many of our bureaucrats, whose idea of their product — even if it is supposed to be a service — often seems to be restricted to papers, briefing notes and reports, endlessly massaged into politically acceptable form, going nowhere and unlikely to change anything. There are also institutional managers more concerned with the regulations than the product, with procedure rather than achievement. To all of these, and to others who are simply interested in improving their own performance and that of their organisations, I would commend Peter Drücker's book. It should be read with healthy scepticism — not everything can be run in quite the clean, logical business-like manner he would have us believe can be achieved, and there are all sorts of messy situations that neither he nor his proxies discuss — but with a flexible mind, seeking the ideas and approaches that can be applied in situations other than those discussed directly. Some of what the book says is trite and some seems obvious, but *Managing the Non-Profit Organisation* is worth reading and thinking about.

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Telecommunications Policy for the 1990s and Beyond by *Walter G. Bolter, James W. McConnaughey and Fred J. Kelsey*
(M.E. Sharpe, London, 1990), pp. xvii + 426, \$US75.00, ISBN 0-87332-586-9.

Productivity improvement in the telecommunications industry has been a major force in post-war economic growth. This is a book about the US telecommunications industry. It covers the evolution of the industry from basic telegraphy to the multi-dimensional information technology industry of today and beyond. Topics include the transition from public to private ownership, regulation and deregulation, monopoly and competition.

Ch. 2 explores the rationale for government intervention in terms of microeconomic theory and industrial organisation. Economic models of competition: perfect competition, pure monopoly, monopolistic competition and oligopoly are comprehensively but briefly outlined. The resulting potted treatment of basic microeconomic theory will probably be off-putting to many economists. At the same time non-economists will have difficulty in coping with the economic jargon. The discussion is diagrammatic, however the diagrams are missing. Diagrams are introduced later on in discussing natural monopoly and the control of monopoly power. My impression is that the authors have got price determination under monopoly wrong. The authors would have been better advised to refer the uninitiated reader to a basic microeconomics text and to leave this chapter out. In the end this very quick and taxing survey of price theory comes up with the rather disappointing result that no one theory has emerged as the standard. This, if anything, is a damning indictment of applied economics.

Globalisation as a counterforce to antitrust laws is discussed in the very last paragraph of Chapter II. I think that this is an important point that cannot

be emphasised too much, namely that the imperatives of global competition have rendered the trade practice laws and regulations of the past obsolete. What is called for is a new economic approach to the theory of the firm operating in a global environment which takes account of strategic alliances, co-operative or jointly conducted research and the promotion of consortia comprised of industry, government and universities.

Ch. 3 focuses on the emergence of the US telecommunications system. The conflict between the goals of universal service (CSOs) and economic efficiency; between cost-based rates and universal service; between regulation and competition; between monopoly and competition, recalls the debate that has been going on in Australia over the last decade. The authors add value in raising some new issues. These are yet to be confronted in the Australian context; namely the need to regulate the behaviour of the dominant carrier in order to guarantee the survival of new entrants and thereby to prevent a relapse into monopoly. This is particularly evident in the case of the domestic airline industry where preservation of the benefits of competition may force the re-regulation of the industry.

In ch. 4 the main forces affecting the US telecommunications industry during the 1980s are discussed. These are the AT&T divestiture, technological change, and competition. Rather than exploring the policy alternatives the authors have tended to describe the different methods of regulation, providing many examples of their application. The reader is confronted with numerous court cases and the resulting complex of legal decisions. The relevance of many of these cases to the Australian situation is quite tenuous. Nevertheless certain things come through quite strongly, notably the US preference for structural solutions to the problems posed by anticompetitive cross-subsidies.

Ch. 5 focuses on technological questions. There is considerable discussion of the attributes of fibre optics versus copper wire systems. Some basic technical knowledge is needed to cope with this chapter. Nevertheless the authors raise some interesting issues. These include the dilemma faced by Local Exchange Companies (LECs) concerning when to deploy fibres in the local network, i.e., the problem of high initial installation costs versus the costs of changing the system over at a later stage. This is an economic dilemma. The choice is between copper and fibre. If the results of the economic analyses were adhered to, copper would almost always be installed. However in practice this is not the case. From an economic point of view optical fibre and digital switching have produced a regime of declining costs and increasing productivity. Experimental developments are still well ahead of present commercial applications and this progress shows no sign of slowing.

There is also the regulatory dilemma in the increasing popularity of cable television and the use of fibre cable to provide it. The authors note that the possibility of a merger between telecommunications and cable television companies is desirable both from a customer and a supplier viewpoint. In Chapter VI cable television is foreshadowed as one of the significant new bypass technologies. The effect of divestiture appears to have increased the problem of bypass by separating local and long distance services.

Ch. 7 purportedly examines the global perspective for US telecommunications and information services. This is a fairly interesting chapter. It appears clear that the future of telecommunications in the short to medium term is closely linked to the implementation and dispersion of integrated services digital network (ISDN) technology. Exciting and revolutionary new developments which will emerge as a result of ISDN include the development of telehomework whereby the workstation is relocated from the office to the suburban household. The

prospect for productivity gains and cost savings, not alluded to in the chapter, must be enormous. These will come from the elimination of overhead costs of office accommodation and facilities, the reduction or total elimination of commuting time, along with the reduced pressure on traffic, transportation and central business districts. There is also the resulting benefits to the quality of life in that the worker will be able to live and work well outside the central business district and its environs. The notion of telehomework foreshadows one of the most radical changes in conditions of employment since the industrial revolution.

Ch. 8 looks at the prospects for the US telecommunications companies in international markets. The two main areas of specialisation are seen as consulting and software. This chapter is of particular interest to those who currently see the future of the Australian telecommunications industry in international markets. The authors note that the greatest growth will occur in the developing regions of Africa, Asia, and South America. It is increasingly being recognised that telecommunications services are key inputs to a nation's or region's productivity and economic growth. Most of the facilities which will be deployed in the future will be comprised of digital switching and up-to-date transmission facilities. It is therefore imperative that the Australian industry maintain pace with developments in these technologies if it is to be a credible participant in the global industry. The largest global participant is AT&T with sales in the order of \$13 billion.

In ch. 9 which looks at industry trends, policy issues and future developments, it is pointed out that in both international and domestic markets non-price factors are playing a significant role in determining market dominance. Furthermore in spite of the regulatory changes of the past the industry in the US is characterised by a tight oligopolistic market structure. As the authors point out non-price rivalry and the dominant firm price leadership model are likely to be hallmarks of these so-called liberalised market arrangements.

Finally, the authors acknowledge that the telecommunications industry will always have some monopoly elements particularly in its local exchange markets. Accordingly the future financial performance of those telecommunications companies providing local exchange services will be guaranteed. Ultimately the telephone companies biggest asset is their technical ability to design and construct communications networks. The future for telecommunications companies lies in the emerging global marketplace where internationally oriented companies compete to sell their expertise to the developing nations.

The authors have provided a very comprehensive coverage of the US telecommunications industry and the implications of the new technology and the new structural arrangements for the immediate future. Anybody interested in the future of the Australian telecommunications industry either from a technological or a regulatory viewpoint would be well advised to have a look at this book. However my enduring impression is that the authors have tried to do too much. As a result the book is excessively detailed and very repetitive. I definitely would not recommend the book to the reader with only a casual interest in telecommunications. The book is for the specialist who is willing to sift through the mass of economic, legal and technological jargon for the few significant insights into the industry and its future that the authors have managed to identify.

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