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The Role of the Social Sciences in Policy Oriented Telecom Research

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INTRODUCTION

William Melody and I in the early 1990s served on a Committee of the Telecom Fund for Social and Policy Research which at that time funded social and policy research in the telecom field in Australia. Committee members extensively discussed what constituted good quality telecom research and Melody and I continued this discussion over several years. A key question that arose was how might the social sciences make a contribution to policy-oriented telecom research? Most academic telecom research was not read by policy makers. This contribution represents a renewed attempt to come to grips with these issues. I argue here that academic, business and policy-oriented telecom research has had limited success in analysing the social, economic and political forces shaping the telecom industry. At the risk of oversimplification, telecom researchers have a somewhat superficial understanding of these forces. As a result, analyses of telecom demand tend to be characterised by black-box approaches.

My argument is a general one, but I illustrate it here by examining two telecom-related issues: the globalisation of telecom operators (telcos) and the Internet and dot.com boom of the late 1990s. In both cases, the enthusiasm for simplistic strategies, which were based on an inadequate understanding of supply and demand as well as of the impact of broader social and political factors, led to disastrous losses for the companies and for society.

These two cases illustrate different but interrelated issues. The first examines the argument that globalisation is the future for the telecom industry and that telcos have no choice but to become mega-carriers and to expand globally. The second illustrates the naïve belief of the dot.com entrepreneurs in the role of technology to satisfy demand and, more fundamentally, their lack of understanding of social, economic and political factors that are shaping demand. In both cases, the extent to which academic research based on an understanding of social, economic and political processes could have tempered the enthusiasm of business and policy makers for the latest management fads or 'new economy' theories is considered.

GLOBALISATION OF TELECOM OPERATORS

The emerging globalisation of society is one of the most significant changes taking place in the past 20 years and it has had a major impact on the telecom industry. Academics, industrialists and policy makers have struggled to understand the implications of globalisation for the telecom industry. The problem of responding to the pressures of globalisation is common across a range of industries. For example, it is argued that the telecom, airline and media industries will be dominated by five or six global mega-carriers in the future. While trends towards global mega-carriers exist in these industries, their profitability has been poor over the decade of the 1990s. British Telecom, in particular, has been one of the most prominent proponents of the need to go global, but has been forced to reinvent its global strategy regularly in the light of its declining profitability. The global mega-carrier thesis, nevertheless, has survived over the past decade, despite scant evidence of its success.

A fundamental problem in the globalisation of the telecom industry has been a lack of understanding of the complexity of global-local interrelationships. Firstly, a global telco must satisfy the local, national, macro-regional (for example, European) and global communication needs of firms and individuals, as well as provide better quality and cheaper services than nationally-oriented telcos. Global telcos have found that the profitability of serving major transnational corporations (TNCs) is less than they had envisaged.

Secondly, TNCs must be able to respond to the multiple regulatory environments in which they operate. This is a particular problem in the telecom industry, given the continuing role of the state. The global mega-carrier thesis argues that privatisation, deregulation and competition throughout the world will open up the market. While the role of the state has changed significantly in the past 20 years, global telcos are still severely restricted in their ownership structure and operations in many countries. Global operators have learned to their cost that privatisation, competition and deregulation have different meanings in different countries. Much of the research on global telecom regulatory changes has failed to understand the importance of differences in institutional structures in different countries.

Thirdly, and perhaps most importantly, global telcos need a profitable home base from which to cross-subsidise their loss-making global operations. If profitability in the home base collapses, then the global strategies tend to collapse as well. For example, the financial problems of European telcos in their home markets in the early 2000s has severely restricted their global ambitions. This issue, however, is not confined to the telecom industry.

The global mega-carrier thesis fails to come to grips with the complex economic and political issues shaping the demand for telecom services. While there is a strong demand for seamless global telecom services, the extent of demand for sophisticated telecom services is less than has been asserted. Do we need global telcos to satisfy the demand for global telecom services (*Economist* 1997)?

THE INTERNET AND DOT.COM BOOM

The Internet and dot.com boom of the late 1990s and its subsequent crash in 2000 also illustrate the power of wishful thinking and the lack of attention to fundamental supply and demand issues. The boom and crash are considered here from the perspective of the concentration on supply-side factors, mainly technology, and the optimistic views of the demand for e-commerce. While many early e-commerce applications in the business-to-consumer (B2C) and the business-to-business (B2B) areas have been poorly designed, it seems clear that B2B e-commerce has a significant long-term role in the economy.

The business-to-consumer e-commerce boom illustrated a number of problems. Pre-eminently, it demonstrated a woeful lack of understanding of people's purchasing decisions. Traditionally, consumer purchasing behaviour was analysed using socio-economic variables such as age, sex, stage in family lifecycle, ethnicity and income. In addition, shopping satisfies important psychological needs of people. Many people like to touch and try on items of clothing. These issues were ignored in the technology-led enthusiasm for the e-commerce revolution in the 'new economy'. The subsequent debacle for the B2C e-commerce companies came as no surprise. A broadly-based social sciences perspective should have been able to indicate which areas of shopping and which consumer groups might be most amenable to the adoption of electronic shopping. In particular, it should have been recognised that the provision of telecom services is just *one* component of a more complex set of factors shaping purchasing decisions.

The B2B e-commerce boom also exhibited a lack of understanding of the nature of supply and demand factors. Its adoption is more likely to be evolutionary than revolutionary, an argument illustrated by the results of research on the role of foreign TNCs in Australia (see Thorburn, Langdale and Houghton 2002). The respondents in this study varied considerably in the importance they attached to e-commerce. However, a common theme was that the role of e-commerce needed to be seen in the context of industry developments to encourage common industry e-commerce systems, as well as in terms of the competitive rivalry between firms. E-commerce was expected to become more important in their businesses over time, but, in general, it was regarded only as *one* of many factors shaping

corporate profitability. Far too often, telecom researchers who examine information and communication technology issues, fail to understand the broader industry and corporate contexts in which this technology is adopted.

CONCLUSION

My experience on the Telecom Fund in the early 1990s led me to strongly question the policy-relevance of contributions of academic telecom researchers. In discussions at the time, Melody and I agreed that there was a lack of good social scientists in Australia applying to the Fund. The situation has not changed since that time and will not in the future unless there is a greater commitment from the government to long-term funding in this area. The research agendas of social scientists from disciplines such as anthropology, economics, politics, sociology and geography need to be reoriented towards policy-oriented issues in the telecom field and in the information society.

More fundamentally, a substantial shift in the focus of telecom research is needed. We need to see electronic communication in the context of broader social, economic and political forces shaping human behaviour. Good social science telecom research may have been able to warn business and policy makers during the e-commerce boom about the poor business models being advocated at the time. This would not necessarily have stopped the speculators, but it would have been a welcome relief from the chorus of 'new economy' gurus that emerged in the late 1990s. Similarly, good social science research should have been able to warn telcos that their understanding of globalisation was flawed and that other models of corporate strategy were needed.

The social science contributions to research have been poor at technology forecasting in the telecom field. For example, the mobile communication boom of the 1990s clearly tapped into a market, with various groups in society wanting mobile communication for social and business purposes. In particular, the youth market grew rapidly to become a significant component of the overall mobile market. However, few social science telecom researchers predicted or understood its growth.

Similarly, major social changes are transforming the nature of Western society. While telcos may undertake market research on how households use telecom services, to what extent have they understood the long-term communication implications of changing family size and structure? Where is the academic research linking changes in the social fabric of society with developments in the telecom field? For example, households are generally smaller and more mobile. The

nuclear family is less common today than in the past. To what extent do these social changes have long-term communication implications?

Clearly, many more telecom researchers need to move beyond the black-box approach to understanding demand towards a more sophisticated understanding of social, economic and political trends shaping the society. Melody's research and editorial contributions over many years have assisted these trends, but much more is needed.