

Competition in the telecommunications industry: a new global paradigm and its limits

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The ascendancy of competition in the telecommunications industry suggests the emergence of a new public policy paradigm. By tracing the progress of two first movers - the United States and the United Kingdom - the technological, industrial and economic pressures for change can be observed. In this paper we present the underlying assumptions, effects and expected benefits of the competitive paradigm. We argue, however, that the outcomes experienced by early adopters of this paradigm may not be the same for later entrants. Evidence from other industries, economic development theory, and social equity literature questions the assumption that all nations should progress along identical telecommunications policy paths.

Introduction

The telecommunications industry, historically non-competitive, has experienced significant structural change in recent years. In the United States telecommunications had been a regulated monopoly, a private company controlled by government oversight agencies. In other countries it has been, and in many cases still is, a state or semi-state agency. However, the movement towards greater competition in telecommunications during the 1980s suggests that telecommunications policy, like other forms of public policy, exists within a societal context, and must change along with societal factors. Therefore, the change in policy toward greater competition, the form which that competition has taken, and the impacts that will result can be viewed as a function of societal forces. However, this also suggests that the environment stimulating competition in one nation and the expected benefits might not necessarily exist in other nations.

The purpose of this paper is threefold. First, it will review the origins of competition within the telecommunications industry. It will do so by reviewing the process in two nations which are leading the way - the United States and the United Kingdom - from the viewpoint of environmental conditions which brought about this change. Second, it will consider the forces pushing for a globally competitive telecommunications industry. Finally, it will suggest implications and issues for later entrant countries moving toward a policy of greater competition.

The movement towards competition

The shift in telecommunications policy from monopoly and state control to one of deregulation, privatization, and competition has come about in two forms. In the United States it took the form of deregulation and the break up of divestiture of a government-regulated monopoly. In the United Kingdom it followed the trajectory of first liberalization then privatization of a state-controlled monopoly. Not only do these two countries illustrate two predominant ways in which the telecommunications industry has shifted toward competition, they also represent the first nations to do so. A brief examination of the policy shift in these two countries, therefore, will highlight some of the underlying assumptions of competition, the societal, economic and technological forces driving it, the expected benefits, and some of the reasons for the new structures that have emerged. While the change to free market control of the telecommunications industry has occurred in one of two basic ways each representing discontinuous change in the dominant telecommunications policy paradigm, what both paths reveal is a movement toward the introduction of greater competition within the industry.

It is clear that the movement away from regulation in the telecommunications field put forth in these two countries is still unfolding. Both may be considered to have played host, over the past quarter of this century, to a bold public policy experiment: the deconstruction of important institutional structures in the telecommuni-

cations policy domain and the unravelling of their relationships. So fundamental has this public policy shift been that it might appear difficult to envision any real alternative to the deregulatory idea. In telecommunications, as on the wider public policy front, it seems that we are fast approaching Fukuyama's (1989) 'end of history', a period during which the tenets of economic liberalism and the widespread celebration of market contestability have transcended long-standing ideological disputes. Parties of the left (such as the Labour Party in Britain), while expressing criticism of telecommunications policy developments in the past decade are increasingly being urged by their sympathizers to commit themselves fully to competition in the event of their election (Garnham, 1990).

It is tempting to characterize such developments as marking an important paradigm shift. Following Kuhnian usage (1970), it seems reasonable to view the telecommunications policy process as one in which revolutionary developments - particularly in the fields of technology and political ideology - have strained the norms of the telecommunications policy process beyond their existing paradigmatic limits. As will be argued below, a particular constellation of forces appears to have driven a process of paradigm replacement.

The American path

Deregulation - connotating a policy shift towards less regulation within an industry - has meant the dismantlement of policy structures established in circumstances of monopoly and their replacement with new policy mechanisms designed to manage a competitive environment. The US rationale for regulation was firmly based on the view that telecommunications constituted a natural monopoly. That is

- (1) the large capital investment needed to provide telecommunications products and services represents a significant economic barrier to entry;
- (2) therefore, economies of scale would result from having a single supplier;
- (3) a single supplier could redistribute costs thereby facilitating universal service (i.e. business users being obliged through tariff structures to underwrite private users).

In the US this meant that a government-regulated monopoly, AT&T, was the single provider for telecommunications products and services. (Fuller details of the monopoly phase in the US are spelt out in Pitt and Morgan, 1989.) In essence, the monopoly period may be characterized as one in which there existed a largely settled 'assumptive world' - a world of shared and settled values. The hero of this phase was undoubtedly Theodore Vail, the general manager of the American Bell Telephone

Company. The most enduring of Vail's legacies was his formulation of Bell's operational goal: one system, one policy, universal service.

Paralleling this doctrine of end-to-end service with its rationale in the natural monopoly argument resided a system of regulation which constituted a peculiarly and appropriately American approach to political economy enabling the retention of capitalism, yet allowing some social control over unwanted consequences of single-minded pursuit of the values of the market system.

Regulation at the state level began in the late nineteenth century and by the 1920s most states had established public utility commissions (PUCs). A parallel system of federal regulation was established at the beginning of the twentieth century as the telephone system evolved from a largely intrastate to an interstate phase. The passage of the Mann-Elkins Act in 1910 placed responsibility for the regulation of telecommunications in the Interstate Commerce Commission (ICC).

During the 1920s the spotlight of attention was turned on AT&T which, through a series of acquisitions of independent telephone companies, had established a system of market dominance threatening to outrun the ability of the ICC to effectively police the sector. In the mid-1930s, the Splawn Report recommended that a new federal commission with expanded powers to regulate the telephone services be created. This led to the establishment of the Federal Communications Commission (FCC) with formidable regulatory powers and charged with the task of providing a rapid, efficient, nation-wide (and world-wide) communications service.

Consideration of this period reveals the existence of several major premises. First, there was general acceptance of the presumed natural monopoly characteristics of telecommunications. Vail's proclaimed goal of end-to-end service under unified company control was seen to be productive of economies of scale and economies of scope. Second, behind the rhetorical facade of free enterprise there lurked an increasing awareness that the telecommunications marketplace, being imperfect, required regulation. Third, as in the latter days of the non-competitive telephone era in Britain (Pitt, 1980), pressures for unified control outweighed those for parallel provision by a large number of separate and competing companies. The force of these pressures was exemplified in the ultimate willingness of the independent companies to sell out to AT&T. Finally, a social regulatory rationale was present in the obligation of the FCC to act in the public interest to oversee the attainment and sustenance of the goal of universal service.

The British path

Following a period during the Victorian era characterized by patent wars between various private telephone

companies, the British telecommunications system was nationalized in 1912 and placed under the administrative umbrella of the Post Office. Construed as a settlement to the previous quarter-century of intercompany disputes, the act of nationalization located responsibility for telecommunications policy firmly within the hands of bureaucratic officials. There it was destined to remain for over half a century. As in the American case, natural monopoly arguments were well to the fore. Intercompany disputes had revealed that competition could lead to the duplication of fixed assets, nonstandardization, and administrative anarchy.

Essentially, the rationale for state ownership rested on two assumptions: first, that the objective of a universal service could best be met through state ownership of services and products; and second, that the development of infrastructural services such as railways and telecommunications could be most effectively fostered through government management and control. While the US and Britain chose different public policy trajectories for telecommunications in the monopoly phase - regulation and nationalization, respectively - the outcomes were broadly similar in one important respect: the provision of telecommunications services was placed firmly into the hands of single suppliers. On the equipment side, monopsony ruled. While Western Electric sourced AT&T in the US, the British Post Office constructed a supply cartel. Subsequent 'cosy' industrial relationships produced what might be called a variant of telephonic Fordism: the consumer could buy a telephone of any colour as long as it was black.

Policy parallels

Retreat from this paradigm of provision had its roots in the 1950s in both countries. In the US, 1956 marked the beginning of a lengthy process of 'regulatory perestroika'. AT&T and the Department of Justice entered into an agreement which effectively protected the dominant market position of the company in the provision of basic telephone service, but which prevented it from entering newly developing lines of business in areas such as computing and data processing. Thus began a process of deregulation culminating in the Consent Decree decision of 1982 which brought about the divestiture of the Regional Bell Operating Companies (BOCs) of AT&T, simultaneously serving upon them a series of service and manufacturing prohibitions. Disputes over these restrictions are a continuing feature of the current US, telecommunications policy arena.

The British case for many years appeared to offer a picture of resistance to such change pressures. But behind the facade of normality in the post-war Post Office, other forces were at work. Britain's apparently weak showing in the international league tables of telecommunications

performance stimulated debates both within the Post Office and in its environment. Growing criticism led to a series of inquiries (Pitt, 1980). In consequence, by the 1970s the Department had been transformed into a public corporation. It had acquired a degree of immunity from Treasury financial interference and had embarked on ambitious schemes of internal structural reviews. However, as the Carter Report would reveal in the late 1970s, the re-constituted corporation was showing the same signs of organizational pathology exhibited by the previous Post Office Department.

As this brief review has pointed out, the 1980s marked a period of discontinuous change in the American and British systems. In the former, the shift to deregulation in 1984 has meant the breakup of AT&T's monopoly, the creation of competition in long distance services, the option of bypassing the local operating company (the one form of monopoly retained), and competition in the provision of technology and hybrid information services (Temin and Galambos, 1987, Huntley and Pitt, 1990). For its part, Britain played host to major transformations in the telecommunications policy arena. An Act of Parliament in 1981 first produced liberalization - the introduction of open market entry in areas such as value added network services (VANS) and managed competition in network infrastructure through the licensing of Mercury, a pivotal network provider. It was followed in 1984 by a subsequent Act which resulted in privatization - the transference of the newly constituted British Telecom to the private sector. Paraphrasing Toffler (1985), both telecommunications systems have entered a new stage in their corporate lifecycles. Both AT&T and British Telecom have been forced to face an increasingly volatile regulatory, technological, and competitive environment.

The result of all this has been quite dramatic. In America the maternalistic approach of AT&T based on end-to-end service, has been dismantled. The former regional Bell companies are now confronting AT&T, their erstwhile parent, as full fledged and more aggressive adolescents. Britain has witnessed the replacement of network monopoly by duopoly in network provision. Both countries have experienced the development of new market segments (e.g. cellular communications). Both, too, have seen a reconfiguration of the equipment sector. America has experienced the intrusion of foreign equipment vendors. In Britain the 'bulk supply' cartel has been breached. Finally, new regulators have emerged. Bryan Carsberg, Director General of the Office of Telecommunications (OFTEL) in Britain, has effectively carved out an innovative role as a regulator while Judge Harold Greene has captured centre stage in US telecommunications by asserting the continuing judicial role in public policy formation. Both continue to exert a shaping influence over contemporary telecommunications

policy developments. Clearly, Britain and the US are continuing further down the path of policy experimentation in the field of telecommunications deregulation. In the US policy pressures on Greene to further relax the line of business restrictions on the Bell operating companies are still being exerted. The UK has witnessed (1991) the conclusion of a major policy review and subsequent White Paper which announced *inter alia* the ending of the fixed network duopoly policy thus enabling the entry of new licensed network providers to compete with British Telecom and Mercury (White Paper, 1991).

Pressures for change

The emergent deregulatory paradigm is a result of a series of enabling factors which have propelled this issue up the policy agenda of many nations. This change in public policy owes its origins to three interdependent factors:

- (1) technological change (and in particular, the convergence of telecommunications and computing);
- (2) the increasing visibility of telecommunications as a key corporate resource;
- (3) the ascendancy of a market-driven political economy.

The convergence of information technology

Prior to the development of data communications technology, communication channels were assumed to be used for a single purpose only. For example, the telephone was only used to transmit voice, the airwaves were only used to transmit audio/video signals, and coaxial cable was only used for broadcast purposes. However, significant advances in information technology which brought computer and communications technology closer together during the 1970s linked them inextricably in the decade that followed. Computer technology became an integral part of communicating voice and video signals, and at the core of end-user and distributed data processing phenomena was data communications capability (Irwin, 1984).

The undoubted challenge posed to long-standing regulatory protocols by technological convergence is best illustrated by reference to the American experience. Here, boundary erosion between computing and telecommunications posed a considerable threat to a telecommunications policy, the key operating assumption of which was the ability to make a distinction between the two. Given a policy framework in which the domain of computing was not regulated while that of communicating was, hybrid forms such as the use of cable television technology for data transmission early on exemplified the

problem of partial regulation of telecommunications (Trauth, 1981).

The first attempt to resolve this policy dilemma took the form of two computer inquiries conducted by the Federal Communications Commission. The First Computer Inquiry (FCC, 1971) sought to deal with inherent regulatory problems by concluding that data processing should not be regulated, but that there should be maximum separation between the activities of common carriers and the entities providing computing services. The basis for regulation was linguistic; it derived from the definition of such terms as '*data processing*' and '*message switching*'. The Second Computer Inquiry (FCC, 1980) acknowledged the convergence of information technologies and the difficulty of determining what was primarily computing and primarily communicating for purposes of regulation. It sought, instead, to base regulation on the type of service being offered. Services were accordingly categorized into '*voice*', '*basic non-voice*', and '*enhanced non-voice*' with the first two being the domain of regulated entities and the latter being open to competition. Policy change to cope with the challenge of new technology through legislative means* was subsequently obviated by judicial resolution through the settlement of the AT&T antitrust case and the conditions associated with it (Huntley and Pitt, 1990).

The US case illustrates the importance of technological convergence as an impeller of paradigm replacement. The dominant assumption that telecommunications and monopoly were intimately linked was shattered by a process in which new types and uses of information technology clearly could not be assimilated into the existing policy framework. Convergence, by eroding boundaries between computing and telecommunications, entailed the deconstruction of monopoly.

The information economy and globalization of work

With increasing speed nations are basing economic growth upon their information economies. The term information economy refers to that portion of the labour force which derives employment from

- (1) the manufacture of information technology equipment;
- (2) the development of computer software;
- (3) the provision of information services (Porat, 1977).

This is in contrast to the concept of a post-industrial or information society in which the majority of the labour force derives employment from the information economy (Bell, 1973).

* In addition to the two Computer Inquiries, Congressional Bills to amend the Communications Act of 1934 were also introduced in both the Senate and the House of Representatives: S 898 (7 April 1981), and HR 5158 (10 December 1981).

The first nations to emerge as post-industrial societies did so slowly, after a lengthy period of traditional industrialization and along with the evolution of information technology. As a result, technological infrastructures were put in place to facilitate the gradual increase in dependence upon telecommunications technology. Nations currently moving into the information age, however, tend to take a different route; many are 'leap frogging' from an agrarian to an information society. Because of the speed with which such nations are doing so, their starting point, and the level of technological sophistication needed to support an information economy, existing telecommunications infrastructures are not always sufficient to cope with this increased demand upon them.

This situation has been exacerbated by the growing globalization of work. By eliminating geographical and temporal barriers, information technology has made it easier for firms to become multinational. Multinational companies (MNCs) strategically positioned to stimulate the information economy of a country are now in the vanguard of pressure politics: they increasingly exert pressure on host governments to improve services or allow them the use of alternative telecommunications routes such as private networks (Kruse, 1985). Wishing to gain comparative advantage in attracting such MNCs to London, for example, British Telecom has deliberately attempted to stimulate the phenomenon of 'hubbing'. Large user groups representing the interests of MNCs and other large companies have been key carriers of the deregulatory message in America (Schiller, 1982). In Britain, key pressures for liberalization emanate from organizations such as the Telecommunications Managers' Association.

The rise of economic liberalism

The final accelerator of deregulation has been the ascendancy of a market-driven philosophy purveying the argument that regulation was increasingly demonstrating allocative inefficiencies. In the US the changing political economy of deregulation can be charted through the successive presidencies of Carter, Ford, Reagan and Bush. Its acme was to be found in Reagan's oft-repeated commitment to 'get government off the backs of the people'. The resurgence of economic liberalism in America was matched by Thatcherite triumphalism in Britain. A true believer in this political philosophy, Thatcher was to preside over a major period of discontinuous regulatory change. As in the Victorian period, the telephone question moved to the forefront of the policy agenda. It was argued that liberalization and privatization would lead to greater allocative efficiencies, reduce bureaucracy, encourage investment (through the forma-

tion of risk capital) and allow for the exploitation of new technology.

The spread of competition

It is tempting to follow Kuhnian usage and suggest that events described above clearly indicate a paradigm shift from monopoly control of telecommunications to deregulation and open-market entry. In this view we may be witnessing a period of regulatory revolution in which old structures and protocols are being attacked by a triad of forces: technology, ideology, and large user pressures. We may even discern what Kuhn delineated as a flight of intellectuals from the assumptions of the old provisioning regime. In the US, for example, key economists strategically placed in the policy process have abandoned venerable regulatory values in support of greater contestability. To borrow a metaphor (Schon, 1971), the 1980s constituted a period when competition came into 'good currency'.

A key observation concerning the nature of a competitive environment is that it needs growth in order to survive. Increased market share is required, for example, to amortize the costs of increased investment. Expanding markets are essential in order to increase profits and satisfy stockholders. Therefore, in order to sustain growth the telecommunications industry must look to global markets. Thus, countries embracing this new paradigm cannot be content with a competitive environment limited to their own national boundaries. In order for this paradigm to succeed, new markets must be opened up and new players induced to play by the new rules. One could argue, therefore, that the spread of competition in the telecommunications industry is crucial to the success of this new paradigm.

On a global level, the competitive paradigm has resulted in many important consequences. The first of these has been the *proselytizing effect*: as competition swung into the ascendant, first movers encouraged the export of the competitive philosophy. This was done to avoid the dysfunctional consequences of deregulatory asymmetry. The attempt has been made to pursue the goal of an international level playing field in telecommunications. First movers, denied market entry to the territory and markets of their competitors have become increasingly proactive in their demands for the deconstruction of neo-mercantilism.

This is demonstrated in American moves to protest the construction of a European telecommunications fortress in the build-up to 1992. The spectre of a protectionist Europe existing despite the EC's assurances of a drive towards open market entry still exists for US policy makers. Such fears drove the passage of the Omnibus Trade and Competitiveness Act of 1988. Identifying

telecommunications as a key industrial sector, the Act gave wide powers to the US Trade Representative and the President to target priority foreign countries which seem to be denying 'mutually advantageous market opportunities to US products and services'. Thus, the EC became a prime candidate for US attention. GATT was chosen as providing a key policy milieu within which to subject EC telecommunications developments to ongoing scrutiny and review.

Closely linked to the proselytizing effect, has been the *emulative effect*. The general experience of privatization in Britain has clearly been watched closely from Manila to Mexico City. The example of the British telecommunications experience appears to have triggered liberationist trends elsewhere. Even the most convinced retentionists of the earlier provisioning paradigm such as Germany have partially succumbed to the coaxing of proponents of British style policy developments. Ironically, the promises of privatization have occasionally been taken to heart by ideological opponents now busily dismantling the social project of state provision with the fervor of the late convert. The Labour Government in New Zealand, for example, announced in June 1990 the privatization of Telecom New Zealand. Interestingly, it was to be sold in part to an international consortium spearheaded by two of the Bell Operating Companies: Ameritech and Bell Atlantic.

The final result has been the *infrastructural effect*. Internationalization of telecommunications has been assisted by the use of fibre optic and satellite technology to develop high speed networks. These global highways, by facilitating the movement of all information types, have in turn fed the desire for more and improved telecommunications services. Linked to this have been developments such as open network architecture (ONA) and its European equivalent, open network provision (ONP). Both were explicitly designed to facilitate contestability (Huntley *et al.*, 1990).

Limits to the competition paradigm

A key question for policy makers and members of this industry is: what are the limits to the competitive paradigm? There have been many claims for the benefits of a competitive regime. They include the introduction of new services; lowering of costs; greater innovation; and the introduction of a regulatory framework consistent with the convergence of information technologies.

Other intended outcomes would include the encouragement of more players within, and expanded markets for members of the telecommunications industry. Arguably, many of these outcomes have been realized by the first nations which have embraced the new paradigm. Both the

US and the UK possess telecommunications markets which are open and permeable.

Additional claimed benefits, revealed for example in the British case, are an increase in profits and product variety since privatization, and a steady improvement in the range and quality of services on offer. Competitive pressures have contributed to improvements and innovation in British Telecom's operational structures. The commitment of the organization to total quality management (TQM) has apparently contributed to a price regime with charges held below the consumer price index and a lowering of annual faults per line. Looking for reciprocal market access overseas (like AT&T and the Bell Operating Companies), British Telecom has established, *inter alia*, links with McDonnell Douglas and taken a 20% holding in McCaw Communications - the USA's leading cellular telephone operator. Such proactivity has been fostered by deregulatory developments. Nevertheless, scope for all-around improvement exists. British Telecom is considered by some commentators to lag behind continental counterparts in fully exploiting developments such as ISDN and CATV, a result of a loss of a clear research focus since privatization. Acknowledgement of improvements in customer service such as a decline in call box faults has been matched by continuing complaints about the upward rise of domestic charges against a background of declining charges for the business subscriber (National Consumer Council, 1991).

While the introduction of competition has shown benefits in Britain and the US, the possible implications for later entrant countries raises the issue of the limits of a new telecommunications paradigm. That is, will the new paradigm result in the same benefits accruing to the first movers? The history of the newspaper and broadcast industries in the United States suggests that concentration of ownership existed from the beginning with the advantage given to those companies which were dominant in the early years of the industries (Trauth *et al.*, 1983). If applied to the current context, this would suggest that the first nations will retain their current advantage.

This argument is also supported in the literature of industrial development. For example, O'Malley (1989) challenges the neoclassical view of such development by pointing out three barriers to entry experienced by late-industrializing countries such as Ireland. One is economies of scale. Since a company's average costs decline as the scale of production (or volume of sales) increases, established companies have the advantage by having already achieved low costs due to scale. As a result, newcomers would have to enter on a similarly large scale in order to be competitive, a prospect involving considerable risk. A second barrier to entry is the product differentiation advantage. -Established forms have the advantage of brand identification and customer loyalties stemming from past advertising, a long record of customer service;

or simply from being one of the first into the industry. Differentiation, therefore, forces new entrants to spend heavily to influence customer preferences. A third barrier to entry is financial. The need for significant capital expenditures in order to enter an industry is particularly applicable to the telecommunications industry.

The result could well be that not only will later-entrant countries not be able to compete on a global scale for a share of the world-wide telecommunications market, they may also face the prospect of losing their home markets to foreign competition should they open up telecommunications to competition. Whether through direct ownership or joint venture, partial or complete ownership of a nation's telecommunications infrastructure by foreign companies raises questions. Who benefits most when this national resource can be controlled by a foreign interest? On the one hand, it may be a means of speeding up the process of technological advancement. And this may lead to improved services, the development of a more cost/effective telecommunications infrastructure for businesses, and the subsequent attraction of multinational firms. On the other hand, it may exert pressure on a nation's communications priorities. The goal of universal or public service may take second place to the needs of foreign industry. Bell and Meehan (1988) make this point in considering the impact of Hughes's direct control of the Irish Direct Broadcast Satellite system. However, while later entrants may be at a disadvantage with regard to realizing some of the benefits of increased competition, they may be able to minimize some of the costs experienced by the first movers who had to bear the burdens associated with the rapid ascent of the financial, technological, and policy learning curves.

This consideration of some of the potential difficulties and dilemmas of second mover nations might suggest that the celebration of competitive determinism in telecommunications may be premature. Instead, it may be prudent to remember that public policy - including telecommunications policy - is, to an important degree, culturally specific. Therefore, no single paradigm (however seductive) is likely to provide a 'one best way' approach tailored to fit all circumstances. Each country, especially later entrant examples, may require the development of its own policy trajectory in response to political, economic and technological propellants to change.

An instructive analogy exists in the provision of health care. While all nations might acknowledge the goal of an adequate level of health care for its citizens, the means for achieving it vary according to the political, economic, and cultural perspectives of each country. This argument acknowledges the possibility of uniformity of outcome while allowing for diversity of means. Applying this notion to the current context, the question is whether it is possible to create a telecommunications infrastructure

which is cost effective, provides quality products and services, promotes technological innovation, and is responsive to the policy challenges of new technology in ways other than those taken by first nations such as the US and Britain.

Answering this question in relation to second movers involves another question: do the circumstances which provided the original rationale for monopoly and state control in the US and UK still exist for some countries? That is, does the large capital investment required still constitute a barrier to entry, suggesting that economies of scale and universal service can best be provided by a single supplier? Does the state of the telecommunications infrastructure require a monopoly to guarantee the funds needed for its development?

One significant aspect of this issue is the size and wealth of the country. Is it large enough to maintain the goal of universal, affordable service in an environment of unrestrained competition? Is it wealthy enough to overcome the financial barriers to entry in this industry? Can all nations afford to support more than one telecommunications provider? And if not, is a nation willing to allow the possible domination of its telecommunications industry by foreign competitors?

The economic development aspects of telecommunications are increasingly apparent (Bachtier, 1986; Pitt *et al.*, 1990). These include a concern with equity considerations. Not only second mover nations but those, such as the US and the UK - deemed to be at the forefront of deregulatory developments - evidence increasing interest in the information rich/information poor issue. In an earlier study, Hudson (1979) drew attention to the social impacts of telecommunications policy. Important reservations about social equity questions now surround the competition argument. As Hills (1989) has pessimistically noted:

Of themselves the mechanisms of liberalisation, privatisation and structural regulation are not sufficient to ensure the continued provision of 'universal service', whether it is defined as telephone penetration and access, or in terms of usage, or in terms of quality of service between groups and areas . . . The experiences of the UK and the USA do not provide a particularly encouraging scenario if 'universal service' of any kind is the goal.

Concern about equity is linked to a continuing concern among critics about the national strategic importance of telecommunications and the proper role of the government in the maintenance of its telecommunications infrastructure. Here, Britain provides a forum for widening the debate about the network of the future. Envisioning a national telecommunications grid based on optic fibres, proponents of this idea typically insist that public policy must be based on increased government

intervention in progressing its planning and implementation.

Conclusion

While it may be too early to reject the emergent competition paradigm on the fragmentary basis of concern over social equity and planning issues, it seems reasonable to endorse the view that countries are unlikely to proceed down one, and only one, telecommunications public policy path (Grant, 1989). Social equity and planning issues, *inter alia*, will not be lost in the political ethics of second movers. Nevertheless, the continuing strength of the competitive social project in telecommunications can hardly be denied. The globalization of telecommunications may yet do much to propel countries down the path towards competitive hegemony. Perhaps we might end by suggesting that now is an opportune time to question the inevitability of this new global public policy paradigm—the competitivization of the telecommunications way of life.

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