The micro-economic and demographic characteristics of the non-dominant telecommunications sector holds out enormous potential to conribute economic growth and access in the United States and throughtout the world. Technologies which create, manipulate, manage and use information, help businesses remain competitive in an era of expanding global markets and competition, and create significant employment opportunities domestically. According to National Telecommunications and Information Administration (NTIA), two-thirds of U.S. workers are in information-related jobs, and the rest are in industries that rely heavily on information. As explained below, the actual and potential contributions of non-dominant market forces to economic growth and access, in terms of innovation, employment, and international trade, are quite significant when considered aggregately.

Innovation. The FCC and the NTIA have found that "[i]n communications, it has often been through the initial efforts of small entrepreneurs that our society has achieved significant technology breakthroughs. For example, many of the advances in the customer premises equipment (CPE) market were made by small business vendors. Further in cable television, a broad range of new information, news and entertainment offerings have been brought to the American public by firms which started as small commercial enterprises. Small communications firms have emerged to offer services to other small businesses which typically lack in-house expertise. SBA research, moreover, provides direct support for FCC and NTIA findings on this point. Specifically, the SBA has found that small firms innovate at a per person rate twice that of large firms, spend more on research and development than larger firms, and translate R&D spending into new products more efficiently than large firms.[29] Thus, non-dominant businesses are not only a means of attaining individual prosperity, for those willing to work hard and take risks, non-dominant businesses "reinforce ... efficiency, productivity, and innovation" in the marketplace.[30]

Alternatives to complicated or high technology equipment will also be a niche independent and non-dominants can fill.[31] Demand for new telecommunications service among traditional small businesses for greater productivity and increased sales is stimulating increasing levels of investments in telecommunications technology such as video conferencing systems, fax on demand, mobile telecommunications services, and miniature computers.[32] The ability to adjust or expand customer service as commercial demand changes is a strategic advantage of small size in this market climate.[33] Case studies show that visibility of mobile radio equipment is a major factor in market segments lacking information and

---

[29] Id.

[30] Communications and Minority Enterprise, supra.

[31] "When to say No to Technology," Security Management, March 1991, p. 23A-24A; see also "Timothy O'Brien, "Information Superhighway Will Aid Output, Small Business Executives Say," Wall Street Journal, p. B2.

[32] Rosaline Resnnick, "Play into Profits", International Business, August 1993, p. 46-52.

[33] "Building Strategic Customer Relations," Communications. October 1991. p. 79-85.

understanding of business and technology, many of which are themselves small business.[34]

Employment. The crucial role of non-dominant entities in the nation's economy is also illustrated by the significant contribution these businesses make to promoting job creation and growth. SBA findings indicate that non-dominant entities are more likely to increase employment as a result of innovation than dominant firms, and for this reason, it is likely that non-dominant firms will contribute a substantial portion of the new jobs that will come from building the information highway. The Department of Labor estimates that by the year 2005, the information highway will create 200,000 new jobs for computer systems analysts, programmers, electronic engineers, and information technicians. Small to medium sized firms in construction and manufacturing will also furnish significant employment opportunities. As continuous quality improvement programs become more widespread within the communications field, jobs will increasingly provide opportunities for employee ownership and involvement in decision-making, as well as enhanced retirement benefits.[35] Charts #2 and #3 document the contributions of non-dominant firms to employment and employment growth in SIC Code 4812.

---

[34] Binks, Emmett and Cervenlea, "Marketing [?]" February 1992, p. 33-35.

[35] See, "ESOPs, Employee Ownership, Evolve," Employee Benefit Plan Review, Aug. 1993, p. 28-30 (275 new ESOPs covering 170,000 employees were established in 1992).

FIRM EMPLOYMENT IN SIC CODE 4812

TYPE OF DATA	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1000-4999	5000-9999	10,0000 & over	TOTAL
NUMBER OF FIRMS												
1989	354	242	155	112	42	22	17	2	2	0	0	948
1991	395	240	170	100	44	24	9	4	3	1	0	990
GAIN OR LOSS	+41	-2	+15	-12	+2	+2	-8	+2	+1	+1	-0	+42
AVERAGE EMPLOYMENT												
1989	2.6	6.6	13.0	29.3	68.0	136.1	340.8	675.0	2071.0	0.0	0.0	26.3
1991	2.5	6.5	13.3	29.7	66.3	154.0	304.3	700.0	2447.3	5200.0	0.0	32.8
GAIN OR LOSS	-0.1	-0.1	+0.3	+0.4	-1.7	+17.9	-36.5	+25.0	+376.3	+5200.0	-0.0	+6.5
SHARE OF TOTAL EMPLOYMENT												
1989 (CUMULATIVE)	3.6 (3.6)	6.4 (10.0)	8.1 (18.1)	13.2 (31.3)	11.4 (42.7)	12.0 (54.7)	23.2 (78.0)	5.4 (83.4)	16.6 (100.0)	0.0 (100.0)	0.0 (100.0)	100.0 (100.0)
1991 (CUMULATIVE)	3.1 (3.1)	4.8 (7.9)	6.9 (14.8)	9.2 (24.0)	9.0 (33.0)	11.4 (44.3)	8.4 (52.8)	8.6 (61.4)	22.6 (84.0)	16.0 (100.0)	0.0 (100.0)	100.0 (100.0)
GAIN OR LOSS	-0.5	-1.6	-1.2	-4	-2.4	-0.6	-14.8	+3.2	+6	+16.0	-100	-100

EMPLOYMENT GROWTH IN SIC CODE 4812					
TYPE OF DATA	0-19	20-99	100-499	500-599	INDUSTRY WIDE
EMPLOYMENT 1989	430	5222	5487	46269	1593
EMPLOYMENT 1991	5557	4956	6751	51924	
BIRTHS	1473	810	1342	7517	533
EXPANSION	967	856	1508	9528	-348
DEATHS	-998	-1069	-1225	-7876	185
CONTRACTION	-190	-863	-361	-3514	11.61
CHANGE NET	1252	-266	1264	5655	323
PERCENT	29.08	-5.09	23.04	12.22	-180
CONSTANT	2013	1684	1831	23474	742

Source: Social and Scientific System Inc.

The need to innovate new lower-cost information services, and modernize information infrastructure, is expected to create substantial investment opportunities for non-dominant firms in global markets for emerging technologies.[36] Throughout the 1980's the communications industry was one of the few sectors of the economy that grew in terms of gross national product and jobs, contributing $750 billion in capital assets and $400 billion in annual domestic activity.[37] In 1990, it was reported that the telecommunications sector revenues accounted for approximately 6 percent of GNP and some 3 million jobs. Moreover, with more capital invested in telephone, broadcast, mobile radio, broadband video services, and other electronic assets, than any other nation, the United States enjoys significant competitive advantages in the global marketplace for communications services and equipment. The external benefits of non-dominant participation that have been shown to enhance economic development domestically are even more highly valued in global markets.[38]

International Trade. The Commerce Department's U.S. Industrial Outlook Report for 1993 notes a 35 percent increase in cellular subscription rates worldwide, with increasing interest in cellular on the part of developing countries where wireless technologies are the fastest and most economic way to provide modern telephone

---

36 FCC-NTIA Conference Report, p. 7.

37 FCC Report, at p. 4.

38 See generally, U.S. Telecommunications in a Global Economy: Competitiveness at a Crossroads, U.S. Department of Commerce, Washington, D.C. (1990).

service.[39] In the developing world, wireless technologies such as PCS frequently provides a local loop technology giving users network access for the first time (unlike in the U.S.) where wireless carriers typically supplement existing loop technology. Many developing countries prefer to procure services from non-dominant sources, with relevant service delivery experience, due to perceived flexibility and cost advantages. In this regard, enhanced global competitiveness must be seen as a substantial and additional external benefit of diversification economies which enable non-dominant entities to enter global markets which would provide insufficient return on investment for dominant competitors.[40]

The innovation, employment, and global competitiveness benefits of non-dominant market forces directly address recognized barriers to technological diffusion. A recent study sponsored by the New York State Telecommunications exchange identified three specific barrier to the diffusion of telecommunications technology: cost prohibitive equipment and training, old habits and ways of thinking that repress diffusion opportunities, and lack of skills among potential users. As a major source of innovation and employment opportunities, the non-dominant market sector would also appear to offer a logical source of new products, services and opportunities for end-user training, especially considering that demand for telecommunications services by traditional small

---

[39] Department of Commerce, U.S. Industrial Outlook 1993, p. 29-8.

[40] See e.g., Laurel Yancey, African Telecommunications Market Studies, FCC Office of International Communications (1992).

businesses will be the major source of economic growth. By competing to expand U.S. export capabilities in developing regions of the world, moreover, the non-dominant market sector helps drive down the cost of equipment and training for low-volume domestic users. For these reasons, it appears that measures to enhance participatory opportunities for non-dominant market forces have the potential to yield significant aggregate benefits to domestic and international users above and beyond the benefits derived by individual non-dominant competitors.

STRUCTURAL CONTRAINTS ON ECONOMIC GROWTH AND ACCESS

This section discusses our findings regarding the impact and causation of structural impediments to non-dominant investment in the communications field. Here, we examine in detail contentions of non-dominant entities in new and existing industries that current market and regulatory conditions have, or could, inhibit their ability to respond to public needs and consumer demands. While it appears from SBAC market studies that these non-dominant market forces add substantial value to an increasingly stratified communications economy, they also face several major impediments due to dysfunctional capital markets and adverse regulatory and administrative circumstances. These impediments not only limit the economic opportunities of capital constrained non-dominant entities, they compound past inequities for underserved consumers and increase the potential for undue concentration of ownership. Without pro-active efforts to stabilize economic erosion in existing markets, and to encourage new entry in emerging technologies and broadband video services, the SBAC considers it unlikely that the anticipated increases in economic efficiency and consumer surplus will materialize in a way that inures to the benefit of all America's people.

Market Assessments

PCS Markets. The SBAC held hearings to assess the policy implications of General Docket 90-314 and 90-217 in Washington, D.C. on May 27, 1993 and September 14, 1993.[41] One of the major findings to emerge from these hearings was that entry opportunities for small service providers have been constrained in existing telecommunications markets by undercapitalization, concentration of ownership, and other conditions contributing to the exclusion of businesses owned by minorities and women. The SBAC found that capital formation is the major economic barriers to full participation by small and minority owned businesses, and interlinking policies are needed which reduce the amount of cash required to acquire spectrum and build out the service area. In this market environment, bidding enhancements and tax expenditure finance assistance are appropriate regulatory tools to ensure that the public receives the best practical service from emerging PCS technologies, and to increase economic opportunities in the PCS field. Finally, the report contained numerous recommendations, including those addressing innovator credits, designated allocations for non-dominant entities, and various financial subsidy proposals.

The Commission's response to SBAC feedback and policy proposals to date has generally been affirmative. In the emerging technologies area, the Commission has adopted, and retained on reconsideration, an allocation scheme for broadband and narrowband PCS that included BTA service areas consistent with SBAC findings and recommendations. In the competitive bidding proceeding, where

[41] The Executive Summary of the PCS Report which appears in the appendix summarizes major Committee findings based on testimony from industry leaders and other interested parties.

the Commission adopted a menu of options for implementing spectrum auctions, the Commission included numerous provisions based on SBAC proposals or variants on those prosposals. These options include installment payments, spectrum allocations for designated entities, bidding credits, tax certificates for 2 GHz microwave licensees. Other proposals concerning the establishment of a communications capital fund, and performance requirements for incumbent bidders (LECs and cellular operators) are pending, and the proposed innovator's credit will examined the context of the Commission's ongoing pioneer's preference proceeding. Finally, consistent with SBAC recommendations, rules governing the attribution of designated entity status are consistent with SBA financial assistance criteria, yet include provisions for service specific waivers.

While the Commission's response in the areas mentioned above has generally been encouraging, we note that the Commission declined to adopt some of the SBAC proposals outlined in the PCS report. Specifically, the competitive bidding process does not include provisions for royalty bids, flexible financial certification, and capital gains based investment incentives. Neverthelees, flexible financial certification and favorable capital gains treatment continue to be important areas of concern and we look forward to the opportunity to work with Commission staff to identify problems with our proposals and to make necessary adjustments. Finally, the SBAC commends the Commission for taking steps to avoid abuse in the context of rules on attribution of minority and female ownership, but the chairs of the SBAC subcommittees on Policy and Finance now express serious reservations that requiring 50% equity and voting control about may lead to underinclusion of minority firms.

Finally, the SBAC notes that the Commission has not taken action on proposals which hold out some promise of increasing economic opportunities, such as the communciations capital fund, attribution waivers for LEC/cellular bidders with procurement programs for small value-added service providers and equipment manufacturers, innovation preferences. Consequently, the SBAC will monitor these issues in the context of a future report on emerging technologies to ensure that the Commission will have relevant information in the event that corrective action is needed.

Digital Media Markets. At the SBAC's May meeting, witnesses identified High Definition Television (HDTV), Digital Audio Broadcasting (DAB), and Radio Broadcast Data Services (RBDS) as new digital technology markets that will provide consumers with new services and incumbent competitors with significant new revenue streams. Government measures to inaugurate new technologies for the American public, one speaker maintained, should ensure that incumbent radio and television stations be given the opportunity to participate.

Broadcast Markets. Testimony at the SBAC May hearing reaffirmed social and economic importance of broadcast speech and ownership diversity in today's changing marketplace. The radio industry as a whole is comprised largely of small businesses who play an important role in serving the First Amendment interests of audiences in communities across the country. Decline in print media has left many cities with few newspapers, particularly minority newspapers. As a result many communities rely heavily on radio and television broadcasters for local news and information, especially spanish speaking populations and other language minorities. The broadcast industry is also involved to a substantial degree in the development and delivery of new services. Since broadcast ownership is correlated with important First Amendment interests, it is essential that broadcasters serving underrepresented communities be involved in all aspects of telecommunications if all Americans are to have viable means of exercising their First Amendment rights. Economic data, however, indicates that the broadcast industry as a whole faces serious financial conditions. Notably, sixty percent of all stations lost money in 1992, and the growth of minority ownership of broadcast facilities has slowed to a trickle. Female ownership is also low given the presence of women in the population at large.

For these reasons, the need for government efforts to stabilize the industry's economic base for incumbent licensees, and maintain ownership opportunities for minorities and women was repeatedly emphasized to the SBAC. First, reinstatement of the broadcast exception to the SBA Opinion Molder Rule, and revisions to the FCC tax certificate policy, are two ways to increase broadcast access to capital which participants recommended highly. Many expressed the view that the tax certificate policy has been the most successful device the FCC has developed to encourage voluntary efforts to diversify ownership. There was also universal opposition on policy and legal grounds to the SBA's 1986 decision to withdraw financial assistance for broadcast and information service providers. Second, witnesses urged the Commission to evaluate whether adverse impact on minority ownership could result from proceedings on radio and TV ownership rules, and licensing and spectrum allocation for rules covering AM and FM radio. Some contend that there is too much interference and too many stations that are supported by advertising revenues which has impaired technical service and complicated local responsiveness.

Multichannel Video Market. Input from the SBAC's May meeting indicates that treatment of non-dominant operators, and programmers in proceedings governed by the Cable Television Consumer Protection and Competition Act of 1992 will be a major determinant of whether and how soon the information highway reaches geographically isolated communities in rural areas and demographically submerged urban communities. Non-dominant operators fill an important gap left by the "dominant nationwide video medium" of cable television by providing cable services to rural America.[42] Unless small systems can be acquired at distress sale prices, the return on investment from wiring many communities in small towns and rural areas is frequently unattractive to Multiple Systems Operators (MSOs) whose operations are designed primarily to achieve vertical and horizontal integration on a nationwide basis. Entrepreneurial cable

[42] Remarks of David Kinley, Chairman, Small Cable Business Association, to the SBAC, September, 1993, p. 6.

system operators, in contrast, have demonstrated the ability to improve allocation of service to isolated areas, while creating jobs for others and achieving self-employment for themselves.

The treatment of non-dominant systems and programmers serving urban markets has significant implications for the information highway for similar reasons. Forty percent of all Americans do not subscribe to cable television - either because they cannot afford cable service or because cable service is unavailable or unresponsive to their needs. Many unserved or undeserved communities are in urban and economically distressed enclaves where alternative video distribution media through multiple technologies provides a more realistic market-based implementation solution for Congressional and FCC diversity policy goals than conventional cable systems. The role of multiple technology media (e.g. MMDS, LMDS, 28 GHz microwave) is even more significant when it is considered that there are few other opportunities for new entry in existing video service markets due to administrative freezes on broadcast TV allocations in major markets, prior DBS orbital slot assignments, and substantial concentration of cable television ownership among dominant MSOs. Without viable opportunities to deploy multiple technology media, the counter programming opportunities which are logically necessary to justify the marketplace approach are in many areas functionally non-existent. In the past, the FCC's tax certificate policies have played a major role in facilitating new entry by minority owned firms, but proposals to consider the same diversity goals in regulating ownership of multiple technology media have languished without even being assigned rulemaking numbers for public comment.

Although current FCC rate regulation and diversity policies jointly provide relief for small and minority owned cable systems, and minority and female owned cable suppliers, a consensus has emerged that additional steps are needed to bring Commission policy in line with prevailing market realities. Non-dominant operators maintain that the FCC's rate regulations are over inclusive, create unnecessary paperwork and compliance burdens for non-dominant operators, and establish unduly narrow eligibility criteria for administrative relief. Non-dominant cable operators urge the Commission to adopt streamlined procedures, flexible rate increase allowances based on cost of service standards and benchmarks that reflect actual costs and debt structures, and discretionary relief for small systems and operators. Other speakers representing consumers and new entrant groups pointedly observed that market anomalies that resulted in previous malapportionment of cable television programming would recur in the context of new infrastructure deployment without government intervention. To avoid this outcome, consumer and new entrant groups offer proposals to establish incentives under existing diversity policies for deployment of multiple technology media. Consumer and new entrant groups claim bias based on denial of opportunities for notice and comment on petitions for policy expansion. Tax treatment of Subchapter S corporations for Cable Act purposes, and of multichannel distributors and programmers for purposes of the

Continuing Appropriations Acts, are two other significant areas of dispute.

Common Carrier Markets. The SBAC reviewed data on common carrier markets both as part of the regulatory flexibility analysis for Docket 90-314, and in response to requests on behalf of small paging operators. Specifically, Radiofone requested the SBAC to "investigate and confirm the adverse impact upon existing and future small paging companies, of extensive preemption of state jurisdiction over regional paging systems...and to take other steps to preserve the ability of existing and future small companies to enter and serve local paging markets."[43] In support of this request, Blooston and Duffy state that "[i]n recent years, certain state public utility commission's have been the only government agencies attempting to encourage the remaining small paging firms to continue serving their local communities. These efforts are presently threatened by a campaign by larger, regional paging companies to have the [FCC] preempt state utility commission jurisdiction over paging operations."[44]

While resource constraints did not permit an investigation of all aspects of these claims, the SBACs analysis of market trends in SIC Code 481 between 1989 and 1991 confirmed a trend toward

---

[43] See, Letter of Arthur Blooston and Gerard J. Duffy, Counsel to Radiofone, Inc, to John R. Winston, Director, FCC Office of Small Business Activities, November 17, 1993, pp. 2,3.

[44] Id., p. 2. See also, Comments of the National Telecommunications And Information Administration re Gen. Docket No. 90-314, pp. 41-46 (arguing the Commission should not preempt state regulation of PCS and rates for interconnection at this time).

concentration of ownership in the radio telephone industry segments that includes paging services. During this period, firms with over 249 employees increased from 19 to 21 and went from a 47.5 percent share of total revenues to 64.9 percent for a 17.4 percent gain in total market revenue.[45] While these data do not confirm the actual or potential effects of state pre-emption, they do suggest that independently owned paging companies may be susceptible to adverse impacts from significant changes in their market environment, including realignment of federal policies governing state jurisdiction over paging operations. Therefore SBAC staff took the treatment of local paging operators into account in formulating policy recommendations for SBAC consideration.

General Analysis of Structural Constraints

SBAC staff research confirms witness testimony that major impediments to non-dominant entry and participation exist as a result of various administrative, regulatory, and financial conditions. To assure that the public receives the maximum benefits from spectrum resources, it is importnat to understand the causation of these restraints on consumer utilization of non-dominant firms in telecommunications commerce.

Administrative Factors. Administrative gridlock in the rulemaking process is a formidable impediment to non-dominant entities, as illustrated by complaints about the FCC's regulatory flexibility process. Critics claim, for example, that "there are no effective regulatory safeguards for small business," and "there is

---

[45] SBAC Report, at p. 3.

rarely any specific focus on small business needs... Commission orders routinely include a paragraph certifying that the order 'would not have a significant economic impact' on a significant number of small businesses."[46] The current approach to regulatory flexibility also gives the appearance that the impact of regulatory changes on diversity interests has been ignored: "The FCC's ad hoc approach to regulation ... has violated its statutory obligation by repeatedly failing to adequately consider the impact of eliminating diversity policies for mass communications."[47] Even congressional authorities criticized the FCC during the 1980s for "bypassing all that is essential to informed and publicly-minded regulatory policy."[48] More recently, critics claim these kinds of practices "give an upper hand in ... innovative services to telecommunications giants while often shutting out entrepreneurs, especially minorities."[49]

These criticisms, although valid in some respects, must be viewed in perspective. One major factor critics neglect is that the conditions that lead to administrative gridlock at the FCC are

---

[46] Gorosh, supra, at p. 404, n. 36, 37.

[47] Johnson, Andrea, "Redefining Diversity in Telecommunications: Uniform Regulatory Framework for Mass Communications," U.C. Davis Law review, Fall 1992, pp. 132-137.

[48] William Ray, FCC: Ups and Downs of Radio-TV Regulation, Iowa State Press, (1990), p. 171 (comments of Rep. Edward Markey, Chrmn, House Subcom. on Telecom. and Finance., on findings of Rpt. of Cong. Res. Service, Libr. of Cong., to House Committee on Energy and Commerce, Subcom. on Telecom. and Finance Feb.1,1988 .)

[49] See, Mark Green, editor, Changing America, Newmarket Press, New York, 1992, pp. 608, 614.

found in the rulemaking processes of agencies throughout federal government. Conventional rulemaking forces agency staff to fashion regulations without the benefit of "reality testing," i.e. testing the probable practical consequences of the proposed regulation through observing reactions and interactions of potentially affected parties. Developing an adequate record in an adversarial system tends to contribute to expense and delay. Parties take extreme positions in their comments or withhold information that is damaging. The process also tends to deprive participants of opportunities to directly exchange views and focus on finding constructive, creative solutions to problems.

One reason for this state of affairs is the obvious need for competing applicants and industries to influence the FCC's decisional process. The problem is that the inability to resolve disputes administratively leads to litigation where parties may be induced to negotiate settlements under court supervision; or worse, the court may direct the agency to start the rulemaking process all over again by remanding the proceeding back to the agency with instructions. Another drawback is that some proposals may be perceived as so controversial that policymakers manage potential controversy by withholding action on the proposed rule change altogether. In other cases, a proposed rule change may never get past the first step of the conventional rulemaking process.

Critics are correct to note, however, that staff regulatory flexibility analysis rarely devotes the attention to small business issues that is commensurate the empirical role of non-dominant market forces in the communications economy. The lack of data that resulted from the deregulation of most reporting requirements for FCC licensees. Broadcast deregulation also resulted less input from the public since many public interest rules were repealed during this period. Regrettably, these conditions tend to diminish government's ability to critically evaluate regulatory assumptions about scale and scope economies and ascertain the impact of its rules.

The lack of data is particularly prejudicial to non-dominant entities in the context of monitoring market trends and failures. The Census Bureau has noted in this regard that "[t]here are no adequate aggregate measures of activity for the communications sector. Those that do provide some measure of economic activity for communications include the Internal Revenue Service's series 'Statistics of Income" (SOI), wages and earning from the BLS, and the Census Bureau's County Business Patterns (CBP) Program ... The Federal Communications Commission was a major supplier of financial and operating statistics ... and until they stopped collecting these data, there was sufficient statistical information on these industries ... In March 1982, the Commission dropped the rule requiring [broadcast] licensees to file annual financial reports. The last year of FCC data for the radio and television industry was 1980." [50]

---

[50] Supporting Statement of the U.S. Census Bureau Regarding the Annual Survey of Communications (1990), pp. 4-5.

The Economic Policy Council's Task Force on Economic Statistics concluded that it would be necessary for the Commerce Department to initiate an annual survey of communications. Because "[t]he measurement of output and prices, and therefore productivity, in the rapidly growing service sector, is seriously flawed." The Census Bureau also noted that expenditure data furnished by certain trade groups was "insufficient in detail, and are defined so as to make interindustry comparisons impossible." There was also concern with low industry response rates to industry surveys and discrepancies between industry data and government estimates. Thus, it appears that efforts to reduce paperwork burdens may have had the perverse effect of making it more difficult for non-dominant entities to prove the need for relief from financial and regulatory impediments the administrative process partially caused. To the extent that the primary reliance on industry data sources in FCC rulemaking proceedings presumably suffers from the same flaws, relevant factors are likely to escape the Commission's attention to the detriment of non-dominant entities when it undertakes to adopt policies and rules.

Licensing And Spectrum Allocation Factors. Licensing and spectrum allocation processes for both broadcast and non-broadcast services also involve formidable structural impediments for non-dominant license acquisition. Comparative hearings are especially formidable impediments to the applicants that seek to serve small audiences. These groups experience continuing difficulties in paying large sums available to group owners. Consequently, in considering structrual barriers to economic growth and access, it is important not to overlook the impact of costly and time consuming licensing procedures which necessitate exceedingly large sums of money in the first place.

Prior to the establishment of the FCC, the Federal Radio Commission adhered to the view of the public interest that disfavored applicants seeking to serve small audiences. As the Radio Commission held in one early landmark case, "it was not logical that [a small group] should enjoy peculiar facilities for propagating its beliefs when there is not room in the other for many other [small groups] to have their separate stations."[51] Radio Commission members were tacitly aware that the situation gave "the newcomer, the non-conformist, and the representative of the minority ... small chance to present his ideas to the public" and that the situation "inevitably must continue unless some fundamental change in the science of radio come about as the result of new discovery."[52]

One conspicuous result of the licensing tools selected by the Commission was minority underrepresentation in broadcast ownership. Despite this early recognition of the problem cross-ownership multiple ownership policies were initially the only policies adopted to encourage diversification. By 1950, only three of the nation's broadcast facilities were owned by African Americans,

---

[51] Great Lakes Broadcasting Co., 3 FRC 32 (1929); reversed on other grounds 37 F. 2d 993; cert denied 281 U.S. 706 (1930).

[52] Annual Report of the Federal Radio Commission, June 30, 1927, p. 7.

according to some accounts.[53] Even after the Commission adopted policies treating diversification of ownership as a public good in 1965, less than a half of one percent minority group ownership penetration in the broadcast industry by 1978.

The FCC's Minority Ownership Task Force attributed minority underepresentation in ownership to licensing conditions that were foreseeable at the time of the Radio Commission: Entry by challenging license renewals and acquisition of unused frequencies was difficult due to the problem of time and cost associated with participation in a hearing proceeding. In particular the Task Force found there is a lack of clear standards associated with determining a successful applicant, and the relative weight accorded to minorities is not clear.[54] The 1978 Minority Ownership Task Force also found that purchasing facilities were often impractical because typically "minority owners are excluded from knowledge of the availability of such stations."[55]

Licensing and spectrum allocation for non-broadcast services also reveals formidable impediments to entry and participation. Since 1949, spectrum designated for radio paging and cellular

---

[53] See, Brief of the National Bar Association as Amicus Curea in Metro Broadcasting v. FCC (cite omitted).

[54] Minority Ownership Task Force report, at p. 10.

[55] Minority Ownership Task Force report, at p. 10.

radio[56] has been allocated under a duopoly market structure which separated allocations into two bands for wireline and non-wireline carriers.[57] It was the Commission's view originally that even the introduction of a marginal amount of competition into the cellular market "will foster important public benefits of diversity of technology, service and price, which should not be sacrificed absent some compelling reason."[58] Although arguably beneficial to the public interest, and perhaps less restrictive than the alternative of a one-to-a-market-rule,[59] however, the duopoly market

---

[56] See, Cellular Communications Systems, 78 FCC 2d 984 (1980) (rejecting unlimited entry and flexible entry proposals). The Commission subsequently explained that four factors established the legal foundation for this approach: (1) there was a need for mobile services to the public; (2) the need could be addressed quickly with wireline expertise; (3) the separate allocation was a reasonable means of avoiding delays due to comparative hearings; (4) steps were taken to guard against anti-competitive practices. Report and Order in CC Docket 79-318, 86 FCC 2d 469 (1981).

[57] General Mobile Radio, 13 FCC 1190 (1949); Adjustment of Band Edges, 12 FCC 2d 841, recon. denied 14 FCC 2d 249 (1968), aff'd sub. nom. Radio Relay Corp., supra.

[58] Separate Allocation Order, supra, at p. 478.

[59] Before adopting the duopoly market structure for the cellular industry, the FCC tentatively authorized a one-system-per-market rule based on its conclusion at that time that wireline carriers had vastly superior deployment capabilities and that the market would not support competing systems. See, First Report and Order in Docket 18626, 19 RR 1663, 1675 (1970) (wireline allocation), 31 FCC 2d 50, 52 (1971) (denying cellular allocations for non-wireline carriers); and Second Report and Order in docket 18626, 46 FCC 2d 752, 760 (1974) (adopting one-system-per-market rule). Ultimately, however, the FCC followed more flexible approaches to encourage entry by new firms in emerging telecommunications markets. See, Specialized Common Carriers, 29 FCC 2d 870 (1971), and Domestic Communications Satellite Facilities, 35 FCC 2d 844, recon. granted in part, 38 FCC 2d 665 (1972), and abandoned the one-system-per-market proposal for licensing cellular facilities in favor of duopoly allocations. Memorandum Opinion and Order, 51 FCC 2d 945, 953, clarified, 55 FCC