

line service, and (since divestiture in 1984) inter-connects with independent local networks to deliver the service.

There are several differences as well. First, there is no production area nor market area for calls, although call concentration is higher in metropolitan areas. Second, the customer cannot determine the route that his calls take on a carrier, and may not switch carriers within the path. Third, calls are not fungible or interchangeable, as are gas molecules. For example, a customer wants to talk to his or her family, friends, or business associates, not someone else's.

## 2. History of Long Distance Service

The history of telecommunications regulation has been one of playing catch-up to technological change. Local and long-distance services were assumed to be natural monopolies, to be provided by AT&T. The fixed plant was expensive, and subject to a declining average cost of service, and all customers needed to be interconnected.

The natural monopoly disappeared with microwave technology because after a critical mass, more traffic requires a roughly proportionate increase in towers and more transmitters.<sup>12</sup> In 1977, the FCC allowed MCI into the market. It also allowed general OCC (Other Common Carrier) entry in 1977. In 1979, the FCC began the *Competitive Carrier* proceedings which ultimately effectively allowed market-based pricing for carriers other than AT&T. The two largest OCCs, MCI and Sprint, currently control 25% of the long-distance market.<sup>13</sup> Local services remained a natural monopoly.<sup>14</sup>

## 3. Light-Handed Regulation of Non-Dominant Firms

In the *Competitive Carrier* proceedings,<sup>15</sup> the FCC minimized the regulation of OCCs. It based its actions on two principles: First, in order to retain business with prices above total costs a firm must possess market power and some firms did not. Second, regulation imposes costs. There are the administrative costs of compiling, maintaining, and distributing information necessary to comply with reporting and licensing requirements. More significant costs on society come from the loss of dynamism which can result. The FCC cited to the Averch-Johnson effect in which rate of return regulation can distort the input choices of a regulated firm away from production at minimum cost. It also discussed effective competition being limited by firms being required to give advance notice of innovative marketing plans and having those initiatives subject to public comment and review. The FCC said that the posting of prices and legal obligation to refrain from "unjust and unreasonable discrimination" may well result in artificially

<sup>12</sup> Huber, Peter W., *The Geodesic Network II: 1993 Report on Competition in the Telephone Industry*, p. 3.4.

<sup>13</sup> Wall Street Journal, July 22, 1994, p. A2.

<sup>14</sup> Meanwhile, technology has begun to remove the local natural monopoly for telephone service. There are a large number of potential and credible providers of local service including cable television providers and radio-based and cellular carriers.

<sup>15</sup> First Report and Order, 85 F.C.C. 2d 5 (1980).

stabilizing prices to the consumer's eventual disadvantage.

*Competitive Carrier* characterized carriers as dominant (eventually only AT&T) or non-dominant. Initially, it defined dominant firms as firms with market power.<sup>16</sup> The FCC said that it focused on certain market features to determine if a firm can exercise market power: The number and size distribution of competing carriers, the nature of barriers to entry and the availability of reasonably substitutable services.<sup>17</sup>

As the FCC refined its determination of which carriers could be subject to lighter-handed regulation, it concluded that once a determination of market power was made, it would look at the degree of power before determining whether regulations conferred greater benefits on customers than costs.<sup>18</sup>

The agency reasoned that non-dominant carriers lacked (substantial) market power, and that the costs outweighed the benefits of regulating such firms. It held that non-dominant firms:

- Can't charge excessive rates;
- Can't discriminate without losing their customers; and
- Can't pass on the costs of inefficient investments to customers.

Applying its definitions, the FCC determined that AT&T was a dominant carrier because of its historical market power, immense financial and technological base, control over monopoly interconnection facilities, and substantial cross-subsidization potential. In addition, it is an effective price leader.<sup>19</sup> Over time, the FCC found that all other carriers were non-dominant.

The FCC decreased the regulations for non-dominant carriers in two phases: streamlining and forbearance. Under both, non-dominant carriers were required to charge just and reasonable and non-discriminatory rates. With streamlining, the FCC presumed that tariff filings were legal, and required no cost justification of the tariffs.<sup>20</sup> Forbearance went further than streamlining, by not requiring tariff filings from non-dominant firms. The Supreme Court later overruled this, as discussed in part I above.

### C. The Cab and Airlines

Airline transportation and its regulation has many similarities to gas pipeline transportation. On any given trip, the variable cost of flying the aircraft is essentially the cost of the fuel used, just as the variable cost of transporting gas is the fuel used by the compressors. Unit costs, therefore, are highly sensitive to utilization or load factors. Economies of scale attainable

<sup>16</sup> Notice of Inquiry and Proposed Rulemaking, 77 F.C.C. 2d at 350 (1979); and First Report and Order, at p. 21.

<sup>17</sup> First Report and Order at p. 21.

<sup>18</sup> Further Notice of Proposed Rulemaking, 84 F.C.C. 2d at 499-500 (1981); and Second Report and Order, 91 F.C.C. 2d (1982).

<sup>19</sup> Notice of Inquiry and Proposed Rulemaking, 77 F.C.C. 2d at 352-353; and First Report and Order, *supra*.

<sup>20</sup> Streamlining also gave (1) blanket approval for expansions, (2) reduced the filing period (substantially) to 14 days, and (3) required no financial information.

through the use of larger airplanes, however, have been thought to be less important than for gas pipelines.<sup>21</sup> Airline companies, like pipeline companies, needed a public convenience & necessity certificate to serve or abandon any interstate route; rates and terms and conditions were strictly regulated. Discounts were allowed, if at all, after a hearing at which competitors could either challenge the proposed rates or match them.

Differences were and are important. Airlines generally have little substantial investment in immobile assets like roadbed, track or in laying pipe. Airports, landing slots and air-traffic control are generally government supplied. Economies of aircraft scale, while present, are less pronounced than for pipelines. Air traffic, in contrast to natural gas, is not fungible. When you go to pick up your grandparents at the airport, you expect unique rather than generic grandparents to deplane. Regulation was thought necessary, not because airlines were a natural monopoly, but because they were thought to be subject to "excessive competition." Under this theory, regulation was necessary to prevent airlines from bankrupting each other through overbuilding and excessive price competition.<sup>22</sup> Another purpose was to provide direct subsidies to encourage the growth of general aviation. The history of airline deregulation also differs greatly from that for natural gas pipelines. While the CAB itself, under Alfred Kahn, initiated some important changes in 1977 under the Civil Aviation Act (1938), Congress decided, in 1978, to phase out all CAB regulation and the agency itself by 1985. The change from a highly regulated environment designed to minimize competition to a free entry environment emphasizing price competition occurred in a remarkably short time.

### 1. Problems That Led to Deregulation

The Senate held hearings on airline regulation in February 1975. The study released later that year was highly critical of the CAB.<sup>23</sup> Stephen Breyer,<sup>24</sup> summarized the study as revealing several "serious defects" relating to rates, routes, efficiency and agency procedures, two of which were:

Rates. Regulation led to high prices and overcapacity. Because the airline industry was highly competitive and because the CAB prevented price competition, the airlines channeled their competitive energies into providing more and costlier service—more flights, more planes, more frills \* \* \* Yet the planes themselves flew more than half empty. (Breyer, 1982, 200)

<sup>21</sup> Bailey et al., provide some of the evidence indicating that economies of scale are modest at pp. 50-54. Fred Kahn, however, suggests that, from hindsight, economies of scale were underestimated. The "thoroughgoing" movement to a hub and spoke system was not foreseen. See "Surprises of Airline Deregulation," *American Economic Review*, May, 1985, 316-322.

<sup>22</sup> See Stephen Breyer, *Regulation and Its Reform*, Harvard, 1982, 197-221; and Elizabeth Bailey, David Graham and Daniel Kaplan, *Deregulating the Airlines*, MIT, 1985, 11-26.

<sup>23</sup> Senate Comm. on the Judiciary, Subcomm. on Admin. Practice and Procedure, 94th Cong., 1st Sess., *Civil Aeronautics Board Practices and Procedures*. (1975).

<sup>24</sup> Breyer was the Committee's chief investigator.