

PRESCRIPTIVE REGULATIONS AND
TELECOMMUNICATIONS:
OLD LESSONS NOT LEARNED

Wayne A. Leighton

The Telecommunications Act of 1996 was an important first step toward clearing the regulatory underbrush that thwarted new competitors, new advances in technology, and new services for consumers. The Federal Communications Commission, however, has largely failed to initiate true deregulation. In the areas of universal service, local competition, and access charges, the FCC presumes that by setting prices or otherwise dictating the terms of trade to help new entrants, it will “promote” competition. In reality, the agency’s actions thwart the market process and make true competition less likely.

By interfering with the market process, the FCC disrupts the natural, spontaneous order that comes about as economic actors pursue their own interests in a world of uncertainty and change. Free markets provide opportunities for entrepreneurs to capture above-normal profits if they discover more efficient ways to meet consumer demands—by providing customers with better service, better quality, or a better price.

The idea that government planning or regulation cannot mimic the competitive market process is not a mere ideological mantra. It is an historical fact rooted in the experiences of socialist planners that date back to at least the 1920s and 1930s. This article explains the parallels between the errors of socialist planners over half a century ago and the errors of the FCC today. The basic message is that the FCC would do well to take a page from history and rethink its approach to telecommunications deregulation.

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Wayne Leighton is an economist specializing in telecommunications policy. He has served as a Senior Economist with the U.S. Senate and as an officer of the Charles G. Koch Charitable Foundation. This paper is based on his dissertation, which he completed at George Mason University. He thanks James Gattuso, John Hasnas, Kent Lassman, Ed López, Solveig Singleton, and Richard Steinberg for useful comments.

The Unfinished Journey to Deregulation

The political journey that led to passage of the Telecommunications Act of 1996 paralleled the deregulation of the oil and gas pipelines, airlines, trucking, and other industries in the late 1970s and early 1980s. Liberal observers decried the market power of large incumbents, while conservative and free-market observers pointed to the inefficiencies associated with regulation. A political compromise emerged for the deregulation of these industries, partially addressing the concerns of both sides and in the process earning bipartisan support (Derthick and Quirk 1985).

The Telecommunications Act of 1996 also enjoyed bipartisan support, passing the U.S. Senate by a vote of 91 to 5 and the U.S. House of Representatives by a vote of 414 to 16. President Clinton was delighted to sign such a “popular” bill into law, touting it as an important step for improving the country’s economic competitiveness as well as the telecommunications consumer’s economic well-being (*Communications Today*, 9 February 1996).

Whether the 1996 act will benefit consumers remains to be seen. In the long run, consumers would benefit most from the increased competition that would result from significant, permanent deregulation. But those benefits will largely depend on how the act is implemented by the FCC.

To its credit, the FCC made some significant overtures toward deregulation: it reduced filing requirements for telecommunications carriers and increased forbearance from regulations. But it now appears that the agency’s approach to three of the most important issues in telecommunications deregulation—universal service, local competition, and access charges—will be regulatory, not deregulatory. Known to telecom insiders as the “trilogy,” these issues form the core of the debate between incumbent local exchange carriers, interexchange carriers, alternative access providers, resellers, and others, as well as their armies of attorneys.¹

In interconnection, access charges, and universal service proceedings, the FCC appears more concerned with promoting *preset outcomes* than with promoting *market processes*. In the FCC’s interconnection proceeding, for example, the agency sought to quickly produce competition in the form of resellers, without regard to creating incentives for efficient economic investment. Significantly, the FCC

¹In just one part of the trilogy—universal service—over 240 parties filed comments before the FCC in an attempt to influence the agency’s rulemaking. With only a handful of exceptions, all parties requested special rules, regulations, or subsidies.

has not tried to create rules and regulations that specifically promote the market process—as opposed to rules that mandate the mimicry of market outcomes. Placing a long-run focus on the preset outcomes of competition, while ignoring the institutions that allow for competition to take place, works against the intended result.

Blindness to the reality that competition cannot be artificially stimulated through the regulatory process will prove fatal to the FCC's agenda. What needs to be done is to establish the institutions that provide a framework for competition—namely, the general rules that apply equally to all and that clearly delineate property rights. To assign regulators the goal of dictating outcomes—rather than enforcing general rules—requires the creation of an enormous apparatus that is both bureaucratic and interventionist. It is improper from a civil libertarian perspective, incoherent from a theoretical perspective, and insupportable from an historical perspective.

In the end, those who pursue this regulatory agenda will fail. The “competition” they create will be largely artificial. Most important, no incentives will exist to reward economically efficient decisionmaking. As will be outlined in this paper, ambitious programs to mimic efficient markets have failed in the past, and such programs will fail in the area of telecommunications policy, should the FCC continue to advance them.

The FCC's Implementation

Universal Service

Contrary to the myth that universal service subsidies were established by the Telecommunications Act of 1934, the FCC and state regulators have used universal service subsidies to promote the availability of basic local telephone service only since the 1960s (Mueller 1997). The Telecommunications Act of 1996 codifies that practice, expressing universal service as a goal of Congress for the first time. Section 254 of the act states, “Consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services.” It further adds, “Elementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services.” The FCC favored a high level of federal regulatory involvement in providing universal service to these groups.

The 1996 act left the FCC with significant discretion to devise how support would be provided. The FCC allocated support of no more

than \$2.25 billion per year to schools and libraries based on need, a cap that holds currently through the first six months of 2000 (FCC 1999b: par. 1). The level of assistance will range between 20 and 90 percent of the cost of service. To the FCC's credit, schools and libraries are required to seek competitive bids for subsidized services (FCC 1997a: pars. 425, 480, 492, 498). Yet this \$2.25 billion in support is financed by a tax on all telecommunications carriers offering interstate services and is thus a burden on all telecommunications consumers. In addition, by guaranteeing a minimum 20 percent subsidy for the wealthier schools and libraries, the FCC ensured that even high-income families get a place at the government subsidy trough. While the FCC has responded to Congress's concerns and agreed to reduce the amount of the subsidy, the fundamental problem remains: the creation of a discretionary tax mechanism and a huge pot of money to tempt lobbyists. Moreover, by increasing the federal role in advancing telecommunications services to schools and libraries, the FCC decreases the role of local authorities, those with knowledge of the real educational needs of their communities. This preference for a centralized approach that discounts the knowledge of local leaders is a consistent theme in the agency's rulemaking.

For rural health care providers, the FCC originally decided to provide support not to exceed \$400 million for a variety of telecommunications services. This cap also applies through the first six months of 2000 (FCC 1999b: par. 1). For telecommunications carriers who provide services to rural health care providers at the comparable urban rate, the carrier may recover the difference, if any, between the rate for similar services provided to other customers in comparable rural areas of the state and the rate charged to the rural health care provider for such services. The FCC requires these subsidy recipients to seek alternative sources of telecommunications services via competitive bidding, but health care providers need not accept the lowest bid for a specified level or type of service. Rather, the agency intends to allow rural health care providers "to choose the offering or offerings that they find most cost-effective." The FCC effectively matches a shallow "requirement" for competitive bidding with a "suggestion" for efficient use of resources, and thus appears to absolve all parties from responsibility for fiscal management (FCC 1997a: pars. 425, 660, 686–89). Such an incentive structure almost guarantees high costs.

For low-income consumers, the FCC will deliver support via two well-established mechanisms: the Lifeline and Link Up programs. Lifeline service, which waives the \$3.50 monthly subscriber line

charge (SLC) for qualifying low-income consumers, has been slightly expanded. States may match the FCC's contribution but are not required to do so. Link Up service, which helps low-income consumers by waiving a portion of the charges for service installation, also remains. The FCC's approach to assisting low-income consumers will not dramatically increase the cost of this subsidy. Still, the agency shows little interest in understanding what this cost might be or how its involvement in the market (through subsidization) might cause other, less desirable effects. For example, the FCC dismisses support mechanisms such as vouchers, labeling these as administratively burdensome (FCC 1997a: par. 372). While the administrative burden would likely exist, it is also likely that vouchers would provide a clear accounting of the costs of support to low-income consumers. Yet the agency allows no such incentives for a more efficient allocation of this support.

The subsidy program for consumers in rural, insular, and high-cost areas is the largest and most distortive of these programs. In theory, the new subsidy is technology neutral, allowing for different providers and different technologies to potentially compete in this market (although the concept of subsidizing one or more competitors in a market, and of how to obtain efficient entry when rates are held at below-market prices, is deeply problematic). But the high-cost fund is not capped, even though the total subsidy will be far greater than the funds for schools, libraries, low-income groups, or health care providers. Moreover, support for rural, insular, and high-cost areas is likely to be especially costly given the methodology used to calculate this assistance. Nonrural carriers will receive support based on forward-looking cost estimates, while incumbent rural local carriers will receive support based on their embedded costs. This arrangement for incumbent rural carriers—though supposedly only to last during a transition—is undoubtedly generous. In effect, rural carriers are to enjoy cost-plus regulation, an outmoded regulatory practice that provides little incentive for cost management and is thus virtually guaranteed to promote inefficiency and waste (see Kahn 1971). For nonrural carriers desiring universal service subsidies to enter rural markets, the FCC will apply a forward-looking cost methodology to determine the level of support (FCC 1999a: pars. 11–20). While less likely to promote waste, forward-looking cost models have their own disadvantages, not the least of which is an inability to effectively estimate real economic costs.

The thrust of the FCC's universal service proceedings, then, has been to promote universal service by subsidizing prices via an inefficient sectoral tax, rather than targeting subsidies to minimize dis-

tortion of market processes, or (what would be even more beneficial) simply allowing market forces to lower prices and costs together. Indeed, most of the FCC's comments reveal remarkably little interest in how market forces could lower prices and costs. The focus is on politically desirable outcomes mandated from the top down, instead of on initiating a bottom-up process that would bring economic benefits in the long run. As with all economic goods, however, universal service is best advanced through the market process, not the political process.

Local Competition

The FCC implemented sections 251 and 252 of the act in its "local competition order," perhaps the most hotly contested of the three elements of the trilogy. The FCC and Congress anticipate three ways to develop competition in the local market: through the development of new networks, use of unbundled elements, and resale of existing services (FCC 1996: par. 12). In the local competition order, the agency lays down the rules it views as critical to spur competition via interconnection (e.g., between independent networks), access to unbundled elements, and resale.

In crafting these rules, the FCC exerted considerable authority over the state commissions, even while describing its relation with the state regulatory commissions as a "partnership built on mutual commitment to local telephone competition," (FCC 1996: par. 24). The FCC further asserts that "under this partnership, the FCC establishes uniform national rules for some issues, (while) the states, and in some instances the FCC, administer these rules, and the states adopt additional rules that are critical to promoting local telephone competition" (par. 24). The FCC will lay out the framework within which this competition will be promoted, while the states' role is limited to enforcement and providing supporting, complementary rules.

Perhaps the FCC did this because it was worried about an incomplete free-market approach to implementation of the 1996 act on the part of the state commissions, which are lobbied heavily by and are often responsive to rent-seeking incumbent local exchange carriers. Statutory barriers at the state level have often hindered new or potential entrants into the local market and may still exist. But where this is the case, the FCC has only to attack those barriers directly—for example, by disallowing the monopoly privileges. Instead, by assuming its current heavy-handed role, the FCC again discounts the knowledge of authorities who are closer to the consumer.

But even if we take an approach to rulemaking that sees federal involvement as a given (without condoning it), there are serious problems with the substance of the federal rules themselves. The problems start with the agency's regulation of interconnection, access to unbundled elements, and resale. The FCC misdirects its priorities from disallowing the incumbent's monopoly privileges, which interfere with the market process, to requiring that the incumbent subsidize potential entrants.

Following the 1996 act, the FCC's local competition order requires incumbent local exchange carriers (LECs) to sell specific services to potential competitors at wholesale rates for resale, noting that resale may be an important option for new competitors who only expand to facilities-based competition over time (FCC 1996: par. 907). The resale requirement outlines a set of bundled elements—i.e., packages of retail services—to be offered at wholesale rates. The agency set a controversial default range of wholesale prices for state commissions to employ when setting discounts for resale. These wholesale rates range from 17 to 25 percent below retail rates, and must be employed by state commissions that have not determined the incumbent LEC's avoided costs, or that have used costing methodologies not approved by the FCC (par. 910). Incumbent LECs also must offer unbundled elements of services for competitors to repackage and resell, as well as interconnection. The FCC ruled that “the incumbent must accept the novel use of, and modification to, its network facilities to accommodate the interconnector or to provide access to unbundled elements” (par. 198). The only concession to incumbents is that requesting carriers must pay the cost of interconnection plus a “reasonable” profit (par. 199).

The FCC itself recognizes that this approach is flawed, noting that “incumbent LEC networks were not designed to accommodate third-party interconnection or use of network elements at all or even most points within the network” (FCC 1996: par. 202). This is largely the result of a half century of telecommunications regulation based on natural monopoly theory. Allowing market forces to dictate interconnection arrangements over the last half century likely would have made the current intervention unnecessary (Huber, Kellogg, and Thorne 1999: 536–37).

The potential errors from such intervention are enormous. For example, in setting a “reasonable profit,” federal or state regulators will once again have to estimate costs, yet it is foolish to assume that these costs will be consistent across carriers. Indeed, the FCC's rules do not focus on actual costs but instead focus on what would be charged by a hypothetical company with a specific wholesale cost

(FCC 1996: pars. 674–79, 699–703) The agency’s required methodology essentially employs a mechanistic allocation of common costs, which may or may not reflect market realities.

Tellingly, the agency is underwhelmed by the thought that its regulation could stifle the natural processes of the market. For example, it requires incumbent LECs to share certain proprietary elements with potential competitors, despite the potential for discouraging innovation. The FCC justifies this approach by asserting that “the threat to competition (from incumbents not sharing proprietary elements) would far exceed any costs to consumers resulting from reduced innovation by the incumbent LEC” (FCC 1996: par. 282).

But how does the FCC know this? The FCC argues that, in its calculation, the risk of lower competition (due to incumbents not sharing proprietary information) exceeds the risk of less innovation (due to the requirement that incumbents share their proprietary information). In other words, the expected cost due to less competition exceeds the expected cost due to decreased innovation. If this valuation is accurate, the agency is justified (it asserts) in creating regulations that increase competition at the expense of innovation. But for the FCC to assert that this expression is true, it must assume it has knowledge of all these variables, including the probabilities of all possible outcomes and their costs. Such knowledge is not, and cannot be, possessed by any regulator. Nonetheless, this misguided presumption of superior knowledge has been demonstrated over time by many policymakers, whether in setting the price for a particular service or dictating the terms of trade for an entire economy.

Access Charges

Access charges are the payments that long distance carriers make to local exchange carriers for the service of connecting a long distance call to the local customer. A review of access charges logically follows the FCC’s revision of universal service, since access charges have historically provided an implicit universal service subsidy. Under the old regulatory model, designed for monopoly incumbent LECs, federal and state authorities set access charges at rates that included a portion of the non-traffic-sensitive (NTS) costs of local service, allowing state officials to keep local telephone service prices proportionately lower (see Huber, et al. 1999: 554–55; Leighton 1996: chap. 3). But this means that long distance charges are inflated. The agency’s “Access Charge Reform Order” addresses this problem by mandating a plan to lower NTS costs and remove the universal service costs built in to access charges (FCC 1997b: pars. 6–8, 123–251).

To its credit, the agency's actions shine light on what is essentially a tax policy (whereby some consumers pay more to subsidize others). The agency's reform revises the rate structure for access charges (i.e., flat versus usage-based rates) but, unfortunately, dictates the rate levels (i.e., the actual prices) in key instances. Particularly in revising rate levels, the FCC commits the same type of error seen throughout the trilogy, mandating pre-set outcomes without understanding the market process.

The FCC's plan to revise the rate structure is relatively unobjectionable, if one assumes that the agency ought to regulate the pricing structures for access charges in the first place.² The FCC states that it is "rationalizing" rate structures to "more accurately reflect the manner in which the costs are incurred, thereby facilitating the movement to a competitive market" (FCC 1997b: par. 13). This means NTS costs are to be covered by flat fees, not usage-based fees (par. 68).

Achieving this type of access charge pricing structure has been a stated goal of the agency since at least the early 1980s. However, the most obvious method of addressing the pricing structure problem—increasing the SLC—was and is likely to raise local residential rates, thus making such a solution politically difficult.

The agency avoids this political problem by refusing to raise the SLC for primary residential and single-line business telephone lines, instead focusing price increases on nonprimary residential and multi-line business lines (FCC 1997b: pars. 70–71). In addition, the FCC allows incumbent LECs to recover NTS costs through regulated flat fees to be charged to customers' presubscribed interexchange carriers, which it calls a "presubscribed interexchange carrier charge" or PICC (pars. 71, 91–94). This is essentially an SLC billed to the long-distance service provider. Presumably, the PICC might be billed back to the customer, but it might not be.³

Regarding the rate levels, the agency attempts to take a "market-based" approach, but stumbles along the way. The FCC recognizes

²This is a significant assumption. While the move to charge NTS costs on a flat fee basis may be more efficient, there is certainly a possibility that it is not, and markets are likely to determine the most efficient pricing structure better than government regulators.

³In a consumer information brochure available on-line, the FCC tries to absolve itself from any role in increasing these costs: "Remember—the FCC does not require your long distance company to place these charges on your bill. Let the company know if you believe these charges are inappropriate or are too high." See "The FCC's Universal Service Support Mechanisms" (www.fcc.gov/Bureaus/Common_Carrier/Factsheets/univers.html).

the folly of attempting an entirely prescriptive approach to access charge rate-setting, observing that “regulation cannot replicate the complex and dynamic ways in which competition will affect the prices, service offerings, and investment decisions of both incumbent LECs and their competitors” (FCC 1997b: par. 289). In an attempt to apply this philosophy, the agency’s most recent rules grant flexibility in pricing interstate access services for certain local exchange carriers (FCC 1999c: pars. 4, 19).

But the agency falters in its commitment to an approach that does not interfere with the market process. For example, while the agency takes a step in the right direction by avoiding a prescriptive approach to setting access charges in competitive markets, it takes a notable turn in the wrong direction by asserting that “if competition fails to emerge over time for certain access services in particular geographic areas, we will ensure that the rates for those services reflect the forward-looking economic costs of providing the services” (FCC 1997b: par. 260).

The agency’s approach to regulation in markets with “insufficient” competition is significantly interventionist—and a good bit short of optimal policy. Such an approach imposes a litmus test for demonstrating *actual* competition, essentially ignoring the role that can be played by *potential* competition. Yet the market discipline imposed by potential competition is not simply a matter of theoretical conjecture (Demsetz 1968; Baumol, Panzer, and Willig 1982), it is also supported by fact (e.g., Hazlett 1990). And, finally, it is supported by the extent to which dominant firms in a market, including telecommunications firms, are willing to expend substantial resources on erecting legal barriers to potential competition (Hazlett 1986).

The FCC should, therefore, acknowledge that the potential for competitors to challenge incumbent LECs (absent government-imposed entry barriers) signifies that incumbent LECs can no longer assert market power. Where there is potential for market entry, the regulatory apparatus is unnecessary and should be eliminated (Demsetz 1968). But if the agency truly believes that competition best protects consumers, it should consider consumers “protected” when there is a clear potential for competition to exist. Unfortunately, the agency does not adopt this view of competition, choosing instead to follow the same approach it uses throughout the trilogy. That is, the FCC continues to believe that it has the best knowledge to answer the relevant questions, whether those questions focus on the cost of service, the state of competition, or other variables.

Price-Setting: The Regulatory Conceit

The Prescriptive Approach to Economic Planning

While the FCC's prescriptive approach to regulation is not the most effective way to promote competition in the long run, it is at least not logically inconsistent. Rather, the FCC has maintained a certain logical consistency throughout the trilogy by employing a model that attempts to estimate an "appropriate" price for universal service subsidies, for interconnection and resale, and for access to the local exchange network.⁴

Consistency, however, is no virtue if one is consistently ineffective. And the use of a prescriptive approach to telecommunications policy is—at least in all parts of the trilogy—ineffective. That is, the use of a prescriptive policy is not likely to be effective in meeting the objectives of the Telecommunications Act of 1996, and it is not likely to be effective in meeting the long-run interests of telecommunications consumers.

The FCC is doomed to fail if it pursues an interventionist approach. The agency assumes that if it employs the right minds and runs the right models, it can and will know the proper market price for universal service, interconnection or resale services, and access to the local loop.

This belief—that a central authority could somehow identify market prices—was proposed, debated, and defeated as a theoretical application in the 1920s and 1930s, in an oft-forgotten war of ideas known as the "socialist calculation debate." The FCC—and those who advocate a prescriptive approach to regulation—would do well to learn from that debate.

⁴Some parties that support subsidies—e.g., The American Association of Retired Persons, the Consumer Federation of America, and the Consumers Union—have argued specifically for this consistency, following the argument that all three parts of the trilogy need to support this:

The Commission has already rejected ILEC claims to illegitimate costs with the adoption of Total Element Long Run Incremental Cost (TELRIC) pricing in the Local Competition Order. In addition, the Federal-State Joint-Board on Universal Service has recommended the use of TELRIC pricing in the Universal Service Proceeding. Thus, in the first two parts of the so-called trilogy of regulatory reform, federal policy makers have embraced the use of this pro-competitive pricing methodology. To fail to adopt the same standard on the issue of access charge reform would be inconsistent and seriously damage the prospects for competition in the local telephone market. By not using TELRIC in this proceeding, the Commission will have built a two-legged stool as the platform for launching effective competition [American Association of Retired Persons et al. 1997: 9].

The Socialist Calculation Debate

Those theorists who took the pro-government-planning approach to regulation of the economy included Oskar Lange and Abba Lerner. Their free-market opponents were Ludwig von Mises and Frederick Hayek. As early as 1920, Mises had shown that markets were necessary to determine where resources were needed more or less urgently, and that the price system was the most effective way to allocate these resources (Mises 1920). Because socialism disallowed private property, it was not capable of efficiently allocating resources.

But the socialists were not discouraged. To Lange and his comrades, Mises was correct in arguing that accurate price signals were needed for an efficient allocation of resources. In a satirical passage opening one of his most famous essays, Lange (1938: 57–58) offered his thanks to Mises for demonstrating the importance of prices. But the socialists still maintained that private property—the fundamental issue of contention—could be eliminated. And they set out to prove their point, beginning with a simple hypothesis that supply and demand equations could be estimated to produce appropriate prices (Dickinson 1933).

The socialists soon realized that if those estimations deviate from the reality of the market, resources will be allocated inefficiently. The fundamental “calculation problem” of economics was rapidly seen to be unsolvable by simple estimation, which left socialism in search of a more powerful defense. But this calculation problem was not new. In fact, neoclassical economics had already postulated a widely accepted answer, with its theory of prices being determined in competitive markets through a process of trial and error (Walras [1874] 1954). The socialists were simply attempting to postulate market prices without private property.

It was Lange (1938) who offered what was soon taken as the rebuttal to an economic system based on private property. The state, argued Lange, could set prices through a Central Planning Board, then adjust them in a process similar to neoclassical theory—based on trial and error. Prices would be raised or lowered in response to social needs, with shortages or surpluses helping to communicate these needs.

Lange’s theoretical insights paralleled and complemented the ideas of Frederick Winslow Taylor, the father of scientific management. It was Taylor who, in 1911, promoted a decidedly formal and centralized approach to management theory, whereby managers with superior knowledge guided their more ignorant workers toward the most efficient means of accomplishing tasks (Taylor 1911).

For half a century, the ideas of Lange, F.W. Taylor, and socialism in general reigned with little effective challenge.⁵ Lange's response to the free-market Austrians was viewed by many as decisive and debilitating, while Taylor's "enlightened" management philosophy went virtually unchallenged until the emergence and acceptance of thinkers such as Peter Drucker (1946, 1954).

Confident that Lange and his associates had won the socialist calculation debate, socialist planners throughout the world set about to plan their economies from top to bottom, bringing to fruition the politico-economic system of Marx, Engels, and Lenin. Confident that Taylor had enlightened them, corporate managers throughout the "capitalist" world established top-down control, bringing the fruits of bureaucracy in the name of efficiency.

Tragically for both the socialist citizen and the American worker, Hayek's rebuttal (Hayek 1935) to Lange and others who propped "market socialism" was largely dismissed at the time. Whether this was due to his opponents' inability to comprehend the nuances of his argument or their insincerity in addressing it remains an unresolved issue (Vaughn 1994). Nevertheless, much can be learned from understanding the terms of the debate, with the hope that we can prevent a repetition of the errors of socialism.

Hayek's Requiem to Markets

Hayek argued that all economic systems require a means of allocating the scarce resources of society. The knowledge of relative scarcities of resources must somehow be incorporated into decision-making, which creates a "knowledge problem." Socialism, with its central control of production, requires planners to have specific knowledge of innumerable elements of the production process.⁶ In contrast, a free-market economy utilizes the price system to communicate relative scarcities, and it utilizes private property rights to give individual actors incentives to efficiently apply their particular (or local) knowledge to the management of resources under their control. In short, centralized control of firms in an economy implies micro-

⁵Frederick Winslow Taylor should not be confused with the Frederick M. Taylor who joined Oskar Lange in the socialist calculation debate. Both Taylors, however, demonstrated a remarkable faith in the power of a few persons—senior managers, or socialist planners—to efficiently dictate the actions of many others.

⁶The advance of technology does not help solve the knowledge problem. Even if supercomputers could perform all of the necessary calculations—and it is not clear that they could do this, or that anyone could determine what calculations to input—coordinating these calculations through a hierarchical structure would be inferior to coordination via a competitive market process (Lavoie 1985: 55)

management of firms, for efficient management requires looking after the “small economies” of each operation (see Hayek 1948: 153–54).⁷

Hayek’s second point drew upon his first. Even if central planners could keep track of the infinite quantity of management decisions that have to be made about the allocation of resources, they would have no way of knowing whether their managers had indeed used those resources efficiently. Costs are essentially subjective and can be understood only in terms of opportunities forgone. In a free market, business managers allocate resources by evaluating alternatives. A mandate to minimize costs is meaningless. Command-and-control production processes require costs to be defined in nice, neat, objective terms, such that the controllers can know if their managers are succeeding. But the reality of the market is that costs never are so easily defined.⁸

Finally, Hayek stressed an obvious point on incentives. Resources are most likely to be allocated efficiently when there is an incentive to do so. Even if central planners clearly perceived all the potential allocations of resources and their opportunity costs—an impossibility, as we have just seen—they would not necessarily succeed in motivating their managers to allocate efficiently, because the managers would not necessarily be rewarded for their efficiency. Whereas managers in a free-market system would be motivated by profit and loss, managers in the socialist state would not have the property rights to the fruits of their efficient management. Furthermore, exactly what the efficient use of resources might be in any given situation would remain unknown to the planners.⁹

The Telecom Calculation Debate

Today, few economists go beyond paying lip service to the principles Hayek laid out in the socialist calculation debate (Boettke 1998). Most fail to see the pitfalls of an interventionist approach to

⁷The fact that knowledge in an economy is dispersed does more than render central planners ineffective. It also makes it possible that the negative effects of planning may not appear for some time, thus allowing a greater drift toward socialized control (Ikeda 1994).

⁸Mises (1949: 396) summed up the argument about costs as follows: “At the bottom of many efforts to determine nonmarket prices is the confused and contradictory notion of real costs. If costs were a real thing, i.e., a quantity independent of personal value judgments and objectively discernible and measurable, it would be possible for a disinterested arbiter to determine their height and thus the correct price. There is no need to dwell any longer on the absurdity of this idea.”

⁹It is possible that rewards might be based on the appearance of efficiently managing resources, which would give managers the incentive to *appear* to be successful in this endeavor. But as appearance and reality are not necessarily the same, so would the rewards not necessarily reward actual efficiency.

public policy. They overlook the institutions of a free market that make such intervention unproductive and unnecessary. This is most evident in the debate over telecom policy in general, and the trilogy in particular.

The FCC and advocates of prescriptive regulatory policy in telecommunications demur. Surely, they say, their approach is on solid ground, for it is consistent in applying an economically efficient answer to every pricing problem. On closer examination, however, we can see that the prescriptive approach to regulation in telecom policy is—as it was in the socialist calculation debate—merely an interesting *theoretical* model, not an effective or practical model. To attempt to approximate telecom prices that are divorced from the realities of the market itself is, as Hayek (1988) would say, a “fatal conceit.”

Theoretical models will fail to describe the telecommunications market for the same reasons that such models cannot describe entire economies. Mises’s and Hayek’s refutation of nonmarket “approximations” of the market, made over half a century ago, are just as relevant when applied today in telecommunications markets.

Any economic organization or society must inevitably address the knowledge problem—how to deal with and incorporate knowledge about resource scarcity that is diffuse among many members and often tacitly held. The relative scarcity of resources in telecommunications—physical capital, people, information—is not divorced from this reality. Yet the FCC presumes it can determine an efficient allocation of resources. In fact, its orders on interconnection and access charge reform are largely focused on just such estimation, including detailed and complicated analyses.¹⁰ The agency claims

¹⁰Consider the following description of how access charges will be calculated:

For inputs, the quantity of labor is measured directly, using the reported number of employees. We create the labor quantity index by taking a ratio of number of employees in a year to the number of employees in the base year, 1985. We measure capital services as a constant proportion of the capital stock. We have no direct measure of the quantity of materials consumed in the production of any period’s output. Instead, we calculate materials expense by subtracting from total operating expense the operating expenses attributable to labor, and depreciation and amortization expense. To convert materials expense into a quantity, we deflate materials expense by a price index specifically created to measure changes in materials prices. To combine these inputs into a single index of inputs, we need to calculate weights (or factor shares) that represent the relative contributions of the inputs in the production process. We assume the contribution of each input is proportional to the payments to that factor of production. The weight for each factor is its share of total factor payments. For labor, this is total employee compensation. For materials, we use a number we have already calculated—total material expense. The payment to capital is equal to gross return to capital, which is the difference between total revenue and the sum of materials and labor expense [FCC 1997c: par. 93.].

these analyses allow it to develop accurate measures of changes in resource productivity, and ultimately allocate these resources efficiently (FCC 1997c: par. 94).

To buy into the logic that the FCC need involve itself in the business of efficient resource allocation, one must accept two primary arguments: first, that resources are inefficiently allocated, or would be in the absence of regulation, and second, that a regulatory authority's efforts will lead to greater efficiency. Unfortunately, many parties in the telecommunications debate accept both premises without question or evidence. They argue that if the level of competition in a telecommunications market is "ineffective," then "regulatory oversight is necessary to replicate those prices that would prevail if competitive pressures were effective" (Baumol, Ordover, and Willig 1997: 3).

The agency itself accepts these assumptions throughout the trilogy. For example, in its universal service order, the FCC argues that forward-looking cost "best approximates the costs that would be incurred by an efficient carrier in the market" (FCC 1997a: par. 199). And for interconnection, the agency's original order made it clear that a prescriptive approach would be taken, and that it—not the state regulatory agencies—would mandate the methodology to be used:

Prices for unbundled elements under section 251 must be based on cost under the law, and that should be read as requiring that prices be based on forward-looking economic costs In arbitrations of interconnection arrangements, or in rulemakings the results of which will be applied in arbitrations, states must set prices for interconnection and unbundled network elements based on the forward-looking, long-run, incremental cost methodology we describe [FCC 1996: par. 620].

One can almost hear within these arguments the regulatory cry of the socialist planners of half a century ago: "The last specific provision of the correct socialist plan for dealing with our problem would be this: In fixing the selling price of any particular commodity, the economic authorities would set that price at a point which fully covered the cost of producing said commodity" (Taylor 1938: 45). Certainly, economic efficiency is approached as prices tend to just cover the cost of production. But to presume that regulatory authorities have the knowledge to make such estimations for an entire market is to entirely overlook the knowledge problem.

The fact that costs are subjective—not inherent and ready to be discovered by a model—means that attempts to estimate them are futile. True economic costs cannot be modeled. Investment in a mar-

ket is guided in part by subjective valuations of opportunity cost—not embedded costs or the forward-looking cost of building new facilities. The FCC’s models do not take opportunity cost into account (they cannot, for it is subjective) and therefore the use of those models is likely to substantially distort investment.

Yet the FCC presumes that the models it employs will accurately estimate true economic (i.e., opportunity) costs. For universal service subsidies, interconnection prices, and to a lesser extent, access charges, the agency assumes that efficiency will be achieved if pricing is based on economic cost. While this assumption is true, it carries with it another, albeit implicit assumption. This is the assumption that a model or technique exists or can be developed that will accurately estimate economic cost.

As cited above from the interconnection order, and throughout the trilogy, forward-looking cost is held out as the best means to estimate true economic cost, and different forward-looking cost models are considered to estimate appropriate prices for telecommunications services. For example, in determining the “appropriate” level of support for universal service subsidies, the agency (FCC 1997a: par. 234) considered three different models: the benchmark cost pricing model, the Hatfield model, and the total element cost model.

These models are complex, reflecting the latest statistical and econometric modeling techniques. The agency recognizes this, and promises to evaluate revisions in these models, as well as the models employed by the states, to come up with more “accurate” measures of forward-looking cost. Moreover, the FCC provides a checklist of 10 criteria that any proposed cost methodology for universal service must cover, ranging from assumptions for least-cost/most-efficient technology, a federally authorized rate of return on interstate services, and a “reasonable” allocation of joint and common costs.

In short, the FCC’s policy is to model costs in such a way that forward-looking cost is estimated and then applied to determine the “appropriate” level of subsidy. To the socialists planners of the 1920s, 1930s, and 1940s, this sort of trial-and-error, “regulate-’til-you-get-it-right” approach to economic management was quite natural:

If, in regulating productive processes, the authorities were actually using for any particular factor a valuation which was too high or too low, that fact would soon disclose itself in unmistakable ways. Thus, supposing that, in the case of a particular factor, the valuation given . . . was too high, that fact would inevitably lead the authorities to be unduly economical in the use of that factor [Taylor 1938: 53].

Clearly, the critical role of incentives is continuously misunderstood in today's regulatory debates, as it was during Hayek's day. But if incentives are not taken into account, then inefficient results are much more likely to occur.

Each part of the trilogy is heavily laden with incentives, if only because this is the natural consequence of a prescriptive, interventionist approach to regulation. That is, by mandating terms of trade in telecommunications markets—levels of universal service support, prices for interconnection, and access charges—the FCC creates positive incentives for some economic activity and negative incentives for other activity. But it does not necessarily promote market outcomes. In fact, it forecloses many market outcomes by the very act of mandating the terms of trade.

Foreclosing other market alternatives was not at all foreign to the socialists, as Lange (1938: 81) made clear: "In a socialist economy . . . managers certainly can and do influence prices by their decisions. Therefore, the parametric function of prices must be imposed on them by the Central Planning Board."

Despite the obvious parallel between the socialists' fictitious (but hoped for) Central Planning Board and the regulatory authorities of today, mandating certain prices, and foreclosing others, will not lead to more efficient results:

- If incumbent local exchange carriers eligible for universal service subsidies automatically receive support equal to a pre-determined cost estimate, they will have no incentive to invest in technologies that would drive cost below this level. For example, this might occur if no market mechanism is used to determine what the support should be. Fewer new technologies will come forward.
- If new entrants have an incentive to not build more capital—because the price of interconnection or resale is artificially low—then fewer capital investments will be made in local networks.
- If new long distance networks fail to develop or local carriers fail to cover costs—because access charges are set inefficiently—then either long distance or the growth of access competition in local markets will suffer.

Conclusion

This critique of the FCC's regulatory approach does not say that the results—the agency's pre-set outcomes—will be economically inefficient in all markets and in all cases. But as Hayek made clear, the "economically efficient" result as defined by prescriptive models is

virtually meaningless when applied to the real world. For economies as a whole, a model in which planners set prices requires a massive deviation from reality. It requires neatly centralized knowledge when the knowledge is actually dispersed. It requires objective quantification of costs that are actually subjective. It requires efficient management when actual incentives for efficiency are absent. The impossibility of either the FCC's or any regulator's successfully meeting these requirements is clear, as the futility of prescriptive regulation in general should be.

If the FCC's implementation has taken a decidedly pro-regulatory turn that is likely to be against the long-run interests of consumers, an important question arises: How could lawmakers revisit the act to prevent this? The approach taken by Congress in writing the act was to broadly declare its intention to bring down the regulatory barriers in telecommunications and delegate to the FCC the task of establishing competition, but not to create any clear, specific foundational rules that would unleash market forces in telecommunications. Lawmakers focused on *outcomes* instead of rules and incentives. The FCC's implementation is unfortunately consistent with that approach.

Congress made a critical mistake in describing the criteria and issues the FCC was to consider in implementing the Telecommunications Act of 1996. Congress established both the breadth and width of the FCC's interventionist role, and in both areas expanded too broadly. While it certainly could not—and should not—have addressed telecommunications issues at the level of detail the FCC's proceedings do, Congress should not have given the FCC the broad discretion it did. Congress should revisit the act to resolve central policy issues left to the FCC in favor of free markets, leaving technical and less important policy for the implementation stage.

For example, Congress could encourage universal service by focusing more on removing barriers to entry (either state barriers, or federal barriers such as the slow process for allocating wireless spectrum) rather than establishing subsidies. Markets can achieve universal service by lowering costs, promoting the lower prices that come from new competitors instead of the higher taxes that come with new subsidies. In the local market, lawmakers could take the deregulatory high road by allowing, but not requiring, interconnection, thus avoiding the regulatory nightmare that comes whenever competition is “created” by government mandating terms of trade. And it could leave access charges to market forces—if necessary, with a price cap for the least-competitive markets—thus allowing high access fees to be met by a competitive response, not a regulatory one.

The telecommunications industry and the telecommunications

consumer will most benefit from regulatory policy that openly embraces true deregulation and market processes, not contrived competition or artificial incentives. The Telecommunications Act and the FCC's implementation of it have fallen short of providing such a policy. An entrepreneurial FCC would seize this opportunity to truly advance the market process. Consumers and the industry would benefit as a result.

References

- American Association of Retired Persons, Consumer Federation of America, and Consumers Union (1997) Initial Comments Before the Federal Communications Commission, "In the Matter of Access Charge Reform, CC Docket No. 96-262, Price Cap Performance Review for Local Exchange Carriers, CC Docket No. 94-1, Transport Rate Structure and Pricing, CC Docket No. 91-213, Usage of the Public Switched Network by Information Service and Internet Access Providers, CC Docket No. 96-263," 29 January.
- Baumol, W.; Panzar, J.; and Willig, R. (1982) *Contestable Markets and the Theory of Market Structure*. San Diego: Harcourt Brace Jovanovich.
- Baumol, W.; Ordover J.; and Willig, R. (1997) "Affidavit of William J. Baumol, Janusz A. Ordover, and Robert D. Willig." *Comments of AT&T Corporation*. Appendix A, CC Docket No. 96-262.
- Boettke, P. (1998) "What Went Wrong in Economics." *Critical Review* 11: 11-51.
- Demsetz, H. (1968) "Why Regulate Utilities?" *Journal of Law and Economics* 11: 55-65.
- Derthick, M., and Quirk, P. (1985) *The Politics of Deregulation*. Washington, D.C.: Brookings Institution Press.
- Dickinson, H.D. (1933) "Price Formation in a Socialist Community." *Economic Journal* 43 (June): 237-50
- Drucker, P. (1946) *The Concept of the Corporation*. New York: John Day Publishers.
- Drucker, P. (1954) *The Practice of Management*. New York: Harper and Row.
- Ellig, J. (1988) "The Case of the Interstate Pipeline." Working Paper. George Mason University: Center for Market Process.
- Federal Communications Commission, FCC (1996) FCC 96-325: "In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers, CC Docket No. 95-185," 8 August.
- Federal Communications Commission, FCC (1997a) FCC 97-157: "In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45," 8 May.
- Federal Communications Commission, FCC (1997b) FCC 97-158: "In the Matter of Access Charge Reform, CC Docket No. 96-262, Price Cap

PRESCRIPTIVE REGULATIONS AND TELECOMMUNICATIONS

- Performance Review for Local Exchange Carriers, CC Docket No. 94-1, Transport Rate Structure and Pricing, CC Docket No. 91-213, End User Common Line Charges, CC Docket No. 95-72," 16 May.
- Federal Communications Commission, FCC (1997c) FCC 97-159: "In the Matter of Price Cap Performance Review for Local Exchange Carriers, CC Docket No. 94-1, Access Charge Reform, CC Docket No. 96-262," 21 May.
- Federal Communications Commission, FCC (1999a) FCC 99-120: "In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Forward-Looking Mechanism for High Cost Support for Non-Rural LECs, CC Docket No. 97-160," 27 May.
- Federal Communications Commission, FCC (1999b) FCC 99-121: "In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45," 28 May.
- Federal Communications Commission, FCC (1999c) FCC 99-206: "In the Matter of Access Charge Reform, CC Docket No. 96-262, Price Cap Performance Review for Local Exchange Carriers, CC Docket No. 94-1, Interexchange Carrier Purchases of Switched Access Services Offered by Competitive Local Exchange Carriers, CC Docket No. 98-63, and Petition of U.S. West, Inc. for Forbearance from Regulation as a Dominant Carrier in the Phoenix, Arizona MSA, CC Docket No. 98-157," 27 August.
- Hayek, F.A. (1935) *Collectivist Economic Planning*. London: Routledge.
- Hayek, F.A. (1948) *Individualism and Economic Order*. Chicago: University of Chicago Press.
- Hayek, F.A. (1988) *The Fatal Conceit*. London: Routledge.
- Hazlett, T. (1986) "Competition vs. Franchise Monopoly in Cable Television." *Contemporary Policy Issues* 4: 80-97.
- Hazlett, T. (1990) "Regulation and Competition in Cable Television: Reply." *Yale Journal on Regulation* 7: 141-48.
- Huber, P.W.; Kellogg, M.K.; and Thorne, J. (eds.) (1999) *Federal Telecommunications Law*. 2d ed. New York: Aspen.
- Ikeda, S. (1994) "Market Process." In P. Boettke (ed.) *The Elgar Companion to Austrian Economics*. Hampshire, England: Edward Elgar.
- Kahn, A. (1971) *The Economics of Regulation: Principles and Institutions*. Vol. 2. New York: John Wiley.
- Kirzner, I. (1992) *The Meaning of Market Process: Essays in the Development of Modern Austrian Economics*. New York: Routledge.
- Lange, O. (1938) "On the Economic Theory of Socialism." In B. Lippincott (ed.) *On the Economic Theory of Socialism*. Minneapolis: University of Minnesota Press.
- Lavoie, D. (1985) *National Economic Planning: What Is Left?* Cambridge, Mass.: Ballinger.
- Leighton, W. (1996) *Consumers and Cross-Subsidies: An Interest Group Theory of Telecommunications Deregulation*. Ph.D. dissertation, George Mason University.
- Mises, L. ([1920] 1935) "Economic Calculation in the Socialist Commonwealth." In F.A. Hayek (ed.) *Collectivist Economic Planning*. London: Routledge.

- Mises, L. (1949) *Human Action: A Treatise on Economics*. New Haven, Conn.: Yale University Press.
- Mueller, M. (1997) *Universal Service: Competition, Interconnection, and Monopoly in the Making of the American Telephone System*. Washington, D.C.: AEI Press.
- Peters, T. (1982) *In Search of Excellence: Lessons from America's Best-Run Companies*. New York: Warner Books.
- Taylor, F.M. (1938) "The Guidance of Production in a Socialist State." In B. Lippincott (ed.) *On the Economic Theory of Socialism*. Minneapolis: University of Minnesota Press.
- Taylor, F.W. (1911) *The Principles of Scientific Management*. New York: Harper.
- Telecommunications Act of 1996, Pub. L. 104-104, 47 USC 151 *et seq.*
- Vaughn, K. (1994) *Austrian Economics in America: The Migration of a Tradition*. Cambridge: Cambridge University Press.
- Walras, L. ([1874] 1954) *Elements of Pure Economics*. London: Allen & Unwin.