

**Cost-Minus Regulation:  
responding to Professor Hazlett on USF incentives  
Dale Lehman, December 2006**

Professor Thomas Hazlett, on behalf of the Seniors Coalition, has been on a crusade to rid US telecommunications policy of waste.<sup>1</sup> In his quest, he has stumbled on the Universal Service Fund (USF), the \$7 Billion annual federal fund to serve low income and high cost telephone subscribers. He alleges that this fund wastes at least \$1 Billion per year, much of it on administrative overhead (“corporate operations expense”). His logic is compelling: “Uneconomic operations are a predictable outcome of taxpayer financing on a “cost-plus” basis.”<sup>2</sup>

Compelling, but wrong.<sup>3</sup> The heart of whether there is an economic incentive to waste money on overhead concerns the question: if \$1 more is spent on overhead, how much of that dollar is actually paid by the company in question? In the textbook competitive world of perfect competition, a company will pay the full dollar, and hope to recover these costs from its customers. In Professor Hazlett’s “cost-plus” regulatory world, the company would bear none of the \$1 increase since it would receive an additional dollar of subsidies when it incurs the increased overhead costs. Thus, we can use the symbol  $\alpha$  to denote the fraction of the cost increase that the company actually bears. When  $\alpha$  equals one, the company has perfect cost-reducing efficiency incentives; when  $\alpha$  equals zero, we have “cost-plus” regulation with minimal cost-reducing incentives.

The real world is not as stark as this:  $\alpha$  is not equal to one for unregulated firms and is not equal to zero for regulated entities. Corporate income taxes permit overhead to be treated as deductible business expenses, so  $\alpha = .65$  for most unregulated firms in the US (using an average corporate income tax rate of 35%). Cost-plus regulation would theoretically entail  $\alpha = 0$ , but oversight of company expenditures, with the possibility of denial of imprudent expenditures, means that the expected  $\alpha > 0$  for wasteful spending, where  $\alpha$  would reflect the risk of having the expenditure disallowed.

Professor Hazlett’s characterization of USF as “cost-plus” regulation is overly simplistic, misleading, and wrong. The actual operation of USF is better characterized as “cost-minus” and this casts doubt on Professor Hazlett’s fundamental premise.

He cites “[M]ore than 100 rural telephone companies incur more than \$500 per line in annual administrative expenses.”<sup>4</sup> I asked NECA and NTCA to provide further detail on these offenders, and their analysis is illuminating. In 2005, there were 87 companies with reported corporate operations expenses that exceeded \$500 per line. These are *reported* expenses, not expenses *recovered* from USF. The difference is due to several factors:

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<sup>1</sup>Thomas W. Hazlett, June 2006. “*Universal Service*” Telephone Subsidies: What does \$7 Billion Buy?

<sup>2</sup>*Id.* page 1.

<sup>3</sup> In this paper, I will only deal with Professor Hazlett’s improper analysis of the incentives within the USF program. Incentives are core to his argument that USF has led to wasteful overhead costs.

<sup>4</sup> Thomas W. Hazlett. “Phone fund rip-off,” *Baltimore Sun*, October 24, 2006.

- There is a cap on corporate operations expenses that the FCC imposes (39 of the 87 companies are subject to this cap).
- Only some of the allowable corporate operations expenses are allocated to the high cost funds.
- High cost companies do not get reimbursed on a “cost-plus” basis. Instead, they are subject to a sliding scale which begins at 115% of the national average loop costs. That is, they only receive partial funding on costs that fall above 115% of the average, with greater percentage recovery on high cost levels above this.

As a result, the weighted average corporate operations expense for these 87 companies was \$715.44, with only \$269.62 actually finding its way into the high cost loop program, with only \$149.22 being reimbursed from that program, a return of only 21% per dollar spent. Thus,  $\alpha = .79$  based on the high cost loop fund, but this is not the end of the regulatory story.

The next logical question is: what happens to the overhead expense that is not recovered from the high cost loop fund? There is no comprehensive data source for the revenue sources for these rural carriers. We can get an estimate based on a sample of companies for which NTCA has obtained comprehensive revenue data (14 of these 87 companies).<sup>5</sup> Within this group, the weighted average percent of revenues coming from federal and state USF is 56.7%. This means that possibly 36% (the difference between 57% from USF and 21% from the high cost loop support) comes from local switching support, interstate common line support, and the safety net additive.

A further 11.5% of revenues come from interstate access charges. These are set according to rate of return principles (with a two year lag), so inherent incentives to minimize this portion of costs are relatively weak, but not totally absent. 10.6% of revenues come from intrastate access charges. Many states have not recalculated these rates on a systematic basis, so these revenues operate much like a price cap regulatory regime – any cost savings that a company can realize will not affect these rates, thereby providing strong incentives for cost minimization.

Rather than providing “cost-plus” reimbursement, Professor Hazlett should have explored the efficiency incentives actually faced by rural telephone companies. With 68.2% of overhead costs returned on a rate of return basis (the USF programs and the interstate access charges), almost one-third of the overhead expenses are not recovered on a “cost-plus” basis. Further, there is oversight at a number of levels: USF funds are audited, financial sources (including the Rural Utilities Service) audit, and owners of these firms audit. There is the additional feature of rural life (not experienced within the beltway) that the manager of a rural telephone company often eats lunch sitting next to their neighbors/customers/owners which provides an informal form of audit arguably stronger than any formal audit process.

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<sup>5</sup> There is a large variation in revenue sources across rural ILECs, so the weighted average may not be representative of individual company situations.

If we describe this multilevel audit process as reducing the probability of recovering wasteful corporate operations expenses to one-half, then the actual cost recovery on a rate-of-return basis is  $.5 \times .682 = 34.1\%$ . In other words,  $\alpha = .659 (.341 + .318)$ . Hence my term “cost-minus” regulation. These numbers are summarized in the following table:

Fraction of Hypothetically Wasteful Overhead Costs Borne by the Firm

Situation	$\alpha$
Textbook competition; no taxes; no principal-agent management issues	1.0
USF recipients, based only on the high cost loop fund	0.79
Competitive firms with a 30% corporate income tax rate	0.70
USF recipients; assuming 50% risk of disallowed expenses	0.659
USF recipients, based on high cost loop fund, local switching support, interstate common line support, interstate access charges; ignoring time lags	0.32
Pure “cost-plus” regulation; no effective auditing of costs	0.0

Professor Hazlett has erroneously focused only on the bottom row of the table, ignoring how USF actually works, numerous oversight mechanisms, and the risks associated with policy changes that rural ILECs face. He also misunderstands the nature of overhead costs, claiming that “management costs need not vary so widely. The low density that reduces the ability to share infrastructure costs does not impact corporate overhead expenses because managing networks in less densely populated markets should not be more expensive.”<sup>6</sup> But ten hours of legal council at \$400 per hour, amounts to \$40 per subscriber per year of corporate operations expense for a company serving 100 lines (as a number of these high cost companies do). A \$40,000 annual salary for a single management employee of such a company amounts to \$100 per subscriber per year. It is not hard to see how overhead expenses per subscriber can add up to \$500 per year per subscriber, absent any wasteful spending.

Professor Hazlett suggests that the waste results from having too many companies that are too small. Again, he attributes this to USF: “High-Cost Fund (HCF) payments are distributed in a manner that encourages rural phone carriers (RLECs) to be inefficiently small.” This is at odds with the history of these companies and the facts of life in rural America. These small companies were formed long before USF, and their existence stems from the fact that they serve areas that no larger company was willing to serve. It is true that consolidation of these companies today would reduce overhead costs – but at what expense to rural communities? What level of service would South Park, Colorado obtain from a national carrier serving all of these rural properties? How would the 107 customers of Border to Border Communications fare when served by the same company that serves millions of rural customers nationwide? The logic of consolidation has resulted in few rural communities with their own banks, independent retailers, or high-tech businesses. What type of rural life results from the rampant logic of cost-reduction through consolidation?

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<sup>6</sup> *Id.* page 29.

I certainly agree with Professor Hazlett that USF has influenced the decisions of rural telephone companies. There cost-reducing incentives are not perfect under USF. This can result in waste – but it also results in the ubiquitous deployment of advanced services and the elimination of party-lines, neither of which would be likely under a system of perfect cost-reducing incentives. However, lack of perfect cost-reducing incentives is not the same thing as absence of cost-reducing incentives.  $\alpha$  is not equal to 1, but nor is it equal to zero.

The incentives provided by USF are not that different from how personal income taxes may affect individual taxpayer behavior. The fact that interest on mortgage payments is deductible ( $\alpha = .7$ , using a 30% tax rate) will induce people to purchase more expensive homes than they would absent this deduction. However, few taxpayer would ignore the cost of a home due to the deductibility of mortgage payments. That is, their behavior is affected, but since they bear a significant portion of the expense, they also have incentives to avoid waste. So it is with USF: incentives are neither perfect, nor are they absent. This is how “cost-minus” regulation works in the real world.

I also wonder about the intense interest of the Senior’s Coalition in sponsoring Professor Hazlett’s work. He cites the political economy of USF where “the benefits of a program are concentrated on a small number of beneficiaries while the costs are widely diffused.”<sup>7</sup> What is good for the goose is good for the gander. USF may be a public policy where 6 states with 1.5% of the US population receive 15.1% of total high cost support – a whopping \$564 million.<sup>8</sup> Consider Medicare, where the top 5% of Medicare beneficiaries, two-thirds of one percent of the US population, account for 46% of total Medicare spending, a total of \$112.7 Billion in 2001.<sup>9</sup>

Undoubtedly, senior groups have an interest in avoiding waste. Will they apply the same vigor to attacking the Medicare program – a program that also has cost-plus characteristics, wherein a large percentage of the program benefits accrue to a relatively small percent of the recipients, and where a significant number of recipients do not lack for income to pay their own bills.

The truth is that public policy is not based solely on economic efficiency, and real-world programs do not conform to simplistic stylized policy descriptions such as “cost-plus.” USF embodies a compromise between the desire to minimize costs and the desire to provide a level of service in rural America that may not be justified on economic grounds alone. It would be better to improve the program than to use ill-informed rhetoric to trash one critical to the future of rural areas.

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<sup>7</sup> *Id.* page 56.

<sup>8</sup> This is based on the 6 states – Alaska, Wyoming, North Dakota, South Dakota, Montana, and Mississippi – targeted in Professor Hazlett’s discussion in section VII of his report, using data from Table 9.

<sup>9</sup> “High-Cost Medicare Beneficiaries,” Congressional Budget Office, 2005, available at [www.cbo.gov](http://www.cbo.gov).