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# Pooling, a missing element in the rate of return and price cap regulation debate: A comparison of alternative regulatory regimes

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## ABSTRACT

In March 2010 the Federal Communications Commission (FCC) issued the National Broadband Plan (NBP) detailing strategic proposals to increase broadband availability in the US. One of the sweeping suggestions of the NBP is to convert all incumbent local exchange carriers from rate-of-return (RoR) regulation to price cap regulation. Most of these RoR carriers are small Rural Local Exchange Carriers (RLECs) operating in sparsely populated, isolated territories of the US. Since AT&T's divestiture they have participated in revenue and cost sharing pools which have served as an effective mechanism for reducing unsystematic business risk. We stress that pooling makes both rate of return and price cap regulation operational in RLEC territories and has to be considered in the policy debates. Using cost and demand data from RLECs, we show that if FCC's suggestion was implemented under current price cap rules, many RLECs would likely face financial distress within 3 years of the regulatory regime change. We further show that allowing pooling arrangements under any regulatory regime could improve market efficiency. We suggest that potential efficiency gains are greatest when RLECs within a pooling arrangement have the option of remaining under RoR regulation or volunteering to move to a form of incentive regulation.

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### 1. Introduction

In March 2010, the Federal Communications Commission (FCC) issued the National Broadband Plan (NBP),<sup>1</sup> which included a blueprint for comprehensive regulatory reform of universal service funding and intercarrier access payments. One recommendation is to require RoR carriers to move to incentive regulation.<sup>2</sup> The justification is that RoR was not designed to promote efficiency or innovation. This current FCC position goes well beyond the original con-

<sup>2</sup> See NBP, Recommendations.

clusion reached in the price cap orders of 1989 and 1990 that it found no evidence for cost padding but did find that RoR retarded innovation.<sup>3</sup> Since then, academic researchers have analyzed the performance of carriers that moved to price cap regulation. Abel (2000), Sappington (2002), Vogelsang (2002), and Sappington and Weisman (2010) provide summaries of the empirical research comparing the performance of regulated telecommunications companies under RoR regulation and price cap regulation. The repeated conclusion is that while price caps theoretically should have produced substantial efficiency gains, extending considerably modified versions of price cap regulation to AT&T, the





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<sup>&</sup>lt;sup>1</sup> Federal Communications Commission, Connecting America: The National Broadband Plan, released March 16, 2010 (NBP).

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<sup>&</sup>lt;sup>3</sup> Policy and Rules Concerning Rates for Dominant Carriers.CC Docket No. 87-313, Second Report and Order, 5 FCC Rcd 6786 (1990) (*RBOC Price Cap Order*) ¶¶ 29-30.

Regional Bell Operating Companies (RBOCs), General Telephone (GTE) in 1989 and 1990 and to other carriers in later years has produced few significant, tangible, and unambiguous results.

Sappington (2002) summarizes empirical findings as:

Incentive regulation appears to increase the deployment of modern switching and transmission equipment, to spur an increase in total factor productivity growth, and to foster modest reduction in certain service prices. There is little evidence, though, that incentive regulation leads to significant reductions in operating costs. There is some evidence that earnings may be higher under price cap regulation. There is little evidence of a systematic decline in service quality under incentive regulation.

In all regulatory regime debates, the effectiveness of pooling as a vehicle for regulatory reform has been overlooked. This is surprising because the FCC wrote into its rules at the time of AT&T's divestiture an organization later known as the National Exchange Carrier Association (NECA), to be a rate-setting agent and financial clearing-house that pools billed revenues and distributes those funds among members to recover their costs. As of 2012, NECA still performs its original functions for more than 1100 Rural Local Exchange Carriers (RLECs) that participate in NECA's pools voluntarily.

Our objective is to show that pooling has the capability to make both RoR and incentive regulation operate effectively for RLECs. We also suggest that a more nuanced approach to regulatory reform by the FCC could improve market efficiency by allowing RLECs within a pool the option of remaining under RoR regulation or volunteering to move to a form of price cap regulation. Having both RoR and price cap regulatory options available and optional within a pool should be welfare enhancing (Sappington, 2002). Some RLECs are too small and isolated and have little operational flexibility to change business practices simply to beat a price cap target. They would remain under RoR regulation. On the other hand, other RLECs have more operational flexibility. For them, the target set by the regulator could be more challenging if price caps are voluntary than if they are mandated. We will also show that without pooling, an RLEC's profitability would swing wildly under price cap regulation and its rates would swing wildly under RoR regulation. The main reason is huge amount of unsystematic risk - RLEC - and time-specific changes in the marketplace that cannot be anticipated. We will demonstrate that a modified form of price cap regulation, which, in effect, widens the bands of allowable rates-of-return acceptable to policymakers, is easily incorporated into a pooling environment. With pooling, policy makers can shorten the review period without compromising the benefits of incentive regulation. More immediately, we want to suggest that lack of an incentive option within the pool may have doomed the FCC's strategy of enticing RLECs to abandon RoR regulation for price cap regulation.

The paper is organized as follows: Section 1 reviews the history of NECA's pooling operation. Section 2 reviews a key academic article on pooling. Section 3 documents the large level of unsystematic risk facing RLECs, which increases the potential demand for insurance offered through pooling of costs and revenues. Section 4 shows the effects of systematic risk and unsystematic risk on return risk under RoR regulation and price cap regulation and documents the risk-reducing benefits of pooling. Section 5 addresses the potential downsides of pooling, notably the moral hazard problem associated with providing insurance. The section ends with a sketch for an incentive option within a pool that is potentially welfare enhancing.

#### 2. Institutional background of pooling

Pooling is an industry arrangement where the government allows many companies to act together to set rates and pool revenues and costs. It is as if they are one entity even though they have not merged into one corporation. Pools are not uncommon in the telephone industry, but NECA is by far the largest one with over 1100 RLECs, and the only one that operates at the national level.

The FCC intended NECA to serve as an intra-industry body to implement the access charge plan established by the FCC in the aftermath of the AT&T breakup. The access charge plan included rules to determine the rates interexchange carriers and end users would pay for access to local telephone company facilities used to complete interstate service offerings and required LECs to bill access charges under tariff.

The FCC's access plan provided for several categories of rate elements. The FCC initially decided that the carrier common line (CCL) element should be computed on a uniform nationwide basis and would require the creation of a compulsory tariff and pool arrangement because different exchange carriers have different costs.<sup>4</sup>

The FCC then decided to allow voluntary arrangements for common tariffs and revenue pooling from all rate elements.<sup>5</sup>

For both compulsory and voluntary tariffs, the FCC recognized the need for an organization to administer the access plan. The organization would compute charges, prepare and justify the tariffs on behalf of the participating exchange carriers, run the revenue pools, and compute the distributions that each participant is entitled to receive from the pool.<sup>6</sup> These are the basic functions which NECA performs in order to administer the FCC's access plan for rate-of-return ILECs that opt to participate in NECA's pools.

At the outset, NECA set uniform rates for all members and all members earned the same rate of return per FCC order. However, as the compulsory membership in the

<sup>&</sup>lt;sup>4</sup> Section 203 of the Communications Act requires every common carrier, except connecting carriers, to file tariffs for interstate services. Prior to divestiture, exchange carriers relied upon AT&T to file tariffs on their behalf. *Third Report and Order at* ¶¶ 303, 314, 340.

<sup>&</sup>lt;sup>5</sup> Today all access pooling is voluntary. In 1987, the FCC released an order modifying the then existing pooling mechanism to allow RLECs to withdraw from NECA's tariff and pool and to file their own common line tariffs based on their own costs. *See MTS and WATS Market Structure*, CC Docket No. 78-72, and Amendment of Part 67 of the Commission's Rules and Establishment of a Joint Board, CC Docket No. 80-286, Report and Order, 2 FCC Rcd 2953 (1987).

<sup>&</sup>lt;sup>6</sup> Id., at ¶ 339.

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