



On the determinants of non-market strategy: The separations mechanism and cost shifting in the telecommunications industry

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ABSTRACT

This study examines the relationship between performance levels and the levels of cross-subsidy attained by local exchange carriers in the United States telecommunications industry. These cross-subsidies have been obtained by firms via their engagement in a separations mechanism, based on a cost allocation process, which telecommunications sector regulatory authorities use. Non-market strategies have assumed primacy in the activities of several sectors world-wide. Thus, understanding non-market strategic choices is important in the analysis of firms' behavior and performance. Active engagement in the separations process is an important non-market strategy in the telecommunications industry, as a firm relatively successful in this activity can gain large cross-subsidies. The analysis establishes that less profitable firms obtain greater cross-subsidies. Once the profitability variable is decomposed into its two main components, which are productivity and price recovery, the impact of the profitability variable reduces. Firms which are relatively unproductive, as well as those unable to recover higher output prices, obtain relatively greater cross-subsidies. These results are inconsistent with the postulates of the strategic cost-allocation and behavior literatures but are consistent with *x*-inefficiency and rent-seeking perspectives of firms' strategic actions.

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1. Introduction

There has been considerable increased interest in the design and implementation of firms' non-market strategies, defined as coordinated firms' actions undertaken in public policy arenas (Baron, 1995a; Baysinger, 1984). Despite the fact that non-market political strategies are important in overall strategy design (Baron, 1995b), the literature focuses primarily on the interaction between firms and regulatory authorities and on ways in which firms strive to influence regulatory outcomes.

Firms' resources are uneven, and resource variations between firms influence firms' non-market strategy outcomes (Aggarwal, 2001; Baron, 1995b, 2003; Dean & Brown, 1995). Hence, there can be variations between firms as to their motivations for choosing specific non-market strategy outcomes. Evidence, and associated theory, on how firm-specific factors influence firms' non-market strategy choices, however, is relatively sparse.

This article reports the results of an evaluation of how variations in firms' performance characteristics influence the outcomes for a critical non-market strategy variable in the telecommunications sector. A ubiquitous characteristic of regulation is the creation of cross-subsidies between the various interest groups that purchase the regulated firm's products (Kahn, 1988). Influencing the level of cross-subsidies attainable by firms is an important non-market strategy in regulated sectors.

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For the population of the local exchange carriers in the United States telecommunications industry, this article evaluates how different firm-level factors affect the level of cross-subsidies that the firms obtain. These cross-subsidies are obtained from regulatory authorities via a process of investment and cost-base shifting through a separations mechanism. The regulatory authority in this case is the Federal Communications Commission (FCC). This process of investment and cost-base shifting is undertaken via a separations mechanism, as described in Section 2. The section also contains details of expected hypotheses. Section 3 describes the context and contours of the empirical analysis, while Section 4 describes the various estimation techniques used. Section 5 contains a discussion of the results, while Section 6 concludes the article.

2. Telecommunications cross-subsidization

2.1. The idea of cross-subsidization

Cross-subsidy flows from the long-distance sector to the local sector, by means of a regulatory process that involves cost shifting from the local exchange sector to the long-distance sector, are crucial in the evolution of the U.S. telecommunications infrastructure (Brock, 2002; Goldmann, 1994; Kellogg, Thorne, & Huber 1992). They are a well-established feature of the industry. Such cross-subsidies, while considered uneconomic (e.g. Baumol & Sidak, 1993; Kahn, 1988; Mitchell & Vogelsang, 1991; Zajac, 1978), remain a key non-market based institutional mechanism shaping the behavior and performance of firms in the U.S. telecommunications industry (Brock, 2002).

For example, Kellogg et al. (1992, pp. 448–449) write that: “While cross-subsidy is undoubtedly an important problem of legitimate concern, it is equally clear that cross-subsidy has become the Great Satan of telephone regulation, invoked reflexively as a compelling reason to retain massed legions of regulatory exorcists.”

The theory of cross-subsidy assumes that a multi-product firm sells outputs at a lower price in a competitive market while charging higher prices to consumers in a market in which it enjoys an effective monopoly (Baumol, 1986). The monopoly market customers are overcharged to provide a cross-subsidy to customers in the competitive market, who are provided items at prices lower than that justified in cost terms.

In the United States telecommunications industry, on the other hand, long-distance customers in the competitive inter-state market have paid higher prices than warranted by costs. These customers have provided a cross-subsidy to local telephone companies’ customers. These customers are supplied local and intra-state long-distance call facilities by monopoly suppliers; yet they have been charged prices lower than that warranted by costs. Local and intra-state long-distance customers are price inelastic relative to inter-state long-distance customers (Taylor, 1980). In a similar manner, business customers cross-subsidize residential customers (Palmer, 1992).

The key intellectual source of criticism for cross-subsidization has arisen because the Ramsey (1927) pricing principle is violated. The Ramsey rule states that the largest share of costs should be allocated to users who most need the service; in other words to those individuals whose demand elasticity is the lowest and who do not have any other alternatives to change to. Nevertheless, cross-subsidization is a pervasive fact of economic life. For example, it occurs between divisions of diversified firms, between subsidiaries of global firms and between firms within business groups.

The objective behind the creation of the cross-subsidy created flows has been to keep local and intra-state long distance calling rates low so as to diffuse universal telephone service (Brock, 1994). Diffusion of telephone services has taken place throughout the United States, but the cross-subsidization process has remained in place as an ubiquitous regulatory feature influencing pricing decisions in the telecommunications sector (Johnson, 1982; Kaserman & Mayo, 1994).

In the United States telecommunications industry the separations mechanism is used for cost and investment base allocation and cross-subsidization. This mechanism determines how local operating company total costs and investments are allocated between state and federal regulatory jurisdictions for cost-recovery purposes. Such a cost separation process is not rare in economic life. The separations mechanism, involving cost shifting, exists in other sectors with multiple business segments. Among defense contractors costs can be shifted between the defense and commercial segments (Rogerson, 1992; Thomas & Tung, 1992), in the health care sector costs can be shifted between the for-profit and not-for-profit segments, and in the financial services sector costs can be shifted from competitive segments to non-competitive service segments (Cavalluzzo, Ittner, & Larcker, 1998).

Taking advantage of state-level separations data for the local exchange sector of the telecommunications industry, this study assesses how far the separations mechanism, and thereby the extent of cross-subsidy local exchange carriers receive, is influenced by characteristics, such as key performance parameters, of the United States telecommunications firms. The separations mechanism is described in detail next.

2.2. How cross-subsidization takes place via the separations mechanism¹

Local telephone companies’ networks are used to provide a number of services: local calls, intra-state toll calls and inter-state toll calls. Inter-state toll calls are subject to federal jurisdiction, while intra-state toll calls and local calls are subject to state-level regulatory jurisdiction. The production of these services uses common plant facilities.

¹ The section is based on Majumdar (2000).

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