

Before The
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

Experimental Rate and Service Changes)
to Implement Negotiated Service Agreement)
with Capital One Services, Inc.)

Docket No. MC2002-2

RESPONSE OF WITNESS JOHN C. PANZER
TO INTERROGATORIES OF CAPITAL ONE SERVICES, INC.
(COS/JCP-T1-1-5)

The response of John C. Panzar to the interrogatories of Capital One Services, Inc., dated January 22, 2003, is attached. Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

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COS/JCP-T1-1. Please refer to the “Threshold for Quantity Discount” subsection of the “Economic Analysis of Quantity Discounts with Independent User Demands” section of your testimony, which begins on page 12. In particular, refer to lines 4-9 of page 12 where you state, “The example illustrates the key role typically played by the large user’s initial Volume, Q^0 , in the design of an optional tariff offering. It is no accident that this quantity determines the beginning of the quantity discounts (and the ‘kink’ in the outlay schedule). In the theoretical analysis, this guarantees that, *whatever the shape of the large user’s demand curve*, the large user will find it desirable to expand its purchases and the monopolist’s profits will increase as a result.” Please assume independent user demands and that a monopolist negotiated the following NSA with a large user that includes a quantity discount:

- The threshold for a quantity discount is set at a quantity less than Q^0 .
- As a condition of receiving the quantity discount, the large user agrees to allow the monopolist to change the service provided to the large user in a way that reduces the monopolist’s costs by \$10 million.
- The total quantity discount that the large mailer receives if it mails the volume Q^0 is less than \$10 million.

Is it true that *whatever the shape of the large user’s demand curve*, the monopolist’s profits will increase as a result of this agreement? Please explain your response fully.

RESPONSE:

Assuming that the discounted rate was above marginal cost, I would agree that the monopolist’s profits would increase as a result of this agreement. The worst case for the monopolist’s profitability is that in which the large user’s demand curve is perfectly inelastic (i.e., vertical) at the quantity Q^0 . Then, the discount induces no new volumes, and the monopolist loses contributions by an amount equal to the magnitude of the discount times the difference between the threshold and Q^0 . However, by hypothesis, the cost savings exceed this amount so that the monopolist’s profits will increase.

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COS/JCP-T1-2. Please refer to page 20 of your testimony and, in particular, to lines 8-12 where you state, “(2) Competitors of the firm receiving the NSA should have ‘economic standing’ in evaluating its provisions. They may be adversely affected notwithstanding the profitability of the NSA. The NSA may be in the public interest even if they are damaged, but their concerns are an important part of the evaluation process.”

- (a) Please define fully “in the public interest” as used in the quoted section of your testimony.
- (b) Would you advise the Postal Rate Commission to recommend agreements that are “in the public interest” and increase Postal Service profitability? Please explain your response fully.

RESPONSE:

- (a) My use of the phrase “in the public interest” was intended to characterize whatever criteria the Commission might employ in reaching its decision consistent with its statutory responsibility.
- (b) Yes, consistent with my response to subpart (a).

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COS/JCP-T1-3. Please refer to the “Market Induced Demand Interdependence” subsection of the “Economic Analysis of Quantity Discounts for Inputs” section of your testimony, which begins on page 14. In particular, please refer to lines 6 through 10 on page 16 of your testimony where you state, “When the price that a particular firm pays for a normal input decreases, that firm’s reaction function “shifts out”. That is, the firm would choose a larger quantity (lower price) everything else equal. In the new market equilibrium: (1) the market price of output falls; (2) the output of the favored firm increases; and (3) the output, input purchases, and profits of firms not receiving the discount decrease.” Please confirm that consumers will benefit if the market price of output falls. If not confirmed, please explain fully.

RESPONSE:

Confirmed.

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COS/JCP-T1-4. Please refer to the “Economic Analysis of Quantity Discounts for Inputs” section of your testimony, which begins on page 14. In particular, please refer to lines 13-14 of page 14 where you state, “This interdependence causes the breakdown of the elegant Pareto improvement argument in support of optional tariff offerings. Indeed, one cannot even presume that the introduction of optional tariff offerings will increase total surplus in the market. “

- (a) In what circumstances will offering quantity discounts to a large business user increase total surplus in the market?
- (b) In what circumstances will offering quantity discounts to a large business user not increase total surplus in the market?
- (c) In what circumstances will offering quantity discounts to a large business user result in a pareto improvement?
- (d) In what circumstances will offering quantity discounts to a large business user not result in a pareto improvement?

RESPONSE:

- (a)-(b) I am not aware of a simple, easy to check set of conditions that would indicate that the result of a quantity discount plan would increase total surplus when user demands are interdependent. There will be both winners and losers. Whether or not the gains of the winners outweigh the losses of the losers will, in general, depend on many details of the particular situation.
- (c) When user demands are interdependent, offering a quantity discount to a large business user will harm that user’s competitors. Therefore, it can only result in a Pareto improvement (which makes all users better off) if the price facing those competitors is reduced by enough to offset this damage but does not reduce the monopolist’s profits.

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- (d) When user demands are interdependent, offering a quantity discount to a large business user will harm that user's competitors. Therefore, it will not result in a Pareto improvement (which makes all users better off) unless the price facing those competitors is also reduced and the monopolist's profits are increased.

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COS/JCP-T1-5. Please refer to page 1 of your testimony where you state, “I have published two books and many articles on subjects related to pricing and other issues concerning regulated enterprises.” In your experience, in situations where regulated enterprises have costing systems that develop unit cost estimates for providing Service A to their customers as a whole, but where it would be difficult to estimate the unit cost of providing Service A to a particular customer, how do regulated enterprises generally evaluate the financial implication of offering optional tariffs for Service A to a particular customer? Please explain your response fully.

RESPONSE:

Under the scenario posited, a regulated enterprise’s evaluation would proceed from its self-interest. To that end, it may wish to develop an optional tariff based on the estimated unit costs of that customer perhaps coupled with other provisions to assure that it would be better (or at least as well) off under the optional tariff. Nevertheless, regardless of its internal evaluation, the regulated enterprise would be required to justify its proposal before the appropriate regulatory authority. While the proposal may raise a host of policy issues for the regulator to consider, it would also involve, at a minimum, trying to estimate the unit costs savings associated with the demands of a particular user and the impact of a quantity discount offering.