

DOCKET SECTION

BEFORE THE  
POSTAL RATE COMMISSION  
WASHINGTON, D.C. 20268-0001

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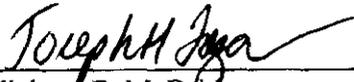
) Docket No. R97-1

**RESPONSES OF  
DOW JONES & COMPANY, INC. WITNESS SHEW TO  
INTERROGATORIES OF  
NEWSPAPER ASSOCIATION OF AMERICA  
(NAA/DJ-T1-1-7)  
(February 5, 1998)**

Pursuant to the Commission's Special Rules of Practice, Dow Jones & Company, Inc. ("Dow Jones") hereby replies to the interrogatories posed by the Newspaper Association of America (NAA/DJ-T1-1-7) on January 22, 1998.

Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,



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February 5, 1998

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**RESPONSES OF DOW JONES & COMPANY, INC. WITNESS SHEW  
TO INTERROGATORIES OF NEWSPAPER ASSOCIATION OF AMERICA**

**NAA/DJ-T1-1.** Please refer to page 5, lines 20-21 and page 6, line 1 where you state: "But each service's true cost -- the cost that would be avoided if the service were not offered -- is inevitably the appropriate point of departure in establishing suitable service rates."

- a. Is the "true cost" to which you refer in the above statement, the marginal cost or the incremental cost of each service? Please explain.
- b. Should the "true cost" to which you refer in the above statement be measured on a short-term or a long-term basis? Please explain.
- c. Should the Postal Rate Commission use the "true cost" as the attributable cost basis for determining the institutional cost markup for each subclass of mail? Please explain why or why not.

**RESPONSE:**

(a) In the context of pages 5 and 6 of my testimony, which deals with efficient pricing of postal services, true cost refers to the marginal cost of each service. Marginal and incremental costs are both "true" measures of cost, in the sense that they attribute cost to a service on the basis of not arbitrary assumption but of actual causal responsibility. They do that by measuring the cost that the service supplier could avoid by producing one fewer unit of the service (marginal cost) or by eliminating the service line altogether (incremental cost).

My testimony provided a simple example that illustrates why it is *marginal* cost that is relevant to sending customers efficient price signals. Suppose that the marginal cost of both oranges and pears is \$1. In other words, producing one fewer orange or one fewer pear would save \$1 of real resources, which would then be available to produce some other good. Now suppose oranges are priced at \$.50 and pears at \$2. At a \$0.50 price, consumption of oranges would be wastefully excessive, since consumers to whom oranges are worth as little as 50 cents would be encouraged to buy them, even though each one absorbs \$1 of the economy's resources to be produced (i.e., has a marginal cost of \$1). As for pears, pricing them at \$2, well above their \$1 (marginal) cost, would also distort the choices of customers, since it would discourage them

**RESPONSES OF DOW JONES & COMPANY, INC. WITNESS SHEW  
TO INTERROGATORIES OF NEWSPAPER ASSOCIATION OF AMERICA**

from buying pears whose value to them exceeds the (marginal) cost of producing them. In short, prices that do not appropriately reflect marginal cost can waste resources by distorting the choices made by customers.

(b) Normally, the expectation is that short-run marginal costs are relevant to rate-making, and I know no reason why this proceeding would be an exception. In setting postal rates, the appropriate marginal cost to look at depends on (a) the length of time over which the new rates are expected to be in effect, compared to (b) the period of time that it would take the USPS to reach long-run equilibrium under the new rates. For long-run marginal cost to be relevant, the Postal Service must be expected to attain long-run equilibrium within the period during which the new rates will be in effect. Otherwise, short-run marginal costs are relevant.

The reason is straightforward. Long-run marginal cost describes the cost that can be avoided by providing less of a service when the supplier has the opportunity to completely adapt all of its inputs to the new, reduced level of output. In the short run, some costs are fixed, and so the opportunity to save costs differs from the long run. Rates based on long-run cost would give the wrong price signals in the short run. If some of the Postal Service's inputs cannot be altered during the period the rates now being set are in effect, then short-run costs are relevant to rate-making.

(c) As long as rates are designed to promote the public interest to the fullest possible extent, suitably reflecting the considerations specified by Congress, the particular path taken to arrive at those rates would seem to be inconsequential. The (estimated) marginal cost of each service should be taken into account, for the reason discussed in my answer to (a) above, at some stage in the process of designing rates. There are various ways that might be done. As one possibility, one might estimate the revenue deficit that would be produced by marginal-cost pricing, and then decide how the burden of recovering the deficit can best be distributed across postal services, bearing in mind the public interest considerations specified by Congress.

**RESPONSES OF DOW JONES & COMPANY, INC. WITNESS SHEW  
TO INTERROGATORIES OF NEWSPAPER ASSOCIATION OF AMERICA**

**NAA/DJ-T1-2.** You state in your direct testimony at page 18, lines 5-7 that Professor Bradley's analysis of the variability of mail processing costs "constitutes a major step forward in improving understanding of the factors driving Postal Service costs." Further, you conclude that "the study in its current form more than adequately establishes the variability of costs, and the size of the data sets and the thoroughness of the analysis provide ample reason to be confident that the results are reliable."

- a. Please specify all documents, including workpapers, that you relied upon to draw the above conclusions.
- b. As a part of your review of Professor Bradley's analysis, did you examine the data to assess its accuracy or reliability? If yes, please describe your examination of the data and what conclusions you drew based upon this examination.
- c. As a part of your review of Professor Bradley's analysis, did you examine the data that Professor Bradley excluded from his analysis? If so, did you determine whether the exclusion of these data was appropriate? Please explain.
- d. As a part of your review of Professor Bradley's analysis, did you investigate alternative specifications of his recommended models? If so, please describe these investigations and what conclusions you drew based upon these investigations.
- e. As a part of your review of Professor Bradley's analysis, did you perform any independent analysis, including but not limited to recalculation of the resulting cost variabilities by MODS operation, to verify the results of Professor Bradley's analysis? If so, please describe this independent analysis and provide a copy of the analysis.

**RESPONSES OF DOW JONES & COMPANY, INC. WITNESS SHEW  
TO INTERROGATORIES OF NEWSPAPER ASSOCIATION OF AMERICA**

**RESPONSE:**

a. I relied on Professor Bradley's direct testimony, in conjunction with my own experiences doing cost studies involving considerations similar to those dealt with by Professor Bradley.

b.-d. In reviewing Professor Bradley's cost analysis, I followed the same procedures I apply when asked by a professional economics journal to referee an empirical study that has been submitted for publication. In such instances, my aim is to evaluate the soundness of a study's findings by considering the specification(s) of the estimating equation(s), the data that are used, whether any special problems posed by the data are recognized by the researcher, and the *econometric techniques employed in the analysis*. I do not (b) "examine the data to assess its accuracy," (c) "examine the data that [are] excluded from [the] analysis," (d) "investigate alternative specifications," or (e) "perform independent analysis, including recalculation of the [results]." Nor did I in reviewing Professor Bradley's study. The reasons, briefly, are these:

b. It would be reassuring if errors were so obvious that they could be detected merely by "examining" the data, but that rarely happens. Errors can creep into each stage of a data collection process, from observing an activity (e.g., mail handling) to recording the observations, to compiling them in summary records. Once that process is completed, it is usually impossible, *in effect, to reach back in time to spot mistakes that were made*. That leads many researchers, myself included, to assume that any data set is likely to contain errors, some perhaps quite serious, that will remain invisible. Rather than "examining" data, therefore, it seems likely to be more productive to address two methodological questions related to data quality: Could some alternative data set be used that seems likely to be more error-free? If there are reasons to suspect errors in the data, does the research employ techniques designed to deal with data errors? On both of these scores, I see no grounds for criticizing Professor Bradley.

**RESPONSES OF DOW JONES & COMPANY, INC. WITNESS SHEW  
TO INTERROGATORIES OF NEWSPAPER ASSOCIATION OF AMERICA**

c. Professor Bradley formulated criteria for excluding observations that might interfere with obtaining accurate cost estimates. That practice, which is not uncommon, inevitably involves subjective judgment in defining the criteria for excluding observations. Because subjectivity is necessarily involved, the relevant question is not whether someone else would have chosen precisely the same exclusionary criteria, but rather whether the criteria seem broadly reasonable. If there is a valid objection to this aspect of his study, it must pertain to the criteria themselves, and not to the particular observations that happened to be excluded as a result of applying the criteria. I see no reason to object to the criteria for exclusion employed by Professor Bradley. Once the judgment is made that the criteria seem a priori reasonable, it is unclear what would be accomplished by "examining" ex post the particular observations excluded by the criteria. It would be quite improper to tinker with the criteria as a result of examining how the results are affected.

d. I mentioned in my direct testimony two modifications of Professor Bradley's specification that it would be interesting to look into. One is to measure labor cost by compensation instead of hours. The other is to include as explanatory variables the stock of capital (plant and equipment) connected with mail sortation activities. Professor Bradley did not test those specifications apparently because the necessary data are not readily available.

e. I was informed that Professor Bradley's results were independently verified, so little would have been served by my doing that.

**RESPONSES OF DOW JONES & COMPANY, INC. WITNESS SHEW  
TO INTERROGATORIES OF NEWSPAPER ASSOCIATION OF AMERICA**

**NAA/DJ-T1-3.** In your opinion, is Professor Bradley's mail processing analysis likely to produce estimates of the long-run or short-run variability of costs with respect to volumes? Please explain your answer fully.

**RESPONSE:**

My expectation is that the cost variabilities estimated by Professor Bradley come close to measuring the variability of mail processing costs over the long run. For any four-week period covered by his data set, the cross-sectional observations reflect facilities that vary in their scale of operations. Such variations are normally construed to reflect persistent differences in scale, and therefore to reveal points on the long-run cost curve. The period-to-period variations in cost and volume observed within the same facility can be used to estimate the short-run and long-run variability of cost. In most of Professor Bradley's equations, labor hours are explained by contemporaneous output and also output in the previous period, and he sums those two effects to obtain his estimate of cost variability. That combined effect should approximate the variability of cost in the long run.

**RESPONSES OF DOW JONES & COMPANY, INC. WITNESS SHEW  
TO INTERROGATORIES OF NEWSPAPER ASSOCIATION OF AMERICA**

**NAA/DJ-T1-4.** In your opinion, is the IOCS tally system a reasonable tool for distributing costs in today's postal operational environment? Please explain.

**RESPONSE:**

Randomly monitoring what postal employees are doing can provide useful information about service cost responsibility. But as the IOCS tally system is being operated, it seems to be yielding an increasingly incomplete picture of service cost responsibility. It is understandable that a small percentage of tallies would not be service-specific. But by 1996, the majority of tallies related to clerks and mail handlers failed to provide any direct evidence of service cost responsibility. There appears to be almost universal agreement that information should be collected to permit a more accurate determination of service costs.

**RESPONSES OF DOW JONES & COMPANY, INC. WITNESS SHEW  
TO INTERROGATORIES OF NEWSPAPER ASSOCIATION OF AMERICA**

NAA/DJ-T1-5. Please refer to page 39, lines 3 through 11 of your testimony. Do you have a specific proposal for the Commission to use in attributing mail processing costs?

**RESPONSE:**

My testimony apparently seemed to NAA to go on forever, since this question refers to page 39 of a 32 page testimony. In any event, my assignment did not include constructing a new method to attribute service costs, nor did I do that unbidden. Halstein Stralberg and Rita Cohen, two analysts who have long experience with Postal Service operations and costing methodologies, have provided specific proposals for attributing mail processing costs in this proceeding.

**RESPONSES OF DOW JONES & COMPANY, INC. WITNESS SHEW  
TO INTERROGATORIES OF NEWSPAPER ASSOCIATION OF AMERICA**

**NAA/DJ-T1-6.** Please refer to page 30, lines 5-6 of your testimony. Assuming that “all costs not clearly identifiable with individual service classes” to which you refer were, in fact, treated as institutional, please identify what costs would be shifted and what would be the amount of costs shifted from attributable to institutional? Please indicate the amounts of costs by subclass.

**RESPONSE:**

The magnitude of the cost shifts would depend on how exacting the standard is for determining which costs are not “clearly identifiable.” That judgment, which is inherently subjective, is properly a matter of deliberation for the Postal Rate Commission. The shifts might be small or large, depending on where the PRC decided to draw the line between reasonable inference and speculation.

**RESPONSES OF DOW JONES & COMPANY, INC. WITNESS SHEW  
TO INTERROGATORIES OF NEWSPAPER ASSOCIATION OF AMERICA**

NAA/DJ-T1-7. Please refer to your direct testimony at page 32, lines 13-15. You suggest an alternative distribution method that ... makes greater use of existing information and so generates results that are less sensitive to arbitrary assumptions and small samples than the methodology currently being sponsored by the Postal Service.” Please explain this method in detail and describe how this method would make greater use of existing information.

**RESPONSE:**

I did not, as this question implies, “suggest an alternative distribution method....” What I did say, in connection with the analysis of Mr. Degen, is that, the Postal Rate Commission may want to consider whether some better cost foundation is available for developing rates in the current case. I pointed out two possibilities. One is to retain the USPS’s cost study, but to eliminate its speculative allocations by classifying as institutional costs all costs not clearly identifiable with individual service classes. The other, a middle ground between that and the Postal Service’s proposed cost allocations, would be to adopt a methodology that makes greater use of existing information and so generates results that are less sensitive to arbitrary assumptions and small samples than the methodology currently being sponsored by the Postal Service.

**DECLARATION**

I, William B. Shew, declare under penalty of perjury that the foregoing answers are true and correct, to the best of my knowledge, information and belief.

William B Shew

Dated: 2/2<sup>5th</sup>/98

## CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all participants of record in this proceeding in accordance with section 12 of the Rules of Practice.

  
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Joseph H. Fagan

Dated: February 5, 1998