

UNITED STATES OF AMERICA
Before the
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

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POSTAL RATE COMMISSION
OFFICE OF THE SECRETARY

Postal Rate and Fee Changes, 2000)

Docket No. R2000-1

OFFICE OF THE CONSUMER ADVOCATE
INTERROGATORIES TO UNITED STATES POSTAL SERVICE
WITNESS BOZZO (OCA/USPS-T15-56-63)
March 22, 2000

Pursuant to sections 25 and 26 of the Rules of Practice of the Postal Rate Commission, the Office of the Consumer Advocate hereby submits interrogatories and requests for production of documents. Instructions included with OCA interrogatories OCA/USPS-1-14 to the United States Postal Service, dated January 24, 2000, are hereby incorporated by reference.

Respectfully submitted,


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OCA/USPS-T-15-56. Please refer to your testimony, lines 7 through 11 at 31. It is our understanding that the function being estimated is now stated to be a factor input demand function rather than a cost function. Economic textbooks indicate that inputs for a labor demand function include payments to the factors of production as well as the price of the output.

- (a) Does your labor factor demand equation have output price and price of capital in the equation?
- (b) If your answer to (a) is negative, please explain.
- (c) Does your labor factor demand equation have other variables that are not specified by a typical textbook exposition as enunciated in this question?

OCA/USPS-T-15-57. Please refer to your testimony footnote, 7 at 32, wherein you indicate that R. Chambers indicates that the production function's "properties or even its existence was seriously debated".

- (a) Do you give any credence to the question of the existence of a production function? If so, please explain.
- (b) If your answer to (a) is negative, why do you raise this issue?
- (c) If you are concerned about the production function's properties issue mentioned by R. Chambers, please explain in detail the issues in doubt and also how you have resolved the issues.

OCA/USPS-T-15-58. Please refer to your testimony, lines 1 through 4 at 33, and the accompanying footnote 8. You indicate that "Whether the Postal Service's actual plans and procedures are cost minimizing is beyond the scope of this testimony." You quote "Estimation of a Cost Function When the Cost is Not Minimum: The Case of

Soviet Manufacturing Industries, 1958-1971" by Yasushi Toda, *The Review of Economics and Statistics*, 58 (1976) at 259-68, as the source for information on firms which do not minimize costs.

- (a) Dr. Toda indicates that the presence of a factor price disparity creates a bias in the index of total factor productivity. Your analysis of capital and the QICAP variable appears to be based to a significant degree on Total Factor Productivity. Accordingly, does not the assertion that Postal Service facilities may or may not be operated in a cost minimizing fashion limit or eliminate the accuracy of your QICAP variable and the associated capital analysis? Please explain.
- (b) Dr. Toda also found that the shadow rental wage and observed rental wage ratios were significantly different in the case of a cost minimizing and a non-minimizing cost situation. Assuming that according to your testimony cost non-minimization behavior may be a characteristic of some Postal Service facilities, may we conclude that Dr. Toda's conclusions are applicable to the Postal Service? Please explain.
- (c) In discussing cost minimization, would it be correct to assume that you are indicating that some sites (as identified by IDNUM) may be cost efficient, while other sites may be inefficient? If your answer is yes, please indicate factors that could cause a site to be operated in a non-cost minimizing way. If your answer is no, please indicate the concept you are attempting to convey in discussing cost non-minimization if you allege that it is not an issue.

- (d) Assuming that cost minimization occurs at a site (or does not occur at a site), then is it correct that over a period of time a site could move from minimization to non-minimization (or the opposite)? Please explain.

OCA/USPS-T-15-59. Please refer to your testimony, lines 13 through 15 at 42, where you state, "Therefore, estimating labor demand functions, rather than cost or production functions, to obtain the volume-variability factors is a theoretically valid modeling approach."

- (a) Would this be true under all conditions, *i.e.*, both competitive and non-competitive equilibrium, non cost minimization, and cases of non-equilibrium? Please explain.
- (b) Do your results presuppose competitive market equilibrium? Please explain.
- (c) In the case of attainment of a non-competitive market equilibrium, would your results be the same? Please explain.
- (d) You reference in the accompanying footnote 13 a book by R. Chambers to substantiate the theory of the modeling approach. Recognizing that Professor Chambers' book is comprehensive and voluminous at least from the viewpoint of a cursory review effort limited by time, please specifically reference the pages that you use to substantiate your theoretical economic analysis.

OCA/USPS-T-15-60. Please refer to your testimony, lines 9 through 10 and the accompanying footnote 21 at 59. You indicate that "the cost surface passing through the origin is neither necessary nor sufficient for the 100 percent volume-variability result."

- (a) Please provide an example plus graphical representation of a cost surface passing through the origin and possessing 100 percent variability, a cost surface passing through the origin and not possessing 100 percent variability, and a cost surface not passing through the origin and possessing 100 percent variability, and any other possible case(s) not mentioned in this section of the interrogatory.
- (b) Please provide the underlying mathematical proof.

OCA/USPS-T-15-61. Please turn to your testimony, lines 8 through 12 at 72. You state, "To forge ahead and estimate a long-run cost function from cross-section data when the data are not observed in long-run equilibrium results, as Friedlaender and Spady point out, in biased estimates of the relevant economic quantities (see A. Friedlaender and R. Spady, *Freight Transport Regulation*, MIT Press 1981, p.17)." Subsequently in the text, the authors state that one should measure a short-run function in cases of long-run disequilibrium with chronic excess capacity.

- (a) Is your estimated function a short-run or a long-run function?
- (b) Assuming that your reply is "short-run," is this due to disequilibrium and chronic excess capacity? If so, please explain the chronic excess capacity and also the disequilibrium factors.
- (c) If you reply that the function you have estimated is long run, please explain what form a short run function would take in terms of variables.
- (d) The authors state that the long-run function can be derived as the envelope curve of the short-run function. Accordingly, have you derived the unobserved long-run function, as indicated by Friedlaender and Spady? If so, please provide the function.

- (e) Friedlaender and Spady advocate the specification of a cost function in terms of multiple outputs; did you consider such an approach in your estimation efforts? Please explain your answer in detail.

OCA/USPS-T-15-62. In your reply to Interrogatory OCA/USPS-T-15-20, you indicate that an updating of Dr. Bradley's models that did not require the updating of new data systems could require up to two person years of work, or more if significant changes were required.

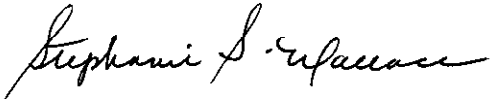
- (a) Would it be reasonable to assume that Dr. Bradley's work also required possibly five years of person effort for the initial development, similar to your efforts? If you are unable to provide this information, please refer the question to the appropriate USPS source that can reply to the question of how many person years of effort went into Dr. Bradley's work.
- (b) Please provide an estimate of the amount of time required to complete your study to obtain the coverage of the functions examined in Dr. Bradley's study, but not examined in your study.

OCA/USPS-T-15-63. These questions focus on the choice of variables for your equations on pages 117 and 118 of your testimony.

- (a) Are any hours of management time included in the hours variable?
- (b) Are any hours of plant and equipment maintenance time included in the hours variable?
- (c) Are any hours of other overhead types of labor included in the hours variable?

CERTIFICATE OF SERVICE

I hereby certify that I have this date served the foregoing document upon all participants of record in this proceeding in accordance with section 12 of the rules of practice.


Stephanie S. Wallace

Washington, D.C. 20268-0001
March 22, 2000