

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

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Postal Rate and Fee Changes, 2000)

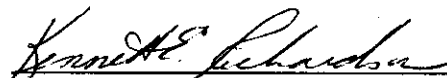
Docket No. R2000-1

ANSWERS OF THE OFFICE OF THE CONSUMER ADVOCATE
TO INTERROGATORIES OF UNITED STATES POSTAL SERVICE
WITNESS: J. EDWARD SMITH (USPS/OCA-T4-26-31)
(June 21, 2000)

The Office of the Consumer Advocate hereby submits the answers of J. Edward Smith to interrogatories of United States Postal Service, dated June 7, 2000. Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

OFFICE OF THE CONSUMER ADVOCATE



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ANSWERS OF OCA WITNESS J. EDWARD SMITH
TO INTERROGATORIES USPS/OCA-T4-26-31

USPS/OCA-T4-26. Please refer to your testimony, OCA-T-4, at page 64, lines 15-16, where you state that "cross sectional data are assumed to show a longer-run equilibrium."

- a. By "are assumed," do you mean assumed by you? Please explain. If you claim that your statement is a point of econometric theory, please provide detailed citation(s) to relevant sources (e.g., Greene's Econometric Analysis, and/or other recent econometrics textbooks) that support your statement.
- b. Is it your testimony that the Postal Service's mail processing plants and/or operations located in the plants operate in a state of long-run equilibrium?
- c. If your response to part (b) is affirmative, in whole or in part, please provide all data, analysis, and/or studies that support your belief. If there are none, please so indicate.

RESPONSE TO USPS/OCA-T4-26. (a) Please see USPS/OCA-T4-25(b).

(b) I believe that one should attempt to estimate the long run equilibrium costs. I do not believe that all of the plants and operations operate in a state of long-run equilibrium. This is an issue that could be examined by a working group focused on an acceptable way of estimating segment 3 costs.

(c) Not Applicable.

ANSWERS OF OCA WITNESS J. EDWARD SMITH
TO INTERROGATORIES USPS/OCA-T4-26-31

USPS/OCA-T4-27. Please refer to your testimony at page 64, lines 9-10. You state, in describing the "between" model, that "a regression analysis is then performed on the sites."

- a. Please confirm that by "performed on the sites," you mean, more specifically, performed using the site means of the data. If you do not confirm, please indicate the correct interpretation of the quoted statement
- b. Please confirm that the pooled, "between," and fixed-effects estimators employ the same underlying data-i.e., the data that are averaged for use in the "between" estimator are the same data that are employed in the pooled and fixed-effects estimators. If you do not confirm, please explain your answer, and provide references to appropriate sources in the econometrics literature to support your position.

RESPONSE TO USPS/OCA-T4-27. (a) Confirmed.

(b) Confirmed.

ANSWERS OF OCA WITNESS J. EDWARD SMITH
TO INTERROGATORIES USPS/OCA-T4-26-31

USPS/OCA-T4-28. Please refer to your testimony, OCA-T-4, at page 63, lines 13-16. You state, "One could allow for the treatment of the data on a pooled basis or cross sectional basis... Such a modeling approach would be consistent with the data..."

- a. Is it your testimony that Dr. Bozzo did not "allow for the treatment of the data on a pooled basis or cross sectional basis"? Please explain any answer that is affirmative, in whole or in part.
- b. Is it your understanding that the question of whether or not the pooled or "between" estimation methods are "consistent with the data" can be answered with a statistical specification test (or tests)? Please explain any answer other than is anything other than an unqualified "yes," and provide references to appropriate sources in the econometrics literature to support your position.

RESPONSE TO USPS/OCA-T4-28. (a) Yes. He used the fixed effects method and rejected the pooled and cross sectional approaches.

- (b) No. Prior to performing the statistical estimation it is necessary to hypothesize a modeling approach, including the clear definition of the underlying economic theory and its applicability, development of appropriate data bases, and choice of estimation approach that will estimate the model. If the cross sectional, pooled, and/or fixed effects models were all theoretically acceptable, then one could perform statistical tests. Dr. Bozzo did, in fact, perform such analysis, but the fixed effects model is based on unrealistic assumptions.

ANSWERS OF OCA WITNESS J. EDWARD SMITH
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USPS/OCA-T4-29. Please consider a piece of economic intuition that can be framed as the null hypothesis of an appropriate statistical specification test. Assume that when the test is performed, the null hypothesis is rejected at a confidence level of C percent (or, equivalently, a significance level of 100-C percent).

- a. Please confirm that confidence levels of C=90 percent or C=95 percent are widely accepted in econometric practice as minimum confidence levels for rejecting the null hypothesis of a statistical test. If you do not confirm, please explain fully, and provide references to appropriate sources in the econometrics literature to support your position.
- b. Please confirm that the standard interpretation of the hypothetical test result described above is that the null hypothesis is likely incorrect, with the probability of a "Type I" error (i.e., rejecting the null hypothesis even though it is correct) given by 100-C percent.

RESPONSE TO USPS/OCA-T4-29. (a) I would generally expect to find the aforementioned confidence levels and/or a 99% confidence level.

(b) Confirmed.

ANSWERS OF OCA WITNESS J. EDWARD SMITH
TO INTERROGATORIES USPS/OCA-T4-26-31

USPS/OCA-T4-30. Please refer to your testimony at page 63, line 22, to page 64, line 2. Is your statement, that "[t]he results [of appropriate econometric techniques and variables] could be 100 percent volume variable, or some other number greater than (or less than) 100 percent volume variable," based on the economic result that findings of economies (or diseconomies) of scale, size, density, etc., are theoretically possible? If not, please explain in detail the basis for your statement.

RESPONSE TO USPS/OCA-T4-30. Yes.

ANSWERS OF OCA WITNESS J. EDWARD SMITH
TO INTERROGATORIES USPS/OCA-T4-26-31

USPSIOCA-T4-31. Please refer to your testimony at page 32, line 15 (beginning with "He maintains..."), to page 33, line 6. You provide a number of paraphrases of statements you attribute to Dr. Bozzo.

- a. Please provide a detailed citation for each statement you attribute to Dr. Bozzo.
- b. For each statement you attribute to Dr. Bozzo in the cited section of your testimony, please indicate whether you agree or disagree, or if you have no opinion with respect to the statement. In each case, if you disagree, please explain fully the basis for your disagreement.

RESPONSE TO USPS/OCA-T4-31. (a) I shall delineate each statement and supply a source in the testimony:

(i) Dr. Bozzo essentially maintains that the QICAP variable in its current state is the best estimate of capital usage available. This is inferred from his testimony insofar as a witness would not logically proffer a second best estimate if a better estimate were available. In addition, Dr. Bozzo indicates that his methodology is based on and consistent with the methodology presented by Christensen & Associates, who in their 1992 briefing package, "TFP Presentation to Budgeting Group", extol their approach. The briefing package and extensive documentation are available in USPS-LR-H-272. It should be noted, however, that nowhere in his testimony does Dr. Bozzo reference the variable QICAP, nor does he indicate that the QICAP term is the same term as used in his regression equations. The term is used in USPS-LR-I-107.

(ii) Dr. Bozzo maintains that it is not possible to classify all equipment at a site by cost pool. The appropriate interrogatories are OCA/USPS-T15-48 (c), (d), and (e); OCA/USPS-T15-50 (b); and UPS/USPS-T15-24.

ANSWERS OF OCA WITNESS J. EDWARD SMITH
TO INTERROGATORIES USPS/OCA-T4-26-31

(iii) According to Dr. Bozzo, the resulting cost pool level capital measures which would result from segmenting available data by activity cost pool would not represent the cost pools of capital *per se*, but rather, they would represent the portion of the cost pools capital that could be associated with the cost pool using the Property Code Number (PCN). The appropriate interrogatories are UPS/USPS-T15-24 and OCA/USPS-T15-64.

(iv) Dr. Bozzo further notes that data on facility space, which he alleges to be an important non-equipment component of a hypothetical cost pool capital index, are not available by cost pool. See OCA/USPS-T15-50 and UPS/USPS-T15-24.

(v) Dr. Bozzo further maintains that it is not obvious that a cost-pool-level capital measure would be the sole--or even the primary--economically relevant measure of capital. See UPS/USPS-T15-24.

(vi) Dr. Bozzo has indicated that, in his view, the effect of including the facility capital index is to capture the fixed effect on labor demand in a given cost pool of the capital services employed in that cost pool as well as the capital services employed in other pools. See UPS/USPS-T15-24.

(b) The following comments reference the previously numbered statements.

(i) I agree that Dr. Bozzo believes that the QICAP variable is the best estimate of capital usage.

(ii) I disagree. Classification of equipment by cost pool is a standard procedure. Since some classification may appear to be arbitrary, it would be necessary to determine whether such a classification yields the best

ANSWERS OF OCA WITNESS J. EDWARD SMITH
TO INTERROGATORIES USPS/OCA-T4-26-31

answer. However, a correctly performed analysis might not require the division of jointly shared equipment into specific cost pools.

- (iii) I agree and see this as a study deficiency.
- (iv) I agree that the data are not currently available.
- (v) I agree that the analysis is not obvious; in fact, this may be a reason to consider joint production aspects of mail processing rather than focusing on mail processing as a single activity
- (vi) I believe that he has related capital to labor demand, but I do not believe the analysis is correct.

DECLARATION

I, J. Edward Smith, declare under penalty of perjury that the answers to interrogatories USPS/OCA-T4-26-31 of the United States Postal Service are true and correct, to the best of my knowledge, information and belief.

Executed

June 21, 2000

J. Edward Smith

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.

A handwritten signature in black ink, reading "Kenneth E. Richardson". The signature is written in a cursive, flowing style with a large initial 'K'.

KENNETH E. RICHARDSON

Washington, D.C. 20268-0001
June 21, 2000