

DOCKET SECTION

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

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COMMISSION

Postal Rate and Fee Changes, 1997

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Docket No. R97-1

ANSWERS OF THE OFFICE OF THE CONSUMER ADVOCATE
TO INTERROGATORIES OF UNITED STATES POSTAL SERVICE
WITNESS: J. EDWARD SMITH, JR. (USPS/OCA-T600-9-11)
(FEBRUARY 6, 1998)

The Office of the Consumer Advocate hereby submits the answers of J. Edward Smith, Jr. to interrogatories USPS/OCA-T600-9-11, dated January 23, 1996. Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,



KENNETH E. RICHARDSON
Attorney
Office of the Consumer Advocate

ANSWERS OF OCA WITNESS J. EDWARD SMITH, JR.
TO INTERROGATORIES USPS/OCA-T600-9-11

USPS/OCA-T600-9. Please refer to your testimony at pages 26-28.

- (a) Please provide a mathematical regression equation that corresponds to the "pooled model" as you use the term in your testimony.
- (b) Please confirm that the pooled model is a special case of the "fixed-effects model" in which all of the intercepts are constrained to be equal.

A. (a) I have not developed the regression, for the scope of my work has consisted of (a) evaluating witness Bradley's model and (b) reviewing alternative approaches which need to be considered in advocating a change. A substantial amount of additional work may be required in evaluating, changing, or supplementing witness Bradley's approach and, accordingly, is outside the scope of my testimony.

Witness Bradley has already provided pooled regression equations which from a theoretical point of view seem to comport more closely with the underlying economics. Additional work considering other variables—such as facility capacity, age, and technologies—in a production function mode with subsequent derivation of a cost function could also be considered.

(b) The pooled model has one intercept and one equation—not multiple intercepts corresponding to multiple lines, for which the β_i may or may not be equal depending upon the underlying data and estimation procedure used. Subject to these substantial differences, one could state that the pooled model is a special case. In fact, a possible first approximation in a search for a solution might be the consideration of the pooled equations developed (but not endorsed) by witness Bradley in response to POIR No. 4.

ANSWERS OF OCA WITNESS J. EDWARD SMITH, JR.
TO INTERROGATORIES USPS/OCA-T600-9-11

USPS/OCA-T600-10. Please refer to your testimony at page 27. You state that since you have not computed regressions, your conclusions are "not precise." Given that you have had access to the required data, why did you choose not to compute the regressions that would have made your conclusions "precise"? Please explain fully.

A. A visual inspection of the data is adequate to substantiate my conclusions. The computation of regressions would require the treatment of issues of multicollinearity (an issue with which witness Bradley has expressed concern), the treatment of scrubbed data (another witness has found very different results using witness Bradley's methodology but unscrubbed data), the specification of appropriate variables, and technical economic issues such as the treatment of the longer run. Rather than have the analysis focus on a debate over the specific and appropriate techniques for generating a regression equation, I have chose to avoid those issues and to focus on the underlying data.

However, in my reply to the "Notice of Inquiry No.4 on Mail Processing Variability," I do perform some regression analysis, and my conclusions are that the underlying data do not support witness Bradley's conclusions.

ANSWERS OF OCA WITNESS J. EDWARD SMITH, JR.
TO INTERROGATORIES USPS/OCA-T600-9-11

USPS/OCA-T600-11. Please refer to your testimony at page 27, lines 4-6. Please explain precisely what you mean by your statement "the underlying data plotted on a site by site basis substantiate both fixed effects regressions and pooled regressions."

A. On the basis of visual inspection, some of the site data support on a site by site basis the fixed effects regression conclusions arrived at by witness Bradley for the analysis of the entire data set. Some of the data appear to substantiate that a regression approach with a common slope between sites and a positive and different alpha intercept for each site would be reasonable. However, other data appear to substantiate that the assumption of common slopes is not acceptable.

In addition, some of the data plots appear to be "blobs". A regression on those data is not meaningful.

Other data plots tend to comport to the pooled regressions generated by witness Bradley in response to POIR No. 4.

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.


KENNETH E. RICHARDSON
Attorney

Washington, D.C. 20268-0001
February 6, 1998

DECLARATION

I, J. Edward Smith, Jr., declare under penalty of perjury that the answers to interrogatories USPS/OCA-T600-9-11 of the United States Postal Service are true and correct, to the best of my knowledge, information and belief.

Executed Feb 6, 1998

J. Edward Smith, Jr.