

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

RESPONSE OF UNITED STATES POSTAL SERVICE
WITNESS BRADLEY TO INTERROGATORIES OF
UNITED PARCEL SERVICE
(UPS/USPS-T18-5-6)

The United States Postal Service hereby provides the responses of witness Bradley to the following interrogatories of United Parcel Service: UPS/USPS-T18-5-6, filed on April 11, 2000.

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

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

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April 17, 2000

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T18-5. Refer to your answer to interrogatory MPA/USPS-T18-4.

- a. Explain the economic reasoning underlying the practice in the previous rate cases of specifying separate equations, according to truck capacity, for the Intra-P&DC, Intra-CSD, Inter-P&DC, Inter-Cluster, and Inter-Area accounts?
- b. Consider the case where the USPS chooses to increase capacity on a route, because of increased mail volume, by expanding truck capacity from a van to a tractor-trailer.
 - i. In this case, would you consider the two types of capacity to be substitutes as inputs into the production of mail movement? If not, why not?
 - ii. In this case, would you consider all of the extra costs due to the provision of greater truck capacity to be volume variable. If not, why not?
 - iii. How is this dimension of variability in costs accounted for in a system where cost variability in van trips and cost variability in tractor-trailer trips are estimated in separate equations?
- c. Confirm that your empirical model of highway transportation cost holds vehicle capacity constant when estimating volume variability. If not confirmed, explain why not.
- d. Confirm that your empirical model of highway transportation costs incorporates no variables representing the relationship between the volume of mail and the choice of vehicle capacity. If not confirmed, explain why not.
- e. Have you examined the extent to which, or frequency with which, truck capacity changes over time under a contract. Have you examined the frequency with which truck capacity changes as contracts expire and are replaced with new contracts? If so, provide the results of your analyses. If not, explain why not.

Response of United States Postal Service Witness Bradley
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Interrogatories of UPS

UPS/USPS-T18-5 Response:

- a. The disaggregation of the intra-SCF and inter-SCF accounts (the Intra-P&DC, Intra-CSD, Inter-P&DC, Inter-Cluster, and Inter-Area accounts you mention in your question did not exist until this case) into their tractor trailer and van components was first done in Docket No. R97-1. Previous to that, a single econometric equation was estimated for the combined cost pool. The motivation for investigating the disaggregated approach came from two observations. First, these two cost pools had a mix of both tractor trailer and van transportation. Second, cost pools that were essentially all tractor trailer transportation had higher variabilities than cost pools that were essentially all van transportation. I explained this in my docket No. R97-1 testimony:¹

A maintained hypothesis underlying the Commission's Docket No. R87-1 analysis is that the cost-generating process within each account category is relatively homogenous. If so, a single equation can be used to estimate the variability for all costs in the account. If this hypothesis is not true, then there is more than one cost-generating process, and accurate measurement of variability may require separate identification and estimation of the individual cost generating processes. The parameters of the cost generating processes may not be the same. If they are not, a more accurate variability calculation will be accomplished through separate estimation

¹ See Direct Testimony of Michael D. Bradley on Behalf of the United States Postal Service, USPS-T-13, Docket No. R97-1, at 35.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

of the individual parameters.

This is not to say that every cost pool should be split, willy nilly, into smaller subpools in a misguided search for different variabilities. Rather, a disaggregated analysis should be followed only when there are good operational reasons to do so. In the instant case, the operational basis is the existence of substantial use of two different transportation technologies within one account. Purchased highway transportation contracts that use the tractor-trailer technology have materially higher variabilities (intra-BMC and inter-BMC) than those use straight body trucks (intra-SCF and inter-SCF).

Some contracts have just tractor trailer transportation, some just have straight body transportation and some are mixed. Because the HCSS data are collected at a more detailed level than the contract, i.e., at the contract cost segment level, the mixed contracts can be separated into their tractor trailer and straight body portions. A review of the HCSS data set reveals that only inter-SCF and intra-SCF accounts have many of both tractor trailer and straight body cost segments. Other account categories are more homogeneous. For example, box route contracts have no tractor trailers and all but one of the inter-BMC contracts specify tractor trailers.

Given that accounts that are predominantly tractor trailer transportation have a higher variability than those that specify straight body transportation, the measurement of variability might be improved by splitting, where possible, accounts into smaller technology-defined cost pools. In the inter-SCF and intra-SCF accounts there is significant heterogeneity. Furthermore, sufficient data exist to estimate separate variabilities for those contract cost segments that use straight body trucks and for those contracts that use tractor trailer contracts. If the estimated variabilities come out to be the same, such a division is unnecessary and a single equation should be used for the entire account. If the estimated variabilities are different, and make sense individually, then two variabilities for the cost pool should be calculated. In

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

essence, two smaller cost pools will be formed and the variability for each will be derived from its own econometric equation.

- b.i The substitution contemplated in this hypothetical is more than just a change in *cubic capacity*. It reflects a change in the method of production. These two methods of production are alternatives methods in the production of mail movement.

- b.ii. The change in costs would be captured by the movement of both costs and cubic foot-miles out of one cost pool an into another. In the hypothetical, capacity and cost would be moving from a van cost pool to a tractor trailer cost pool. Because the estimated variability in the tractor trailer cost pool is higher, I would expect the switch to lead to an increase in volume variable costs.

- b.iii. The possibility that alternative methods of production can be used to move mail is captured in the formation of separate cost pools and estimation of the separate variabilities for each of those cost pools. For example, in the hypothetical, we would observe an increase in accrued cost in the "tractor trailer" cost pool and a decrease in accrued cost on the "van" cost pool. By estimating separate variabilities for each of these cost pools, the disaggregated approach applies the appropriate variability to the accrued costs in both instances.

Response of United States Postal Service Witness Bradley
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Interrogatories of UPS

- c. Not confirmed. The empirical model is based upon cross-sectional data, not time series data. The variation in cost and capacity is thus across contract cost segments not through time. There is substantial variation in vehicle capacity in the cross-sectional data set. Of course, it is true that the capacity of any individual vehicle is fixed at a point in time.

- d. Confirmed.

- e. No. The database used for empirical analysis in both Docket No. R97-1 and Docket No. R2000-1 is a cross-sectional database. As explained above, this means that capacity varies across contracts, not through time. In Docket No. R87-1, I did pursue a time series analysis that generated results similar to the cross-sectional data.

Response of United States Postal Service Witness Bradley
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UPS/USPS-T18-6. Refer to your answer to interrogatory MPA/USPS-T18-10. Your response indicates that the variable CONTYPE in Workpaper WP-3 at page 5 denotes whether a contract is a regular contract, and emergency contract, or a temporary contract.

- a. Are these variables defines in the same manner as they are defined in the Postal Operations Manual, pages from which you attached to your response to UPS/USPS-T18-3?
- b. If not, provide a table of correspondence to these terms as defined in the Postal Operations Manual.

UPS/USPS-T18-6 Response:

- a. Please note that I did not answer UPS/USPS-T18-3. That interrogatory was redirected to the Postal Service. Nevertheless, it is my belief that the variable CONTYPE in the HCSS database defines contract type in a manner consistent with the Postal Operations Manual.
- b. Not applicable.

DECLARATION

I, Michael D. Bradley, declare under penalty of perjury that the foregoing answers are true and correct, to the best of my knowledge, information and belief.


Date: 4/17/00

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.

A handwritten signature in cursive script, appearing to read "Susan M. Duchek", is written above a horizontal line.

Susan M. Duchek

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