

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

POSTAL RATE AND FEE CHANGES

Docket No. R2006-1

RESPONSE OF POSTAL SERVICE WITNESS BRADLEY (USPS-T-17) TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 24
(December 4, 2006)

The United States Postal Service hereby provides the responses of witness Bradley (USPS-T-17) to Presiding Officer's Information Request (POIR) No. 24, issued November 17, 2006.

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

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Daniel J. Foucheaux, Jr.
Chief Counsel, Ratemaking

Sheela A. Portonovo

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260-1134
(202) 268-3012; Fax -6187

**Response of Postal Service Witness Michael D. Bradley (USPS-T-17)
To Presiding Officer's Information Request No. 24**

1. The Response of Postal Service Witness Michael D. Bradley (USPS-T-17) to Presiding Officer's Information Request No. 7, Question 6, states that as a courtesy to the Commission, he will set the value for "item" to zero whenever "quantity" is equal to zero, and run his various window service regressions with this condition in place.
 - a. Were observations deleted from these regressions in all instances where "item" was set to zero when "quantity" was equal to zero?
 - b. If not, please explain why not.

Response:

- a. No.
- b. To understand why it was appropriate to include these observations, please recall that question 6 was the last of a series of interrogatories referring to what was thought to be an "anomaly" -- a value for items that was positive when the value for the quantity was zero. However, as I attempted to explain in my response to Presiding Officer's Information Request No. 7, Question 4, this is not a data error or "anomaly" but rather a reflection of certain types of transactions:¹

A zero value for a window service item means that there was a transactional activity for an item, although no quantity was ultimately purchased. Examples of non-purchase transaction activities include an inquiry about the product, an acceptance of a previously stamped product, or a customer refusing to purchase the product after an initial intent of purchase. Such a transaction is valid and is not an anomaly. In these instances, there was a transaction in which window time was incurred but no products were purchased.

¹ See, Response of Postal Service Witness of Michael D. Bradley to Presiding Officer's Information Request No. 7, Question 4.

**Response of Postal Service Witness Michael D. Bradley (USPS-T-17)
To Presiding Officer's Information Request No. 24**

Moreover, as I tried to indicate in my response to Presiding Officer's Information Request No. 7, Question 5, these are valid transactions and are included in the regression data base. Given that they these are valid transactions and that the concern is about the values for one of the variables -- that the "item" variable has a positive value when it "should" be zero -- it seemed to me that the appropriate way to deal with concern was to correct the value for the variable at issue and to re-estimate the regressions including the corrected values.

**Response of Postal Service Witness Michael D. Bradley (USPS-T-17)
To Presiding Officer's Information Request No. 24**

2. In, Docket No. R90-1, USPS-T-6, page 6, line 15, witness LaMorte defined transactions associated with demand-side variability as "...a *visit* to a Post Office." The time associated with a visit to a Post Office could therefore possibly include the time a clerk waits for a customer ("wait time"), and the time a customer walks to the counter ("walk time").
 - a. Please discuss whether and why the definition of transaction on page 6 of witness LaMorte's testimony is consistent with the measurement of the variable "time" that witness Bradley used to estimate transaction-side variabilities in his proposed Window Service study.
 - b. Based on the Postal Service's understanding of witness LaMorte's definition of demand-side transactions on page 6, would it be more consistent to measure the variable "time" presented in USPS-LR-L-80 by omitting "walk time" and "wait time"; by including "walk time" but not "wait time"; or by including both "walk time" and "wait time" in the dependent variable "time?" Please explain your answer.

Response:

- a. My understanding is that witness LaMorte's used the term "visit" as a synonym for the term "transaction" as it is currently defined. For example, I found this discussed later in Witness LaMorte's testimony:²

As indicated earlier, a transaction occurs every time a customer visits a postal window. The length of the transaction includes the time from the first contact between the clerk and the customer, which may be verbal or non-verbal, until the clerk has completed the duties associated with the transaction. The duration of the transaction, then, is the period of time that the clerk is occupied with the customer's needs.

I also found a section in which witness LaMorte's was discussion transactions on the supply side and referred to them as "visits".³

² See, Direct Testimony of Michele M. LaMorte on Behalf of the United States Postal Service, Docket No. R90-1, at 16.

**Response of Postal Service Witness Michael D. Bradley (USPS-T-17)
To Presiding Officer's Information Request No. 24**

The transaction supply-side variability associated with these new transactions is 100%, because the increase in clerk processing time is proportionate to the increase in transactions, or visits to the post office.

This linkage was also apparently explained by witness Brehm in Docket No. R97-1:⁴

The first indirect effect of a change in postage volume is the demand side effect, which measures the degree to which a change in mail volume changes the number and type of transactions. This variability, which is expressed as a percentage change in transactions caused by a percentage change in mail volume, is less than or equal to one because customers may not necessarily increase their visits to the post office in response to an increase in mail volume. Instead, they may increase the number of services purchased during each trip to the post office.

In Docket No. R90-1, the estimate for the demand side effect was based upon two different models of customer behavior. The first model, the fixed size transaction model, held that consumers purchase a fixed amount of postage in each transaction. Therefore, an increase in mail volume caused an increase in transactions, or visits to the post office.

- b. Based upon the way the witnesses LaMorte and Witness Brehm defined demand side transactions, it would be most consistent to exclude both walk time and waiting time. For example, witness LaMorte indicates that a transaction includes "service time" (the time required for sale itself) and "set up time" (the time for the

³ See, Direct Testimony of Michele M. LaMorte on Behalf of the United States Postal Service, Docket No. R90-1, at 16.

⁴ See, Direct Testimony of Christopher S. Brehm on Behalf of the United States Postal Service, USPS-T-21, Docket No. R97-1 at 3.

**Response of Postal Service Witness Michael D. Bradley (USPS-T-17)
To Presiding Officer's Information Request No. 24**

greeting, payment and good-bye).⁵ She thus excludes both walk time and waiting time from her definition of a transaction. The same is true for witness Brehm in Docket No. R90-1.

This definition is appropriate because waiting time is a separate cost pool measured by IOCS and thus should not be included in the transaction time cost pool. Walk time should be excluded from transaction time for the same reason, but as OCA witness Smith showed, it is so small that its inclusion has no impact on the estimated variabilities.

⁵ See, Direct Testimony of Michele M. LaMorte on Behalf of the United States Postal Service, Docket No. R90-1, at 21.

**Response of Postal Service Witness Michael D. Bradley (USPS-T-17)
To Presiding Officer's Information Request No. 24**

3. In, Docket No. R90-1, USPS-T-6, witness LaMorte also stated on page 16, lines 7-9 that “[t]he Postal Service based its approach for estimating demand-side variability of postage sales on customer purchasing behavior.” If the answer to question 1a. above is “negative,” please discuss whether and why this definition of transaction on page 16 is consistent with witness Bradley’s decision to retain observations in his regression analyses where a customer engaged a postal clerk, but failed to purchase a service.

Response:

I believe that the definition of transactions used by the Postal Service in this case, including the possibility of non-sale transactions, is consistent with the approach witness LaMorte used in calculating a demand-side variability. One reason I think this definition is consistent is because witness LaMorte relied upon a very similar definition of a transaction later in her own analysis. The complete sentence from which the quotation was taken reads as:⁶

In Docket No. R77-1, the Postal Service based its approach for estimating [the] demand-sided variability for postage sales on postal customer purchasing behavior.

Two points are revealed by reviewing the complete quotation. First, witness LaMorte was apparently not describing the Postal Service analysis in Docket R90-1, but rather was providing some historical context by describing what had been done in an earlier case.⁷ Second, the quotation actually refers to the demand-side variability used for postage sales, not the variability of postage sales. In other words, witness LaMorte is describing the demand-side variability that was applied to postage sales, not an estimated variability which was derived from an analysis of actual postal sales. In fact,

⁶ See, Direct Testimony of Michele M. LaMorte on Behalf of the United States Postal Service, Docket No. R90-1, at 16.

⁷ A review of the subsequent text suggests that Witness LaMorte may have actually been referring to Docket No. R87-1

**Response of Postal Service Witness Michael D. Bradley (USPS-T-17)
To Presiding Officer's Information Request No. 24**

her testimony indicates the variability was derived not from actual postage sales but from a survey of self-described postal customer behavior. There is nothing in the survey structure to preclude the possibility that one of anticipated transactions may not come to a sale because, say, the customer forgot his or her money or the post office visited did not have a particular stamp in stock on that day. A certain customer could well describe himself or herself as a "fixed interval" or a "fixed purchase" customer even if they had had a non-sale transaction in the past, or anticipated having one in the future. As a result, it is my understanding (and apparently witness Brehm's in Docket No. R97-1) that witness LaMorte's used the term "sales" to represent what we currently call "transactions."

Also, I think it is important to keep some perspective on this issue. Please recall that the demand-side variability applies only to stamp transactions. Of the 7,915 transactions included in the "Wscleanpos" data set, only there were only 13 bulk stamp and 5 non-bulk stamp transactions for which there was no service purchased. Thus, there are only 18 transactions out of 7,915 where this issue of consistency arises, so for 99.8 percent of the transactions, the issue does not arise. Whatever the theoretical issues of consistency, the numbers make clear that there is no material issue for the actual measurement of the relevant variabilities.

On a theoretical basis, it is not clear that witness LaMorte considered the fact that in the normal course of events there will be transactions for a product that do not result in a sale at that time. This does not mean that the information gained in the transaction does not facilitate sales of the particular item in the future. For example, the information gained about an Express Mail service might encourage the customer to use the Express Mail service in the future. The transaction time study has become more sophisticated and, in this case, it has been significantly enhanced by the use of POS-One register data. As the supply side variability has been improved, it may be time to go back and examine if the demand side variability should also be updated.

**Response of Postal Service Witness Michael D. Bradley (USPS-T-17)
To Presiding Officer's Information Request No. 24**

Finally, it is my understanding that in this case, as in previous dockets, the time associated with each product comes from IOCS, not from the transaction time study. Thus the only possible place this consistency issue could arise is in the measure of variability.

**Response of Postal Service Witness Michael D. Bradley (USPS-T-17)
To Presiding Officer's Information Request No. 24**

4. Should the definition of transaction used by witness LaMorte to estimate demand-side variabilities be consistent with the definition of transaction and transaction time used to estimate transaction-side variabilities in witness Bradley's proposed Window Service Study if the multiplication of "Network," "Demand," and "Transaction," variabilities is to produce a correct estimate of the variability of window service clerk cost in response to a change in mail volume? If not, please explain why not.

Response:

In a theoretical model, consistency among definitions ensures that unit volume variable costs produce a measure of marginal cost. As demonstrated by witness Brehm in Docket No. R97-1, the established model (the Postal Service and the Postal Rate Commission use the same model) has such consistency.⁸ As I use the same definition of a transaction as witness Brehm, my testimony makes no change in that property.

In actual measurement, some inconsistency could be tolerated if it is not material. Because measuring volume variable costs incurs real resource costs, there could be instances in which an existing measurement of cost of an existing data set could provide an acceptably accurate measurement of volume variable costs even though those costs or data are not 100 percent consistent with some other part of the cost measurement.

⁸ See, Direct Testimony of Christopher S. Brehm on Behalf of the United States Postal Service, USPS-T-21, Docket No. R97-1 at 7.

**Response of Postal Service Witness Michael D. Bradley (USPS-T-17)
To Presiding Officer's Information Request No. 24**

5. Please explain the reason the following variables were excluded from witness Bradley's econometric estimation of window service transaction times, even though there was at least one transaction associated with each of them: "other," "phone," and "err."

Response:

Please first note that "other" was included in my econometric analysis. Please see Section E.4. of my testimony which is entitled, "Including an "Other" Term."⁹ The variable "phone" refers to phone cards. This variable was excluded because it is a non postal product for which no variability is required and it occurs with a very low frequency. I would suggest that including it in the equation will have no material impact on the recommended variabilities. The final variable mentioned, "err," refers to electronic return receipt. This variable occurs only once in the data set, in a multiple item, multiple quantity transaction. I would suggest that including it in the equation will have no material impact on the recommended variabilities.

⁹ See, Direct Testimony of Michael D. Bradley On Behalf of the United States Postal Service, USPS-T-17 at 36.