

BEFORE THE
POSTAL RATE COMMISSION

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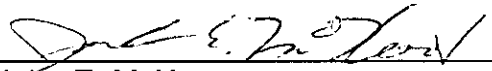
POSTAL RATE AND FEE CHANGES, 2000

DOCKET NO. R2000-1

ANSWERS OF UNITED PARCEL SERVICE
WITNESS KEVIN NEELS TO UNITED STATES
POSTAL SERVICE INTERROGATORIES
(USPS/UPS-T1-18 through 31)
(June 22, 2000)

Pursuant to the Commission's Rules of Practice, United Parcel Service hereby files and serves the answers of UPS witness Kevin Neels to the following interrogatories of the United States Postal Service: USPS/UPS-T1-18 through 31.

Respectfully submitted,


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Of Counsel.

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USPS/UPS-T1-18. Please refer to your biography at lines 5-6, where you state, "The aviation sector has been a particular focus of my work..." Please indicate whether you have performed any cost, demand, or other economic analysis of the aviation sector in which you have used revenue passenger miles (or kilometers), available seat miles, revenue ton-miles, or other similar measures, to characterize the output of airline(s). If so, for each such study, indicate the output measure you used, and provide a brief description of the analysis you performed (the approximate level of detail of the bullet points in the first several pages of Appendix A to your testimony will suffice).

Response to USPS/UPS-T1-18.

I interpret the word "similar" in the interrogatory to include other measures involving the product of a quantity and a distance. I have not used such output measures in my work, and can therefore identify no such studies.

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USPS/UPS-T1-19. Please refer to pages 4-5 of your testimony, UPS-T-1, where you indicate (at page 4 line 21 et seq.) that “[t]o some extent, adjustments can be made to accommodate growth in volume, although over a very short time frame the available options may be limited.” In the accompanying footnote 4 (on page 5), you indicate that the adjustments you have in mind include “a supervisor ask[ing] workers to defer time off, authoriz[ing] extra overtime, monitor[ing] workers more closely to minimize unproductive downtime, or alter[ing] work practices...to increase productivity.” In your opinion, do these “adjustments” typically occur within a time frame of one calendar year or less?

Response to USPS/UPS-T1-19.

Yes.

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USPS/UPS-T1-20. Please refer to your testimony at page 22, lines 1-2. You state, "It seems highly unlikely that the operations of these parallel processing activities [manual and mechanized/automated operations for shape-based mail streams] would not be affected by the way in which mail is allocated between them." Does your statement imply that a variable (or variables) capturing the allocation of mail or mail handlings should be included in appropriately specified mail processing cost or labor demand models, at least unless a specification test demonstrates it (or them) to be irrelevant? Please reconcile any negative response with the quoted statement.

Response to USPS/UPS-T1-20.

The interrogatory seems to imply a situation in which separate cost or labor demand models are being estimated for each of the parallel processing activities. My response assumes that this is the thrust of the question.

Inclusion of such variables could potentially capture the effects of such interactions if the models were fully and appropriately specified, and if such variables were treated appropriately in calculating volume variability. The latter qualification is an important one. The allocation of mail between parallel sorting activities is a decision made by the Postal Service, and is thus endogenous to the mail processing operation. To the extent that such allocation decisions change with shifts in volume, such indirect effects of volume growth would have to be factored into the calculation of volume variability. See my response to USPS/UPS-T1-13(c).

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Inclusion of cross-activity allocation variables in a set of activity-specific cost or labor demand models is not the only or even necessarily the most appropriate way of capturing the interaction effects cited in my testimony. One might also, for example, combine all of the processing activities for a specific shapes-based mailstream into a single model, and include among the explanatory variables measures of the amount of automated processing capacity available. With more time and study, I am sure that other approaches could be developed.

Hence, I do not believe that the solution offered in the text of the interrogatory is the only one that is workable, or that the specific version of that solution used by Dr. Bozzo (inclusion of a manual ratio variable) is correct.

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USPS/UPS-T1-21. Please refer to your testimony, UPS-T-1, at page 21, lines 3-14.

Does your use of the term "largely" in line 3 of the cited testimony indicate that Dr.

Bozzo accounts for potential interrelationships of operations, at least in some way?

Explain fully any negative answer.

Response to USPS/UPS-T1-21.

Yes.

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USPS/UPS-T1-22. Please refer to your testimony, UPS-T-1, at page 21, lines 15-18.

You illustrate the interactions between MODS activities with a description of opening unit operations. Please refer also to Dr. Bozzo's response to MPA/USPS-T15-1, Tr. 15/6251-6255, and to the accompanying library reference USPS-LR-I-178.

- a. Please confirm that opening unit operations are not among the ten MODS operation groups for which econometric results are presented in USPS-T-15. If you do not confirm, please explain.
- b. Please confirm that the MODS sorting operation groups are the "downstream operations" to which your example refers. If you do not confirm, please explain.
- c. Is it your understanding that the opening unit models presented by Dr. Bozzo in response to MPA/USPS-T15-1 treat MODS volumes in downstream operations and ODIS destinating mail volumes, among other things, as factors "driving" opening unit workhours? If not, please explain.

Response to USPS/UPS-T1-22.

- (a) Confirmed.
- (b) Confirmed.
- (c) It is my understanding that Dr. Bozzo treats TPH/F and destinating mail volumes as factors "driving" opening unit workhours.

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USPS/UPS-T1-23. Please refer to your testimony, UPS-T-1, at page 23, lines 15-19.

Do you contend that it is impossible to incorporate the measured effect of capital on labor hours in the variability estimates, if desired? If you claim that it is impossible to do so, please explain fully and support your answer with appropriate references to the economic and/or econometric literature.

Response to USPS/UPS-T1-23.

No. However, an appropriate measure of variability must account for more than just the effects of volume on labor hours, holding capital constant. It must also factor in the effects that volume growth has on capital expenditures, as well as its indirect effects on labor hours through its influence on capital.

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USPS/UPS-T1-24. Please refer to your testimony, UPS-T-1, at page 25, lines 1-2.

Please describe the procedures you employed in the "inspection" you claim to have performed.

Response to USPS/UPS-T1-24.

The first phase of this inspection involved manual review of the data contained in reg9398.xls, provided in USPS-LR-I-107, to assess the frequency with which isolated instances of zero TPH/F and/or zero labor hours were reported. I defined these isolated instances as one or more successive quarters of zero or negative values for a MODS activity and a site that are both preceded and followed by reporting of non-zero values. In other words, I excluded periods of zero TPH/F and hours for a site at the beginning or end of the observation period, since such periods could have corresponded respectively to the period before the activity was installed at the site, or the period after it had been shut down. I found many such instances.

The second phase of this inspection involved the development of software to scan the data set and provide a full and accurate count of the number of such gaps in reporting. The computer program developed for this purpose is named GAPS.PRG, and is included in my workpapers. Results of this analysis are reported in Table 5 on page 27 of my testimony.

Although it is possible that some of the gaps identified in this way represent true zeros (i.e., legitimate periods when no mail was processed), they are too numerous and too long to be explained entirely by periods of idleness. Moreover, frequent

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inconsistencies between the TPH/F data and the labor hour data demonstrate the existence of numerous reporting errors.

The table below shows the number of instances in which a MODS activity at a site reports either positive TPH/F and zero labor hours, or vice versa. There is no plausible operational explanation for such a pattern. It can be explained only by reporting errors.

Table in Response to USPS-UPS-T1-24 MODS Hours and Pieces Data Quality					
MODS Group	Pieces <=0	Hours <=0	Hours <=0 Pieces >=0	Hours >0 Pieces =0	0-40 Hours Pieces <=0
BCS	259	246	2	15	3
OCR	656	608	6	52	30
FSM	1872	1839	4	37	28
LSM	2137	1762	5	374	286
Manual Flats	171	156	1	16	2
Manual Letters	167	153	2	14	4
Manual Parcels	1147	852	231	525	187
Priority	1605	981	58	659	110
SPBS	5288	5094	8	202	119
Notes and Sources:					
1. Data are from reg9398.xls, provided in USPS-LR-I-107.					
2. Following USPS-T-15, pieces for manual operations equal total piece handlings (TPH). Pieces for automated operations equal total pieces fed (TPF), except for observations where TPF<TPH.					

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USPS/UPS-T1-25. Please refer to your testimony, UPS-T-1, at page 28, lines 6-9.

Please provide a detailed citation to support the explanation you attribute to Dr. Bozzo.

Response to USPS/UPS-T1-25.

See USPS-T-15, page 127, lines 5-7. I misspoke when I included SPBS. The statement by Dr. Bozzo refers only to manual parcel and Priority.

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USPS/UPS-T1-26. Please explain your understanding of the method by which TPH and TPF for SPBS operations are measured. Specifically, is it your understanding that TPH and TPF for SPBS operations are obtained from machine counts?

Response to USPS/UPS-T1-26.

In discussing the recording of first handling pieces for parcels, the Management Operating Data System Handbook M-32 (Docket No. R97-1, USPS-LR-H-147) states in section 212.14 that "in parcel operations, first handling pieces are determined by an actual count of parcels or by standard conversion rates of the number of pieces per container (sack or hamper)."

In section 411, "Recording Procedures," that same document directs personnel to "Use console or meter readings of mechanical processing equipment where available." It also directs personnel to "Record parcel volume by container count, meter readings of parcel sorting machines, or other counters." In section 412.4, "Recording Total Piece Handlings," the manual states that "For machine operations . . . the MOD System records the actual total piece handling from meter readings or printouts rather than from projections."

I infer from the statements quoted from sections 411 and 412.4 of the MODS manual that at least some parcel sorting machines are equipped with counters, and that when counter data is available, it is used to determine TPH.

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USPS/UPS-T1-27. Is it your understanding that bundles of flat-shape Periodicals and Standard A are commonly handled in SPBS operations? If not, please describe the basis for your understanding.

Response to USPS/UPS-T1-27.

Yes.

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USPS/UPS-T1-28. Is it your understanding that bundles of flat-shape Periodicals and Standard A are commonly handled in manual parcel and/or Priority Mail operations? If so, please describe the basis for your understanding.

Response to USPS/UPS-T1-28.

Postal Service witness Kingsley states that "When pallets and sacks contain bundles made up to finer sortation levels than the container, a bundle sort is required. This is accomplished in a manual or mechanized operation." USPS-T-10 at 19-20. She does not identify where manual sortation takes place. I do not know for certain where such sortation takes place.

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USPS/UPS-T1-29. Please refer to your testimony, UPS-T-1, at page 29, lines 16-18.

- a. Is the “trend over time in weight per piece” to which you refer, specifically, a trend over time in weight per piece *at the source/type code level*? If not, please explain.
- b. To be “capable of distorting Dr. Bozzo’s volume-variability estimates,” is it necessary that the effect of the “false trend” not be captured by trend variables included in the regression models? Please explain your answer fully.

Response to USPS/UPS-T1-29.

(a) I was referring to the level at which national conversion factors are specified and applied. I understand based on the Management Operating Data System Handbook M-32 (Docket No. R97-1, USPS-LR-H-147, § 413) that they are specified at the source/type code level.

(b) Yes. Dr. Bozzo does include trend variables in his model, and if all sites shared the same trends in weight per piece, the effects of those trends would probably be captured by Dr. Bozzo’s trend variables. However, if each site had its own unique trend in weight per piece, their effects would be captured neither by his trend variables nor by his site-specific fixed effects.

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USPS/UPS-T1-30. Please refer to your testimony, UPS-T-1, at page 29, line 22, to page 30, line 1. Please confirm that your statement would still be correct if it read, "...the fixed effects, the random effects, the pooled and the between estimators will all be inconsistent." If you do not confirm, please provide a mathematical proof that the between estimator is consistent when site-specific measurement errors are present.

Response to USPS/UPS-T1-30.

Confirmed in the case of fixed site-specific measurement error, or measurement error involving site-specific trends in measurement error. Not confirmed in the case of IID (i.e., identically and independently distributed) measurement error. In this latter case, the averaging across time periods that the between model is based upon would tend to reduce the variance of the measurement error, with a resulting loss in bias.

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USPS/UPS-T1-31. Please refer to your testimony, UPS-T-1, at page 32, lines 16-21, and footnote 31.

- a. Please confirm that your reference in footnote 31 to page 55 of USPS-T-15 is, specifically, to the paragraph ending at page 55, line 8. If you do not confirm, please explain.
- b. If you confirm in response to part (a), please further confirm that the paragraph you cite begins at page 54, line 15, of USPS-T-15. If you do not confirm, please explain.
- c. If you confirm in response to part (a), please further confirm that the paragraph you cite begins with the sentences, "The Postal Service's methods recognize that the absolute and relative amount of handlings per piece may vary over time, due to changes in Postal Service operations, mailer behavior, or other factors. The annual updates of the cost pool totals and distribution key shares permit the assumed handling levels and proportions to vary over time." If you do not confirm, please explain.

Response to USPS/UPS-T1-31.

- (a) Confirmed.
- (b) Confirmed.
- (c) Confirmed.

DECLARATION

I, Kevin Neels, hereby declare under penalty of perjury that the foregoing answers are true and correct to the best of my knowledge, information, and belief.

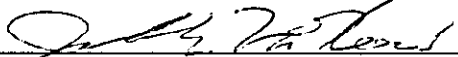
A handwritten signature in cursive script that reads "Kevin Neels". The signature is written in dark ink and is positioned above a horizontal line.

Kevin Neels

Dated: June 22, 2000

CERTIFICATE OF SERVICE

I hereby certify that I have this date served the foregoing document by first class mail, postage prepaid, in accordance with Section 12 of the Commission's Rules of Practice.



John E. McKeever
Attorney for United Parcel Service

Dated: June 22, 2000
Philadelphia, Pa.

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