

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, 1997

Docket No. R97-1

RESPONSE OF UNITED STATES POSTAL SERVICE
WITNESS BARON TO INTERROGATORY OF
ADVO, INC.
(ADVO/USPS-T17-7)

The United States Postal Service hereby provides the response of witness Baron to the following interrogatory of Advo, Inc.: ADVO/USPS-T17-7, filed on August 20, 1997.

The interrogatory 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


Richard T. Cooper

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260-1137
(202) 268-2993; Fax -5402
September 3, 1997

ADVO/USPS-T17-7. Please refer to Equation (7) and your statement on page 19 that: "The delivery effect is properly measured as the second line of equation 7."

(a) Please state how the two elasticities were calculated and identify the sources of the data used and lines of code which calculate the elasticities:

(1) $(\partial LT/\partial AD)/(LT/AD)$

(2) $(\partial AD/\partial V)/(AD/V)$

(b) Please confirm that the elasticities in (a) were multiplied together to develop the delivery effect elasticities shown in Tables 6 and 7. If you cannot confirm, explain how the delivery effect elasticities were calculated and why.

(c) Please specify the lines of code in USPS LR-H-137 which enters the two elasticities into the program and multiplies them together to develop the "delivery effect" as specified in the second line of equation 7.

RESPONSE:

(a) The elasticity $(\partial LT/\partial AD)/(LT/AD)$ was calculated for MDR and BAM stops in the program *LOAD2.ELAST.CNTL*, documented in USPS LR-H-137. For each stop type, this program first estimates the load-time equation, defined as equation 3 at page 8 of my testimony. This estimation is done at lines 317-323 for MDR stops, and at lines 422-428 for BAM stops. At lines 393-401 and line 409, the program substitutes mean values into the right-hand side variables in the MDR regression to compute predicted values for MDR load time and for the partial derivative of load time with respect to actual deliveries. These values are combined with the mean of MDR actual deliveries in line 415 to produce the MDR elasticity of load time with respect to actual deliveries.

For BAM stops, predicted values for load time and for the partial derivative of load time with respect to actual derivatives are calculated at lines 489-496 and line 503. These are combined with the mean value for actual BAM deliveries in line 510 to produce the BAM elasticity of load time with respect to actual deliveries.

The elasticity $(\partial AD/\partial V)/(AD/V)$ was calculated for MDR and BAM stops in the program *EXP.TPANEL.DELS.CNTL*, documented in USPS LR-H-139. For

each stop type, this program first estimates the actual deliveries equation, defined as equation 5 on page 17 of my testimony. This estimation is performed at lines 96-116 for MDR stops, and at lines 291-310 for BAM stops. The next step is to estimate the five separate elasticities of actual deliveries with respect to the five volume terms. This is done at lines 142-178 for MDR stops and lines 335-371 for BAM stops. The total or aggregate elasticity of actual deliveries with respect to volume is then defined as the sum of these five elasticities, at lines 180-181 for MDR stops, and at lines 373-374 for BAM. The calculation procedure first computes predicted load times and partial derivatives of load time with respect to the five volume terms through substitution of mean values into the right hand side variables in the MDR and BAM regressions. These predicted load times and partial derivatives are combined with the means for the five volume terms to derive the five elasticities with respect to these volumes, which are then summed to derive the aggregate elasticities.

(b) Confirmed.

(c) The "delivery effect" is not calculated in USPS LR-H-137. It is calculated in tables 6 and 7 of my testimony through multiplication of elasticity (1) by elasticity (2). For illustration, consider the MDR calculations. USPS LR-H-137 calculates an elasticity of MDR load time with respect to actual deliveries (elasticity (1)) equal to 0.45998. This is reported on page 54 of LR-H-137. USPS LR-H-139 calculates an aggregate elasticity of MDR deliveries with respect to volume equal to 0.166797 (elasticity (2)), as reported on page 34 of that library reference. The product of 0.45998 and 0.166797 equals the MDR delivery-effect elasticity, .07672, which is shown in table 6 on page 22 of my testimony.

DECLARATION


I, Donald M. Baron, declare under penalty of perjury that the foregoing answers are true and correct, to the best of my knowledge, information, and belief.

Donald M. Baron

Dated: 9-3-97

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.


Richard T. Cooper

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UNITED STATES POSTAL SERVICE
NOTICE OF FILING DECLARATION TO
WITNESS LION'S RESPONSE TO
OCA/USPS-T24-59
(September 3, 1997)

The United States Postal Service filed witness Lion's response to interrogatory OCA/USPS-T24-59 on August 29, 1997 without attaching his declaration. That declaration is attached hereto and filed herewith.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Daniel J. Foucheaux, Jr.
Chief Counsel, Ratemaking

K N Hollies

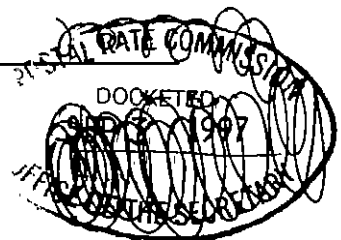
Kenneth N. Hollies

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.

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September 3, 1997

K N Hollies
Kenneth N. Hollies



DECLARATION

I, Paul M. Lion, declare under penalty of perjury that the foregoing answers are true and correct, to the best of my knowledge, information, and belief.

Paul M Lion

Dated: 8/29/97