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Postal Rate and Fee Changes, 2000

Docket No. R2000-1

OFFICE OF THE CONSUMER ADVOCATE
INTERROGATORIES TO UNITED STATES POSTAL SERVICE
WITNESS BOZZO (OCA/USPS-T15-44-55)
March 10, 2000

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Pursuant to sections 25 and 26 of the Rules of Practice of the Postal Rate Commission, the Office of the Consumer Advocate hereby submits interrogatories and requests for production of documents. Instructions included with OCA interrogatories OCA/USPS-1-14 to the United States Postal Service, dated January 24, 2000, are hereby incorporated by reference.

Respectfully submitted,

TED P. GERARDEN

Director

Office of the Consumer Advocate

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OCA/USPS-T-15-44. These questions pertain to the QICAP variable presented in USPS-LR-I-107, page 3, where it is denoted as "Quantity index for facility capital."

- (a) Is QICAP a stock of investment capital at a facility site?
- (b) Is QICAP a flow of capital used at a facility site?
- (c) If the answer to (a) and (b) is negative in both cases, please define exactly the nature of QICAP.

OCA/USPS-T-15-45. Please also refer to the associated Excel file in the aforementioned Library Reference LR-I-107, where the data for the analysis conducted and presented in your testimony are contained. In the worksheet Excel file, for IDNUM 1 for the time period 193, QICAP has the value 890207; for the time period 293, QICAP has the value 927301. For IDNUM 2 for the time period 193, QICAP has the value 4530367; for the time period, 293 QICAP has the value 4792736.

- (a) If one should wish to consider capital usage for IDNUM 1 and IDNUM 2 on a consolidated basis, would the total value of QICAP for 193 be 5420574 for the two facilities combined, where values of QICAP have been added for the two facilities for the same time period?
- (b) If the answer to (a) is "no", please state what the value for QICAP would be. If QICAP could have more than one value or, if the value is indeterminate, please explain in detail, providing values to the extent possible.
- (c) If one wished to consider a facility with twice the amount of capital in time period 193 as occurred at IDNUM 1, would the value of QICAP be 1780414 for the time period?

- (d) If the answer to (c) is negative, please state how QICAP would be computed and provide the value, showing all calculations.
- (e) For the time period 293, is it correct that for facility IDNUM 2 there is 5.17 times the amount of capital as is the case at facility IDNUM 1 (the number is obtained by dividing QICAP for IDNUM 2 for 293 by QICAP for IDNUM 1 for 293). If the answer is "no", please explain in detail.
- (f) In the case of (e), please indicate whether the capital value represents the stock of capital present or the flow of capital consumed or used; if neither alternative is applicable, please define the meaning of the capital value.
- (g) For any IDNUM for a given year, would the total capital used be defined by summing the four quarters for the year? If the answer is "no", please provide a detailed answer presenting the correct computation.

OCA/USPS-T-15-46. Index numbers are usually stated in terms of a base year of 100; the choice of the base year is usually tailored to the problem at hand.

- (a) What is the base year and base year value for QICAP?
- (b) What are the units of measurement of QICAP?
- (c) Is QICAP a cardinal number? Please explain explicitly--why or why not.
- (d) Is QICAP an ordinal number? Please explain explicitly--why or why not.
- (e) Are all QICAP values in constant dollars?

OCA/USPS-T-15-47. It is our understanding that one of the calculations used to derive QICAP was based on the accounting depreciation technique denoted as "1.5 declining balances".

- (a) Please confirm that this is correct. If not, please state the accounting technique(s) used.
- (b) Please provide the computations used to produce the numbers using the depreciation approach employed. If you refer to a library reference, please explicitly state the page(s) on which the "1.5 declining balances" or other depreciation approach was presented.
- (c) Why was the "1.5 declining balances" technique used in place of straight-line depreciation? If some other depreciation technique was used, please state why that technique was used.
- (d) In the case of each asset--e.g., LSM, BCS, or OCR machine--how was the period of years (i.e., life of asset) chosen for the time period over which the asset was depreciated; what was the time period as measured in years? Please provide the asset lives for depreciation purposes for each of the various types of equipment, referencing which schedule applies by equipment type, e.g., OCR, BCS, FSM, etc.
- (e) Please provide information for owned buildings and/or other assets similar to that provided in (d).
- (f) Would a choice of depreciation technique different from that used have led to a different value of QICAP?

(g) Please state how yearly investments are accrued and/or treated in the QICAP series.

OCA/USPS-T-15-48. The following questions focus on QICAP and investment.

- (a) Among the costs of installing a piece of equipment are the engineering, planning, installation, and supervisory costs of in-house personnel and/or vendor and contractor personnel in effectuating the installation of the equipment. Does the QICAP series incorporate any of these costs?
- (b) Does QICAP include any Operating and Maintenance costs? If not, are Operating and Maintenance costs carried under the direct hours in your Excel spreadsheet associated with each activity, e.g., FSM, LSM, OCR, etc? If your answer is negative to both questions, please explain.
- (c) Only one QICAP number is available for each quarter for an IDNUM. Does this number refer to the total capital used in all activities analyzed (including machines, buildings, and any other capital) at a site? If the answer is "no", please explain in detail.
- (d) Does QICAP contain any dollars at a site for activities not explicitly analyzed in your study at the site?
- (e) Are there individual QICAP series available for each function, i.e., FSM, OCR, LSM, BCS, etc.?
- (f) If the answer to (e) is "yes", please provide the appropriate QICAP values for each of the functions, e.g., FSM, OCS, LSM, BCS, etc.

OCA/USPS-T-15-49. It is our understanding that the machinery at the mail facilities is depreciated. Assume that a FSM, BCS, OCR, or other type of machine has been depreciated on the books by a total of 40%.

- (a) Does a machine that has been depreciated by 40% have a productivity level that is 60% of its original rating?
- (b) Assuming that two BCS machines of the same model, features, and capacity were purchased in two different years for different prices (prices differing based on market conditions) are they considered to have the same productivity, *ceteris* paribus, after x years of service?
- (c) If the answer to (b) is "no", how would the productivity of the two machines be compared and measured?

OCA/USPS-T-15-50. These questions focus on the amount of capital equipment in each facility.

- (a) For each facility and each operation, e.g., FSM, LSM, OCR, etc., are capital equipment data available by facility IDNUM for each piece of equipment, including acquisition date of each piece of equipment, acquisition cost, and basis for depreciation? Please provide the information.
- (b) Are data available for the yearly costs for pieces of leased equipment, in terms of activity, site, and time period? If so, please provide the information.
- (c) Are data comparable to (a) and (b) available for owned and leased space, by IDNUM, time period, and activity? If so, please provide the information for the space used in the case of owned facilities, and yearly dollar values of the lease for leased space.

(d) For any case with a negative response, please explain.

OCA/USPS-T-15-51. In discussing the translog function in your testimony, lines 10-12 at 40, you discuss homotheticity and its implications.

- (a) In the course of your work did you consider whether the function was homogenous of degree n, with n assuming values equal to, greater than, and less than one? Please explain.
- (b) Did you perform any analysis of returns to scale? Please explain.
- (c) Is your consideration of homotheticity in any way related to homogeneity?

 Please explain.
- (d) Do you have any evidence of increasing, constant, or decreasing returns to scale for the activities analyzed? If so, please state them.
- (e) What are the physical characteristics represented by a homothetic function: i.e., how would we know, absent a statistical test but looking at the physical production line, whether such a function was homothetic?
- (f) Did you perform any statistical test for homotheticity?

OCA/USPS-T-15-52. Please confirm that management labor hours are not included in the labor hour relationships that you have estimated. If you do not confirm, please explain.

OCA/USPS-T-15-53. You use the manual ratio as a measure of the degree of automation at a facility. Why did you use this variable instead of a measure of the amount of automated equipment at the facility, for example--the value of installed OCR, BCS and other automation machinery?

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OCA/USPS-T-15-54. In OCA/USPS-T-15-16 you state, "The restrictions I have "avoided" are those associated with the use of a functional form for the labor demand models that does not have the translog's approximation properties." What, specifically,

are the restrictions avoided to which you refer?

OCA/USPS-T-15-55. Please refer to USPS-LR-I-178, focusing on the Excel file "Capital Index.xls."

- (a) Is REGPO in column 1 the same as IDNUM? If not, please explain the mappings of REGPO onto the IDNUM's.
- (b) Please define and explain all other column headings.

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.

Stephanie S. Wallace

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Washington, D.C. 20268-0001

March 10, 2000