UNITED STATES OF AMERICA
Before The
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

Postal Rate and Fee Changes, 2000) Docket No. R2000-1

ANSWERS OF THE OFFICE OF THE CONSUMER ADVOCATE
TO INTERROGATORIES OF UNITED STATES POSTAL SERVICE
WITNESS: J. EDWARD SMITH (USPS/OCA-T4-49-51)
(July 7, 2000)

The Office of the Consumer Advocate hereby submits the answers of J. Edward Smith to interrogatories of United States Postal Service, dated June 23, 2000. Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

OFFICE OF THE CONSUMER ADVOCATE

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ANSWER OF OCA WITNESS J. EDWARD SMITH
TO INTERROGATORIES USPE/OCA-T4-49-51

USPS/OCA-T4-49. Please refer to your response to USPS/OCA-T4-20. Please also refer to the material you cite from Intriligator. Bodkin, and Hsiao's *Econometric Models, Techniques, and Applications*. As necessary, please assume that the variable z, defined in USPS/OCA-T4-20, is exogenous to the firm's decision process for the purpose of your answer.

a. Please confirm that, in the discussion of the cost curve you cite, Intriligator, Boskin, and Hsiao characterize the short run cost curve as an "alternative expansion path." If you do not confirm, please explain.

b. Please confirm that the material in Intriligator, Bodkin, and Hsiao that you cite implies that the (long- or short-run) cost function and the (long- or short-run) "expansion path" are conceptually identical. That is, in terms of the notation of USPS/OCA-T4-20, the cost function $c = f(y,w,x^*,z)$ represents either the short- or long-run (depending on whether there are "quasi-fixed" factors x*) "expansion path." If you do not confirm, please explain.

c. Please confirm that the material in Intriligator, Bodkin, and Hsiao that you cite implies that the (long- or short-run) labor cost associated with the (long- or short-run) "expansion path" is, in terms of the notation of USPS/OCA-T4-20, given by $c_L = w \cdot h(y,w,x^*;z)$—i.e., the function $h(y,w,x^*,z)$ is defined to equal the derived demand for labor associated with the short- or long-run (depending on whether there are "quasi-fixed" factors x*) cost function or "expansion path" $c = f(y, w^*,z)$. If you do not confirm, please explain.

d. Please confirm that, in the discussion of the cost curve you cite, Intriligator, Boskin, and Hsiao indicate that the short-run cost curve $C_s(y)$ and the long-.run cost curve $C(y)$ must satisfy the relationship $C_s(y) \geq C(y)$ at each level of output, given by y. If you do not confirm, please explain.

e. Please confirm that, given the notation in USPS/OCA-T4-20, the elasticity $\partial \ln c / \partial \ln y = \partial \ln f(y,w,x^*,z) / \partial \ln y$ measures the percentage change in short- or long-run (depending on whether there are "quasi-fixed" factors x^*) cost, moving along the cost function or "expansion path" $c = f(y,w,x^*,z)$, resulting from a percentage change in output. If you do not confirm, please explain.

f. Please confirm that, given the notation in USPS/OCA-T4-20, the elasticity $\partial \ln(w \cdot h(y,w,x^* z)) / \partial \ln y$ measures the percentage change in short-run or long-run (depending on whether there are "quasi-fixed" factors x^*) labor cost, consistent with moving along the associated cost function or "expansion path" $c = f(y,w,x^*,z)$, resulting from a percentage change in output. If you do not confirm, please explain.

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RESPONSE TO USPS-T4-49. (a) Confirmed.

(b) Not confirmed. Costs are either fixed or variable, resulting in short run and long run cost functions from a theoretical point of view. Assuming that the question focuses on short run or long run cost functions, to the degree that the notation is consistent with the notation used in Intriligator, Bodkin, and Hsiao, I will confirm.

(c) Not confirmed. Costs are either fixed or variable, resulting in short run and long run cost functions from a theoretical point of view. Assuming that the question focuses on short run and long run cost functions and that the notation is consistent with the notation used in Intriligator, Bodkin, and Hsiao, I will confirm.

(d) Confirmed.

(e) Not confirmed. Costs are either fixed or variable, resulting in short run and long run cost functions from a theoretical point of view. Assuming that the question focuses on short run and long run cost functions and that the notation is consistent with the notation used in Intriligator, Bodkin, and Hsiao, I will confirm.

(f) Not confirmed. Costs are either fixed or variable, resulting in short run and long run cost functions from a theoretical point of view. Assuming that the question focuses on short run and long run cost functions and that the notation is consistent with the notation used in Intriligator, Bodkin, and Hsiao, I will confirm.

ANSWER OF OCA WITNESS J. EDWARD SMITH
TO INTERROGATORIES USPE/OCA-T4-49-51

USPS/OCA-T4-50. Please refer to your response to USPS/OCA-T4-21(c). Please also refer to the material provided as Attachment 1 to USPS/OCA-T4-50, which includes page 565 of *The Theory and Practice of Econometrics*, Second Edition, by Judge, et al. Please assume, if necessary, that the page is properly reproduced. Interrogatory USPS/OCA-T4-21(c) related to the conditions under which simultaneous equations estimators are needed, without reference to any particular variable or analysis. Please confirm that a simultaneous equations estimator (e.g., two-stage least squares) is not needed to consistently estimate the parameters of a regression equation for which the explanatory variables consist entirely of exogenous and/or predetermined variables. If you do not confirm, please explain.

RESPONSE TO USPS-T4-50. I am unable to confirm that your exact statement appears in the above-mentioned text. However, the statement, "For statistical purposes the relevant distinction is between jointly dependent variables and predetermined variables" leads to the conclusion that you suggest. Accordingly, I will confirm the substance of your interrogatory.

The Theory and Practice of Econometrics

Second Edition

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New York *Chichester* *Brisbane* *Toronto* *Singapore*

Library of Congress Cataloging in Publication Data:

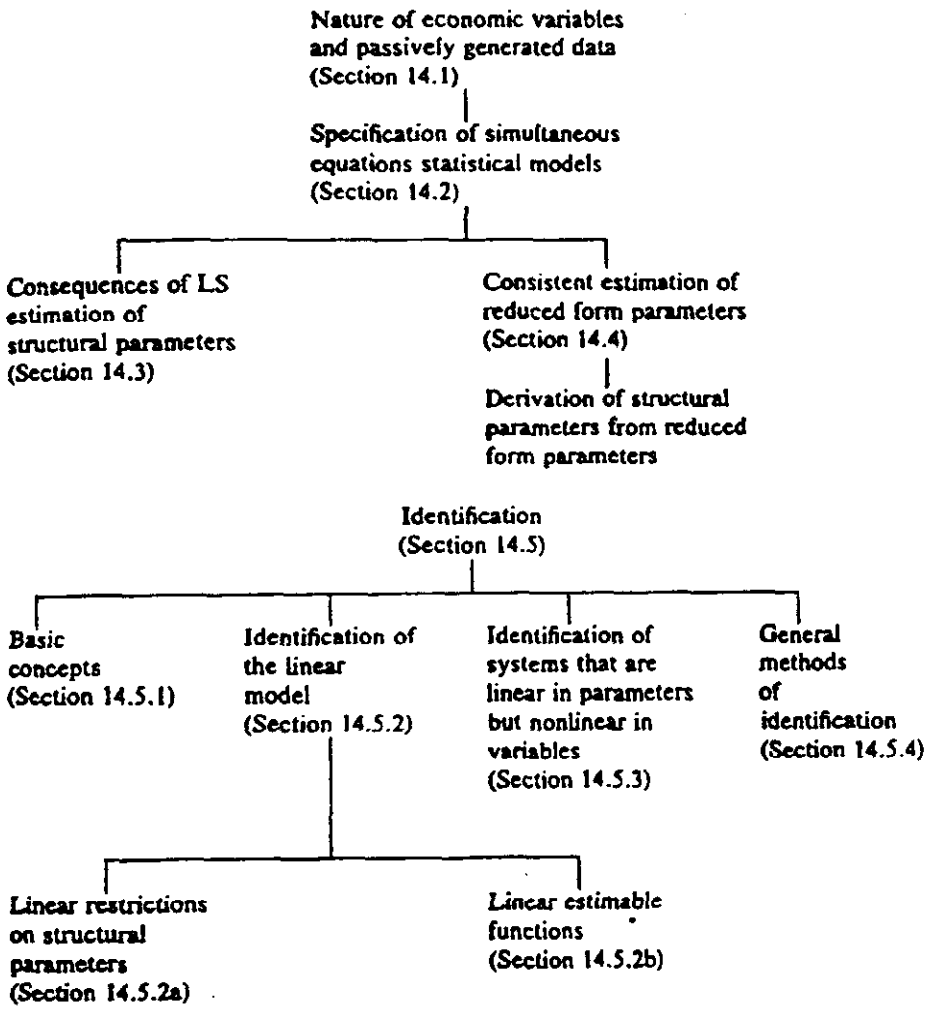
The Theory and practice of econometrics.

Includes bibliographies and index.
1. Econometrics. I. Judge, George G.
HB139.T48 1985 330'.028 84-7254
ISBN 0-471-89530-X

Printed in the United States of America

10 9 8

TABLE 14.1 ***SPECIFICATION AND IDENTIFICATION OF SIMULTANEOUS EQUATIONS MODELS***



endogenous variables may be placed in the same category as the exogenous variables since for the current period the observed values are predetermined. The exogenous variables and variables that may involve any length of lag are called *predetermined variables*. For statistical purposes the relevant distinction is between jointly dependent variables and predetermined variables.

The final classification of variables involves the nonobservable random errors, or, as they were called in the early simultaneous equation literature,

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TO INTERROGATORIES USPE/OCA-T4-49-51

USPS/OCA-T4-51. Please refer to your response to USPS/OCA-T4-21(d). The interrogatory asked whether it was "your understanding that there is a time lag between the Postal Service's investment decisions and the availability of the related equipment for Postal Service operations." In your response, you state, "Based on information furnished by the Postal Service, it appears that the current level of capital is related to the current level of activity, though not necessarily on a 100 percent basis."

a. Please provide detailed citations to all "information furnished by the Postal Service" you used in formulating your response.
b. With respect to the original question, does the quoted statement from your response to USPS/OCA-T4-21(d) indicate that you do not believe that there is "a time lag between the Postal Service's investment decisions and the availability of the related equipment for Postal Service operations"? Please explain.

RESPONSE TO USPS-T4-51. (a) Please see OCA/USPS-T-15-13; OCA/USPS-T-15-14; USPS-T-10 at 11 lines 19-31, at 20 lines 7-8, and at 31 lines 14-24; USPS-T-16 at 15 lines 1-7; and "gateway to the household", United States Postal Service, *1999 Comprehensive Statement on Postal Operations*, at 4, 83,84,85 and 90.

(b) The concept of "lag" is nebulous. If capital availability during a time period is a function of work during the time period, there is no lag, even though the investment decision may be part of a five year plan, assuming that the plan is correct in its forecasts. There are a number of explicit and implicit assumptions involved in the analysis of an investment decision. In view of the potential importance of an investment decision on the Postal Service, this subject is clearly an area for additional analysis and review; possibly the issues could be clarified and even resolved in a working group focused on segment 3 costs.

DECLARATION

I, J. Edward Smith, declare under penalty of perjury that the answers to interrogatories USPS/OCA-T4-49-51 of the United States Postal Service are true and correct, to the best of my knowledge, information and belief.

Executed July 7, 2000

J. Edward Smith

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.

Kenneth E. Richardson

KENNETH E. RICHARDSON

Washington, D.C. 20268-0001
July 7, 2000