DOCKET SECTION

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

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FLORIDA GIFT FRUIT SHIPPERS ASSOCIATION
RESPONSES OF WITNESS MEREWITZ TO INTERROGATORIES
FROM UNITED STATES POSTAL SERVICE
USPS/FGFSA-T1-1-38

Florida Gift Fruit Shippers Association hereby provides responses of witness Merewitz to interrogatories of United States Postal Service 1-38.

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

Florida Gift Fruit Shippers Association

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January 26, 1998

USPS/FGFSA-T1-1. Please refer to page 1 of your testimony, where you discuss your employment history at the Postal Rate Commission.

(a) Please state each position you held and the years during which you held them.

(b) During your service at the Commission did you familiarize yourself with any postal transportation issues? Please explain.

(c) Please describe the extent to which you worked on or performed analyses on postal transportation issues.

RESPONSE:

1- (a) I was Special Assistant to Commissioner John Crutcher, 1986-1993.

(b) The staff of the PRC was then small, so I was often assigned to teams in the group known as Technical Analysis and Planning (TAP) which made use of my economics and transportation training and knowledge. I was used by TAP doing cases as an economist on matter relating to postal volumes, transportation, Ramsey pricing, multi-product regulated firms and rigorous definitions of cross subsidy. I was recused from MC96-1, the DBMC Parcel Post case because I had been the Team Leader in developing evidence for the filing of that case when I worked for USPS. I made several presentation to the Commissioners on the subject of volumes in formal briefing sessions. I was also consulted on questions relating to direct marketing and transportation. In R87-1 I was on the team that analyzed the PS submission on purchased transportation, involving, among other things, translog cost functions and whether elacticities should be measured at the mean or at the extremes of the sample.

During these years I prepared two papers for refereed journals or books:
Merewitz and Zupan, "Franchise Bidding, Contracting Out and Worksharing in the Production of Postal Services: Can They Collect, Sort and Deliver", in Crew, M. and P. Kleindorger, Regulation and the Nature of Postal and Delivery Services (1993).
Haldi and Merewitz, "Costs and Returns from Delivery to Sparsely Settled Areas", in Crew, M. and P. Kleindorger, Managing Change in the Postal and Delivery Industries (1997)

(c) Given my background at MVMA and my participation in MC86-1, Experimental Destination BMC Parcel Post Service, I was consulted on transportation issues. See response to part (b), above.

USPS/FGFSA-TI-2. In preparation for your testimony in this proceeding, please list all testimony or other documents (such as workpapers, library references, Commission Opinions and Recommended Decisions, etc.) on transportation issues from this and prior rate and classification cases that you reviewed.

2- I read the testimony of Witnesses Hatfield and Bradley in MC97-2, I reviewed worksheet 14.0.1 and others in the workpapers behind the CRA for 1995 and 1996. I reviewed the testimony of Witnesses Robers and Martin in R80-1 and R84-1, the PRC decisions in R80-1, R84-1 and R87-1, Library References PCR 17 and 20 from MC97-2, and other materials concerning C.S. 14. I reviewed Lib Ref H-82 and H-82 and the testimony and work papers of witnesses, Alexandrovich, Hatfield, Nieto, Bradley and Patelunas.

USPS/FGFSA-TI-3. Please refer to page 3 of your testimony.

(a) Please explain why you relied on the Comprehensive Statement of Postal Operations rather than the Postal Service's Base Year workpapers for the transportation costs you cite at lines 5-8.

(b) Are you aware of any differences between the two? Please explain in detail.

(c) Are the figures you cite accrued costs or volume variable costs?

(d) Are the intra-BMC figures you cite the same as those referred to as intra-BMC highway costs in the Base Year workpapers?

RESPONSE

3 (a) I originally listed the figures from the **Comprehensive Statement on Postal Operations** because I wished to compare highway trnsportation expenditures with the four other modes. I later excluded this exhibit from my testimony but the figures from 1996 remained.

(b) Figures on purchased transportation, highway, from the worksheet 14.0.1 from Alexandrovich (USPS T-5) show $1507 million in 1996. The comparable amount from the Comprehensive Statement on Postal Operations is $1540. This amounts to difference of 3 parts in 150 or 2%. I have been told that both are accrual rather than one being on a cash basis.

(c) The figures in the worksheet are attributable costs. Those in the Comprehensive Statement are accrued costs.

(d) Yes

USPS/FGFSA-T1-4. Please define the following terms:

(a) nonpreferential transportation system (as used on page 3, lines 12-13 of your testimony)

(b) Inter B (as used on page 3, line 12 of your testimony).

RESPONSE

4. (a) The nonpreferential transportation system historically uses more highway and rail than air. It tends to have less frequent departures than the preferential system so that it allows larger loads to accumulate. As mentioned in the testimony the distinction between the pref and the nonpref transp system has tended to weaken in recent years.

(b) Inter B stands for InterBMC.

USPS/FGFSA-T1-5. Please refer to page 4, lines 8-9 of your testimony.

(a) Please define the term "foisting" as you use it there.
(b) Please define the term "container capacity" as you use it.
(c) Please define the term "container cost" as you use it.

RESPONSE

5. (a) foisting - to try to convince with not an entirely legitimate argument. I mean that Bradley wants to pretend that he has found the way purchased transportation responds to volume, when he has never studied volume at all.

(b) container capacity - trailer, truck, anything which contains mail and has wheels. I did not mean standard container of piggyback transportation.

(c) container cost - the contract cost for purchased transportation.

USPS/FGFSA-T1-6. Please refer to your testimony page 4, lines 8-18. which of the following best describes your understanding of Dr. Bradley's analysis:

(a) an econometric analysis of how changes in container capacity correlate with container cost;

(b) an econometric analysis of container capacity and expected output;

(c) an econometric analysis of the sensitivity of contract cost to foot-miles of capacity.

Please explain.

RESPONSE

6. (c) best describes Bradley's analysis.

USPS/FGFSA-T1-7. Please provide a copy of Exhibit LAM-5 as referred to on page 5, line 1 of your testimony.

RESPONSE

7 There is no exhibit LAM-5.

USPS/FGFSA-TI-8. Please provide the electronic spreadsheets used to develop each of your exhibits.

RESPONSE

8. Please see Library Reference FGFSA-H-1

USPS/FGFSA-T1-9. Please specify the units of measure for the numbers that appear in Exhibits LAM-4b and LAM-6.

RESPONSE

9 - In the first panel, Standard A and B, volumes are in millions. This carries through the table, exept for SCF Destination Entry and DDU destination Entry in 1996 for Standard A, which are in Billions.

USPS/FGFSA-T1-10 Please confirm that the cost figures for interBMC transportation and intraBMC transportation used throughout your testimony refer to the cost of highway contracts assigned to the interBMC and intraBMC contract accounts.

RESPONSE

10 - Confirmed.

USPS/FGFSA-T1 -11. Please refer to page 7 of your testimony. Please confirm that the figure 1990 on line 5 should be 1991.

RESPONSE

11 - Confirmed.

USPS/FGFSA-T1-12. Consider the following example. A mailer in Northern Virginia has two virtually identical mailings. Mailing A and Mailing B weigh the same, have the same number of pieces, and same presort and automation characteristics. Mailing A is directed toward addressees in the Washington, DC, area; Mailing B is directed to addressees in Los Angeles.

(a) Is the workload the same for Mailing A and Mailing B? Please explain.

(b) Now assume the mailer is offered a $100 discount for each mailing if he enters that mail at the destination BMC. Other things (such as service and customer demand) being equal, which mailing is likely to be dropshipped, the Los Angeles mailing or the Washington mailing? Please explain fully.

RESPONSE

12 - (a) The workload in preparing the mailings should be the same.

(b) Mailing A is more likely to use DBMC rates, but, some mailers use DBMC rates throughout the country.

USPS/FGFSA-TI-13. Please refer to your discussion of transportation prices on pages 7 and 8 of your testimony and in Exhibit LAM-7.

(a) The price index used in your analysis is an index of the "growth in truck rental costs." Please state your source for this description of the data series.

(b) Please provide the United States Bureau of Labor Statistics definition of this price index.

RESPONSE

13 (a) "Growth in truck rental costs" was meant to develop the analogy of the concept of user cost as used by Dale Jorgenson and Robert Hall, "Tax Policy and Investment Behavior", American Economic Review, June, 1964. Owned and leased capital as well as those whose services are purchased at arm's length can be seen as absorbing analogous flows of resources.

(b) BLS definition:

Standard Industrial Classification, Major Gour 42 - Motor Freight Transportation and Warehousing, 4213 - Trucking, except local.

Establishments primarily engaged in furnishing "over the road" trucking service either as common carriers or under special and individual contracts or agreement. This includes long-distance trucking, trucking (except local) and "over-the-road" trucking.

USPS/FGFSA-T1-14. On page 8 of your testimony you mention "Service Related Costs."

(a) Please define this term.

(b) Are you advocating the use of service related costs in this proceeding?

RESPONSE

14 - (a) I believe this concept had considerable merit as a cost analysis idea. It had implementation problems so that it was not carried forward.

(b) I am not advocating its use in this proceeding.

USPS/FGFSA-TI-15. Beginning on the last line of page 6 you state: "The result was a 13.7 per cent increase in real purchased highway services."

(a) Are you saying that costs, adjusted for inflation, increased 13.7 percent from 1991 to 1996?

(b) Are you saying that transportation capacity was increased, or that service increased, 13.7 percent?

(c) If the answer to either a or b is no, please explain what the 13.7 percent figure purports to measure.

RESPONSE

15 - (a) Yes.
(b) Yes.
(c) N/A

USPS/FGFSA-TI-16. Please indicate where in the record you find support for your statement, on page 8, line 19 of your testimony, that TRACS "yields volume data for proper econometric analysis...."

RESPONSE

When there is weighting of mail subclasses reported in TRACS, before expansion, these data would be useful for proper econometric analysis of the relation between truck contract costs and actual volume.

USPS/FGFSA-T1-17. On page 10, lines 1-3 of your testimony, you cite two average capacity utilization figures: 56.7% for intra BMC and 69% for inter BMC. You state that these figures are "shown in LAM-9b". Please confirm that these figures are not shown in Exhibit LAM-9b. Please explain their derivation or correct them.

RESPONSE

17 - They are simple averages of the 56.76 and 69.0.

USPS/FGFSA-T1-18. Please indicate the source of the 49% spending increase cited on page 10, line 3.

RESPONSE

18 - See LAM-1. The change in total spending from 1992 to 1996 was 49%.

USPS/FGFSA-T1-19. Please refer to page 10, lines 5-7 of your testimony.

(a) Please explain what you mean by "real purchased transportation" on page 10, lines 6-7.

(b) Please explain the derivation of the 97% figure on line 6.

RESPONSE

19 - (a) Teal purchased transportation Is the total expended on purchased transportation, divided by a price index or price relative. It is appropriate to measure purchased transportation in constant dollars of a particular year.

(b) The 97% is the average of Bradley"s three proposed attribution levels of 97.43, 94.88 and 100. See worksheet 14.0.1, p. 2 of 3 Alexandrovich WP B-14.

USPS/FGFSA-T1-20. Please refer to page 12, line 2 of your testimony. Please explain why you believe that TRACS is "not a statistical system."

RESPONSE

20 - the testimony of Witness Nieto. TRACS was not designed to have optimal properties as the prime consideration. As I say in the next clause, it does collect data and those data have statistical properties. To base national estimates for allocating $500 million on a system that makes 7.75 observations on average in on market each quarter is basing conclusions on a very thin reed.

USPS/FGFSA-T1-21. Please refer to page 12, lines 34 of your testimony. What forms are you referring to that are to be filled out by PW?

RESPONSE

For highway transportation, form TRACS 3S-Surface. They may presently largely be filled out by USPS data technicians but good practice would recommend that Price Waterhouse do some filling out of such forms, so that they can anticipate questions which arise and improve the forms, over time.

USPS/FGFSA-TI-22. Please refer to page 21, line 5 of your testimony, where you state that it is "efficient to have a high load factor."

(a) Please define the term "load factor."

(b) Please define the term "efficient' as you use it here.

RESPONSE

22 - (a) Load factor is basically use divided by capacity. A 100% load factor means full use of all capacity all of the time.

(b) Efficient means using minimum resources to produce a given output or maximizing output for a given cost.

USPS/FGFSA-T1-23. Please define the terms "line haul" and "back haul" as you use them on page 21, line 14 of your testimony.

RESPONSE

23 - Line haul is the part of the trip which includes the major payload. Back-haul occurs after the major load has been delivered and the truck is returning to its base. Back-haul may include intermediate stops

USPS/FGFSA-TI-24. Is it your understanding that the Postal Service is required to pay for the backhaul on any one-way trip? Please explain.

RESPONSE

24 - It is my understanding that contracts for highway transportation cover complete round trips. I am not aware of any contract for one-way trips.

USPS/FGFSA-TI-25. Consider the following routing: BMC to SCF1 to SCF2 to AO to SCF2 to BMC. Which of these legs is the "line haul" and which is the "backhaul". Please explain.

RESPONSE

25 - Under the TRACS definitions, the legs originating at the BMC to SCF and AO facilities are outbound and would be part of the line-haul. The legs destinating at the BMC would be inbound and part of the back-haul.

USPS/FGFSA-T1-26. Consider the following routing: BMC1 to BMC2 to BMC1. Which of these legs is the "line haul" and which is the "backhaul". Please explain.

RESPONSE

26 - For interBMC transportation there is no separation between inbound and outbound movements.

USPS/FGFSA-T1-27. Consider the following routing BMC to SCF to AO. Which of these legs is the "line haul" and which is the "backhaul". Please explain.

RESPONSE

27 - See response to USPS/FGFSA-T1-25.

USPS/FGFSA-T1-28. Please consider the following hypothetical. A truck shuttles back and forth between two facilities three times. From A to B on the outbound leg, the truck is always 50 percent full. From B to A the truck is empty on the first two trips but full on the third trip.

(a) Please confirm that the average capacity utilization is 50% ((0.5 + 0.5 +0.5)/3) on the outbound (A to B) movement.

(b) Please confirm that the average capacity utilization is 33 percent ((0 + 0 + 1.00)/3) on the inbound movement (B to A).

(c) Is it your understanding that the size of the truck was caused by the mail on the outbound movement? Please explain.

(d) In your opinion, should the entire cost of the route in this example be distributed to the mail causing the peak? Please explain.

(e) In your opinion, does the inbound peak volume cause 100 percent of the capacity cost to be incurred or 50 percent, the incremental capacity above and beyond what is needed to meet the outbound volume?

RESPONSE

28 - (a) The accuracy of the computation is confirmed.

(b) The accuracy of the computation is confirmed.

(c) No. The size of the truck was selected by USPS personnel on some undetermined basis. A smaller truck would have been adequate.

(d) No. I have not advocated strict peak-load costing

(e) The TRACS data shows that the outbound move consistently operates at about 50% capacity utilization and this is the largest consistent loading. Thus the outbound loading has much to do with the size of the vehicle contracted for. This utilization factor would need to be taken into account in assessing causation. The inbound runs do have more variation, and in causing more problems have a role in responsibility, but, they are not responsible for the size of the vehicle. Other measures are available to deal with large, one-time loads, such as an emergency or nonscheduled trip or contract, or, if the mail were deferrable, allowing some of the volume to wait for the next trip. The PS contract for purchased transportation do not appear to be designed to meet one-time peaks.

USPS/FGFSA-T1-29. Please refer to the discussion of preferential and nonpreferential transportation beginning on the bottom of page 25 of your testimony.

(a) Please confirm that your understanding of the increase in preferential mail on nonpreferential transportation is based on TRACS data. Please explain any nonconfirmation.

(b) Are you asserting that preferential mail or red tag service standards have resulted in better service for Periodicals distributed at BMCs? 'Why has this service improved?

(c) Would you agree that, as one way to provide better service to Periodicals sorted at BMCs, the frequency of some intra- and inter-BMC trips mail could be increased? Please explain any disagreement

(d) To the extent that Standard A and B mail gets more frequent transportation on the same trucks as "red tag" or other preferential mail, would you expect its service to be enhanced. Please explain.

RESPONSE

29 - (a) Not confirmed. TRACS data does show such an increase.

(b) I do not have the data to show the extent to which Periodicals are "distributed at BMCs", and therefore cannot state whether or not the service has improved.

(c) I do not know the extent to which Periodicals are sorted at BMCs. Increase in the frequency of transportation trips handling Periodicals could result in better service.

(d) Any more frequent transportation would not be in accordance with the published service standards for Standard A and B mail.

USPS/FGFSA-T1-30. Please refer to page 27, lines 7-20 of your testimony.

(a) Is it your understanding that the sample selection process in TRACS should seek to minimize variance in the absence of other considerations? Please explain.

(b) Please provide a formal, mathematical definition of the phrase "bias in data collection."

(c) What is the relationship between minimum variance and bias?

RESPONSE

30. (a) The purpose of sampling is to obtain the best estimate possible of some population characteristic. In TRACS, that characteristic is the distribution of transportation costs attributable to each type of mail. Usually, the best estimate of a population characteristic or parameter is defined as a minimum variance estimate, but not always.

The question includes the phrase, "in the absence of other considerations." Usually, the most crucial consideration is cost. With enough funding, very precise estimates can be obtained. Even a census can be made of the mail, were enough funds available. We assume that costs are fixed for the purpose of the discussion and that the most precise estimates are desired, given the financial constraints.

Precision is usually defined by a loss function. The most common such function in statistics is the squared difference of each point estimate (sampled observation) from the parameter. The sum of these squares is the variance divided by n or (n-1) as appropriate. Minimum variance refers to the desirable trait in a parameter estimate that this loss function be minimized.

Other loss functions are possible, and some are occasionally used. One type that has become somewhat more common is some kind of bounded loss function, where the sum of squares is limited to a maximum such as twice or three times the standard deviation. This kind of loss function is used where occasional bizarre observations are likely and are suspected of being incorrect. An example might be errors in machinery. It appears that the Postal Service's approach is of the traditional sort, using the variance as an estimate of error. Thus, discussion will concentrate on the variance.

The advantage in minimizing a loss function lies in gaining increasing precision of the parameter estimate(s). A smaller variance suggests that the analysis is closer to the population parameter, that the confidence interval at a set Type I error level, often 95%, is the smallest. One almost always wants to obtain the most precise estimates. Thus, in most circumstances, the sample selection process in TRACS should seek to minimize variance.

There is one possible exception to this: that situation in which the minimum variance

estimate may not be acceptable: when it is biased. Bias means that, as the sample gets larger, the estimate approaches some value not equal to the population parameter. Thus the error has two components, a random error and a bias or the difference between the population parameter and the target estimate.

Some estimates can be minimum variance, while still biased, because the random error variance is so small that, even with bias, the total variance is minimal. Sometimes, these minimum variance biased estimates are acceptable; but sometimes they are not - it depends on the bias. If the estimates are biased and the bias is acceptable, then the minimum variance estimate is the best; but if the bias is not acceptable, then the estimate of choice would be the minimum variance unbiased estimate - the estimate that has been most commonly used in statistical analysis.

In terms of the TRACS sampling, except for the caveat about biased estimates, there is no logical reason to aim to produce anything other than the minimum variance estimate. With this estimate comes the smallest confidence interval for the allocation of transportation costs. Any other approach either produces less precision than required or, if the precision obtained is acceptable, wastes money by drawing too large a sample: an alternative sampling plan would produce the same precision for a lower cost.

(b) Bias in data collection can be summarized as the following:

Expected value = Population Parameter + Random Error + Bias (Systematic Error)

(c) As touched on briefly in Part (a), bias is a component of error. The error for an observation is made up of the random component and any bias component. The bias component serves to increase the total error. However, the fact that there is bias does not mean that the estimate fails the test of minimum variance. The variance is equal to the sum of squared error, which can be smallest even if there is bias.

The problem with biased minimum variance estimates is ensuring that the bias is acceptable, which is something that needs careful consideration.

USPS/FGFSA-T1-31. Please refer to your carpool example on pages 14-15. Assume the car in question has seating for 4 occupants (three passengers and the driver). Please state whether you agree or disagree with each of the following statements and explain your answers.

(a) When the 4 seats are taken, additional adult passengers can be added to the laps of the occupants.

(b) Assume one of the occupants is child. An adult can be seated on the child.

(c) Assume all four seats are full with adults. It is appropriate to place babies on the laps or shoulders of the occupants.

(d) Assuming three of the four seats are occupied, it is appropriate to fill the fourth seat with boxes of toys, books or other freight.

RESPONSE

31 - Passengers and freight are different. Adults cannot be stacked on top of children or on shelves. Freight can be stcked with the use of false bottoms, shelves and rigid containers.

(a) It could be done, but not reasonable.

(b) no.

(c) no.

(d) It could be done.

USPS/FGFSA-T1-32. How many TRACS highway tests have you personally observed? Please state the date and location of each such test.

RESPONSE

32 - None.

USPS/FGFSA-T1-33. Have you ever worked for United Parcel Service as a consultant or in any other capacity? If so, please provide the dates of such employment and describe the nature of such work in detail.

RESPONSE

33.- No.

USPS/FGFSA-T1-34. Please refer to Exhibit LAM-4b in your testimony. Please provide explicit citations for the Standard Mail (A) figures presented in this exhibit.

RESPONSE

34 - See LAM-4(Revised)
Standard A data - Lib. Ref. H-111, Appendix A, Table 4
Conversion factors - Lib. Ref. H-82, page 171

USPS/FGFSA-T1-35. Please confirm that a route with a 2400 cubic feet capacity vehicle which makes five trips a day at 100 miles each yields the same cubic foot miles as a route with a 1600 cubic feet capacity vehicle making five trips a day at 150 miles each.

RESPONSE

35 - Confirmed.

USPS/FGFSA-T1 -36. Please refer to page 28 of your testimony. Please provide a basis for the statement, "AOs and DUs have less dock activity per hour."

RESPONSE

36 - Except for New York, which is probably called a GMF (James A. Farley Post Office), most AOs and DUs have less dock activity per hour than BMCs. BMCs are larger than the other types of facility in the sense of amount of mail that passes through per day. Therefore, they need to have more dock activity.

USPS/FGFSA-T1-37. Please consider the following mute trip:

BMC1 to SCF1 to SCF2 to BMC1

a. Would you consider the first leg of the route trip (BMC1 to SCF1) inbound or outbound?

b. Would you consider the second leg of the route trip (SCF1 to SCF2) inbound or out bound?

c. Would you consider the third leg of the route trip (SCF2 to BMC1) inbound or outbound?

RESPONSE

37 - The response is based in the TRACS definitions:

a. Outbound.
b. Outbound
c. Inbound.

FGFSA/USPS-T1-38. On page 9, lines 19-20 of your testimony, you state "Several of the major changes of dropshipping should have had their impact by now." Please provide your estimate of the costs of postal transportation in the absence of destination entry discounts.

RESPONSE

38 - No such estimate has been made by me.

DECLARATION

I, Leonard Merewitz, declare under penalty of perjury that the foregoing responses to interrogatories are true and correct, to the best of my knowledge, information and belief.

Dated: January 26, 1998

Leonard Merewitz

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all parties of record in this proceeding on this date in accordance with Section 12 of the Rules of Practice and Procedure.

Dated : January 26, 1998

M. W. Wells, Jr., Attorney