

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

POSTAL RATE AND FEE CHANGES, 2006)

Docket No. R2006-1

RESPONSES OF VALPAK DIRECT MARKETING SYSTEMS, INC. AND
VALPAK DEALERS' ASSOCIATION, INC.
WITNESS JOHN HALDI TO INTERROGATORIES OF
UNITED STATES POSTAL SERVICE (USPS/VP-T2-1-12)
(September 27, 2006)

Valpak Direct Marketing Systems, Inc. and Valpak Dealers' Association, Inc.

("Valpak") hereby submit responses of witness John Haldi to the following interrogatories of the Postal Service: USPS/VP-T2-1-12, filed on September 13, 2006. Each interrogatory is stated verbatim and is followed by the response.

Respectfully submitted,

William J. Olson
John S. Miles
Jeremiah L. Morgan
WILLIAM J. OLSON, P.C.
8180 Greensboro Drive, Suite 1070
McLean, Virginia 22102-3860
(703) 356-5070

Counsel for:
Valpak Direct Marketing Systems, Inc. and
Valpak Dealers' Association, Inc.

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-1.

Please refer to your testimony at page 17, line 17, to page 18, line 5.

- a. Please confirm that the full sentence from which you quote is, “Labor cost (as opposed to workhour) data are not available at appropriate levels of operational detail.” (Tr. 10/2661). If you do not confirm, please explain fully.
- b. Consider the labor cost function $c(w,y) = w l(w,y)$, where w is the price of labor, y is output, and $l(w,y)$ is the derived labor demand. Please confirm that the cost elasticity with respect to output, $\ln c(w,y) / \ln y$, equals the labor demand elasticity with respect to output, $\ln l(w,y) / \ln y$. That is:

$$\ln c(w,y) / \ln y = (\ln w + \ln l(w,y)) / \ln y = \ln l(w,y) / \ln y.$$

If you do not confirm, please provide a mathematical derivation of the result you believe to be correct.

Response.

- a. Confirmed.
- b. Confirmed that the mathematics are correct, provided the functions are continuous and differentiable throughout the relevant range. I would note two things. First, the discussion in my testimony which you cite concerns the way “mail processing costs change *with the increasing size of facilities* and volume of mail processed.” (Emphasis added.) However, the labor cost function, $c(w, y)$, does not contain any variable to relate size of the plant and capital equipment to labor demand or labor cost. Consequently, any empirical study of labor demand based on this model is not likely to develop any insight as to whether larger plants are subject to economies or diseconomies of scale. Second, in the abstract, such a generalized cost function could be said to apply to a single plant, any group of plants, or all plants together.

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-2.

Please refer to Dr. Bozzo's response to VP/USPS-T12-4a, Tr. 10/2656. Are you familiar with the referenced paper: L. Christensen, D. Caves, and M. Tretheway, "Economies of Density Versus Economies of Scale: Why Trunk and Local Service Airlines Differ" (*Rand Journal of Economics*, Winter 1984, at 471)?

Response.

No.

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-3.

Please refer to your testimony at page 21, lines 4-5. Please confirm that the cost elasticity with respect to output, $\frac{\ln c(w,y)}{\ln y}$, is defined if $c(w,y)$ is a differentiable short-run cost function. If you do not confirm, provide a mathematical derivation of the result you believe to be correct.

Response.

Confirmed; also see my response to USPS/VP-T2-1(b).

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-4.

Please refer to your testimony at page 21, lines 10-15.

- a. Please confirm that you are describing a “U-shaped” short-run average cost curve. If you do not confirm, please explain.
- b. Please confirm that the long-run average cost curve may also be U-shaped. (See, e.g., Hal R. Varian, *Microeconomic Analysis, Second Edition* [New York: W. W. Norton] at pages 38-39 and page 43.) If you do not confirm, please explain.
- c. Please also refer to your testimony at page 25, lines 2-3. Please confirm that, in microeconomic theory, the long-run average cost curve specifically is the lower envelope of the short-run average cost curve. (See, e.g., Varian, op. cit., at page 43.) If you do not confirm, please explain.

Response.

- a. Confirmed, subject to the proviso that “U-shaped” should not be taken too literally.

My testimony is intended to describe a unit cost curve that declines (perhaps gradually, perhaps sharply) over some range of output, then reaches a minimum (which may remain constant over an extended range), and then starts increasing after the plant has reached full utilization of its most efficient equipment and then must rely on less-efficient, more costly equipment and procedures to reach higher levels of output. Once unit cost starts to increase, that rate at which it increases may be gradual or steep, depending on the particular circumstance at the time. The decline and ultimate increase in unit cost may be shallow or sharp with a wide, flat bottom, and the cost curve may be far from symmetrical.

- b. Confirmed, see also my response to interrogatory 4(a), above.
- c. Confirmed.

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-5.

Please refer to your testimony at pages 22-23.

- a. Please confirm that in the economic “long run,” the Postal Service would not be bound by capacity constraints that might force it to employ less efficient processing technology in the “short run.” If you do not confirm, please explain.
- b. Your statements regarding the possibility of the Postal Service employing less efficient technologies such as manual sorting in the short run do not reference to any quantitative data on the prevalence with which the Postal Service actually does so. If your statements are based on any quantitative data, please provide detailed citations to the data. If not, please so indicate.

Response.

- a. “In the long run we are all dead.” Thus wrote Lord Keynes. I can confirm, though, that we are not all dead yet, and I also can confirm that, given sufficient time, the Postal Service can expand its mail processing capacity beyond existing short run capacity constraints. However, the “long run,” or “sufficient time” required to expand capacity may extend over the span of several rate cases (and well beyond the Test Year in any given case), as attested by the chronic shortage of mechanized flats processing capacity throughout the 1990's.
- b. The table below, which is based on the data in Table 1 at page 36 of my testimony, summarizes both total and volume variable costs for flats, letters, parcels, and Priority Mail in FY 2005, for all cost pools studied by witness Bozzo. For all mail processing cost pools combined, those characterized as “manual” amounted to a non-trivial one-third of both total and volume variable costs.

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

Response to USPS/VP-T2-5b.

**FY 2005 Total Costs
(\$,000)**

	(1)	(2)	(3)	(4)
	Manual	Automated/ Mechanized	Total	Percent Manual
Flats (1)	239,251	756,916	996,167	24.0%
Letters (2)	917,249	1,683,563	2,600,812	35.3%
Parcels	83,115	410,170	493,285	16.8%
Priority	317,740	145,691	463,431	68.8%
Total	----- 1,557,355	----- 2,996,340	----- 4,553,695	34.2%

**FY 2005 Volume Variable Costs
(\$,000)**

	(1)	(2)	(3)	(4)
	Manual	Automated/ Mechanized	Total	Percent Manual
Flats (1)	224,896	690,454	915,350	24.6%
Letters (2)	816,352	1,466,453	2,282,805	35.8%
Parcels	66,492	356,848	423,340	15.7%
Priority	238,305	126,751	365,056	65.3%
Total	----- 1,346,045	----- 2,640,506	----- 3,986,551	33.8%

- (1) Column 2 = AFSM 100 + FSM 1000
(2) Column 2 = BCS/DBCS/CSBCS + OCR

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-6.

Please refer to your testimony at page 26, line 12, to page 27, line 1. You state:

Any increases or decreases in unit cost on account of such other **exogenous** factors [described by witness McCrery] should **not** be interpreted as evidence tending to prove or disprove the existence of economies of scale. [Emphasis in original.]

Please also refer to GAO report GAO-05-261, provided as Docket No. N2006-1, USPS-LR-N2006-1/7, at page 30, where a graph shows facility productivities for “small,” “medium” and “large” facility categories.

- a. Do you agree that the GAO’s graph referenced above shows a lower average productivity for “large” sites than for sites in the smaller size categories? If not, please explain.
- b. Please assume that exogenous factors such as you describe in your testimony account for the observed average productivity differences by facility size. Under such circumstances, please confirm that your testimony, quoted above, implies that it would be incorrect to conclude that there are diseconomies associated with large facilities from productivity data such as that presented by GAO. If you do not confirm, please explain fully.

Response.

- a. I would agree.
- b. Under the assumption posited here, that exogenous factors account for observed average productivity differences by facility size, it clearly would be incorrect to conclude that larger facilities are subject to systematic diseconomies of scale.

At the same time, and despite the GAO’s own caveats at pages 28-32, in the face of such data any conclusion that postal facilities are subject to economies of scale would require a blind leap of faith.

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-7.

Please refer to your testimony at page 29, lines 3-9. Assume a facility is merging outgoing processing of its First-Class Mail and Standard Mail. Would you expect a single-unit increase in the Standard Mail volume to be sufficient to cause such a facility to cease merging the processing, or would a larger increment of volume normally be required?

Response.

Your question does not indicate whether the facility is merging flats or letters, so I shall attempt to address both. First, however, let me establish some relevant parameters.

According to witness McCrery:

a minimum volume of three to four thousand pieces is necessary to sort flats on a particular sort scheme. Below that number, consolidation with flat mail from another class would be considered if feasible. [Tr. 11/3135.]

For letters, witness McCrery states that:

10 minutes of mail is a good rule of thumb, but that differs significantly with the situation. [Tr. 11/3134.]

Throughput of DBCS machines is approximately 37,000 pieces (letters) per hour.

Tr. 11/3104; USPS-T-42, p. 6, ll. 13-14. Since 10 minutes is one-sixth of an hour, 10 minutes of mail would be approximately 6,000 pieces (which can vary significantly with the situation).

Your question asks what I would expect from a “single-unit” increase in Standard Mail volume, without defining the term “single-unit.” If by single-unit you intend a single piece of mail, my answer is: No, in general I would not expect just one additional piece of Standard Mail to be sufficient to cause a facility to cease merging the

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to Interrogatory of the Postal Service**

processing. Suppose however, that a single-unit is defined as a rate-induced volume change, such as 1,000 additional pieces of Standard Mail. Then, if we assume that some small volume of Standard Mail already exists and is being merged with First-Class Mail, (i) for flats I would say that the chances are at least 1 in 3 (1,000/3,000) that an additional “unit” might be sufficient, and (ii) for letters I would say that the chances are better than 1 in 6 (1,000/6,000) that an additional “unit” would be sufficient to cease merged processing and sort the Standard Mail separately.

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-8.

Please refer to Prof. Baumol's testimony in Docket No. R87-1, USPS-T-3 at page 10, lines 5-11. Prof. Baumol defines the incremental cost of a service as:

Those costs -- fixed and volume variable -- which would be eliminated if the particular service... were (hypothetically) discontinued are called the "incremental cost" of that service.

Do you agree with Prof. Baumol's definition? If not, please explain the basis for any disagreement.

Response.

I agree with Professor Baumol. Professor Baumol's statement is fairly obvious, when all costs are defined as either fixed or volume variable. Note, however, that some costs can be "semi-fixed" or "semi-variable." The cost function may involve some discontinuities. Such costs may not change at the margin, with small changes in volume, in a continuous manner. At the same time, such costs may be reduced or even eliminated altogether well before the particular service were (hypothetically) discontinued and volume disappeared altogether. Such costs do not fit neatly within Professor Baumol's dichotomy.

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-9.

Please refer to Prof. Baumol's testimony in Docket No. R87-1, USPS-T-3 at page 12, lines 15-19. Prof. Baumol states:

The term "long run marginal cost" does not refer to a particular length of time but instead refers to the marginal costs that would be incurred if all plant, equipment and labor were used in optimal configurations so that costs, for whatever volume of service is supplied, are minimized.

Do you agree with Prof. Baumol's characterization? If not, please explain the basis for any disagreement.

Response.

Provided that we take plants and technology as fixed at some point in time, I would agree with Professor Baumol's characterization. This is a "static" definition of "long-run marginal cost," and is consistent with the envelope cost curve discussed at pp. 25-27 of my testimony.

In a "dynamic" situation, technology may be in a state of ongoing evolution and improvement, and the optimal configuration of plant, equipment, and labor then will be subject to change on a regular and continuing basis.

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-10.

Please refer to your testimony at page 42, lines 14-20.

- a. Please confirm that there is no single class or subclass whose hypothetical discontinuation would lead to the discontinuation of all letter-shape products. If you do not confirm, please explain fully.
- b. Please confirm that there is no single class or subclass whose hypothetical discontinuation would lead to the discontinuation of all flat-shape products. If you do not confirm, please explain fully.
- c. Please confirm that there is no single class or subclass whose hypothetical discontinuation would lead to the discontinuation of all parcel-shape products. If you do not confirm, please explain fully.

Response.

- a. Confirmed.
- b. Confirmed.
- c. Confirmed. Note, however, that when processing is by shape, it is possible for there to be (common) costs that can be identified readily with shape but not with a single class or subclass of mail. Revenues are of course readily identifiable with shape. A shape-based incremental cost test is thus straightforward and should be made routinely even if there exists some policy reason for allowing the costs of handling parcels to be cross-subsidized by letters and flats.

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-11.

Please refer to your testimony at page 51, lines 16-18. Please provide a citation to the record indicating where Dr. Bozzo “concur” with the statement.

Response.

See witness Bozzo’s responses to VP/USPS-T12-16(a), Tr. 10/2677 (concurring with witness Bradley’s statement quoted in my testimony at p. 51, ll. 6-14) and VP/USPS-T12-17, Tr. 10/2679.

As Dr. Bozzo states in response to the latter interrogatory:

the issue is whether the cost in question is avoidable if a
product or service (in this case, First-Class Mail) were not
provided, and not the relative volume of other mail.

Dr. Bozzo does not mention “Periodicals letters,” which my testimony uses as a specific example of the “other mail” mentioned by Dr. Bozzo.

**Response of Valpak witness John Haldi, VP-T-2,
to Interrogatory of the Postal Service**

USPS/VP-T2-12.

Please refer to your testimony at page 51, line 23 to page 52, line 6. Please confirm that in the scenario you describe, the Standard letters require processing whether or not the First-Class Mail service is provided. If you do not confirm, please explain.

Response.

Confirmed. All mail must be processed until it ultimately reaches its final destination. The situation with respect to small volumes of Standard letters that are sorted concurrently with First-Class Mail is analogous to the Priority Mail situation described by witness Bradley, as quoted in my testimony at page 51, lines 6-14. As witness Bradley observes, the "other mail" that is processed with Priority Mail also would have to be processed if the Priority Mail cost pool did not exist. That is why all the volume variable cost of processing such other mail is attributed to that mail, and any non-volume variable costs of the Priority Mail cost pool are treated as intrinsic incremental costs of Priority Mail.