

UNITED STATES OF AMERICA  
POSTAL REGULATORY COMMISSION  
WASHINGTON, D.C. 20268-0001

Periodic Reporting  
(Proposal One)

Docket No. RM2022-3

CHAIRMAN'S INFORMATION REQUEST NO. 3

(Issued February 15, 2022)

To clarify the Postal Service's petition to consider proposed changes in analytical principles filed January 5, 2022,<sup>1</sup> and following up on the responses provided to the Chairman Information Request No. 1 filed January 12, 2022,<sup>2</sup> the Postal Service is requested to provide written responses to the following questions. Answers should be provided to the individual questions as soon as they are developed, but no later than February 22, 2022.

1. Please refer to the Bradley Study that states, "the dependent variable in the top-down equation will be the amount of street time incurred by all carriers in an individual ZIP Code on a given day." Bradley Study at 44.
  - a. Please confirm that, due to the construction of this dependent variable, it possesses a lower bound of 0 hours.
  - b. If 1.a. is confirmed, please explain how the Postal Service's Top-Down Model accounts for this bound when estimating its proposed quadratic regression.

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<sup>1</sup> Petition of the United States Postal Service for the Initiation of a Proceeding to Consider Proposed Changes in Analytical Principles (Proposal One), January 5, 2022 (Petition). The Petition was accompanied by a study supporting its proposal. See Michael D. Bradley (Bradley Study), *On the Estimation of a Top-Down Model for City Carrier Street Time\**, January 5, 2022.

<sup>2</sup> Response of the United States Postal Service to Questions 1-3 of Chairman's Information Request No. 1, January 18, 2022 (Response to CHIR No. 1).

- c. If 1.a. is confirmed, considering this bound, please provide further justification, beyond what was provided in the Bradley Study on pages 48 to 50, as to why a quadratic equation is the best functional form for this analysis. Specifically, please reflect on its appropriateness given its potential to predict street times below the abovementioned lower bound.
  - d. If 1.a. is not confirmed, please explain the lower bound of this variable and any relevance it has to the choice of the functional form.
2. Please refer to Table 30 from the Bradley Study at 114 and Library Reference USPS-RM2022-3-1, January 5, 2022, folder "Directory 4 Public Impact Workbooks," Excel file "CS06&7-Public-FY21-TopDown.xlsx," tab "7.0.1." Please describe how the Postal Service defines relay in "Travel To/From Route and Relay" and "SPR RELAY (TRANS TO LTR)," and provide separate thorough descriptions of the carrier actions included in each of these activities.
3. Please refer to the Bradley Study statement that "[f]or example, the current deviation parcel / accountable variability of 51.9 percent would seemingly be larger than the top-down deviation parcel / accountable variability of 7.3 percent. But such an inference would be erroneous because it does not account for the fact that the 51.9 percent variability is multiplied by a FY 2021 cost pool of \$979 million, whereas the 7.3 percent variability is multiplied by a FY 2021 cost pool of \$12.9 billion. The former variability leads to volume variable letter route street time costs for deviation parcels / accountables of \$508 million, but the latter variability leads to \$943 million volume variable letter route street time cost for that cost pool. So, the top-down variability is actually larger, in terms of producing volume variable costs, than the existing variability." Bradley Study at 114-15. Please provide more explanation of the example by indicating the sources of the dollar amounts that appear in the example.
  - a. Please identify the source of the \$943 million cost referenced above.

- b. Please indicate the exact location in the submitted documents where the updated variability is multiplied by the \$12.9 billion cost pool to determine the volume variable cost.
4. Please refer to the Bradley Study statement that, “[u]pon investigation the Postal Service determined that the main differentiating factor of City Carrier Street time costs is indeed ZIP codes that receive [Flats Sequencing System (FSS)] Processing, which was one of the two stratification criteria identified in the First Status Report. The second potential stratification criteria identified in that Report, the Accountable time per ZIP code, appears to merely conflate the strata definitions and to result in an unreliable dataset for analysis. FSS ZIP codes overall have a higher number of routes, hours, mail volumes, and therefore likely have higher Accountable mail volume. As such, the Postal Service reduced the number of strata from four to two, zones that receive FSS processing and those that do not, and selected a new sample accordingly.”<sup>3</sup>
  - a. Please explain the nature of the investigation referenced above, specifically the purpose and the methods of the investigation.
  - b. Please explain the rationale for stating that the accountable time per ZIP Code “appears to merely conflate the strata definitions and to result in an unreliable dataset for analysis. FSS ZIP codes overall have a higher number of routes, hours, mail volumes, and therefore likely have higher Accountable mail volume.” Bradley Study at 6. Please explain the evidence of this claim and describe any methods employed to substantiate this claim.
  - c. Please refer to the First Status Report that states, “[p]revious research on estimating city carrier street time costs showed that costs for FSS ZIP

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<sup>3</sup> Bradley Study at 6-7. The Bradley Study cites the Postal Service’s First Status Report. Docket No. PI2017-1, First Status Report of the United States Postal Service in Response to Order No. 4869, April 19, 2019, at 1 (First Status Report).

Codes are materially different from costs for non-FSS zones.” First Status Report at 2.

- i. Please explain the rationale for the above conclusion.
  - ii. Please provide the evidence of this claim and describe any methods employed to substantiate this claim.
- d. Please confirm that this indicator was chosen as a stratification criterion because FSS ZIP Codes have higher number of routes, hours, and mail volumes.
  - i. If confirmed, please clarify the other ZIP Codes in comparison to which the expression “higher number of routes, hours, mail volumes” is employed. Please explain in detail why ZIP Codes that receive FSS processing have high number of routes, hours, and mail volumes.
  - ii. If not confirmed, please clarify the reasons why ZIP Codes that receive FSS processing were chosen as a stratification criterion.
5. Please refer to the Bradley Study’s description of the Delivery Data Set stating, “[b]ecause of the COVID-19 pandemic, the monthly 2020 volume and street hour data are distorted and do not reflect ongoing operational practice. During much of the year, the Postal Service was not able to follow normal street time procedures. Consequently, data from [calendar year] 2019 remain the most relevant to estimate the variabilities of street time.” Bradley Study at 5 n.9. Please also refer to the Bradley Study’s description of the Collection Volume Data Set stating, “[i]n the course of their delivery activities, letter carriers also collect mail from customers’ receptacles. The amount of volume collected is material, so it is important to include some measure of this collected volume to avoid omitted variables bias. In order to have a complete set of volume variables for the top-down model, the Postal Service undertook a special study to measure

the volume collected by letter carriers from customers' receptacles on regular letter routes. Collection points with barcodes from the Collection Point Management System (CPMS) like blue boxes, wall units, firms, or mail chutes were not included in the study. Carriers from over one thousand ZIP Codes participated in the collection volume study in a two-week period in January and February 2021." Bradley Study at 24-25 (footnotes omitted).

- a. Please explain why the Delivery Data Set consists of calendar year 2019 data rather than fiscal year 2019 data. Please explain whether, for the purpose of estimating street time variabilities, it may be more appropriate to use data from calendar year 2019 or fiscal year 2019.
  - b. Please confirm that during January and February 2021, when data for the Collection Volume Data Set was collected, the Postal Service followed normal street time procedures in collecting mail from customers' receptacles.
    - i. If confirmed, please explain the reasons why the COVID-19 pandemic did not affect collection procedures in January and February 2021, given that it caused distortions in volume and street hour data.
    - ii. If not confirmed, please explain in which ways street time procedures for collecting mail from customers' receptacles deviated from the norm during January and February 2021, due to the COVID-19 pandemic. In the response, please explain why, despite the deviation from the norm during January and February 2021, the Postal Service considered it appropriate to use collection volume data from this period to estimate street time variabilities.
6. Please refer to the Bradley Study's description of the Collection Volume Data Set's methodology for recording total volume of mail collected from customers'

receptacles that states “[a]n actual piece count was required if there was less than one inch of mail. When there was more than one inch of mail, carriers had the option using one of two methods.” *Id.* at 26 (footnote omitted). Please also refer to the Bradley Study that states, “[t]he primary explanatory variables included in the top-down equation are the volumes handled by city carriers.” *Id.* at 45.

- a. Please confirm that mail collected from customers’ receptacles is a primary explanatory variable in the calculation of street time variabilities.
  - i. If confirmed, please explain whether the conversion standards could lead to measurement error bias due to measurement error in an explanatory variable.<sup>4</sup> In the response, please indicate the expected effects of the measurement errors on the calculated variabilities.
  - ii. If not confirmed, please provide the list of primary explanatory variable in the calculation of street time variabilities. In the response, please explain whether any of these primary explanatory variables are possibly subject to measurement error. For the variables that are subject to measurement error, if any, please explain the likely impact of the measurement errors on the calculated street time variabilities.

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<sup>4</sup> In mail processing variability studies, the Commission has previously stated that “[m]easurement of the variables that are to be used as explanatory terms in the estimated variability models (TPF or FHP) [Total Pieces Fed and First Handled Pieces, respectively, which are measures of volume] must be substantially free of error. The Commission has warned since Docket No. R97-1 that the consequences that follow from using an explanatory variable measured with a substantial level of error can be severe.” Docket No. R2006-1, Opinion and Recommended Decision Vol. 1, February 26, 2007, ¶ 3030. See *also* Docket No. RM2020-13, Reply Comments of the United States Postal Service Regarding Proposal Six, December 8, 2020, PDF file “Bozzo.Reply.Report.pdf,” at 5.

- b. For each of the two conversion standards, please provide any research that the Postal Service has conducted on the accuracy of these standards in estimating volumes and their conclusions.

By the Chairman.

Michael Kubayanda