

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

Periodic Reporting
(Proposal Ten)

Docket No. RM2020-2

CHAIRMAN'S INFORMATION REQUEST NO. 3

(Issued March 5, 2020)

To clarify the Postal Service's petition to consider proposed changes in analytical principles, filed November 29, 2019, the Postal Service is requested to provide written responses to the following questions.¹ Answers to each question should be provided as soon as they are developed, but no later than March 18, 2020.

1. Please refer to Chairman's Information Request (CHIR) No. 2, question 7 and the Postal Service's responses to question 7.² In response to question 7.c., the Postal Service states that "[a]ll values in the Zone of Tolerance (as well as those outside the Zone of Tolerance) are used to estimate the models underlying the postmaster cost variabilities. This includes offices that may be likely to move up an EAS grade, as well as offices that may be likely to move down an EAS grade."

Additionally, please refer to Library Reference USPS-RM2020-2/1 – Public Material Relating to Proposal Ten, Folder: Calculate Variabilities, Files: Calculate Variability for 20 and 21.sas and Calculate Variability for 20 and 21 (Text

¹ Petition of the United States Postal Service for the Initiation of a Proceeding to Consider Proposed Changes in Analytical Principles (Proposal Ten), November 29, 2019 (Petition). The following were filed on November 29, 2019, in support of the Petition: Library Reference USPS-RM2020-2/1, Public Material Relating to Proposal Ten; Library Reference USPS-RM2020-2/NP1, Nonpublic Impact Material Relating to Proposal Ten. Additionally, the Petition was accompanied by a study supporting its proposal. See Michael D. Bradley, *Investigating the Variability of Postmaster Costs**, November 29, 2019 (Bradley Study).

² Chairman's Information Request No. 2, January 17, 2020, question 7.c. (CHIR No. 2); Responses of the United States Postal Service to Questions 1-7 of Chairman's Information Request No. 2, January 29, 2020, question 7.c. (Responses to CHIR No. 2).

Document), which relate to the computation of Postmaster cost variability for EAS grades EAS-20 and EAS-21.

- a. Please confirm that in the text file of the SAS program indicated above, the classifications of the Postmasters and the cost computations performed from line 835, (“*** Identify EAS Grade for Variability Calculation ***”) to line 876 (“b_low_cost b_high_cost s_low_cocst s_high_cost b_cost s_cost s_theta n=count”), only include the population of Postmasters in the EAS-20 grade, *i.e.*, apart from using the minimum salary for the EAS-21 grade in the computations, the classification of the Postmasters excludes any post office in the EAS-21 grade. If not confirmed, please explain.
 - b. If confirmed, please explain why post offices that are likely to move down from the EAS-21 grade to the EAS-20 grade are excluded from the calculation of Postmaster cost variabilities for EAS-20 and EAS-21.
2. Please refer to the Bradley Study, where Bradley states that in order to “account for the possibility that the variability could be applicable to a variety of circumstances, a sensitivity test was performed for a wide range of possible [Workshare Service Credit] [(WSC)] changes,” which “started at 2.5 percent and was increased by 2.5 percentage point increments to the maximum value of 20 percent,” and that “[t]he results of the sensitivity analysis support the use of a 10 percent WSC change as the benchmark for calculating Postmaster variabilities.” Bradley Study at 42, 44.
- a. Please confirm that the Postal Service assesses the stability of Postmaster cost variability over a range of WSC growth rates that it chose for the purpose of performing the sensitivity analysis, and not over a range of historically observed WSC growth rates (*see, e.g., id.* at 42, Table 22). If not confirmed, please explain.

- b. Please provide past examples of variability computation where the Postal Service based its choice of the percentage increase in the cost drivers on a sensitivity analysis in which alternative percentage changes in the cost driver have been considered.
 - c. Please provide past examples of variability computation where the Postal Service based the percentage change in the cost driver on the stability of the computed variability numbers over a defined growth range of the cost driver.
3. Please refer to the logistic probability function of WSCs described in the Bradley Study and its resulting estimation. See *id.* at 18, 29, Table 14.
 - a. Using EAS grades EAS-20 and EAS-21 as an example, please confirm that based on the estimation results shown in Table 14 of the Bradley Study the average salary, as a function of WSC, can be determined for the Postmasters pertaining to these two pay grades. Specifically, please confirm that the average salary is computed by first multiplying the minimum salary pertaining to the EAS-21 grade by the estimated probability function, then multiplying the minimum salary pertaining to the EAS-20 grade by one minus the probability function, and, finally, adding the two products together. If not confirmed, please explain.
 - b. If question 3.a. is confirmed, please also confirm that the point elasticity of the expected salary can be computed at any chosen value of WSC. If not confirmed, please explain.
 - d. If question 3.a. and 3.b. are confirmed, please explain whether computing the variability as described in questions 3.a. and 3.b., is or is not an acceptable alternative to the Postal Service's proposed method based on the classification of Postmasters.

4. Please refer to CHIR No. 2, question 7 and Responses to CHIR No. 2, question 7. In response to question 7.d.ii., the Postal Service states that “[t]his set of three estimated logit models that include the offices in the EAS-21 and EAS-22 grades thus incorporate movements not only between EAS-21 and EAS-22, but also between EAS-20 and 22 as well as EAS-22 and EAS-24. To the extent changes in WSCs would lead to these latter types of grade changes, they would be captured by the relevant pairwise logit models and would influence the postmaster cost responsiveness in that way.”

Please also refer to An Introduction to Categorical Data Analysis written by Alan Agresti.³ Mr. Agresti states that “[s]oftware for multi[-]category logit models fits all the equations [...] *simultaneously*. Estimates of the model parameters have smaller standard errors than when binary logistic regression software fits each component equation [...] separately. For simultaneous fitting, the same parameter estimates occur for a pair of categories no matter which category is the baseline. The choice of the baseline category is arbitrary.” *Id.* at 174.

- a. Did the Postal Service estimate a multi-category logit model, along with separately estimating the binary logistic regression equations? If yes, please provide the estimation results that were obtained.
- b. If question 4.a. is not confirmed, please explain why the Postal Service did not consider the multi-category logit model, which fits all the equations simultaneously and results in smaller standard errors than when the binary logistic regression equations are estimated separately.

³ See Alan Agresti, An Introduction to Categorical Data Analysis, Second Edition (2007), available at: <https://mregression.files.wordpress.com/2012/08/agresti-introduction-to-categorical-data.pdf>.

5. Please refer to the Direct Testimony of Nai-Chi Wang on behalf of United States Postal Service.⁴ In Figure B, Wang presents the structure and components of post office function activities as well as the index of WSCs. *Id.* at 17.
 - a. Please confirm that the WSC index is obtained by:
 - i. Considering a defined list of post office activities,
 - ii. Defining quantitative indicators of the activities, referred to as workload factors and revenue units,
 - iii. Weighting the quantitative indicators of the activities with weights that were initially determined by the Expanded Postmaster Criteria System Task Force, and
 - iv. Summing the weighted values of the quantitative indicators of the activities.

If not confirmed, please explain.

- b. Please confirm that the post office activities include both operating elements, such as the mail volume handled, as well as administrative elements. If not confirmed, please explain.
- c. Please confirm that, because the WSC index includes revenue elements and factors other than mail volume (*e.g.*, prices that enter the revenue calculations), those non-volume related revenue elements and factors may also contribute to the changes in the WSC index. If not confirmed, please explain.

⁴ Docket No. R84-1, Direct Testimony of Nai-Chi Wang USPS T-12, November 10, 1983 (Wang Testimony).

- d. If question 5.c. is confirmed, please explain why salary components that are not determined by volume are excluded from the salary measures used to define the response variable in the logistic regression, but non-volume factors included in the WSC index are not controlled for in the regressions.

By the Chairman.

Robert G. Taub