

# U.S. Postal Service's Cost Attribution for Parcel-only Processing Facilities

## AUDIT REPORT

Report Number 24-075-R25 | October 4, 2024



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# Highlights

## Background

The Postal Accountability and Enhancement Act (PAEA) divided postal products into two categories: market-dominant and competitive. The U.S. Postal Service uses a top-down product costing system to develop costs by product using expense, operational, and sampled data from the current fiscal year (FY). It also obtains supporting information essential to cost development through special studies. The Postal Service considers all its costs to be either attributable or institutional costs, neither of which fluctuated significantly from FY 2019 through FY 2023.

PAEA empowered the Postal Regulatory Commission (PRC) with authority over the methods used to attribute Postal Service costs to products, and notes that the Postal Service shall analyze costs using such methodologies as the PRC prescribes by regulation. The Postal Service is a multi-product firm with a non-linear cost structure caused by economies of scale and scope occurring within its processing, transportation, and delivery network. The network's design and functionality has been evolving since the Postal Service's Delivering for America plan (DFA plan) was published in March 2021.

## What We Did

We performed this audit as part of our mandate under PAEA to regularly audit Postal Service data collection systems and procedures used in collecting information to prepare annual reports to the PRC. Our objective was to assess the Postal Service's processes for tracking and attributing costs for parcel-only processing facilities.

## What We Found

We found the Postal Service can track and identify parcel-only processing facilities using system data, and currently there is only a very small fraction of the facilities in the network dedicated to processing parcels only. In addition, the Postal Service currently attributes costs for parcel-only processing facilities in accordance with methodologies established by the PRC, but these methodologies do not require cost attribution at the facility level.

## Management's Comments

Based upon the audit results, we did not make any recommendations. Postal Service management's comments and our evaluation are at the end of the finding. See [Appendix D](#) for management's comments in their entirety.



# Transmittal Letter



OFFICE OF INSPECTOR GENERAL  
UNITED STATES POSTAL SERVICE

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October 4, 2024

**MEMORANDUM FOR:** SHARON D. OWENS  
VICE PRESIDENT, PRICING AND COSTING  
  
DANE A. COLEMAN  
VICE PRESIDENT, PROCESSING AND MAINTENANCE OPERATIONS

A handwritten signature in black ink, reading "Alan S. MacMullin", is positioned above the "FROM:" field.

**FROM:** Alan S. MacMullin  
Deputy Assistant Inspector General  
for Finance, Pricing, and Human Capital

**SUBJECT:** Audit Report – U.S. Postal Service's Cost Attribution for Parcel-only  
Processing Facilities (Report Number 24-075-R25)

This report presents the results of our audit of the U.S. Postal Service's cost attribution for parcel-only processing facilities.

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Laura Lozon, Director, Cost and Pricing, or me at 703-248-2100.

Attachment

cc: Postmaster General  
Corporate Audit Response Management  
Postal Regulatory Commission

# Results

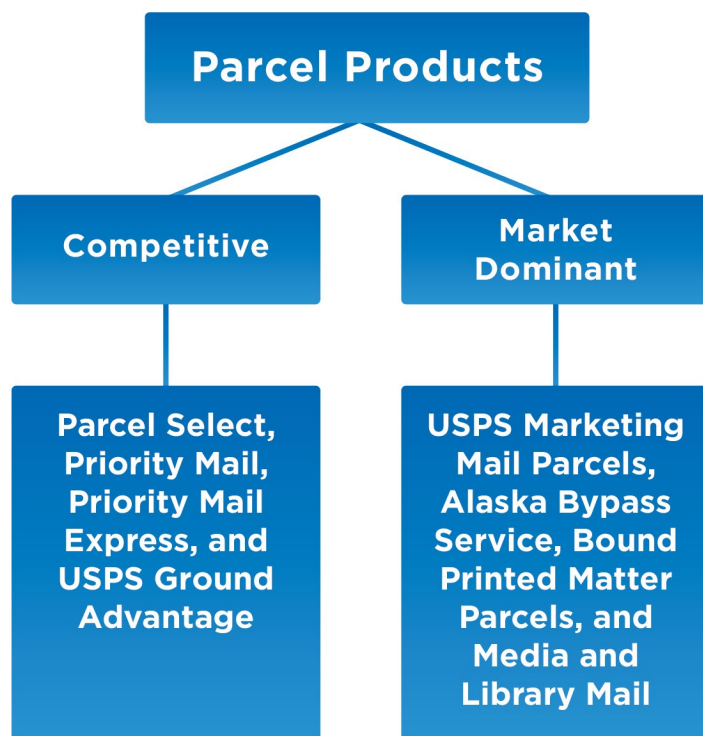
## Introduction/Objective

This report presents the results of our self-initiated audit of the cost attribution for parcel-only processing facilities (Project Number 24-075). Our objective was to assess the U.S. Postal Service's processes for tracking and attributing costs for parcel-only processing facilities. See [Appendix A](#) for additional information about this audit.

## Background

The Postal Accountability and Enhancement Act (PAEA) divided postal products into two categories: market-dominant<sup>1</sup> and competitive.<sup>2</sup> The current list of both market-dominant and competitive parcel<sup>3</sup> products are noted in Figure 1.

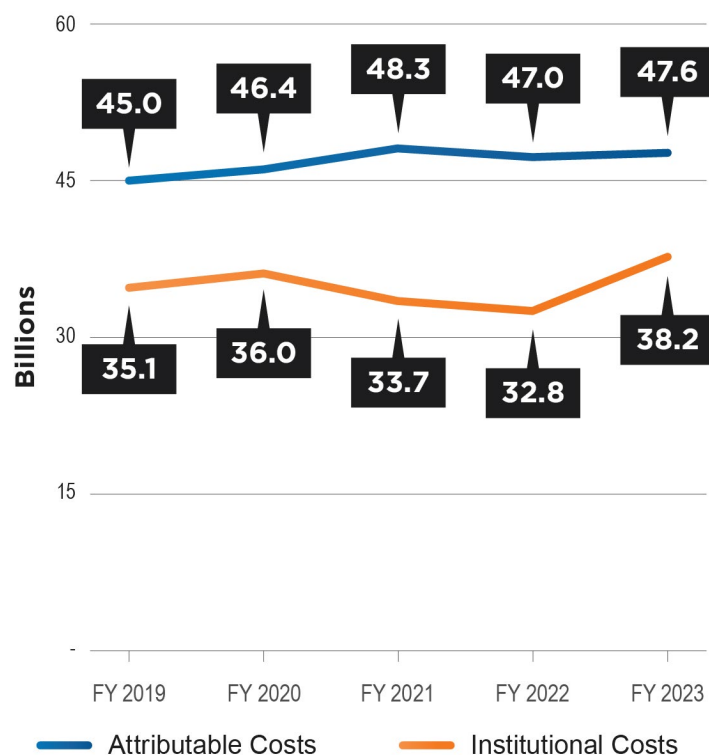
**Figure 1. Market Dominant and Competitive Parcel Products**



Source: The Postal Service's fiscal year (FY) 2023 Revenue, Pieces, and Weight Report, and the Quarterly Statistics Report for the fourth quarter of FY 2023.

The Postal Service uses a top-down product costing system to develop costs by product using expense, operational, and sampled data from the current fiscal year. For example, the In-Office Cost System (IOCS) is the primary probability sampling system the Postal Service uses to attribute and distribute the labor costs of clerks, mailhandlers, city carriers, and supervisors related to the handling of mail and parcels. It also obtains supporting information essential to cost development through special studies. The Postal Service considers all its costs to be either attributable or institutional costs, neither of which fluctuated significantly from FY 2019 through FY 2023, as noted in Figure 2.

**Figure 2. Postal Service's Attributable and Institutional Costs, FY 2019 - FY 2023**



Source: U.S. Postal Service Office of Inspector General (OIG) trend analysis of attributable and institutional costs noted in the Summary Description of USPS Development of Costs by Segments and Components from FY 2019 through FY 2023.

- <sup>1</sup> Products and services (commonly referred to as mailing services) that the Postal Service exercises sufficient market power that it can effectively set their price with limited competition.
- <sup>2</sup> A category of products and services (commonly referred to as shipping services) with similar products and services offered by private sector carriers. The postal products and services are not subsidized by market dominant products and make an appropriate contribution to institutional costs.
- <sup>3</sup> A parcel is also known as a package.

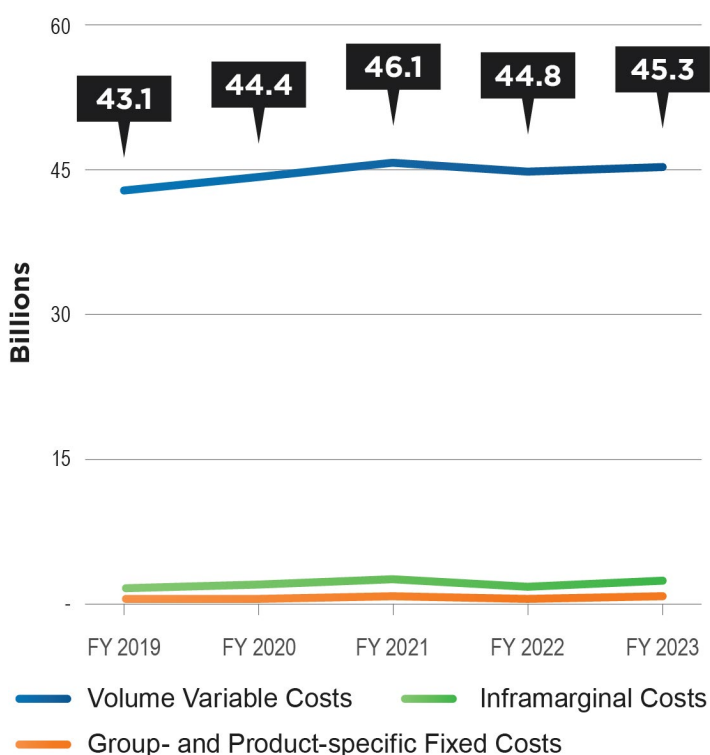
■ **Attributable Costs:** Attributable costs are the direct and indirect Postal Service costs that can be clearly associated with a particular mail product through reliably identified causal relationships. It is the sum of volume variable costs, group – and product-specific fixed costs, and inframarginal costs; all of which have also not fluctuated significantly from FY 2019 through FY 2023 as noted in Figure 3:

- **Volume Variable Costs:** Volume variable costs (i.e., the proportion of costs that change with respect to the product’s volume changes) are the costs that would be incurred if all units of the product had the same marginal cost<sup>4</sup> as the last unit produced. Postal Service’s methodology for calculating unit volume variable costs includes four steps:
  1. Assign costs to segments, components, and pools
  2. Identify each cost pool’s cost driver to calculate its volume variable costs
  3. Distribute each cost pool’s volume variable costs to products
  4. Calculate each product’s unit volume variable costs

See [Appendix B](#) for more details on the Postal Service’s methodology for calculating unit volume variable costs.

- **Group – and Product-specific Fixed Costs:** Group – and product-specific fixed costs, such as a product’s advertising costs, relate to the provision of one or several products, but do not vary with changes in volume.
- **Inframarginal Costs:** Inframarginal costs are all remaining attributable costs that are neither volume variable costs nor group – and product-specific fixed costs. Inframarginal costs capture the differences in marginal costs that take place at different levels of production.

**Figure 3. Postal Service’s Volume Variable, Group – and Product-specific Fixed, and Inframarginal Costs, FY 2019 – FY 2023**



Source: OIG trend analysis of volume variable, group – and product-specific fixed, and inframarginal costs noted in the Summary Description of USPS Development of Costs by Segments and Components from FY 2019 through FY 2023.

- **Institutional Costs:** Institutional costs are costs that cannot be directly or indirectly assigned to any mail class or product. They are common costs or overhead costs needed for overall operations. All Postal Service costs that cannot be attributed to products are considered institutional costs.

#### Accepted Analytical Principles for Attributing Postal Service Costs to Products

PAEA empowered the Postal Regulatory Commission (PRC)<sup>5</sup> with authority over the methods used to attribute Postal Service costs to products, and notes that the Postal Service shall analyze costs using such methodologies<sup>6</sup> as the PRC prescribes by regulation.

Title 39 of the U.S. Code of Federal Regulations (CFR) § 3050.11 notes any interested party, including the Postal Service, may submit a petition to the PRC

<sup>4</sup> Marginal cost is the change in cost that results from a small change in its volume alone, with the volumes of other products remaining constant. The multiplication of a product’s marginal cost by its volume results in its volume variable cost.

<sup>5</sup> The PRC is an independent establishment of the executive branch of the U.S. government that has regulatory oversight over many aspects of the Postal Service, including the development and maintenance of regulations for pricing and performance measures.

<sup>6</sup> The Postal Service uses methodologies that have been authorized by the PRC. The methodologies are summarized each fiscal year in the *Summary Description of USPS Development of Costs by Segments and Components*.

to initiate a notice of proceeding to change an Accepted Analytical Principle for attributing postal costs to products, which may improve the quality, accuracy, or completeness of the data (or analysis of such data) contained in annual periodic reports to the PRC. For example, each year the Postal Service uses time between the issuance of the PRC's Annual Compliance Determination (ACD)<sup>7</sup> report, which is typically at the end of March, and the preparation of its Annual Compliance Report (ACR),<sup>8</sup> which typically begins in October, to investigate and, if appropriate,

write proposals to the PRC as part of its efforts to continuously improve the Accepted Analytical Principles to attribute costs to products.

### **Evolution of the Postal Service's Network**

The Postal Service is a multi-product firm with a non-linear cost structure caused by economies of scale<sup>9</sup> and scope<sup>10</sup> occurring within its network. The network's design and functionality has been evolving since the Postal Service's Delivering for America (DFA) plan was published in March 2021.<sup>11</sup>

<sup>7</sup> The ACD is issued by the PRC within 90 days after the Postal Service files its ACR each fiscal year, which fulfills the PRC's responsibility to produce an annual assessment of Postal Service rates and service mandated by 39 U.S.C. §§ 3653 and 3705.

<sup>8</sup> The ACR is issued by the Postal Service pursuant to 39 U.S.C. § 3652, which requires it to file with the PRC, within 90 days after the end of each fiscal year, a variety of data on costs, revenues, rates, and quality of service, in order to demonstrate that all products during such year complied with all applicable requirements of title 39.

<sup>9</sup> Economies of scale is the increase in efficiency when the number of goods or services being produced increases.

<sup>10</sup> Economies of scope are the cost advantages or other efficiencies that arise due to the provision of multiple products.

<sup>11</sup> U.S. Postal Service, *Delivering for America: Our Vision and Ten-Year Plan to Achieve Financial Sustainability and Service Excellence*, March 23, 2021.

# Finding: Attributing Postal Service Costs to Products as the Redesigned Network Is Implemented

We found the Postal Service can track and identify parcel-only processing facilities using system data, and currently there is only a very small fraction of the facilities in the network dedicated to processing parcels only. In addition, the Postal Service currently attributes costs for parcel-only processing facilities in accordance with methodologies established by the PRC, but these methodologies do not require cost attribution at the facility level. As the Postal Service implements its DFA plan, it should continue to identify opportunities to improve the quality, accuracy, and/or completeness of its data (or analysis of such data) contained in annual periodic reports to the PRC.

### Tracking Process

The Postal Service can track parcel-only processing facilities using Management Operating Data System (MODS)<sup>12</sup> and Web End-of-Run (WebEOR)<sup>13</sup> system data. Specifically, management can use a combination of MODS and WebEOR system data to track what its facilities are processing (e.g., letters, flats, and/or parcels) and the related processing equipment being used (e.g., equipment for processing letters, flats, and/or parcels), respectively. The Postal Service identified eight parcel-only processing facilities out of its 324 total processing facilities (2.5 percent) as of March 2024. We analyzed the volume and work hours of parcel-only processing facilities and compared them to all other processing facilities during March 2024 as noted in Table 1.

Table 1. Volume and Work Hours of Parcel-only Processing Facilities Compared to All Other Processing Facilities, March 2024

Processing Facility	Volume		Work Hours	
	Amount	Percent of Total	Amount	Percent of Total
Birmingham AL Package Support Annex (PSA)	██████	██████	555	0.003%
Seminole FL PSA	██████	██████	995	0.005%
Ybor City FL PSA	██████	██████	9,246	0.048%
San Antonio Annex	██████	██████	24,373	0.126%
Industry CA Mail Processing Annex	██████	██████	6,101	0.032%
Houston North Annex	██████	██████	20,034	0.104%
Lubbock Annex	██████	██████	6,607	0.034%
South Houston TX Local Processing Center	██████	██████	50,495	0.262%
All Other Processing Facilities	19,505,246,757	99.916%	19,184,019	99.387%
Total	19,521,579,117	100%	19,302,425	100%

Source: OIG data analysis of the volume and work hours of parcel-only processing facilities compared to all other processing facilities using Postal Service data during March 2024.

<sup>12</sup> MODS is a systematic approach to gather, store, and report data on workload, work hours, and machine utilization. The operational data is entered into MODS, compiled, and communicated in reports to postal facilities for planning mail processing activities and projecting work hours and mail volumes.

<sup>13</sup> WebEOR is a Web-based application used in collecting operational data from automated and mechanized mail processing equipment (MPE). The application allows end users to retrieve, view, and store various end-of-run statistics from automated and mechanized MPE. WebEOR's statistical data is sent to MODS.



Based on our data analysis, we determined that the eight parcel-only processing facilities represented a small percentage of total volume processed (0.07 percent) and hours worked (0.59 percent) during March 2024. Furthermore, the actual volume and work hours of each of the eight parcel-only processing facilities were significantly less than the average volume (61.7 million pieces) and work hours (60,726 hours) of all other processing facilities, respectively, during the month.

### Cost Attribution Process

The Postal Service has processes in place to attribute costs for parcel-only processing facilities in accordance with current Accepted Analytical Principles established through regulation by the PRC. We found that cost segments directly related to processing are largely attributed (75 percent) to products and are not institutionalized. However, we were not able to trace specific costs at parcel-only processing facilities to individual products because of the Postal Service's top-down product costing system, which uses an aggregated approach for analyzing costs. This is because the current Accepted Analytical Principles do not require costs to be attributed at the facility level. Therefore, the costs at parcel-only processing facilities are attributed using the same methodologies as facilities that process both mail (e.g., letters, flats) and parcel products. Specifically, the costs associated with these facilities are aggregated with all of the Postal Service's other costs and then divided into cost segments, cost components, and cost pools prior to being attributed to products.

The most significant costs at parcel-only processing facilities are associated with the salaries, benefits, and related costs of clerks and mailhandlers in cost segment 3. The Postal Service uses MODS and IOCS data to attribute these labor costs to products. Notably, the Postal Service attributed 82 percent of all the costs from the Clerks and Mailhandlers cost segment to products in FY 2023.

Any interested party may petition the PRC to initiate a change to an Accepted Analytical Principle to improve the quality, accuracy, or completeness of the Postal Service's data (or analysis of such data) contained in annual periodic reports to the PRC.<sup>14</sup> Based on the number, volume, and work hours of parcel-only processing facilities and our analysis of the Postal Service's costs, we did not identify an immediate need to request a change to the Accepted Analytical Principles for analyzing and attributing costs to products for parcel-only processing facilities. Therefore, we did not make a recommendation.

### Looking Forward

The Postal Service should continue to identify opportunities to improve the quality, accuracy, or completeness of its data (or analysis of such data) contained in annual periodic reports to the PRC as the redesigned network is implemented. For example, if the Postal Service significantly increased the number of parcel-only processing facilities, then it may determine that changes are needed to the Accepted Analytical Principles to reflect its current parcel processing operations.

In addition, as the Postal Service redesigns its network to support more efficient parcel processing, it should monitor whether changes are needed to ensure that attributable costs (and analysis of such data) are calculated as accurately and completely as practically possible — particularly those costs related to transportation and delivery operations. For example, management stated during the audit that it anticipates many changes noted in the DFA plan will likely require revisions to cost segment 14, Transportation. In addition, we found that cost segments directly related to delivery had the largest percentage of institutional costs among all the Postal Service's active cost segments in FY 2023; and thus, there may be opportunities to attribute costs more accurately and completely as changes are made that impact parcel delivery operations. The OIG

<sup>14</sup> 39 C.F.R. § 3050.11.

will continue to monitor the cost attribution process as the Postal Service implements the DFA plan as part of our oversight responsibilities.

#### **Postal Service Response**

Management agreed with the finding in the report. See [Appendix D](#) for management's comments in their entirety.

#### **OIG Evaluation**

Although the report does not contain any recommendations, the U.S. Postal Service OIG considers management's comments responsive.

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# Appendix A: Additional Information

## Scope and Methodology

The scope of our audit included tracking and attributing cost for parcel-only processing facilities from FY 2019 through FY 2023.

To accomplish our objective, we:

- Interviewed Pricing and Costing management, personnel, and contractors at Postal Service's Headquarters to understand the cost attribution process.
- Consulted with the PRC's Office of Accountability & Compliance to further our understanding of the Postal Service's cost attribution process.
- Interviewed a representative from the mailing industry to discuss their perspective on the Postal Service's cost attribution process.
- Reviewed and analyzed quantitative and qualitative information about the Postal Service's cost attribution process including the
  - *Summary Description of USPS Development of Costs by Segments and Components* from FY 2019 through FY 2023; and
  - ACR and related folders of supporting documentation (e.g., ACR folders) from FY 2019 through FY 2023.
- In coordination with management, collected and analyzed MODS and WebEOR system data to identify parcel-only processing facilities.
- Reviewed the Postal Service's DFA plan including their first<sup>15</sup> and second year<sup>16</sup> progress reports.
- Conducted walkthroughs of how the following four ACR folders are prepared, reviewed, and approved: *Fiscal Year 2023 Cost Segments and Components Reconciliation to Financial Statements and Account Reallocations*; *Cost Segment 3 Cost Pools and Other Related*

*Information; CRA Model (Model Files, Cost Matrices, and Reports); and CRA "B" Workpapers.*

- Reviewed laws and regulations applicable to the Postal Service's cost attribution process.

We conducted this performance audit from February through September 2024 in accordance with generally accepted government auditing standards and included such tests of internal controls as we considered necessary under the circumstances. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. We discussed our observations and conclusions with management on September 11, 2024, and included their comments where appropriate.

In planning and conducting the audit, we obtained an understanding of the cost attribution internal control structure to help determine the nature, timing, and extent of our audit procedures. We reviewed management's controls over the cost attribution process and mitigating associated risks. Additionally, we assessed the internal control components and underlying principles, and we determined that the following two components were significant to our audit objective: control environment and control activities.

We developed audit work to ensure that we assessed these controls. Based on the work performed, we did not identify internal control deficiencies related to control environment and control activities that were significant within the context of our objective.

We assessed the reliability of management's list of parcel-only processing facilities as of March 2024 by independently reperforming its query to identify the facilities. We also interviewed knowledgeable officials

<sup>15</sup> U.S. Postal Service, *Delivering for America: First-year Progress Report*, April 7, 2022.

<sup>16</sup> U.S. Postal Service, *Delivering for America: Second-Year Progress Report*, April 2023.



from the Postal Service's Processing Operations group about how the data was collected. Furthermore, we assessed the reliability of MODS and WebEOR system data by performing logical tests of completeness, accuracy, and reasonableness on key fields. We determined that the data were sufficiently reliable for the purposes of this report.

### **Prior Audit Coverage**

The OIG did not identify any prior audits or reviews related to the objective of this audit within the last five years.

# Appendix B: Methodology for Calculating Unit Volume Variable Costs

Postal Service's methodology for calculating unit volume variable costs includes four steps:

1. Assign Postal Service's costs<sup>17</sup> to segments,<sup>18</sup> components, and pools
2. Identify each cost pool's cost driver to calculate its volume variable costs
3. Distribute each cost pool's volume variable costs to products
4. Calculate each product's unit volume variable costs

## 1. Assign Postal Service's Costs to Segments, Components, and Pools<sup>19</sup>

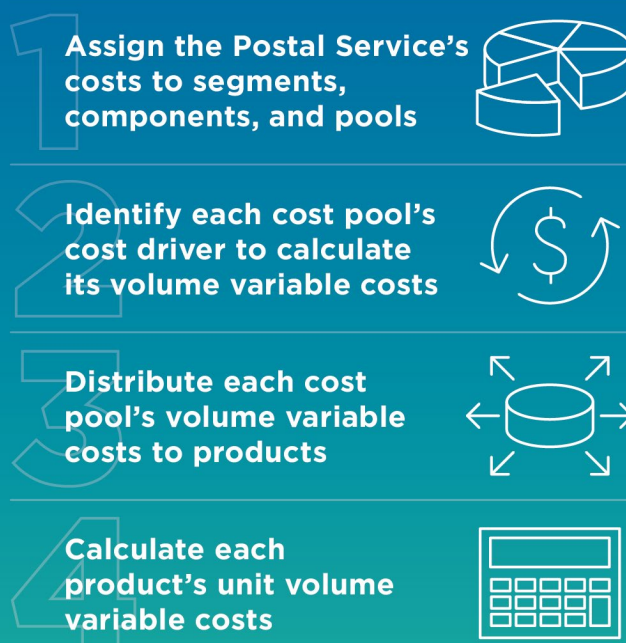
First, the Accounting Services group<sup>20</sup> is responsible for proposing to the Cost Attribution group<sup>21</sup> how to divide the Postal Service's costs into 17 segments, 217 components, and 483 pools based on its review of the nature and characteristics of the expenses recorded in the general ledger accounts within the accounting system. For example,

- **Cost Segments:** If a new account was created for expenses related to clerks and mailhandlers, then it would likely be assigned to cost segment 3, Clerks and Mailhandlers.
- **Cost Components:** If a new account was created for expenses related to clerks and mailhandlers' mail and/or parcel processing, then it would

likely be assigned to cost component 35, Mail Processing.<sup>22</sup>

- **Cost Pools:** If a new account was created for expenses related to clerks and mailhandlers' manual processing of parcels, excluding Priority Mail, then it would likely be assigned to a cost pool titled Manual Parcels – MODS.<sup>23</sup>

### The Postal Service's methodology for calculating unit volume variable costs includes four steps:



<sup>17</sup> Costs include all expense general ledger accounts recorded in the Postal Service's accounting system.

<sup>18</sup> The Postal Service established 17 of 20 active cost segments including: 1. Postmasters, 2. Supervisors and Technicians, 3. Clerks and Mailhandlers, 6. City Delivery Carriers – Office Activity, 7. City Delivery Carriers – Street Activity, 8. Vehicle Service Drivers, 10. Rural Carriers, 11. Custodial and Maintenance Services, 12. Motor Vehicle Service, 13. Miscellaneous Local Operations, 14. Transportation, 15. Building Occupancy, 16. Supplies and Services, 17. Research and Development, 18. Service-wide Personnel Benefits and HQ / Area Operations, 19. General Management Systems, and 20. Other Accrued Expenses (Service-wide). Cost segments 4, 5, and 9 are inactive.

<sup>19</sup> Aggregation of costs occurs from cost pools to cost components to cost segments.

<sup>20</sup> The Postal Service's Accounting Services group manages accounting processes and procedures in three Accounting Service Centers, Accounting Center Support (e.g., Accounting Help Desk, Accounting Service Management), and Headquarters Payroll.

<sup>21</sup> The Postal Service's Cost Attribution group develops attributable costs for postal products and services and for postal costs avoided when mailers choose to workshare.

<sup>22</sup> Cost Segment 3, Clerks and Mailhandlers, is divided into 13 cost components: (I) 35, Mail Processing, (II) 40, Window Services, (III) 824, Administrative Support and Miscellaneous, (IV) 476, Administrative Clerks, (V) 66, Claims and Inquiry, (VI) 421, Data Collection, (VII) 422, General Office and Clerical, (VIII) 423, Quality Control, (IX) 470, Training, (X) 41, Other, (XI) 424, Customer Care Centers, (XII) 477, Time and Attendance, and (XIII) 227, Product Specific.

<sup>23</sup> Cost component 35, Mail Processing, is divided into 52 cost pools, encompassing three major categories of activities: (1) automated and manual distribution of mail; (2) allied labor operations including platform operations, collection, and cancellation operations; mail preparation; manual bundle / tray / sack sorting; and dispatching; and (3) miscellaneous work including bulk mail acceptance, specialized operations for Priority Mail Express, Registered Mail, Business Reply Mail, and other mail processing support activities.

Second, the Postal Service's Cost Attribution group is responsible for reviewing and approving how the Accounting Services group proposed to divide the costs. If the Cost Attribution group does not approve, then it notifies the Accounting Services group with an explanation of why it did not approve and provides a counterproposal of how to divide the costs.

Third, the PRC ultimately determines how the Postal Service's costs should be divided into cost segments, components, and pools.

### Cost Pool Types

Once the Postal Service's costs have been divided into cost pools, then each cost pool is assigned to one of eight different types by the Cost Attribution group by answering a series of questions about the nature of the costs within the cost pools. A cost pool type is assigned to help the Postal Service determine the total attributable costs for each cost pool. For example,

- Cost pool types 1 and 2 are applicable to cost pools with fixed costs.
- Cost pool types 3 through 8 are applicable to cost pools with volume variable costs.
  - If a cost pool has no group – and product-specific costs and a constant marginal cost curve, then its attributable costs equal its volume variable costs (i.e., cost pool types 3, 5, and 7).
  - In contrast, if a cost pool has a cost elasticity<sup>24</sup> (also known as volume variability) between 0 and 1 with a variable marginal cost curve, then it has inframarginal costs that will be included in the attributable costs for that cost pool (i.e., cost pool types 4, 6, and 8).

The critical element that needs to be determined is the shape of the marginal cost curve for the cost pool, which establishes whether the cost pool has inframarginal costs that are included in a product's attributable costs. See [Appendix C](#) for

the Postal Service's decision tree to assign a cost pool type.

## 2. Identify Each Cost Pool's Cost Driver to Calculate its Volume Variable Costs

The Postal Service is responsible for identifying cost drivers for each cost pool to calculate its volume variable costs.

### Cost Driver

A cost driver is identified for each cost pool that reflects the essential activity of the pool. For example, the Postal Service uses employees' activity time in IOCS as the cost driver for the cost pool titled Manual Parcels – MODS.<sup>25</sup> Specifically, the costs in the pool are driven by the amount of time an employee is manually processing parcels.

### Calculation of Volume Variable Costs

The volume variable cost for each cost pool is then calculated by using the relationship between the pool's cost and its cost driver. Specifically, the Postal Service uses three primary methods for determining the elasticity of the relationship between a pool's cost and its cost driver:

- *Volume Variability / Distribution Key Method:* The elasticity of the relationship between a pool's cost and its cost driver is estimated using one of three approaches (1) econometric modeling, (2) functional analysis, or (3) operational assumption. This elasticity measures the percentage response in cost from a given percentage increase (or decrease) in the cost driver, which is the key parameter in determining the volume variable cost for each cost pool. Once this elasticity is estimated, it is multiplied by total costs with the result being volume variable costs.

If there is reason to believe that the relationship between mail and parcel volume and the cost driver is not linearly homogenous, then that relationship can be investigated by the Postal Service using the Constructed Marginal Cost Method.

<sup>24</sup> The cost elasticity of a postal activity (e.g., processing, transportation, or delivery) is the marginal (or variable) costs as a share of total costs.

<sup>25</sup> IOCS provides a mechanism for attributing clerk, mailhandler, and supervisor labor costs for activities performed inside the Postal Service's processing facilities using MODS work operation codes.

- *Constructed Marginal Cost Method*: This method was designed to produce marginal costs because it does not require an assumption about the relationship between mail and parcel volume and the cost driver. Like the Volume Variability / Distribution Key Method, the elasticity of the relationship between a pool's cost and its cost driver is estimated. In addition, elasticity of the relationship between mail and parcel volume and the cost driver is estimated. Once these elasticities are estimated, they are multiplied by total costs with the result being volume variable costs.
- *Piggyback Method*: A support cost component is assumed<sup>26</sup> to be as volume variable as another primary cost component. For example, volume variable costs for supervisors' labor piggyback those of the supervised personnel.

For example, the Postal Service uses the Volume Variability / Distribution Key Method to calculate volume variable costs for the cost pool titled Manual Parcels – MODS. Specifically, econometric modeling is used to estimate the elasticity of the relationship between clerks and mailhandlers' manual parcel processing costs (i.e., costs) and employees' activity time (i.e., cost driver). The elasticity can then be multiplied by the pool's total costs to calculate its volume variable costs.

### 3. Distribute Each Cost Pool's Volume Variable Costs to Products

The Postal Service's three primary methods to calculate volume variable costs for each cost pool are also used for the assignment of volume variable costs to products.

- *Volume Variability / Distribution Key Method*: The distribution of volume variable costs to products is performed using a "distribution key." The key is typically a measurement of the proportions of the cost driver used by products. Products are assigned costs in the same proportions as their share of the cost driver.

- *Constructed Marginal Cost Method*: Distribution of volume variable costs to products does not depend upon assigning proportions of the cost driver to products, but rather upon estimation of the elasticity of the relationship between mail volume and the cost driver.
- *Piggyback Method*: Distribution of volume variable costs to products is in the same proportions as the primary cost component.

For example, the Postal Service uses the Volume Variability / Distribution Key Method to distribute volume variable costs for the cost pool titled Manual Parcels – MODS. Specifically, if USPS Ground Advantage parcels manually processed by employees account for 80 percent of the employees' activity time, it would receive 80 percent of the Manual Parcels – MODS cost pool's volume variable costs.

### 4. Calculate Each Product's Unit Volume Variable Costs

Finally, the Postal Service calculates the total volume variable costs for each product by summing the volume variable costs for that product across cost components. Unit volume variable costs are then calculated by dividing a product's total volume variable costs by its originating volume.

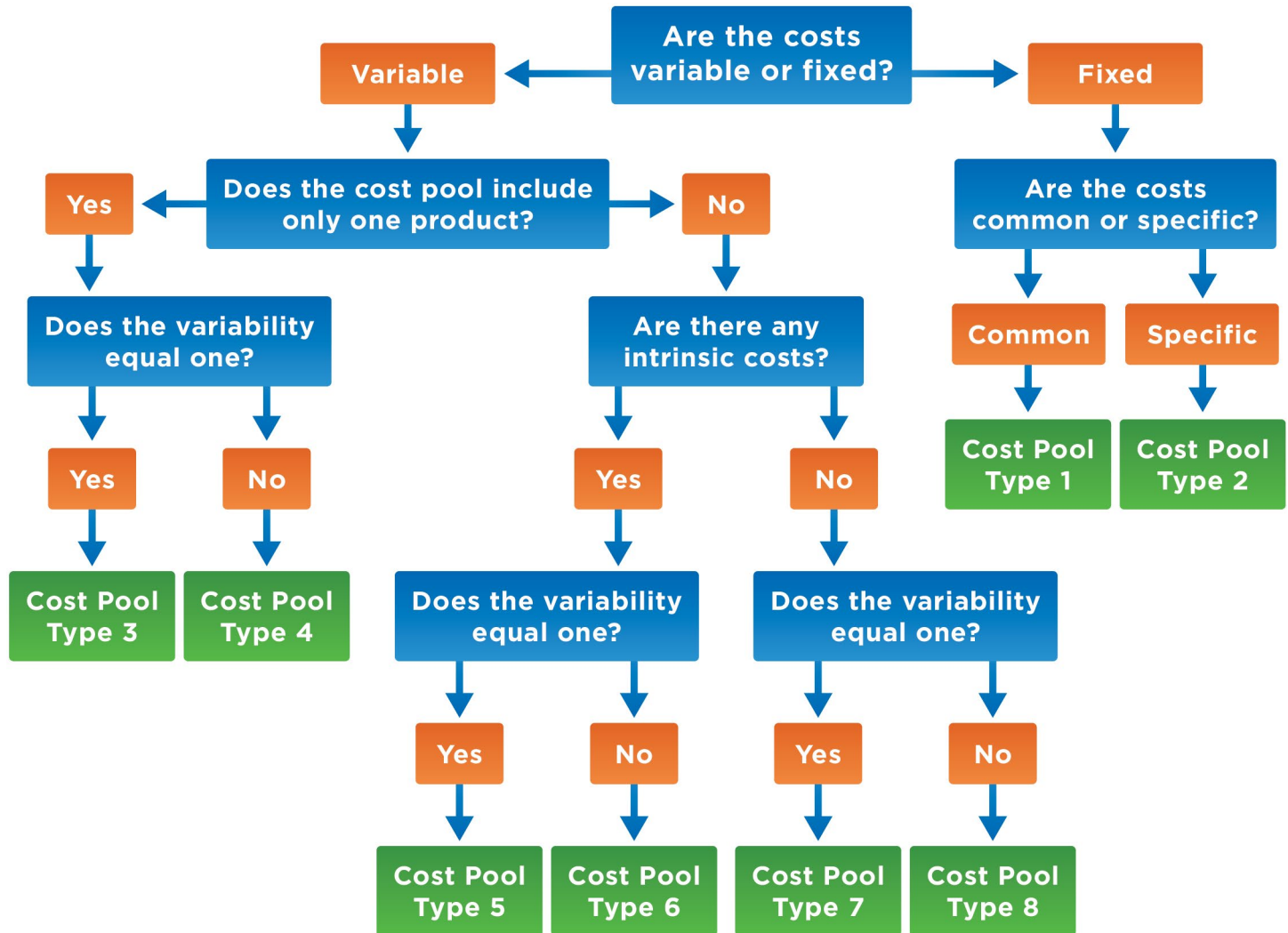
<sup>26</sup> The Postal Service noted that the reasonableness of these implicit assumptions is an empirical question, and the scope of activities included in the piggyback method must be limited in order to make this treatment appropriate.



# Appendix C: Decision Tree to Assign a Cost Pool Type

The Postal Service uses the following decision tree to assign a cost pool type, which helps determine a cost pool's total attributable costs (i.e., volume variable, group – and product-specific fixed, inframarginal), as noted in Figure 4.

Figure 4. Decision Tree to Assign a Cost Pool Type



Source: Developed by the USPS OIG based on the FY 2023 *Summary Description of USPS Development of Costs by Segments and Components*; and testimony on behalf of the U.S. Postal Service (USPS-T-22) as noted in Docket No. R2000-1.

# Appendix D: Management's Comments



September 16, 2024

JOHN CIHOTA  
DIRECTOR, AUDIT SERVICES

SUBJECT: Management Response: U.S. Postal Service's *Cost Attribution for Parcel-only Processing Facilities* (Project Number 24-075-DRAFT)

Thank you for providing the Postal Service an opportunity to review and comment on the finding contained in the draft audit report, 24-075 DRAFT.

**Finding:** Attributing Postal Service Costs to Products as the Redesigned Network is Implemented.

"As the Postal Service implements its DFA plan, it should continue to identify opportunities to improve the quality, accuracy, and/or completeness of its data (or analysis of such data) contained in annual periodic reports to the PRC."

**Management Response:**

Management agrees with this finding. Management is committed to updating its cost models in accord with current operating conditions, so that accurate product cost estimates are available to meet statutory requirements and to make smart business decisions beneficial to the organization. As such, Management annually initiates several proposals to consider changes to analytic principles before the Commission.

These proposals are introduced by the Postal Service because Management understands the importance of identifying opportunities to improve the data included in its periodic reports that will also support the mission of the organization. A comprehensive list of proposals introduced by the Postal Service to change accepted analytical principles is presented in the Annual Compliance Report (ACR) in the preface to ACR Folder 9.

Additionally, in several dockets, Management affirmed its preference to using operational data in its cost models rather than relying on special field data collection efforts. Operational data are defined as data routinely captured during the activities associated with accepting, processing, delivering, or transporting mail. There are three primary reasons for its preference for operational data compared with special field data collection efforts: 1) typically, such use results in substantially larger datasets that improve econometric or other analyses; 2) such use captures contemporaneous data that better

reflect the current operating environment; and, most importantly 3) such use provides superior, more accurate data.

In FY 2024, for example, the Commission approved two substantial changes in analytical costing principles proposed by the Postal Service, one associated with rural carriers and the other with city carrier street activities. The treatment of rural carrier activities was presented in Docket No. RM2024-2, Proposal Eight and the treatment of city carrier street activities was presented in Docket No. RM2022-3, Proposal One. These two proposals embody the commitment Management has made to prioritize continuous improvement in its periodic reporting and expects further advancements as the processing, transportation, and delivery networks evolve.

E-SIGNED by SHARON.D OWENS  
on 2024-09-17 10:20:33 EDT

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Sharon Owens  
Vice President, Pricing & Costing

*cc: Corporate Audit & Response Management*

# OFFICE OF INSPECTOR GENERAL

UNITED STATES POSTAL SERVICE



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