Office of Inspector General | United States Postal Service



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UNITED STATES POSTAL SERVICE

# Demographic Trends in Mail Access Changes and Service, 2016-2020

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# **Executive Summary**

The U.S. Postal Service's mission is to provide the nation with reliable, affordable, and universal mail service. The Postal Service is unique because it must ensure a minimum level of service at an affordable price for all parts of the country, yet also operate like a business.

The Postal Service provides multiple types of mail access for customers to deposit mail, such as collection boxes and mailboxes. The agency also provides retail services to customers through USPS-managed post offices, Contract Postal Units, and usps.com. A collection box can be relocated or removed for several reasons, including low usage and changing community needs. In addition, the Postal Service has considerable discretion to determine the location of postal facilities. However, the agency cannot close a post office just because it operates at a deficit or due to a factor that reflects unreasonable discrimination or preference for one type of mail user over another. Postal Service policies guiding changes in mail access are consistent nationwide, with some decisions made by local management. Despite the consistency in policy language, changes made to mail access points may affect geographic locations or demographic groups differently.

The U.S. Postal Service Office of Inspector General (OIG) assessed changes in the geographic distribution of collection points and retail sites, and the extent to which these changes display patterns that may have disproportionately affected populations in locations with specific racial, ethnic, and income characteristics.

In our analysis of mail access changes, we focused on collection boxes and USPS-managed post offices. Specifically, the OIG reviewed data on collection box removals and post office closures. We also sought historical data on changes in post office retail hours. However, there were challenges with data reliability and availability, and this limited the analysis we could perform. Our analysis of collection box removals with the data available indicated that some geographic locations or demographic groups may experience more collection box removals than others. However, without more accurate data, it is difficult to conduct further analysis of the effect these mail access changes have on different communities.

We also identified demographic trends in service performance scores and the volume of negative customer feedback across the U.S. Our analysis spanned fiscal year (FY) 2016 to FY 2020. The OIG's primary research methods involved reviewing relevant postal policies, interviewing postal management, running a regression model, and conducting spatial analysis for five cities — Atlanta, Chicago, Houston, Los Angeles, and Philadelphia.

Nationally, our regression analysis revealed that three-digit ZIP Codes with relatively more white residents experienced, on average, better service performance. In contrast, in ZIP Codes with more Hispanic residents, service performance was lower on average. Additionally, the analysis indicated income was negatively correlated with service performance scores, suggesting that wealthier three-digit ZIP Codes had worse service performance scores than lower-income ZIP Codes on average. Our spatial analysis of customer feedback did not produce consistent results across the five cities. While the OIG focused on customer feedback, we understand there are multiple ways to measure mail access changes.

Our analysis showed that although national postal policies are consistent, their impact on different demographic groups can be unequal. Postal Service policies do not require consideration of a community's demographic characteristics — such as race, ethnicity, and income — when implementing changes in mail access. Nor are demographic analyses conducted related to service. In the absence of such policies and analyses, routine processes that are designed to be implemented in a neutral manner can inadvertently affect some demographic groups more than others. If the Postal Service incorporated demographic data into their analysis, management would be better informed about the potential unintended consequences of their decisions. As Postal Service policies are established nationally and intended to consistently serve the public good, the agency could enhance its processes to consider the impact of its business decisions on the various demographic groups it serves.

### What the OIG Recommends:

- Recommendation 1: We recommend the Vice President, Enterprise Analytics, the Vice President, Delivery Operations, and the Vice President, Retail & Post Office Operations conduct a mail access study:
  - a. To identify opportunities to enhance relevant data availability and quality used in decision-making related to access changes.
  - b. To determine whether demographic factors should be included in decisionmaking related to access changes.

# **Observations**

## Introduction

The U.S. Postal Service seeks to provide a universally similar postal experience to residents across the country, no matter who they are or where they live. Postal Service policies regarding changes in mail access — such as collection box removals or post office closures — are established nationally and implemented locally.<sup>1</sup> At times, changes in mail access may have a negative or unintended impact on customers.

## **Background: Providing Public Service**

Before we explore the question of postal access changes and service, it is illustrative to consider the Postal Service's Universal Service Obligation (USO) concerning access, as well as other government services and private companies that have made efforts to provide equitable service and access across demographic groups. However, as demonstrative as these examples are, there are no perfect comparisons to the Postal Service in government or business.

The Postal Service is unique because it provides service nationally and has a USO, which is a collection of legal requirements that ensures all postal customers receive a minimum level of service at an affordable price.

The Postal Service is also expected to be financially self-sustaining and operate economically and efficiently. The balance between covering costs while fulfilling the USO leads the agency to operate like a business and a government service. It acts like a business when it decides where to remove collection boxes due to low usage, but like a government service, as it must deliver to every address six days per week, regardless of cost or strain.

#### **Disparities in Access**

Businesses' products and services are not equally available to all demographic groups across the U.S. For example, locations without adequate access to healthy food and banking services generally have some of the same demographic characteristics we observed in our analysis of service changes. The federal government has created programs, policies, or incentives to try to address these imbalances.

As of 2015, more than 5.6 percent of the U.S. population lived in food deserts, areas that lack sufficient access to grocery stores, especially in low-income locations.<sup>2</sup> People who live in food deserts are more likely to experience food insecurity, wherein obtaining food is uncertain or not possible at some time during the year. The location of food deserts reflects geographic disparities related to race, ethnicity, and income. In 2019, 19.1 percent of Black households and 15.6 percent of Hispanic households experienced food insecurity. In contrast, only 7.9 percent of white households experienced food insecurity.<sup>3</sup> Food deserts may pose a particular challenge to lower-income residents who may not have a car to travel to distant supermarkets or grocery stores.<sup>4</sup> To address food insecurity, the federal government has implemented programs such as the Supplemental Nutrition Assistance Program (SNAP); the Special Supplemental Nutrition Program for Women, Infants and Children; and the Emergency Food Assistance Program. The U.S. Department of Agriculture (USDA) recently began piloting a program to allow SNAP beneficiaries to order food online.<sup>5</sup>

Inequities have also emerged as banks across the country have been closing branches, particularly in rural locations. Between 2012 and 2017, the majority of counties in the U.S. lost bank branches.<sup>6</sup> Rural counties were deeply affected and, on average, the rural counties hit the hardest had a higher percentage of

<sup>1</sup> A collection box is "a four-footed, free-standing, blue-painted street box that is used by the public to deposit outgoing prepaid letters, flats, and lightweight parcels." U.S. Postal Service, *Publication 32 – Glossary of Postal Terms*, updated July 2013.

<sup>2</sup> Allison E. Karpyn, Danielle Riser, Tara Tracy, Rui Wang, and Ye Shen, "The Changing Landscape of Food Deserts," UNSCN Nutrition. No. 44 (Summer 2019): 46–53, https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC7299236.

<sup>3</sup> USDA, "Interactive Charts and Highlights," https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/interactive-charts-and-highlights.

<sup>4</sup> Food Empowerment Project, "Food Deserts," https://foodispower.org/access-health/food-deserts.

<sup>5</sup> USDA, "FNS Launches the Online Purchasing Pilot," https://www.fns.usda.gov/snap/online-purchasing-pilot.

<sup>6</sup> Board of Governors of the Federal Reserve System, "Perspectives from Main Street: Bank Branch Access in Rural Communities," November 2019, https://www.federalreserve.gov/publications/files/bank-branch-accessin-rural-communities.pdf, p. 1.

Black residents and a lower median household income compared to all rural counties.<sup>7</sup> Residents affected by branch closures reported "increased costs and reduced convenience in accessing financial services," according to the Board of Governors of the Federal Reserve System.<sup>8</sup> The federal government, through the Community Reinvestment Act, encourages banks to provide lending services in low – and moderate-income neighborhoods.<sup>9</sup>

Disparities in access related to banking can also be seen in federal programs. The Coronavirus Aid, Relief, and Economic Security (CARES) Act, enacted in March 2020, established the Paycheck Protection Program (PPP) to help small businesses cope with the negative economic impact of the COVID-19 pandemic by providing funds they could use to pay their employees.<sup>10</sup> The PPP requires small businesses to request a loan through a bank. In general, banks processed loan requests from existing customers faster than new customers.<sup>11</sup> Small businesses in ZIP Codes with predominantly Black or Hispanic residents were least likely to have existing relationships with banks. As a result, small businesses in majority-white ZIP Codes waited 24 days on average to receive a PPP loan while majority-Black and majority-Hispanic ZIP Codes waited seven and six days longer, respectively.<sup>12</sup> To address these disparities, the U.S. Small Business Administration changed how it implemented the PPP, establishing a 14-day exclusive loan application period for businesses with under 20 employees and revising funding formulas for sole proprietors, independent contractors, and self-employed individuals. These changes resulted in a 60 percent increase in

the share of funding to business with fewer than 10 employees and a 40 percent increase in funding to minority-owned financial institutions and those dedicated to serving low-income communities.<sup>13</sup>

#### **Disparities in Service**

Like with access to retail establishments, there is no perfect comparison to the Postal Service when it comes to providing universal service. However, there are informative comparisons related to Internet service and its impact on education and vaccine provision during the COVID-19 pandemic.

On average, the percentage of Black households with access to computers and an Internet connection in 2018 was 5 percentage points lower than the overall average for each state. Hispanic households experienced a similar gap in access.<sup>14</sup> In addition, only 65 percent of households making less than \$25,000 per year used the Internet in 2019.<sup>15</sup> Lack of access to the Internet has been especially detrimental during COVID-19. Since Black and Hispanic children are less likely than white children to live in households that have home Internet access, Black and Hispanic students had a harder time switching to remote learning necessitated by the pandemic.<sup>16</sup> Black and Hispanic students were also more likely than white students to attend schools that made the switch to remote learning.<sup>17</sup>

To address problems with accessing remote learning, some school districts have provided their students with wireless Internet hot spots throughout the district or

<sup>7</sup> Ibid, p. 12.

<sup>8</sup> Ibid, p. 2.

<sup>9 &</sup>quot;Community Reinvestment Act (CRA)," Board of Governors of the Federal Reserve System, https://www.federalreserve.gov/consumerscommunities/cra\_about.htm.

<sup>10</sup> U.S. Department of the Treasury, "The CARES Act Provides Assistance to Small Businesses," https://home.treasury.gov/policy-issues/cares/assistance-for-small-businesses.

<sup>11</sup> United States District Court for the District of Maryland, "Profiles, Inc. v. Bank of America Corporation, et al.," April 2020, https://www.courthousenews.com/wp-content/uploads/2020/04/boa-brief.pdf, p. 2.

<sup>12</sup> Sifan Liu and Joseph Parilla, "New Data Shows Small Businesses in Communities of Color Had Unequal Access to Federal COVID-19 Relief," Brookings Institution, September 17, 2020, https://www.brookings.edu/ research/new-data-shows-small-businesses-in-communities-of-color-had-unequal-access-to-federal-covid-19-relief.

<sup>13</sup> U.S. Small Business Administration," SBA Prioritizes Smallest of Small Businesses in the Paycheck Protection Program," February 22, 2021, https://www.sba.gov/article/2021/feb/22/sba-prioritizes-smallest-smallbusinesses-paycheck-protection-program.

<sup>14</sup> Digital Planet, "Digital Injustice: Disparities in Digital Access across the US and How they Disproportionately Hurt the Black and Latinx Communities," Tufts University, https://sites.tufts.edu/digitalplanet/digital-injusticecovid19/.

<sup>15</sup> Evelyn Remaley, "NTIA Data Reveal Shifts in Technology Use, Persistent Digital Divide," National Telecommunications and Information Administration, June 10, 2020, https://www.ntia.doc.gov/blog/2020/ntia-data-reveal-shifts-technology-use-persistent-digital-divide.

<sup>16</sup> National Center for Education Statistics, "Table 702.12. Percentage distribution of children ages 3 to 18, by whether they have home internet access, whether they have access through computer or only smartphone, and selected child and family characteristics: 2016 and 2018," 2019, https://nces.ed.gov/programs/digest/d19/tables/dt19 702.12.asp.

<sup>17</sup> Ember Smith and Richard Reeves, "Students of color most likely to be learning online: Districts must work even harder on race equity," Brookings Institution, September 23, 2020, https://www.brookings.edu/blog/how-we-rise/2020/09/23/students-of-color-most-likely-to-be-learning-online-districts-must-work-even-harder-on-race-equity/.

for use at home.<sup>18</sup> To expand access to the Internet across the nation, the Federal Communications Commission's Universal Service Fund provides subsidies to private companies, such as telephone and Internet service providers to offer more affordable rates to low-income customers, schools and libraries, and residents in rural or Tribal areas.<sup>19</sup>

Racial inequities, driven by gaps in access to technology, have also emerged in the distribution of COVID-19 vaccines. For example, senior Black and Hispanic residents are more likely to lack access to computers with an Internet connection, limiting these residents' access to vaccines. In cities like Washington, D.C., relying on the Internet to distribute information about vaccine availability and to schedule appointments left out poorer residents while favoring wealthier ones.<sup>20</sup> Neighborhoods in Washington, D.C., with a higher proportion of Black residents — who experienced higher rates of death due to COVID-19 — had far lower vaccination rates than parts of the city with a higher proportion of white residents.<sup>21</sup> The city government of Washington, D.C., attempted to address disparities in vaccine access through initiatives reaching residents door-to-door and outreach at churches.<sup>22</sup> Similar racial disparities have emerged in New York City.<sup>23</sup> In New York City, the state government established pop-up vaccination sites to make vaccines more accessible to underserved communities.<sup>24</sup>

As the examples of disparities in access and service demonstrate, some demographic groups are historically underserved in multiple ways. Government agencies and other organizations have reacted to the disparities mentioned above with legislation and programs to try to make access and service more equitable, regardless of race, ethnicity, or income.

#### **Purpose and Methodology**

The U.S. Postal Service Office of Inspector General (OIG) sought to understand the extent to which changes in mail access and differences in service affect locations with varying demographic characteristics for fiscal year (FY) 2016 to FY 2020.<sup>25</sup> While the Postal Service is required to provide services universally, the provision of those services may not result in comparable postal access and service nationwide. Unless stated otherwise, all analysis was completed at the five-digit ZIP Code level.<sup>26</sup> The objectives for our research were:

- 1. Assess changes in the geographic distribution of collection points and retail sites, and the extent to which these changes display patterns that may have disproportionately affected populations in locations with specific racial, ethnic, and income characteristics.
- 2. Identify demographic trends in service performance scores and the volume of negative customer feedback across the U.S.

In addition to interviews with Postal Service management and a review of Postal Service policies, we conducted two separate types of data analysis: a regression model and spatial analysis. Both techniques examined the relationship between ZIP Codes' demographic characteristics and mail access changes or service.<sup>27</sup> As discussed later in this paper, data reliability and availability

<sup>18</sup> Bethany Gross and Alice Opalka, "Too Many Schools Leave Learning to Chance During the Pandemic," Center on Reinventing Public Education, June 2020, https://www.crpe.org/sites/default/files/final\_national\_ sample\_brief\_2020.pdf, p. 8.

<sup>19</sup> Federal Communications Commission, "Universal Service," https://www.fcc.gov/general/universal-service.

<sup>20</sup> Lola Fadulu and Michael Brice-Saddler, "D.C.'s vaccine disparities are as big as ever. Here's why poor Black areas are so far behind," *The Washington Post,* March 25, 2021, https://www.washingtonpost.com/local/dc-vaccine-disparities/2021/03/25/f9661460-8126-11eb-81db-b02f0398f49a\_story.html.

<sup>21</sup> Ibid.

<sup>22 &</sup>quot;Mayor Bowser Announces that Vaccination Appointments Will Open for Child Care Providers and Charter and Independent School Teachers Every Monday at Noon and 7 pm," Office of the Mayor – Government of the District of Columbia, February 7, 2021, https://mayor.dc.gov/release/mayor-bowser-announces-vaccination-appointments-will-open-child-care-providers-and-charter.

<sup>23</sup> Mihir Zaveri, "New ZIP code data reflects disparities in N.Y.C.'s vaccination effort, officials say," *The New York Times,* February 16, 2021, https://www.nytimes.com/2021/02/16/nyregion/nyc-covid-vaccine-zip-codes. html.

<sup>24 &</sup>quot;Governor Cuomo Announces 14 Community-Based Pop-Up Vaccination Sites Coming Online This Week to Vaccinate More Than 4,000 New Yorkers," Office of the Governor – Government of New York State, March 11, 2021, https://www.governor.ny.gov/news/governor-cuomo-announces-14-community-based-pop-vaccination-sites-coming-online-week-vaccinate.

<sup>25</sup> During the last several months of our period of analysis, the Postal Service dealt with issues of employee availability due to the novel coronavirus disease pandemic (COVID-19) and preparations for the 2020 general election.

<sup>26</sup> A five-digit ZIP Code is associated with the post offices and delivery stations that serve mailing addresses in a given geographic area. An average five-digit ZIP Code area has an estimated population of 10,276.

<sup>27</sup> See Appendix A for more details on the objectives, scope, and methodology.

challenges prevented further analysis of retail sites. To highlight the benefits of using demographic data, we present results from analysis of data on collection box removals, service performance scores, and customer feedback.

#### **Regression Model**

The OIG worked with a contractor to conduct a regression analysis. When creating a regression model, analysts must decide what variables to focus on, what variables to control for, and what unit of measurement to use when examining those variables. Our regression analysis, therefore, required us to make these decisions; we focused on variables that represent ZIP Codes' mail access changes and service. We also focused on variables representing demographic characteristics related to ethnicity, race, and median household income.<sup>28</sup> Specifically, we used a variable for Hispanic origin to represent ethnicity and variables for Black (non-Hispanic) and white (non-Hispanic) to represent race. This approach ensured we did not double count any residents; for example, someone who identified as Hispanic and Black was counted as Hispanic and not Black.

We also decided to control for some of the ZIP Codes' other demographic characteristics. Control variables are not pertinent to the goals of the analysis but are controlled because they could factor into outcomes. Our control variables were age, state, total population, urbanization level, and educational attainment.

#### **Spatial Analysis**

Next, we conducted spatial analysis, which involved mapping specific variables and determining how they relate.<sup>29</sup> The spatial analysis used nationwide data and identified statistically significant clusters of ZIP Codes with high numbers of events, called hot spots. For example, the software would identify a ZIP Code as a hot spot for customer feedback submissions if it and neighboring ZIP Codes

featured a large, statistically significant number of submissions. Once we identified these hot spots, we overlayed demographic data, such as ethnicity, race, and median household income. Our spatial analysis used the same demographic variables as our regression analysis.

We focused our analysis on trends within five cities — Atlanta, Chicago, Houston, Los Angeles, and Philadelphia — to assess potential patterns in mail access changes and service.<sup>30</sup> Before performing any spatial analysis, we judgmentally selected these cities to ensure our sample represented the demographic, regional, and partisan diversity of the United States.

# **Measuring Mail Access Changes and Service**

The Postal Service offers a variety of services, such as delivery, collection, and retail. Customers may experience differences in changes to these services or the quality of these services. The OIG examined the role postal policies play in shaping these customer experiences, referred to herein as mail access changes and service. We also performed some analyses to measure whether policies that are neutral on their face may lead specific demographic groups to disproportionately experience certain mail access changes and differences in service.

#### **Mail Access Changes**

According to the U.S. Code, the USO requires "ready access to essential postal services" that is "consistent with reasonable economies."<sup>31</sup> The concept of "ready access" includes not only the time and distance needed to get to the location where postal services are available, but time spent at that location obtaining the desired services. "Essential postal services" range from postal products, to mail acceptance points — such as collection boxes — to access to letter carriers who accept mail for posting, to easily accessible information.<sup>32</sup>

<sup>28</sup> For our analysis, we obtained data for race, ethnicity, and income as of 2019 from Esri Business Analyst, which sourced these data from the U.S. Census Bureau. The data included Census-defined variables for Hispanic population and non-Hispanic population by race.

<sup>29</sup> We used ArcGIS Pro, a desktop geographic information system application, to identify the patterns in the geographic distribution of mail access changes and service described in this paper.

<sup>30</sup> We used metropolitan statistical areas, as defined by the Office of Management and Budget, to determine city boundaries.

<sup>31 39</sup> U.S.C. 403(b)(3).

<sup>32</sup> Postal Regulatory Commission, Report on Universal Service and the Postal Monopoly, December 19, 2008, p. 19, https://www.prc.gov/docs/61/61628/USO%20Report.pdf.

The Postal Service enjoys considerable discretion to determine the nature and location of postal facilities by which access will be provided. However, the agency cannot close a post office just because it operates at a deficit or due to a factor that reflects unreasonable discrimination or preference for one type of mail user over another.<sup>33</sup>

Customers can deposit mail and use retail services through various forms of mail access. For example, a customer can send a letter using a mailbox, Cluster Box Unit, or collection point such as a collection box or post office lobby drop.<sup>34</sup> In addition, a customer can access retail services at Postal Service-managed post offices, Contract Postal Units, Automated Postal Centers, and usps.com.<sup>35</sup> For the analysis of mail access in this paper, the OIG focused on collection boxes and Postal Service-managed post offices. As discussed later in this paper, further analysis examining other forms of mail access could be beneficial.

#### **Collection Box Removals**

Nationally, the Postal Service maintained 140,845 collection boxes at the end of FY 2020. Between FYs 2016 and 2020, the agency removed over 1,000 collection boxes per year. The Postal Service has policies governing the installation and removal of collection boxes, including a requirement that local management annually test the amount of mail that customers deposit in each collection box.<sup>36</sup> Using their handheld scanners, carriers record the estimated mail volume each day during the two-week testing period. Based on the test results, local management may relocate or remove collection boxes with low usage.<sup>37</sup> The Postal Service uses 25 pieces per day in residential areas and 100 pieces per day in business areas as thresholds for low usage. Although collection box usage

primarily influences collection box location, local management may consider other factors, such as community needs.

Area – and district-level management oversees the process for removing collection boxes, which postal headquarters outlined in national standards.<sup>38</sup> The process begins with local management's decision on whether to remove a collection box. Local management must formally submit the removal request to district management, which may ask for additional information before approving or denying the request. If district management approves the removal request, area management must review this request. If the removal request is approved, local management must issue a 30-day public notice of the removal, unless the box qualifies for immediate removal. Reasons for immediate removal include vandalism or an unsecure location. A box may also be removed to repair damage or otherwise improve its appearance. Field maintenance removes the collection box upon approval from area management. Neither national policies nor standard operating procedures require accounting for demographic characteristics such as race, ethnicity, and income when deciding to remove a collection box. In addition, the Postal Service does not provide guidance on how local management might best account for demographic characteristics.

We assessed trends in collection box removals using data from the Postal Service's Collection Point Management System (CPMS).<sup>39</sup> However, issues of data reliability limited the regression and spatial analysis we could perform. CPMS records removals approved by area managers, but it does not track if a collection box is removed from one place and then moved to another location. CPMS also does not contain information about why collection boxes were removed. While area management must maintain records documenting

<sup>33 39</sup> U.S.C. 101(b) and 39 U.S.C. 403(c).

<sup>34</sup> A Cluster Box Unit is a centralized grouping of individual locked compartments, and it may have a compartment into which mail can be deposited. U.S. Postal Service, *Publication 32 – Glossary of Postal Terms*, updated July 2013. A lobby drop is a wall slot or collection box inside a post office lobby. U.S. Postal Service, "Section II: Managing Collection Data," in *Collection Point Management System: Admin User's Manual*, updated October 31, 2018.

<sup>35</sup> A Contract Postal Unit is a facility operated by a contractor that provides retail postal services. U.S. Postal Service, *Publication 32 – Glossary of Postal Terms*, updated July 2013. From a customer's perspective, Postal Service-managed post offices may appear indistinguishable from Contract Postal Units. Automated Postal Centers are self-service mailing kiosks that handle Postal Service retail operations. U.S. Postal Service, "15-2 Automated Postal Centers," in *Handbook PO-209 – Retail Operations Handbook*, updated October 2012.

<sup>36</sup> The National Service Standards for Collection Service in Chapter 3 of the Postal Operations Manual were last revised in December 2015. Policies governing removals at the national level have existed at least since the 1970s.

<sup>37</sup> Local management must consider relocating collection boxes before requesting to remove them.

<sup>38</sup> U.S. Postal Service, "Chapter 3 Collection Service — National Service Standards," in Postal Operations Manual: Issue 9, July 2002, updated November 2021, pp. 140-144.

<sup>39</sup> We did not assess whether postal management followed its policies for removing collection boxes.

the reason for removals, this information is not centralized in CPMS, preventing analysis of whether specific communities experience removals for certain reasons more than others. In addition, some CPMS entries do not differentiate between the locations of multiple collection boxes at the same address. For example, multiple collection boxes may be listed at the same address but physically located on different sides of a building, parking lot, or city block. Alternatively, multiple collection boxes may also be listed at the same address and physically located side-by-side. In the former case, removing a collection box represents a greater change to mail access than the latter.

Our analysis of collection box removals with the data available indicated that some geographic locations or demographic groups may experience more collection box removals than others.<sup>40</sup> However, without more accurate data, it is difficult to conduct further analysis of the effect these mail access changes have on different communities. The data reliability issues prompted the OIG to pursue separate work reviewing CPMS.

#### Post Office Closures and Retail Hours

Nationally, the Postal Service managed 31,330 post offices at the end of FY 2020, and the number of post offices remained relatively steady between FYs 2016 and 2020. As authorized by federal statute, the Postal Service has the power "to determine the need for post offices, postal and training facilities and equipment, and to provide such offices, facilities, and equipment as it determines are needed."<sup>41</sup> The Postal Service, however, must maintain a "maximum degree of effective and regular" service to communities, even if the post offices serving these locations lack the revenue to cover their expenses.<sup>42</sup> This authority empowers the Postal Service to set policies related to closing post offices and changing retail hours. Management is not provided guidance on whether or how to account for demographic characteristics when making these changes.

During our review, we determined that improvements to data are needed to accurately track when post offices close or retail operating hours change. The Change Suspension Discontinuance Center is intended to track post office closures — also referred to as discontinuances. However, this postal database does not retain an accurate log of discontinuances, with dates for actual closures versus final closures. Specifically, we initially requested a data set of all post office discontinuances between FYs 2016 and 2020. In the data set the Postal Service provided from the Change Suspension Discontinuance Center, the discontinuance dates ranged from July 12, 2017, to July 13, 2019. Eighty-five percent of the discontinuance dates listed — 304 of the 358 — took place on July 12, 2017, suggesting these data are unreliable. Postal management indicated some of these post offices may have physically closed as far back as 2012, but these discontinuances were recorded in the Change Suspension Discontinuance Discontinuance Center representation and the set of the Change Physically closed as far back as 2012, but these discontinuances were recorded in the Change Suspension Discontinuance Center years later.

In addition, the Facilities Database — a postal database that records retail operating hours — does not contain historical data tracking changes in these hours. Currently, when retail operating hours are updated in the Facilities Database, the previous historical data are overwritten.<sup>43</sup> The Postal Service's most recent optimization efforts have focused on reducing retail hours rather than closing post offices. Retaining more historical data could provide management additional insights in the decision-making process for potential retail operating hour changes.

#### **Measures of Service**

Customers residing in some locations may experience greater delays in mail delivery than those in other locations, resulting in service disparities. The Postal Service uses various measures of service that include service performance scores and customer feedback surveys. A service performance score for a given geographic area indicates the percentage of mail in that area that arrived at its intended destination on time. For this paper, the OIG analyzed First-Class Mail

<sup>40</sup> Our analysis did not account for the proximity of nearby collection boxes when one is removed.

<sup>41 39</sup> U.S.C. § 404(a)(3).

<sup>42 39</sup> U.S.C. § 101(b).

<sup>43</sup> Postmasters submit requests to change retail operating hours, which must be approved by the district and area offices. The area office must notify Headquarters Retail Operations at least 30 days before the change takes effect. U.S. Postal Service, "Chapter 5. Schedules," in *Handbook PO-209 – Retail Operations Handbook, October 2012*, p. 20.

service performance scores from the External First-Class Measurement System (EXFC) from FY 2016 to FY 2018 and the Service Performance Measurement (SPM) system from FY 2019 to FY 2020. To get a more granular perspective on the service that customers experienced, we examined customer feedback from eCustomerCare (eCC) and Customer 360 (C360), the Postal Service's customer relationship management systems, on mail delays and post office wait times.

#### Service Performance Scores

The Postal Service reports the percentage of mail that arrives on time based on the service standard for each type of mail. From June 1990 to October 2018, the Postal Service measured service performance for First-Class Mail using EXFC, then switched to the SPM system, which remains in use.<sup>44</sup> We conducted our analysis of service performance at the three-digit ZIP Code level, which is the most granular level of data available nationwide.<sup>45</sup> EXFC reported service performance scores for three-digit ZIP Codes, and SPM reported these scores at the Sectional Center Facility (SCF) level, hindering the OIG's efforts to directly compare data collected in each system.<sup>46</sup> To overcome this, SCF-level data from SPM were converted to the three-digit ZIP Code level.

Nationally, our regression analysis revealed that three-digit ZIP Codes with relatively more white residents experienced, on average, better service performance. In contrast, in ZIP Codes with more Hispanic residents, service performance was lower on average.<sup>47</sup> Additionally, the analysis indicated income was negatively correlated with service performance scores, suggesting

that wealthier three-digit ZIP Codes had worse service performance scores than lower-income ZIP Codes on average. We are not reporting on the spatial analysis for the service performance scores because scores are measured at the three-digit ZIP Code level, which can include entire metropolitan areas.

#### **Customer Feedback**

Service performance scores provide an indication of the service that customers experience. Another measure of a customer's experience, however, is what the customer reports directly to the Postal Service. Customer feedback provides more granular insight into customer satisfaction. Customers can make their voices heard by the Postal Service at their post office, by phone, or by email.<sup>48</sup> Customers can also call the Postal Service; an Interactive Voice Response system will attempt to resolve their inquiries and direct them to Customer Care Center (CCC) representatives as needed. CCC representatives frequently route inquiries from calls and emails to the customer's nearby post office to be resolved. Our analysis focused on customers who shared concerns via phone or email about delayed mail or long lines at their local post office.<sup>49</sup>

In our spatial analysis of customer feedback, there were not consistent trends across all five cities (see Table 1).<sup>50</sup> However, every city except Los Angeles had a lower percentage of white residents in ZIP Codes with negative-customer-feedback hot spots. Furthermore, every city except Houston had a higher percentage of Black residents in hot spot ZIP Codes. Finally, three out of the five cities had lower than average median household income in hot spot ZIP Codes.

<sup>44</sup> U.S. Postal Service, "Modification of USPS Service Performance Measurement Plan," Postal Regulatory Commission Docket No. Pl2019-1, May 21, 2019. https://www.prc.gov/docs/109/109154/iSPM%20RevPlan%20 BLACK-LINE%2052119.pdf.

<sup>45</sup> A three-digit ZIP Code contains all five-digit ZIP Codes with the same three-digit prefix.

<sup>46</sup> An SCF is a Processing and Distribution Center where the Postal Service sorts the mail to the destination post offices in the three-digit ZIP Codes assigned to the facility.

<sup>47</sup> When we prepared the combined EXFC and SPM data set for our analysis, we removed 159 entries that had service performance score values below 50 percent, which we deemed unreliable. These 159 entries accounted for less than one-half of 1 percent of the approximately 50,000 entries in the combined data set.

<sup>48</sup> From FYs 2016 to 2020, improvements have enabled the Interactive Voice Response system to resolve a greater proportion of customers' inquiries before they would need to be recorded in its customer relationship management system. Phone calls do not include the OIG Hotline, to which individuals can report fraud, waste, and misconduct at the Postal Service.

<sup>49</sup> The Postal Service records customer feedback via customer inquiries. We analyzed counts of customer inquiries in following five categories: "Daily Mail Delivery," "I Have Not Received My Mail in More Than 2 Days," "My Mail Arrives at Different Times," "Long Lines/Long Wait Time," and "Long Lines." The Postal Service changed how it categorized these types of inquires in February 2016 and again when the agency switched customer relationship management systems in FY 2019. Postal management told the OIG that the agency did not otherwise change its policies related to collecting customer feedback between FYs 2016 and 2020.

<sup>50</sup> As a result of the COVID-19 pandemic in 2020, several thousand mail carriers were quarantined and therefore could not deliver mail. The decrease in available employees contributed to mail delays nationally and may have increased the amount of negative customer feedback about delays as a result. Postal data showed carrier availability did not impact the five cities that we focused on in our spatial analysis more than other U.S. cities.

	Atlanta			Chicago			Houston			Los Angeles			Philadelphia		
Metric	All ZIP Codes	Hot Spot ZIPs	Difference	All ZIP Codes	Hot Spot ZIPs	Difference	All ZIP Codes	Hot Spot ZIPs	Difference	All ZIP Codes	Hot Spot ZIPs	Difference	All ZIP Codes	Hot Spot ZIPs	Difference
Total Population	10,930,066	868,399 (7.9%)	_	12,094,701	2,536,994 (21.0%)	_	11,346,103	1,604,247 (14.1%)	_	22,713,382	2,653,968 (11.7%)	_	10,878,829	701,572 (6.4%)	_
Average Income	\$61,683	\$66,174	\$4,491	\$73,708	\$57,570	-\$16,138	\$65,544	\$76,099	\$10,555	\$78,760	\$77,613	-\$1,147	\$82,964	\$68,979	-\$13,985
% Hispanic	12.3%	12.9%	+0.7%	22.3%	35.6%	+13.3%	34.1%	34.0%	-0.1%	44.4%	44.7%	+0.2%	8.4%	6.5%	-1.8%
% White	42.8%	27.7%	-15.1%	54.8%	30.0%	-24.8%	39.8%	38.2%	-1.6%	30.4%	31.2%	+0.8%	63.8%	34.8%	-29.0%
% Black	37.4%	51.7%	+14.4%	14.2%	27.3%	+13.1%	16.0%	14.5%	-1.4%	5.5%	6.5%	+1.0%	19.8%	50.6%	+30.8%
% Other	7.6%	7.6%	+0.1%	8.7%	7.1%	-1.6%	10.2%	13.3%	+3.1%	19.7%	17.7%	-2.0%	8.1%	8.1%	+0.1%

#### Table 1: Demographic Characteristics of Negative Customer Feedback Hot Spots in Five Cities (FYs 2016-2020)

Note: percent white, percent Black, and percent other do not include residents of Hispanic origin. Average Income refers to the average median household income among the selected ZIP Codes. Percentages may sum to more or less than 100 percent due to rounding. This table reports hot spots found to be statistically significant at the 95-percent level or higher. The 95-percent confidence level is used most often in research and is a generally accepted standard. It indicates that there is a 95 percent or higher likelihood that observations are not the result of random variation. A hot spot is a statistically significant cluster of high-value data points. For example, a hot spot could appear if a ZIP Code with a high number of customer feedback submissions is surrounded by other ZIP Codes with a high number of such submissions. Source: OIG analysis of eCustomerCare, Customer 360, and Esri Business Analyst data.

#### **Implications for the Postal Service**

Through the OIG's research and discussion with postal management, we determined there are multiple ways to measure mail access changes when analyzing the demographic characteristics of affected communities. The OIG sought to measure mail access changes using data involving collection box removals, post office closures, and post office retail hours between FYs 2016 and 2020. Other approaches could include examining the locations of residential mailboxes and Cluster Box Units when measuring mail access changes. In our discussions with postal management, they shared other ways to measure

access, including an analysis measuring the distance between ZIP Codes and nearby collection boxes. We did not validate the methodology and results presented by the Postal Service. However, the discussion underlined the value of performing analyses of mail access and the demographic characteristics of communities affected by potential changes to this access. Specifically, the discussion highlighted that understanding how mail access changes affect different communities could inform postal management's decision-making. Reviewing which communities experience better or worse service could also inform decision-making.

#### **OIG Recommendation**

#### **Recommendation 1**

We recommend the Vice President, Enterprise Analytics, the Vice President, Delivery Operations, and the Vice President, Retail & Post Office Operations conduct a mail access study:

- 1. To identify opportunities to enhance relevant data availability and quality used in decision-making related to access changes.
- 2. To determine whether demographic factors should be included in decision-making related to access changes.

### Conclusion

Our analysis showed that although national postal policies are consistent, their impact on different demographic groups can be unequal. Postal Service policies do not require consideration of a community's demographic characteristics — such as race, ethnicity, and income — when implementing changes in mail access. Nor are demographic analyses conducted related to service. In the absence of such policies and analyses, routine processes that are designed to be implemented in a neutral manner can inadvertently affect some demographic data into their analysis, management would be better informed about the potential unintended consequences of their decisions. As Postal Service policies are established nationally and intended to consistently serve the public good, the agency could enhance its processes to consider the impact of its business decisions on the various demographic groups it serves.

## **Summary of Management's Comments**

Management agreed with Recommendation 1 and stated they will perform a mail access study to identify data quality enhancements in applications that support such a study. Management also stated they will consider as a matter of public policy, whether demographic factors should be included in the decision-making process for any requested or proposed change to access points.

Management indicated they remain fully committed to providing mail delivery and universal service to every household and business in the United States and its territories. Management asserted that postal customers could utilize several different types of access points like collection boxes to send letters and can access retail services through several different means, including Postal Service-managed post offices.

Considering the variety of ways that customers can access postal services, management expressed disappointment that the OIG focused exclusively on collection boxes and Postal Service-managed post offices for its analysis. Management stated because the OIG based its assumptions on such a small set of data points, they do not believe that the OIG report is an accurate portrayal of customer access to postal services. Management, however, indicated they appreciate that the OIG recognizes that there are multiple ways to measure whether the Postal Service is providing appropriate access to communities.

Management reiterated the Postal Service has policies governing the installation and removal of collection boxes, and the discontinuance and suspension of post offices. They indicated these policies continue to be followed for all post office closures in a neutral and consistent fashion, and the Postal Service will continue to take action to ensure that it provides service for all of its customers.

See Appendix B for management's comments in their entirety.

## **Evaluation of Management's Comments**

The OIG appreciates management's comments and considers them responsive to our Recommendation 1.

Regarding management's comment about the white paper's scope, the OIG acknowledges that access points, such as residential mailboxes and Cluster Box Units, are as important as collection boxes and post offices. However, we limited our scope to assessing changes in the geographic distribution of collection points and retail sites. Specifically, we reviewed data on collection box removals and post office closures.

The recommendation requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when the action plan is completed. The recommendation should not be closed in the Postal Service's follow-up tracking system until the OIG provides written confirmation that the recommendation can be closed.

# Appendices

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# **Appendix A: Additional Information**

# **Objectives, Scope, and Methodology**

This paper examined the geographic distribution of mail access and service across demographic variables for FYs 2016 to 2020, focusing on the following objectives:

- 1. Assess changes in the geographic distribution of collection points and retail sites, and the extent to which these changes display patterns that may have disproportionately affected populations in locations with specific racial, ethnic, and income characteristics.
- 2. Identify demographic trends in service performance scores and the volume of negative customer feedback across the U.S.

The OIG used the following methods to meet these objectives:

**Reviewed Postal Service policies.** We reviewed Postal Service documentation related to removing collection boxes, closing post offices, changing post office retail hours, calculating service performance scores, and collecting customer feedback. We determined the Postal Service had not substantively changed national policies, including those that delegate decision-making to the field, between FYs 2016 and 2020.

**Conducted interviews with Postal Service management.** We interviewed Postal Service management to identify the relevant policies the agency follows and how they are implemented in practice during our period of analysis.<sup>51</sup>

**Obtained demographic data and key postal data sets.** For FYs 2016 to 2020, we obtained the following four data sets: (1) collection box removals, (2) post office closures, (3) service performance scores, and (4) counts of customer inquiries about delayed mail and long lines at post offices. These postal data come from the following databases: (1) the Collection Point Management System, (2) the Change Suspension Discontinuance Center, (3) the External First-Class Measurement System & Service Performance Measurement, and (4) Customer 360 and eCustomerCare.<sup>52</sup> Lastly, we obtained data on urbanization level and demographic characteristics such as race, ethnicity, and income.<sup>53</sup>

**Ran regression analysis using a contractor.** We contracted with Laurits R. Christensen Associates, Inc. to perform a regression analysis of the relationship between ZIP Codes' demographic characteristics — such as race, ethnicity, and income — and the number of collection box removals or service.<sup>54</sup> To reduce potential statistical bias, we configured the model to include relevant control variables, such as age, state, educational attainment, urbanization level, and population.

**Performed spatial analyses on postal data.** We tested for hot spots of collection box removals and customer feedback at the five-digit ZIP Code level nationally.<sup>55</sup> We used the national distribution of hot spots to compare ZIP Codes that were hot spots to ZIP Codes that were not hot spots in the five metropolitan areas surrounding Atlanta, Chicago, Houston, Los Angeles, and Philadelphia.

<sup>51</sup> We interviewed management from the following Postal Service groups: City Delivery, Customer Experience, Retail Operations, Product Technology Innovation, Corporate Reporting, Geospatial Analytics, Advanced Analytics, and Facilities.

<sup>52</sup> IBM, the contractor that ran EXFC, deposited test mailpieces into the mailstream and recorded how long they took to reach their destination. This enabled IBM to determine the service performance score, which is the percentage of mailpieces that arrived on time per their service standard. EXFC service performance scores only measured from when mailpieces entered the mail stream to when they reached their destination. In contrast, SPM measures the service performance of first-mile, processing duration, and last-mile operations. In addition, SPM samples a greater number of mailpieces than EXFC, for which IBM sampled about 250,000 mailpieces per quarter, according to the Postal Service. For SPM, the Postal Service internally samples about 12 billion mailpieces per quarter.

<sup>53</sup> For our analyses, the data on urbanization level came from the U.S. Department of Agriculture's data set of Rural-Urban Commuting Area (RUCA) Codes, which were last updated in 2010 based on the Decennial Census. Of the 41,164 ZIP Codes with RUCA Codes, we excluded 20 entries (0.05 percent) because these uncoded ZIP Codes had zero population and no rural-urban identifier information. We used data on race, ethnicity, and income as of 2019, which are the most recent demographic data available through Esri Business Analyst. Business Analyst data came from the U.S. Census Bureau's American Community Survey and only included values for the 48 contiguous US states, Alaska, and Hawaii. Therefore, our analyses excluded U.S. territories and outlying areas.

<sup>54</sup> In our analysis of service performance, we analyzed composite service performance scores for First-Class Mail. Composite scores combine the on-time pieces for originating and destinating processing facilities. Because EXFC only measured First-Class Mail, we limited our analysis to First-Class Mail, though SPM also measures service performance for many other mail products, such as Marketing Mail and periodicals.

<sup>55</sup> A hot spot is a statistically significant cluster of high-value data points. For example, a hot spot could appear if a ZIP Code with a high number of collection box removals is surrounded by other ZIP Codes with a high number of such removals.

We conducted our research in accordance with the Council of the Inspectors General on Integrity and Efficiency's Quality Standards for Inspection and Evaluation. We discussed our observations and conclusions with management on December 3, 2021, and included their comments where appropriate.

## **Prior Coverage**

The OIG did not identify any prior audit reports or reviews related to the objectives of this white paper.

# Appendix B: Management's Comments

POSTAL SERVICE

April 11, 2022

JENNIFER MYKIJEWYCZ DIRECTOR, OPERATIONS CENTRAL RESEARCH AND INSIGHTS SOLUTION CENTER

SUBJECT: Management Response: Demographic Trends in Mail Access Changes and Service, 2016-2020 RISC-WP-22-XXX

Thank you for giving us the opportunity to comment on your white paper entitled "Demographic Trends in Mail Access Changes and Service." We remain fully committed to the mission of the Postal Service to provide mail delivery and universal service to every household and business in the United States and its territories. We embrace the values of our Universal Service Obligation (USO) to ensure that postal customers have access to prompt and reliable service at an affordable price-while at the same time remaining financially self-sustaining and operating in an efficient manner.

The Postal Service is focused on ensuring that customers have access to postal services in a manner that complies with the USO. The Postal Service has one of the largest business footprints in the nation-delivering to over 163 million addresses six days a week, maintaining 34,137 brick and mortar post offices, overseeing 13,178 non-postal managed facilities, and managing 140,835 collection boxes. Postal customers have the option of sending letters using their residential mailbox, a cluster Box Unit, or utilizing other access points such as collection boxes or post office lobby drops. Customers can likewise access retail services via Postal Service-managed post offices, Contract Postal Units, self-service kiosks and usps.com.

Given this expansive footprint for access to our services, we were somewhat disappointed that the OIG focused exclusively on collection boxes and Postal Servicemanaged post offices for its analysis, and on changes made to less than 0.0032% of all postal access points. By basing its assumptions on such a small set of data points, we do not believe that the OIG report is an accurate portrayal of customer access to postal services. Nevertheless, we appreciate that the OIG recognizes that there are multiple ways to measure whether the Postal Service is providing appropriate access to communities, and that their analysis involved only a very small segment of overall access points.

The Postal Service has policies governing the installation and removal of collection boxes. Those policies include a requirement that local management annually test the amount of mail customers deposit in each of the 140,000 collection boxes. Using a hand-held scanner, carriers record the estimated mail volume each day during a two-week testing period. Based on the results, local management may decide to relocate or remove collection boxes with low usage. Other reasons including vandalism, an unsecure location, damage to the receptacle, or the need for repair, may also trigger changes.

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Vice President, Delivery Operations

Angela H. Curtis

Target Implementation Date: 03/31/2023

Responsible Officials:

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cc: Vice President Delivery Operations, Joshua D. Colin, Ph.D. Manager, Corporate Audit Response Management

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