New Evidence on Racial Disparities in IRS Audit Selection Calls for Immediate Action

By: Kathleen Bryant and Chye-Ching Huang

Summary

A recent working paper has found that although the Internal Revenue Service (IRS)'s audit selection processes are ostensibly "race-blind," Black tax filers are 2.9 to 4.7 times as likely to be audited by the IRS as non-Black tax filers.[1] Our report summarizes the paper's conclusions, explains what we do and do not know about the causes of these disparities, and outlines next steps for policymakers to address racial disparities in audit selection.

These steps include modifying the IRS's confidential audit selection algorithms, reporting publicly and regularly on the causes of audit disparities, removing imbalanced reporting requirements that place far more attention on refundable tax credits than on much larger sources of tax non-compliance, improving the correspondence audit process, and investing in further research. Such actions are needed for the Biden Administration to deliver on IRS Commissioner Nominee Daniel Werfel's commitment to release a report on racial audit disparities within his first 60 days in office, and the Biden Administration's February 16th Executive Order directing federal agencies to "prevent and remedy discrimination, including by protecting the public from algorithmic discrimination."[2]

1   Stark Disparities in Audit Rates between Black and Non-Black Tax Filers

Previously, other researchers have noted that it is likely Black tax filers are audited by the IRS at disproportionate rates. For years, public data has shown that households claiming the Earned Income Tax Credit (EITC) are audited more frequently than other households, and EITC claimants are disproportionately Black (due to a wide range of discriminatory policies and structural barriers that have left Black workers over-represented in low-wage jobs).[3] But because

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[1] Hadi Elzayn, Evelyn Smith, Thomas Hertz, Arun Ramesh, Robin Fisher, Daniel Ho, and Jacob Goldin, "Measuring and Mitigating Racial Disparities in Tax Audits," Stanford Institute for Economic and Policy Research, January 30, 2023, https://dho.stanford.edu/wp-content/uploads/IRS_Disparities.pdf.

[2] The White House, Executive Order on Further Advancing Racial Equity and Support for Underserved Communities Through The Federal Government, February 16, 2023, https://www.whitehouse.gov/briefing-room/presidential-actions/2023/02/16/executive-order-on-further-advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government/. While this brief focuses specifically on audit-related recommendations, as Steven Dean and others have noted, addressing racial disparities in IRS audit processes are not the only steps needed to advance racial equity in the tax system See: Lauren Loricchio, "Werfel's Promised Report on Racial Disparities Seen as First Step," Tax Notes, February 23, 2023, https://www.taxnotes.com/tax-notes-today-federal/tax-system-administration/werfels-promised-report-racial-disparities-seen-first-step/2023/02/23/.

[3] Margot Crandall-Hollick, "Audits of EITC Returns: By the Numbers," Congressional Research Service, June 13, 2022, https://crsreports.congress.gov/product/pdf/IN/IN11952; Chye-Ching Huang and Roderick Taylor, "How the Federal Tax Code Can Better Advance Racial Equity," Center on Budget and Policy Priorities, July 25, 2019,

federal income tax returns do not collect information on the race and ethnicity of tax filers, there has been no direct evidence on whether Black filers are more likely to face audits than non-Black filers.

The new working paper by Hadi Elzayn (Stanford University), Evelyn Smith (University of Michigan), Thomas Hertz (U.S. Treasury Department), Arun Ramesh (University of Chicago), Robin Fisher (U.S. Treasury Department), Daniel Ho (Stanford University), and Jacob Goldin (University of Chicago and U.S. Treasury Department) estimates the likely racial identity of tax filers based on their first names, last names, and home addresses listed on tax returns, and then compares audit rates for Black and non-Black tax filers.

Elzayn, Smith, et al. find that audit disparities between EITC claimants and those without EITC claims explain only about a fifth of the overall audit disparity between Black and non-Black tax filers. Instead, nearly 80% of the overall disparity is driven by differences *within* the population of EITC claimants selected for audits. Black EITC claimants are 2.9 to 4.4 times as likely to be audited as non-Black EITC claimants.

Black EITC claimants remain more likely than non-Black EITC claimants to be audited even among families of the same household composition, family size, and income. For example, among unmarried men that claim children for the EITC, Black tax filers are more than twice as likely to be audited as non-Black tax filers.

Furthermore, audit rate disparities cannot be fully explained by "true" differences in tax under-reporting between Black and non-Black tax filers claiming the EITC. The researchers sorted tax filers into ten equally sized groups based on the dollars of under-reported tax ultimately identified during audits, and they found that within each group, Black tax filers were more likely to be selected for audits than non-Black tax filers.

The paper notes that racial disparities in audit selection could compound financial insecurity that Black tax filers are already more likely to experience than non-Black filers because of barriers to employment and wealth-building erected by public policy and private discrimination. For example, the working paper states that tax audits "can exacerbate financial strain for the lowest income taxpayers – whose tax refunds are typically frozen while an audit is in place";[4] there is suggestive evidence that audits can deny tax benefits to filers who are truly eligible simply because they cannot make it through a burdensome audit process;[5] and prior research shows that

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https://www.cbpp.org/research/federal-tax/how-the-federal-tax-code-can-better-advance-racial-equity; Paul Kiel and Hannah Fresques, "Where in The U.S. Are You Most Likely to Be Audited by the IRS?", ProPublica, April 1, 2019, https://projects.propublica.org/graphics/eitc-audit.

[4] Elzayn, Smith, et al., *supra* note 1.

[5] Kathleen Bryant, Chye-Ching Huang, Leslie Book, T. Keith Fogg , and Nina E. Olson, "Exclusionary Effects of the IRS Correspondence Audit Process Warrant Further Study," The Tax Law Center at NYU Law and the Center for Taxpayer Rights, February 18, 2022, https://www.law.nyu.edu/sites/default/files/TLC%20CTR%20Memo%20on%20Need%20for%20EITC%20Audit%20Study_TLC%20Site.pdf.

the experience of being audited discourages tax filers from claiming the EITC in future years even when they are likely eligible for the credit.[6]

2 Why Is This Happening? An Overview of Four Possible Factors

The IRS selects tax returns for audits using several confidential processes, including by using algorithms it has designed to identify potential tax non-compliance. In this context, an "algorithm" is simply a series of calculations that follow a set of rules, the results of which the IRS uses to decide (or help decide) which filers to audit. For example, about half[7] of tax returns audited by the IRS's Small Business and Self-Employed Division in 2018 were selected using a model that assigns "scores" based on the likelihood of identifying tax under-reporting. The rules for calculating that score are an "algorithm."[8]

But the IRS keeps private the full details of how its audit selection algorithms and other processes work – otherwise, the most unscrupulous would-be tax evaders might use that information to avoid being selected for audit. And it is not clear what exact share of audits the IRS selects exclusively or partially using an algorithm.

Indeed, the IRS did not even give the authors of the paper full information about its audit selection algorithms and processes. This means that the paper cannot fully explain what features of those algorithms – and other aspects of tax administration – drive the racial disparities that the paper uncovered.

Instead, Elzayn, Smith, et al. create some illustrative audit algorithms. These illustrations give important clues in four main areas about what could be driving racial disparities in IRS audit algorithms and other processes. Before discussing each in more detail, we outline them here:

  a. **The choice of "targets" for audit selection algorithms.** We do not know whether the IRS's audit algorithms aim to select filers who are most likely to owe *any dollars* of under-reported tax; concentrate audits on filers likely to owe *the largest dollar amounts* of tax; target audit resources to those with the highest "return on investment" or ROI (i.e.,

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[6] Dayanand Manoli, John Guyton, Kara Leibel, Ankur Patel, Mark Payne, and Brenda Schafer, "The Effects of EITC Correspondence Audits on Low-Income Earners," June 15, 2022, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4137352.

[7] Treasury Inspector General for Tax Administration, "Individual Returns with Large Business Losses and No Income Pose Significant Compliance Risk," Report No. 2020-30-056, September 28, 2020, https://www.tigta.gov/reports/audit/individual-returns-large-business-losses-and-no-income-pose-significant-compliance.

[8] The IRS's Discriminant Function System (DIF) is a "supervised machine learning" algorithm. Supervised machine learning algorithms use historical data (where an outcome of interest is known) to "train" a model to identify that outcome in future data, based on the characteristics most associated with that outcome in the historical dataset. In this case, the DIF uses audit data from previous years to identify which characteristics from tax returns are most closely associated with tax under-reporting and uses those characteristics to assign a DIF score to each return. In contrast, a conventional algorithm would require the IRS to specify up front the set of rules used to select tax returns for audit (for example, based on characteristics that independent research has identified as key drivers of tax non-compliance). For more on the DIF algorithm, see: Getaneh Yismaw, Drew Johns, Taukir Hussain, Jonathan Creem, and Mary-Helen Risler, "Enhancing Return Risk Assessment for Examination: Recent DIF (Discriminant Function) Model Updates," IRS Research Bulletin, June 24, 2021, https://www.irs.gov/pub/irs-pdf/p1500.pdf#page=161.

dollars recovered relative to costs per audit); or target some other criteria. However, the paper shows that, in general, algorithms targeting *the presence* of tax under-reporting disproportionately audit Black filers while algorithms targeting *the magnitude* of tax under-reporting audit Black filers at lower rates. Furthermore, algorithms that specifically target overclaims of refundable tax credits, rather than tax under-reporting in general, produce significant racial audit disparities.

b. **Tax filer characteristics used for audit selection.** Once an audit algorithm is given a target (say, the likelihood of having *any* tax under-reporting), it will select tax returns for audits based on the characteristics of tax filers that are most closely associated with the measure of tax non-compliance that is being targeted. Because race is not directly reported on tax returns or in other administrative data that the IRS uses, it cannot be one of the characteristics directly used to identify tax non-compliance or to select returns for audit. However, certain characteristics may nevertheless be highly correlated with race and drive racial audit disparities – we explain further below.

c. **IRS funding constraints.** External constraints, such as lack of funding for more complex audits, can contribute to racial disparities in audit selection. The Inflation Reduction Act's $80 billion investment can help narrow racial audit disparities by reducing the share of all audits that target EITC claimants (who drive most of the overall disparity) and increasing audits on high-income tax filers (who are disproportionately non-Black).[9] Budget constraints also likely contribute to audit disparities *within* the population of EITC claimants. EITC claimants with business income are more likely to be non-Black but are less likely to be audited than EITC claimants without business income, potentially because audits involving business income are more expensive to administer.

d. **Burdensome audit processes with racially disparate impacts leading to a "doom loop."** We have previously explained that a potentially significant share of EITC recipients are unable to navigate the IRS's complex audit processes and have their claims denied by default, despite meeting the credit's eligibility criteria.[10] The administrative burdens of IRS audit processes likely fall heaviest on tax filers with limited access to professional representation and other barriers to navigating the audit process. And these characteristics could potentially be correlated with race, because of both "historical racism and contemporary patterns of racial discrimination and bias."[11]

Algorithms that "learn" from historical audit outcomes which tax filers are least likely to successfully navigate burdensome audit processes may compound racial audit disparities over time, by disproportionately selecting those with the steepest barriers to defending themselves during an IRS audit.

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[9] Julie-Anne Cronin, Portia DeFilippes, and Robin Fisher, "Tax Expenditures by Race and Hispanic Ethnicity: An Application of the U.S. Treasury Department's Race and Hispanic Ethnicity Imputation," U.S. Treasury Department, Office of Tax Analysis, January 2023, https://home.treasury.gov/system/files/131/WP-122.pdf#page=35.

[10] Bryant et al., *supra* note 5.

[11] Huang and Taylor, *supra* note 3.

Below, we review each of these four factors in more detail and explain what the working paper does and does not tell us about each of them. Key questions remain unanswered, so lawmakers should take immediate action to address racial audit disparities and to understand more completely what is causing them.

2.1   The Choice of "Targets" for Audit Selection Algorithms

Elzayn, Smith, et al. were not given full information on the IRS's audit selection processes and algorithms for their study. Instead, they built several illustrative audit selection models[12] that demonstrate how algorithmic design choices can either exacerbate or reduce racial disparities in audit selection.[13]

For example, they compared the racial disparities created by two illustrative models given different "targets:"[14] one that selected tax returns based on the likelihood that they had *any* under-reported tax above $100 and another that selected returns with the *highest dollar amounts* of under-reported tax. For example, say these models estimate, based on information that the IRS has and based on past audit data results, that filer A is likely to owe $100, and filer B is equally likely to owe $1,000. The first illustrative audit algorithm will rank these filers equally for audit selection, while the second illustrative algorithm will rank B for selection over filer A.

The model targeting the *magnitude* of underreporting not only collected more revenue than the alternative model, but also audited Black EITC claimants at *lower* rates than non-Black EITC claimants. In contrast, the model predicting *any* dollars of under-reporting audited Black EITC claimants at significantly *higher* rates than their non-Black counterparts.

As one of the paper's authors, Evelyn Smith, explained: "the choice to focus on whether there is underreporting, as opposed to the magnitude of underreporting, is connected to broader structural sources of economic inequality and racial justice."[15] Black tax filers have lower incomes on average than non-Black tax filers, because of centuries of racist policies and systems that have created structural barriers to economic opportunity.[16] As a result, Black tax filers generally have less income to misreport on their tax returns. This means that "focusing audits on the amount of

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[12] The paper refers to these as "counterfactual" models.

[13] These models were "trained" to predict under-reporting among EITC claimants based on audit data from the IRS's National Research Program (NRP). Unlike the operational audits the IRS conducts for day-to-day compliance purposes, NRP audits are conducted on a "stratified random sample" of tax filers within different income and other categories. That is, the purpose of NRP audits is to produce information about non-compliance within different tax filing populations, rather than seeking to only audit those most likely to be non-compliant.

[14] The study refers to this as the "prediction model objective."

[15] Katharine Miller, "IRS Disproportionately Audits Black Taxpayers," Stanford University Human-Centered Artificial Intelligence," January 31, 2023, https://hai.stanford.edu/news/irs-disproportionately-audits-black-taxpayers.

[16] Huang and Taylor, *supra* note 3.

underreported income will disproportionately end up focusing on higher income individuals who are less likely to be Black taxpayers."[17]

Actual IRS algorithms and audit processes may not explicitly aim to subject a filer owing an estimated $100 to an equal chance of being audited as a filer estimated to owe $1,000.[18] But other choices in what algorithms are targeting could, in less obvious ways, prioritize selecting tax filers with any dollars of tax under-reporting rather than higher dollar amounts of under-reporting.[19]

For example, IRS algorithms might target some measure of the expected "return on investment" (ROI) for audits, taking into account not only the tax dollars recovered, but also the costs of conducting audits. As discussed further in section 2.3, audits of filers likely to owe higher dollar amounts of under-reported tax *may be* systematically more expensive to conduct (relative to the amount of tax likely to be owed) than audits of returns likely to generate lower amounts.[20] Black tax filers in general, and Black EITC claimants specifically, are also less likely to have items on their tax returns (such as substantial amounts of "business income") that are more resource-intensive to audit. As a result, algorithms with ROI-based targets could be producing racial disparities in audit selection by systematically selecting tax filers that are the "cheapest" to audit, all else equal, even if those tax filers are responsible for fewer dollars of tax under-reporting on average.

As discussed in more detail in section 2.4, this could be especially problematic if the costs of conducting audits, and audit outcomes, bear no relationship to underlying tax non-compliance, but simply reflect the extent to which some tax filers face greater barriers to navigating burdensome IRS audit processes than others. It might be "cheaper" to audit tax filers that the IRS considers least likely to successfully challenge any tax under-reporting identified. And if the barriers to completing the IRS audit process tend to fall heaviest on Black tax filers, they could be audited at higher rates for reasons that have nothing to do with underlying tax compliance.

There are other ways that the choice of "targets" for audit selection algorithms can create racial disparities. Elzayn, Smith, et al. created another illustrative model designed to specifically identify over-claiming of refundable tax credits (including the EITC, Child Tax Credit, and American Opportunity Tax Credit), instead of tax under-reporting for any reason. This audit selection model recovered fewer total dollars of under-reported tax and created *larger* audit disparities between Black and non-Black EITC claimants than the other models tested.

The researchers designed this illustrative model because refundable tax credits are scrutinized disproportionately under reporting for "improper payments," and this imbalance could be

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[17] Miller, *supra* note 15.

[18] If they are also estimated to have the same likelihood of owing each of those amounts respectively.

[19] Indeed, there is a full spectrum of algorithms lying between the two illustrated targets.

[20] Former IRS Commissioner Rettig has stated that audits on EITC recipients are the "most efficient use of available IRS examination resources." See: Charles P. Rettig, Letter to Sen. Ron Wyden, September 6, 2019, https://s3.documentcloud.org/documents/6430680/Document-2019-9-6-Treasury-Letter-to-Wyden-RE.pdf.

reflected in the IRS's audit selection criteria. Under the Office of Management and Budget (OMB)'s inappropriate interpretation of the Payment Integrity Information Act (PIIA), the IRS and Treasury are required to report more frequently and in more detail on refundable tax credit error than on other sources of tax non-compliance that contribute more to the "tax gap" (the gap between federal taxes paid and taxes owed).[21]

Again, we do not know what targets are used in the IRS's actual audit selection algorithms, and to what extent unbalanced systems like the "Improper Payments" regime factor into how the IRS designs algorithms. But the working paper clearly shows that algorithmic design choices, such as the measures of tax non-compliance used and the types of non-compliance prioritized, can drive substantial racial disparities in audit selection.

2.2   Tax Filer Characteristics Used for Audit Selection

Once a "target" has been chosen, audit selection algorithms identify which filers are most likely to have tax under-reporting based on certain characteristics on their tax returns and other sources of IRS administrative data. Importantly, if IRS audit selection algorithms work like most other "machine learning" algorithms, the characteristics used to select tax filers for audits may not directly *cause* tax non-compliance – they only need to be *correlated* with tax non-compliance for the IRS to prioritize them in the audit selection process.

There is some information publicly available about the types of characteristics that the IRS's algorithms use to identify tax under-reporting. For example, many EITC returns are automatically flagged for audits under the IRS's Dependent Database Program, which checks information about dependents claimed on tax returns against other internal IRS data and administrative data from other federal agencies like the Social Security Administration. But the exact inputs underlying the IRS's audit selection algorithms, and which characteristics are given the heaviest weight when selecting tax filers for audit, are unknown.

In this study, Elzayn, Smith, et al. trained their illustrative audit algorithms to identify tax under-reporting based on characteristics that available evidence suggests are used in the IRS's actual algorithms, including information on income reported on tax returns, deductions claimed, and flags for any incorrectly claimed dependents.

Because race is not reported on tax returns or in other IRS administrative data, it cannot be one of the characteristics directly used to identify tax non-compliance and select returns for audit. However, certain characteristics may nevertheless be highly associated with race and drive racial audit disparities. For example, Smith noted in a recent interview that Black tax filers may be

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[21] The Treasury Department estimates that the highest-income 1% of tax filers alone are responsible for about 28% ($163 billion) of the gap between federal taxes paid and taxes owed each year, while the IRS estimates that EITC recipients are responsible for just 6% ($28 billion) of it. See: Natasha Sarin, "The Case for a Robust Attack on the Tax Gap," U.S. Treasury Department, September 7, 2021, https://home.treasury.gov/news/featured-stories/the-case-for-a-robust-attack-on-the-tax-gap; Internal Revenue Service, "Federal Tax Compliance Research: Tax Gap Estimates for Tax Years 2014–2016," August 2022, https://www.irs.gov/pub/irs-pdf/p1415.pdf.

more likely to have errors related to claiming dependents on their tax returns because of overly complex eligibility criteria for the EITC that are insufficiently inclusive.[22]

However, as described above, differences between Black and non-Black tax filers in household structure do not fully explain audit disparities.[23] Because Elzayn, Smith, et al. did not have access to the details of IRS algorithms, the study could not answer the following key questions:

- What characteristics used to identify potential tax under-reporting in the IRS's audit selection algorithms are most associated with race?

- Which of these characteristics contribute most to audit selection disparities?[24]

For instance, we do not currently know whether factors such as claiming the EITC or filing a tax return for the first time increase the chance of selection for audit. And we do not know how strongly such factors are associated with race. If such factors are used in audit selection, and they are associated with race, they could simply be reflecting unequal barriers to accessing reliable guidance and assistance for filing tax returns and claiming tax benefits. Policymakers should respond by removing those barriers rather than letting them determine downstream compliance and audit activity in a way that compounds racial inequities.

The study emphasizes the importance of understanding what factors are used by IRS algorithms to select filers for audits, and which of these factors introduce racial disparities into audit selection.

2.3   IRS Funding Constraints

Between 2010 and 2021, the IRS's overall budget was cut by about 20% and funding for IRS enforcement activities by about 23%, after adjusting for inflation.[25] These budget constraints have caused audit rates on higher-income filers and large corporations to plummet faster over the past decade than audits on returns with EITC claims, because the latter are much less expensive to conduct.

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[22] Steve Inskeep, "Does the IRS audit some people more often than others?", NPR, February 1, 2023, https://www.npr.org/2023/02/01/1153150854/does-the-irs-audit-some-people-more-often-than-others. See also: Katherine M. Michelmore and Natasha V. Pilkauskas, "The Earned Income Tax Credit, Family Complexity, and Children's Living Arrangements," The Russell Sage Foundation Journal of the Social Sciences, Vol. 8 No. 5, 2022, pp. 143–65, https://www.rsfjournal.org/content/8/5/143.

[23] It is unclear what exact share of the disparity between Black and non-Black EITC filers can be explained by the combination of differences in household composition, income, and other factors that the paper examines, because the paper looks at each of these factors individually but does not explicitly show how the combination of these factors affects racial disparities. The paper displays audit rates by race within key subgroups of interest, such as single men with dependents in Figure 6. See Elzayn, Smith, et. al, *supra* note 1.

[24] This will be determined based on a combination of how associated a characteristic is with race, and how much weight is placed on that characteristic when selecting tax filers for audit.

[25] Chuck Marr, Samantha Jacoby, and Jabari Cook, "Success of the IRS Rebuilding and Tax Gap Reduction Effort Depends on Sufficient Funding Through Annual Appropriations," Center on Budget and Policy Priorities, December 7, 2022, https://www.cbpp.org/research/federal-tax/success-of-the-irs-rebuilding-and-tax-gap-reduction-effort-depends-on.

The Inflation Reduction Act's $80 billion investment in the IRS will allow the agency to shift tax enforcement focus away from low-income filers and towards higher-income tax filers and corporations. Smooth implementation of that funding can potentially help narrow racial audit disparities. Even though this paper found that racial audit disparities are driven primarily by differences *within* the population of EITC claimants (as described above), a fifth of the current top-line disparity is driven by disparities between EITC and non-EITC filers. Using the $80 billion for its intended purpose of increasing compliance among (and, accordingly, audits on) high-income filers (who are disproportionately non-Black)[26] will mechanically reduce the factor by which audit rates for Black tax filers exceed those for non-Black tax filers.

Further, the paper shows that IRS budget constraints can also affect the allocation of audits *within* the population of EITC filers. Only about 7% of EITC claimants under audit have "substantial business income," even though these tax filers may be responsible for a disproportionate share of tax under-reporting among EITC recipients. The IRS may conduct relatively fewer audits on EITC claimants with business income because they cost nearly $400 per audit to complete, compared to about $30 per audit for EITC claimants without business income.[27] Non-Black EITC claimants are also more likely to have substantial business income on their returns than Black EITC claimants.

Elzayn, Smith, et al. illustrate how resource limitations can exacerbate racial audit disparities *among* EITC claimants. They imposed a constraint on each counterfactual model that they created, requiring the models to select the "status quo ratio of business to non-business EITC returns for audit." For each model tested, this constraint reduced the total dollars of tax under-reporting identified and increased the share of Black tax filers selected for audits. Yet again, we do not know whether such constraints are incorporated in the IRS's confidential audit algorithms, but it is clear that funding limitations can drive racial disparities in audit selection.

2.4 Administrative Burden "Doom Loop"

While the IRS conducts several types of audits, the vast majority of EITC claimants are audited via correspondence examination (by mail), rather than by office audit (in-person at an IRS location), or field audit (in-person at the tax filer's home). Correspondence audits are significantly cheaper for the IRS to conduct because they take significantly less time to close – on average, only two hours per audit, compared to 34 hours per in-person audit.[28] As EITC claimants are disproportionately Black, it is therefore unsurprising that Elzayn, Smith, et al. found that a higher share of Black filers is selected for correspondence audits than non-Black filers. In contrast, Black and non-Black tax filers are selected for field audits and office audits at roughly similar rates.

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[26] Cronin, DeFilippes, and Fisher, *supra* note 9.

[27] Miller, *supra* note 15.

[28] Janet Holtzblatt, "The Effect of Tax Enforcement on Revenues," Testimony Before the Select Revenue Measures Subcommittee and Oversight Subcommittee, Ways and Means Committee, United States House of Representatives, June 10, 2021, https://www.urban.org/sites/default/files/publication/104363/the-effect-of-tax-enforcement-on-revenues_v2.pdf.

With the Center for Taxpayer Rights, we have written previously about the substantial administrative burdens that the correspondence audit process imposes on low-income tax filers claiming the EITC.[29] IRS letters and forms are difficult to understand, documents verifying eligibility can be onerous to track down, and IRS phone lines are often too swamped with calls for tax filers to reach customer service representatives. For these reasons, the majority of EITC claimants undergoing correspondence audits either do not respond at all or respond insufficiently to IRS inquiries and have the credit denied by default.[30]

These administrative burdens are deeply tied to discrimination and policy barriers to full economic and social inclusion that are inequitably distributed by race. As an OMB report implementing the Biden Administration's Executive Order on Advancing Racial Equity has noted, administrative burdens "do not fall equally on all entities and individuals, leading to disproportionate underutilization of critical services and programs, as well as unequal costs of access, often by the people and communities who need them the most."[31] For example, if hypothetically, Black tax filers are less likely to have access to a Low Income Taxpayer Clinic (LITC) or a Taxpayer Assistance Center (TAC) where they could seek in-person assistance, they may have more difficulty navigating the audit process. If the administrative burdens of IRS audit processes fall heaviest on Black tax filers, they could be more likely to lose access to the EITC and other tax benefits during audits than non-Black tax filers.

Elzayn, Smith, et al. did not explicitly explore this possibility in their working paper, but if the IRS uses historical data from audit outcomes to predict non-compliance and select tax returns for audit, their algorithms could create a "doom loop."[32] Tax filers that face the greatest barriers to overcoming administrative burdens during the correspondence audit process may be disproportionately Black or other people of color. As a result, these tax filers may be more likely to owe tax dollars on audit, due to non-response or partial response to the audit process, rather than because of any difference in the likelihood that their original return was in fact non-compliant. Over time, the IRS's algorithms may be "learning" from previous audit outcomes to disproportionately select Black tax filers for audits.[33] Rather than reflecting the "true" accuracy

[29] Bryant et al., *supra* note 5.

[30] Manoli et al., *supra* note 6.

[31] Shalanda D. Young, "Study to Identify Methods to Assess Equity: Report to the President," Office of Management and Budget, July 2021, https://www.whitehouse.gov/wp-content/uploads/2021/08/OMB-Report-on-EO13985-Implementation_508-Compliant-Secure-v1.1.pdf.

[32] Negative feedback loops are a topic of concern in the algorithmic fairness literature more broadly. See, for example: Danielle Ensign, Sorelle A. Friedler, Scott Neville, Carlos Scheidegger, and Suresh Venkatasubramani, "Runaway Feedback Loops in Predictive Policing," Proceedings of Machine Learning Research, Vol. 81, 2018, pp. 1-12, http://proceedings.mlr.press/v81/ensign18a/ensign18a.pdf. For more generally on algorithmic bias and related practices that produce discriminatory outcomes for Black communities, see: https://jointcenter.org/tag/data-privacy/.

[33] This pattern could emerge on net even if the algorithm does not increase audit selection risk for specific filers who have been audited and owed any amounts in the past. However, such selection criteria would create an even more direct feedback loop that could compound racial disparities in audit selection. Again, we do not know whether IRS audit algorithms work in this way.

of returns, this means filers who have the greatest difficulty making it through complex audit processes keep being selected.[34]

Other audit selection choices and algorithm rules could have similar impacts. For instance, the IRS's Dependent Database Program is calibrated (at least in part) to minimize the "no-change rate" (the probability that an audit ends with no change in taxes owed). This could have a similar impact of concentrating audit selection on those who face the greatest barriers to making it through an audit without a change to an initial return rather than on those who are most non-compliant, potentially with racially disparate impacts.

Likewise, to the extent that audit algorithms include some measure of ROI, this could end up intensifying audit risks for those who face a correspondence audit but do not respond to it at all – likely one of the cheapest audit outcomes for the IRS to administer. ROI could be relatively high for such returns even if the amounts owed are small. We do not know whether non-response rates are higher for Black than non-Black filers due to higher administrative burdens, but if so, this dynamic could be driving racial disparities in audit selection.

3   What Policymakers Should Do Next

The working paper provides strong evidence of large racial disparities in audit selection and illustrates how audit selection algorithms can have disparate impacts by race even when they do not explicitly use race. The Biden Administration can take immediate steps to increase the understanding of what causes racial audit disparities and make progress on reducing them:

a.   **Modify audit algorithms.** Important lessons learned from this paper can be used immediately to examine and modify confidential IRS audit selection models. For example, the paper makes clear that prioritizing tax filers for audits based on the magnitude of predicted tax under-reporting, rather than the mere presence of tax under-reporting can reduce racial audit disparities. It is also clear that targeting overpayments of refundable tax credits during audits, rather than other types of tax under-reporting, can exacerbate disparities. Such practices should be immediately addressed.

b.   **Report publicly and regularly on audit disparities.**

    i.   *Report within 60 days*. In his confirmation hearing for the role of IRS Commissioner, Daniel Werfel committed to releasing a report on the audit disparities documented between Black and non-Black tax filers within his first 60

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[34] Even algorithms "trained" using NRP data, rather than operational audit data, risk creating a "doom loop." NRP audits generally involve more extensive personal contact between IRS examiners and tax filers, so they have higher response rates than operational audits. However, the NRP audit process can still be "burdensome and intensive" for tax filers and data from 2006-2008 found that the NRP still has a significant non-response rate of about 15% for EITC filers. See: National Taxpayer Advocate, "Compensate Taxpayers for "No Change" NRP Audits and Waive Assessment of Tax, Interest, and Penalties Resulting from NRP Audits," 2017 Annual Report to Congress, https://www.taxpayeradvocate.irs.gov/wp-content/uploads/2020/08/ARC17_Volume1_LR_08_NRP.pdf; Rosemary Marcuss, Alain Dubois, Janice Hedemann, Mary-Helen Risler, and Kara Leibel, "Compliance Estimates for the Earned Income Tax Credit Claimed on 2006-2008 Returns," Internal Revenue Service Research, Analysis & Statistics Report Publication 5162, August 2014, https://www.irs.gov/pub/irs-soi/EITCComplianceStudyTY2006-2008.pdf.

days in office.[35] This report should clearly identify and explain what elements of audit selection algorithms are causing these disparities and describe the steps the IRS will take to address them. It should also include commitments to report further and regularly on these issues in the years to come. This report should address specific questions including:

1. What are the "targets" chosen for various IRS audit selection algorithms, and how do those targets affect racial audit disparities?

    A. To what extent do IRS algorithms or other parts of the audit selection process prioritize selecting returns for audits that are likely to owe *any dollars of under-reported* tax, rather than the *largest dollar amounts* of under-reported tax?

    B. Do funding limits cause the IRS to constrain their audit selection models to prioritize the types of audits that are cheaper to conduct (such as correspondence audits) either directly or by including some calculation of "ROI" that places higher weight on auditing filers who are least likely to respond to an audit request? If so, to what extent do these constraints contribute to racial audit disparities?

    C. Do IRS audit processes prioritize selecting tax filers for audit who are more likely to have made certain types of error (such as EITC and CTC error) relative to other errors, even when the other errors contribute the same or more to tax underreporting?

2. What characteristics used to identify potential tax under-reporting in the IRS's audit selection algorithms are most associated with race, and which contribute most to disparities in audit selection? To what extent do these factors simply magnify barriers to tax filing that are unequally distributed by race?

   The IRS may be reluctant to publicly disclose the full details behind their algorithms, to prevent any would-be tax evaders from gaming the audit selection process. But this should not stop the IRS from disclosing the specific characteristics in its algorithms that are acting as proxies for race and introducing bias into the audit selection process; such factors should be subjected to especially intense scrutiny and accountability. It is also insufficient to simply remove these characteristics from IRS algorithms without publicly disclosing them. To prevent racial bias from re-emerging in the future, questionable components of IRS algorithms should be

[35] Naomi Jagoda and Chris Cioffi, "IRS Nominee Werfel Pledges Transparency with $80 Billion," Bloomberg Tax, February 15, 2023, https://news.bloombergtax.com/daily-tax-report/senate-finance-holds-confirmation-hearing-for-irs-nominee-werfel.

subject to significant oversight and research scrutiny so that it is clear how they introduced such bias into the audit selection process in the first place.

3. How do administrative burdens in IRS audits contribute to disparities in audit selection and outcomes?

   A. Are the administrative burdens of the correspondence audit process inequitably distributed by race?

   B. To what extent are IRS algorithms "learning" over time to select tax filers with the greatest barriers to navigating audits and thereby reinforcing racial disparities in audit selection?

If any of these questions cannot be answered within 60 days, the report should detail what steps the IRS is taking to respond and when these questions will be answered.

As already noted, the Administration should not delay in taking immediate action to reduce audit disparities, even if further research is needed to better understand the full range of factors driving them.

ii. *Annual or regular disclosures.* The Administration can commit to annually or periodically estimating and disclosing disparities in rates of audit selection between Black to non-Black tax filers, including controlling for factors such as income and household composition. Regular reporting could also help to ensure that future changes to tax administration (such as adopting further use of machine learning algorithms as some have suggested) are implemented in ways that do not increase racial disparities in audit outcomes.

iii. *Extension of analysis to other communities*. As part of the 60-day report or subsequent reporting, the IRS should address the feasibility of extending this type of analysis to other racial and ethnic groups, including Latino, Asian American and Pacific Islander, and Native American/Alaska Native tax filers. Other recent Treasury research[36] that uses similar methods for imputing the race and ethnicity of tax filers shows that it can be difficult to generate reliable estimates for certain communities with existing data sources. If this is the case, the report should clearly describe these methodological challenges – and what approaches could help overcome them. Further research could also aim to disaggregate audit rates along other lines of difference.

If the Administration does not proactively provide the information detailed above or commit to providing it, lawmakers and other relevant oversight bodies should ensure that they do so.

c. **Remove refundable tax credits from "improper payments" reporting and bolster "tax gap" reporting.** The IRS should not be subject to skewed requirements to focus

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[36] Cronin, DeFilippes, and Fisher, *supra* note 9.

more on refundable tax credit error than on other sources of tax non-compliance that contribute more to the tax gap. Accordingly, OMB should remove the EITC and other refundable tax credits from the PIIA's reporting regime, which the Administration has incorrectly interpreted to require the IRS and Treasury to report more frequently and in more detail on "improper payments" of refundable tax credits such as the EITC and CTC than on sources of tax non-compliance among high-income tax filers and businesses. These imbalanced reporting requirements reflect long-standing racial and class biases around which groups should be investigated and punished for "fraud" by law enforcement authorities, versus which groups should not be because they are not deemed "criminally suspicious."[37] For more, see our issue brief.[38]

d. **Make the correspondence audit process more accessible and equitable.** The Administration should explore options for reducing the administrative burdens in the correspondence audit process, which are potentially borne disproportionately by Black and other marginalized tax filers and may be feeding racial disparities in audit selection. As we have previously recommended, the IRS could conduct or facilitate research evaluating whether certain interventions can boost participation in correspondence audits, such as initiating repeated contact attempts or assigning personalized assistance to tax filers selected for audits. For more, see our previous report co-authored with the Center for Taxpayer Rights.[39]

e. **Identify and remove inequitable barriers to reliable tax preparation services and guidance.** Our report has focused primarily on IRS algorithms, but other elements of tax administration may have disparate impacts by race that feed racial disparities in audit selection. Evidence suggests that most EITC errors are due to honest mistakes, not intentional fraud,[40] and tax filers may not have equal access to guidance and services that help them file their tax returns accurately. For example, factors such as where the IRS does and does not offer in-person assistance for tax filing and settling disputes; lawmakers' failure to require certain tax preparers to meet minimum standards for competency;[41] and unequal access to plain-language tax guidance, online tools, and

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[37] See: Dorothy A. Brown, "Race and Class Matters in Tax Policy," Columbia Law Review, Vol. 107 No. 3, April 2007, pp. 790-831, https://www.jstor.org/stable/40041719; Sam Washington, "Race, Tax Enforcement and the Social Compact," Kalmanovitz Initiative for Labor and the Working Poor, Georgetown University, https://lwp.georgetown.edu/news/race-tax-enforcement-and-the-social-compact/.

[38] The Tax Law Center, "Rebalancing Reporting on Sources of the Tax Gap," May 3, 2022, https://www.law.nyu.edu/sites/default/files/Improper%20Payments%20Refundables%20vs.%20Other%20Tax%20Gap%20Sources.pdf.

[39] Bryant et al., *supra* note 5.

[40] Robert Greenstein, John Wancheck, and Chuck Marr, "Reducing Overpayments in the Earned Income Tax Credit," Center on Budget and Policy Priorities, January 31, 2019, https://www.cbpp.org/research/federal-tax/reducing-overpayments-in-the-earned-income-tax-credit.

[41] Unenrolled tax preparers are paid tax preparers that are not attorneys, Certified Public Accountants (CPAs), or others with certifications verifying their competency in tax law. See: John Wancheck, "IRS Needs Authority to Regulate Tax Return Preparers," Center on Budget and Policy Priorities, May 5, 2021, https://www.cbpp.org/blog/irs-needs-authority-to-regulate-tax-return-preparers.

telephone assistance may all have impacts that differ by race, geography, and other dimensions of difference. Policymakers should seek to identify and remove barriers to accessing tax guidance and reliable tax preparation services, rather than allowing their effects to ripple through to choices about how to conduct compliance and audit activity. The Administration has already announced some efforts to expand access to tax filing assistance, and these efforts should continue to be prioritized.

f. **Invest in the evidence base.** This working paper reveals troubling racial disparities in the IRS's audit selection process, but the fact that this research was conducted in the first place and released publicly is responsive to longstanding calls, from Dorothy Brown,[42] Steven Dean,[43] Jeremy Bearer-Friend,[44] and other experts, for the IRS to release data that sheds light on the disparate impacts of tax policy and tax administration by race. It is also consistent with President Biden's Executive Order 13985 from early 2021 on advancing racial equity through the federal government, which directs federal agencies to disaggregate administrative data by race.[45]

This study raises many new unanswered questions that will likely require further research and analysis. The Administration should prioritize investing in tax equity analysis across several offices, including Treasury's Office of Tax Analysis (OTA), IRS Statistics of Income (SOI), and the IRS's Research, Applied Analytics and Statistics Division (RAAS). Such investments are needed to provide lawmakers and the public with up-to-date information on whether audit disparities are widening or shrinking over time, and to inform IRS and Treasury decisions on how to most effectively address these disparities.

These steps would be consistent with President Biden's recent Executive Order, released on February 16, 2023, that directs federal agencies to "prevent and remedy discrimination, including by protecting the public from algorithmic discrimination."[46] They are also consistent with several rights enumerated in the Taxpayer Bill of Rights that IRS Commissioner nominee Werfel referenced during his confirmation hearing, including "the right to quality service" and "the right to a fair and just tax system."[47]

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[42] Dorothy A. Brown, "The Whiteness of Wealth: How the Tax System Impoverishes Black Americans and How We Can Fix it," New York, Crown, 2021.

[43] Steven Dean, "Filing While Black: The Casual Racism of the Tax Law," Utah Law Review, Vol. 2022 No. 4, https://dc.law.utah.edu/cgi/viewcontent.cgi?article=1331&context=ulr.

[44] Jeremy Bearer-Friend, "Colorblind Tax Enforcement," NYU Law Review, Vol. 97 No. 1, April 2022, https://www.nyulawreview.org/issues/volume-97-number-1/colorblind-tax-enforcement/.

[45] The White House, "Executive Order On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government," Executive Order 13985, January 20, 2021, https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government/.

[46] The White House, *supra* note 2.

[47] Internal Revenue Service, Taxpayer Bill of Rights, https://www.irs.gov/taxpayer-bill-of-rights.