WHO RECEIVES ACCESS TO SMALL BUSINESS RELIEF?
A SIMULATION-BASED APPROACH

Simulations using application data from three cities showed how outcomes for historically underserved businesses depend on the allocation method.

What was the challenge?

In the wake of the COVID-19 crisis, local governments rapidly distributed emergency grants and loans to small businesses. Many local agencies used a mix of three primary methods to distribute funds when the demand for funding exceeded the amount of funding available: first-come, first-served, lotteries, and points systems. The choice of method was often based in part on the desire to equitably support the businesses that have historically been less able to access financing, including those with owners who are women, Black or Hispanic, or low-income, as well as businesses located in areas with high concentrations of underserved households.

The Small Business Administration (SBA) uses partnerships with groups like OES to learn from community-based approaches to helping small businesses. This work addresses key SBA research and evaluation questions including which strategies help women, minority, and other underserved entrepreneurs recover from the pandemic, and how can the SBA best support small business growth in markets in socially and economically disadvantaged communities.

What did we do?

OES pooled and analyzed business-level data on all applicants to small business relief programs located in three cities. We investigated two sets of equity-related questions. First was descriptive equity: to what extent were applicant businesses located in underserved communities and did they have underserved owners?

Second was counterfactual equity—or how businesses from different groups and geographic areas would fare under different methods cities could use to prioritize businesses for funding. This method takes real applications and asks "what if" funding had been allocated with a different approach, such as giving funding to those that applied earliest, or using a lottery, or by assigning points based on certain characteristics. We compared the portion of funding that would be awarded to applicants from businesses owned by women, businesses with other types of underserved owners (e.g., minority-owned businesses), and businesses located in low-to-moderate income areas, under 10 different allocation methods including approaches that do or do not explicitly prioritize businesses from historically underserved groups.

What did we learn?

The descriptive equity analyses show the importance of precise measurement of underserved attributes, including defining the unit of analysis (underserved individuals versus underserved areas) and whether being considered underserved comes from possessing *any* underserved attributes versus multiple. There are several lessons from conducting the simulations, including:

Basic first-come, first-served methods can disadvantage applicants from historically underserved groups. Businesses owned by members of historically underserved groups generally had the longest submission times, although the results were somewhat different across the three cities and more pronounced for underserved owners than underserved areas. Processing applications and allocating funding in the order they are submitted, without using a separate queue or set-asides for underserved applicants, results in less funding to these applicants.

Points systems that do not explicitly prioritize businesses from historically underserved groups can inadvertently disadvantage those businesses. When a diverse set of businesses applied for funding, those owned by women and minorities or located in low-to-moderate income areas had lower pre-COVID revenue and were disadvantaged by points systems that prioritized higher levels of pre-COVID profitability. Businesses owned by members of historically underserved groups also generally had fewer full-time employees, and in one of two cities where industry codes were reported, they were less likely to be in hard-hit industries prioritized by a points system. Because of these differences, points systems that prioritize factors like revenue loss, number of employees, and specific industries without assigning points to underserved demographic groups may result in less funding going to those groups. This highlights the importance of cities, if they do use a points system, examining the correlation between points systems factors and underserved attributes.

Weighted lotteries and set asides within first-come, first-served methods are a more consistent way to increase the funding going to historically underserved groups. Points systems often prioritize factors that disadvantage the smaller and lower-income businesses owned by members of these groups. Lotteries weighted to give a higher chance of winning to some businesses, or setting aside a portion of first-come, first-served funding for these businesses, drove more funding to historically underserved groups.

These three lessons are seen in the figures, which shows how the different allocation methods affected the *proportion of funding awarded* to women-owned businesses, as compared to the *proportion of applications* from women-owned businesses (the dashed red vertical line). The basic first-come, first-served method ("FCFS: general") is near the bottom of most panels, showing how this method disadvantages women-owned businesses. The various points systems that do not explicitly prioritize businesses from historically underserved groups ("Points, no dem plus factor") are also near the bottom of most panels. Weighted lotteries and first-come, first-served with set-asides are near the top of most panels, showing their potency for driving funding to historically

underserved groups.

Figure 1. City A and City B: *the top panel is City A. The bottom panel is City B.*

Proportion of total awards given to businesses
(underserved characteristic: women-owned;
at baseline: 0.38 of applicants)

☐ No ▮ Yes

Proportion of total awards given to businesses
(underserved characteristic: women-owned;
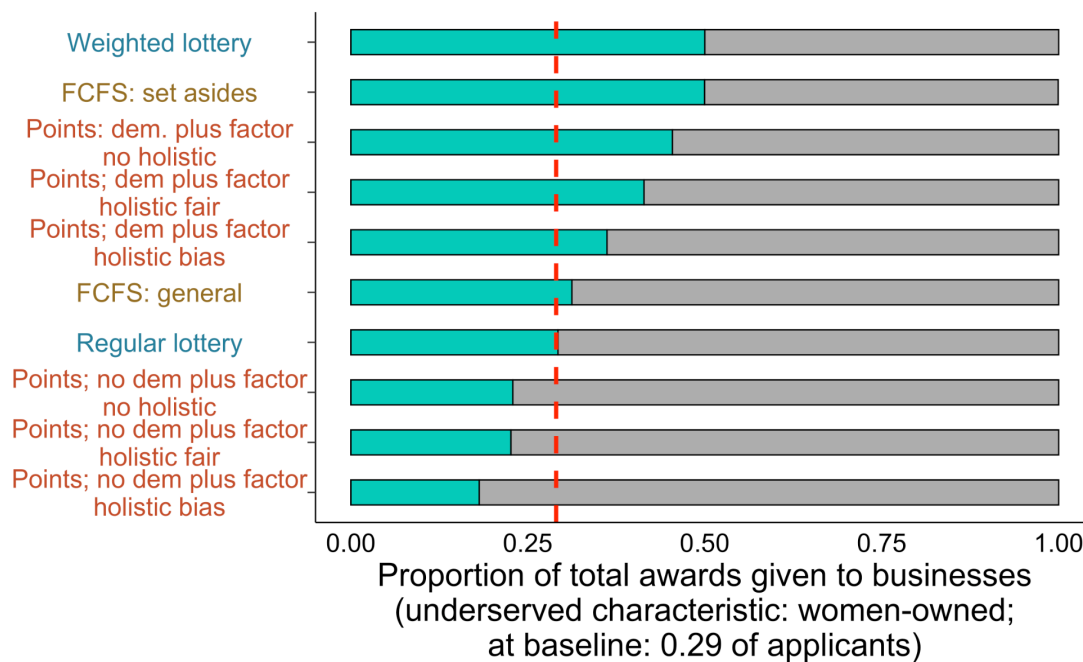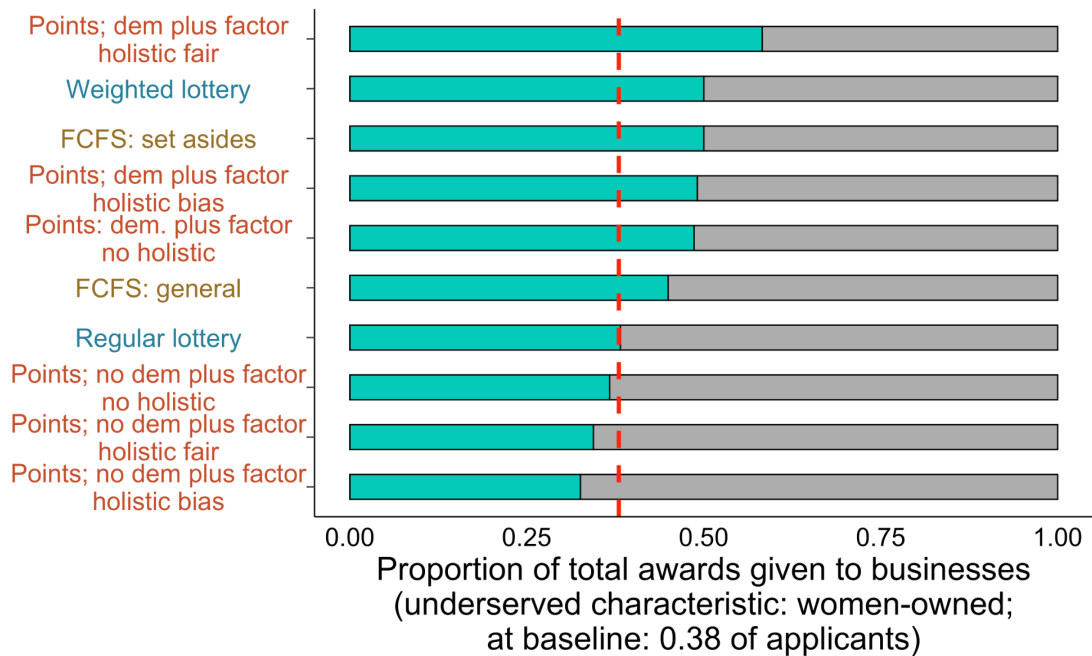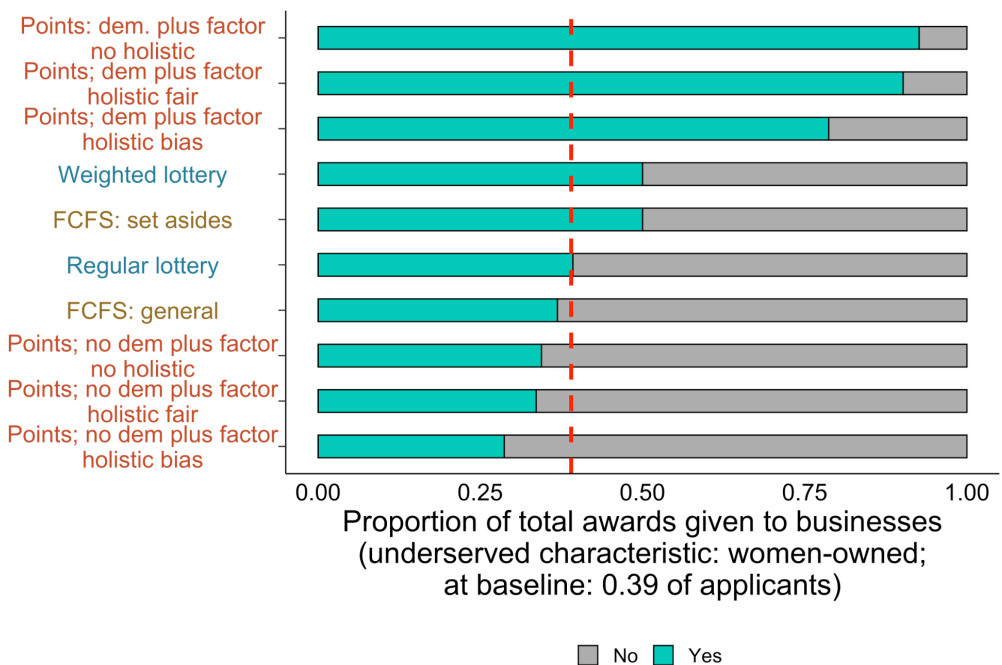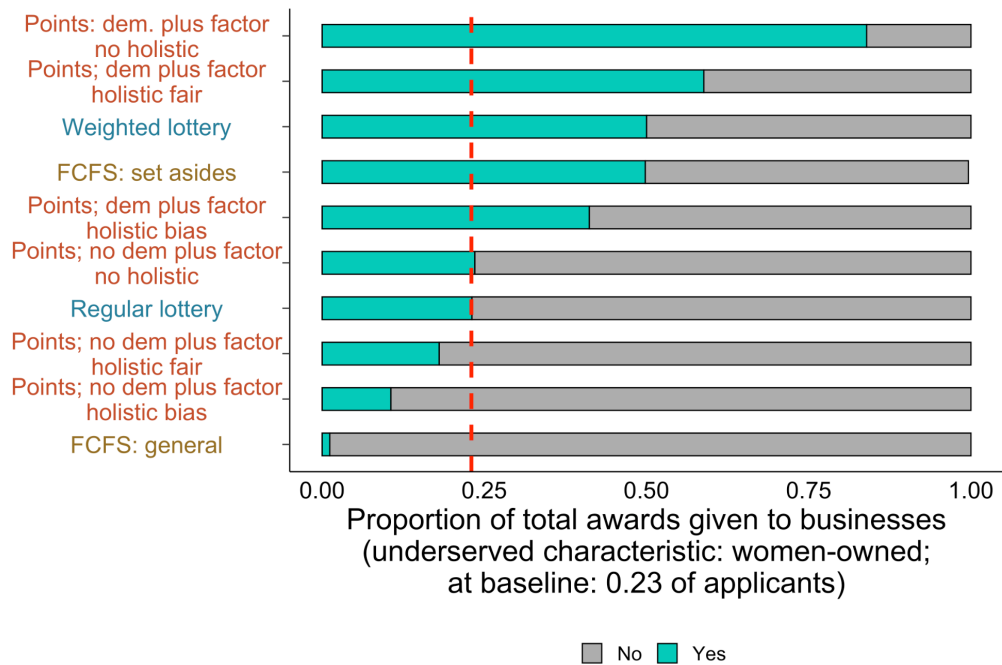at baseline: 0.29 of applicants)

☐ No ▮ Yes

Figure 1. City C. *The top panel shows results for the citywide program. The bottom panel shows results for the program that is geographically targeted to a high-need ward/district, which shows different patterns likely due to the applicant pool containing high proportions of underserved applicants.*

Proportion of total awards given to businesses
(underserved characteristic: women-owned;
at baseline: 0.23 of applicants)

No ◼ Yes ◼

Proportion of total awards given to businesses
(underserved characteristic: women-owned;
at baseline: 0.39 of applicants)

No ◼ Yes ◼

Results of the simulations for minority-owned businesses and businesses with low-income owners are similar, with inequalities less pronounced for businesses in LMI areas. These can be seen in the report-length version: *Who Receives Access to Small Business Relief? A Simulation-based Approach (forthcoming).*

A better understanding of these effects of allocation methods on the amount of funding flowing to historically underserved businesses will allow government programs to make informed decisions about the criteria they use to determine eligibility and prioritization for relief funds.