

Chapter 3, “Small Pictures, Big Biases: the Adverse Effects of an Airbnb Antidiscrimination Policy,”

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By combining scraped data from Airbnb with a state-of-the-art Vision Transformer for image classification, this chapter examines the issue of racial discrimination against service providers in the emerging sharing economy market, using Airbnb as a case study. We first quantify racial disparities in two key market outcomes: occupancy rates and prices. Ordinary least squares regression estimates, reveal that Black hosts exhibit the most significant occupancy rate disparities compared to their White counterparts, controlling for a wide range of traditional and novel covariates. Still, there is no significant difference in pricing. The disparity between Asian and White hosts is minor but still significant for both outcomes, while no disparity is found for Hispanic hosts. Next, we evaluate the impact of an anti-discrimination intervention introduced in October 2018, utilizing difference-in-differences and event study methodologies. The intervention involved reducing the size of profile pictures photos from 225 to 109 square pixels. Surprisingly, our findings indicate a significant and robust negative causal impact of the policy, which increased the racial disparity in occupancy rates between Black and White hosts by approximately four percentage points. We interpret this impact as resulting from the policy’s reduction of positive signals that Airbnb guests potentially infer from profile pictures, which inadvertently led them to rely more heavily on skin color when assessing a host. These findings contribute to the literature on platform design and discrimination, showing that interventions intended to reduce bias can, under certain conditions, exacerbate disparities.