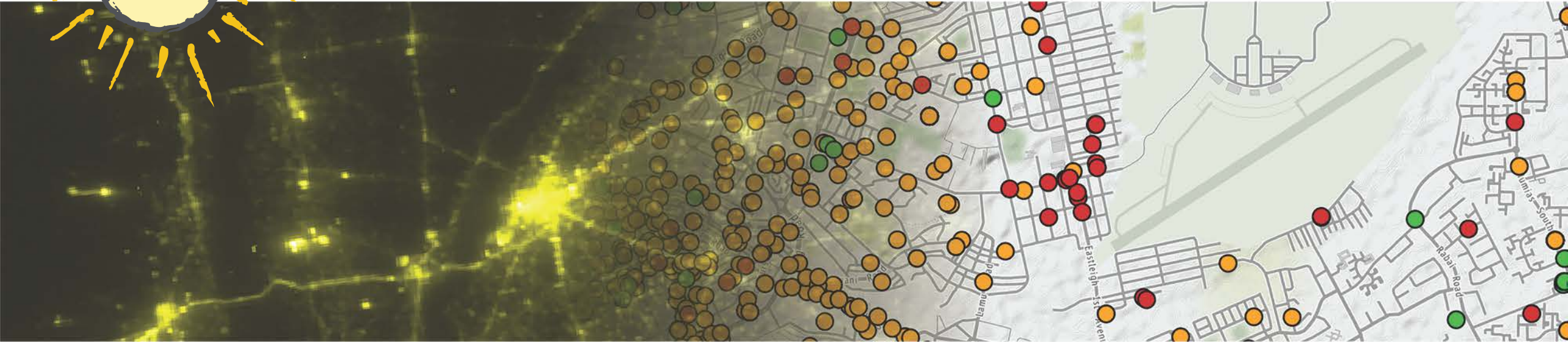




IE CONNECT FOR IMPACT

Transforming the Growth Potential
of Transport Investments

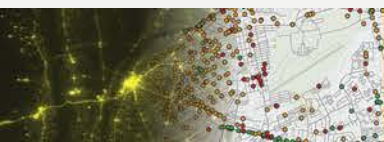


**DEMAND FOR SAFE
SPACE:
AVOIDING HARASSMENT
AND STIGMA**

**FLORENCE KONDYLLIS, ARIANNA LEGOVINI, KATE
VIBORNY, ASTRID ZWAGER, LUIZA ANDRADE**

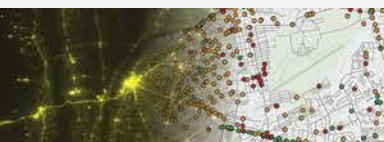
MOTIVATION

- Sexual harassment shockingly common in public places worldwide:
 - 50% physically harassed in public
- Violence against women restricts mobility and reduces women's access to education and market participation
 - (Burde and Linden 2013; Muralidharan and Prakash 2017; Cheema et al. 2017; Borker 2018; Jayachandran 2019)
- Women-reserved “safe spaces” are a common policy response; may allow women to avoid harassment
 - (Aguilar et al. 2018)
- Are there unintended consequences - reinforcing perception that women outside the reserved space provoke harassment?



THE STUDY

- We use crowdsourced data from 22,000 rides on public transit in Rio de Janeiro, Brazil to capture the costs of sexual harassment
 - elicit revealed preferences for women-reserved space by varying payouts to ride in different spaces
 - randomly assign riders across spaces to measure differences in the incidence of physical harassment
- We then document a potential general equilibrium effect of reserved spaces: stigma against women who choose the public space instead of reserved space
 - Interview male and female commuters on the platform and administer 948 social norms survey and 291 Implicit Association Tests



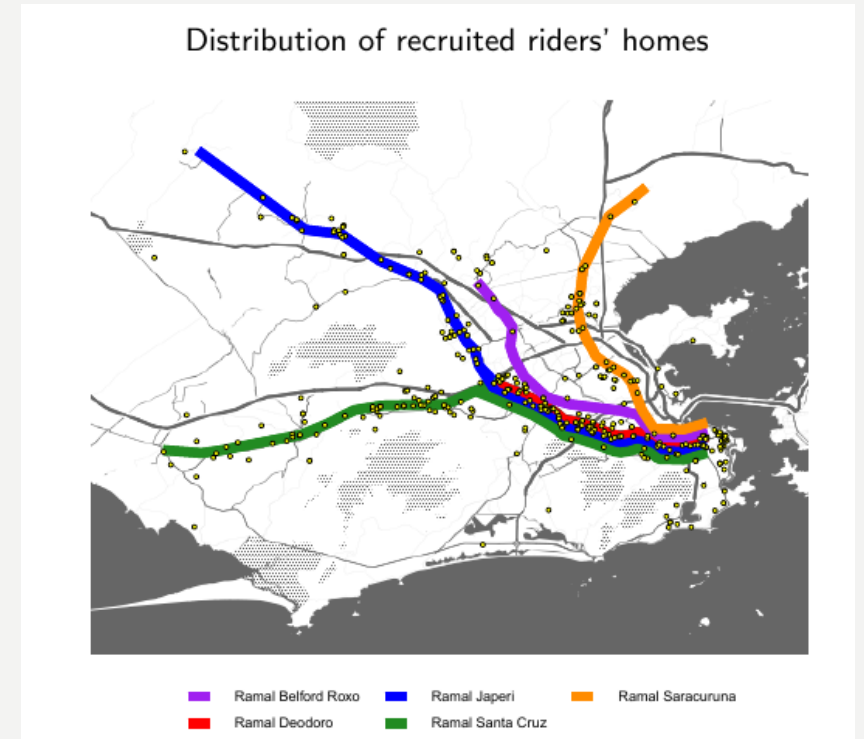
THE CONTEXT

- Since 2006 metro and train operators required to provide a women-reserved car in each train during rush hours (6-9AM and 5-8PM)
 - 1 in 8 carriages are dedicated to women; 50% of riders are women
- Women can choose which space to ride



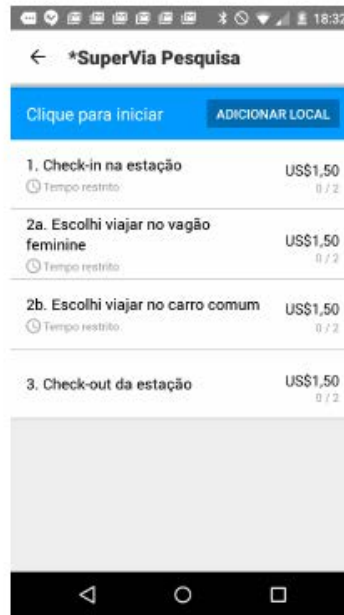
DATA CROWDSOURCING

- We recruit 357 female participants from train stations; most are regular commuters
- Recruitment material did not mention space reservation or harassment to avoid self-selection
- Participants paid \$4.5 per ride to capture data through a phone application



PRESENTATION OF TASKS

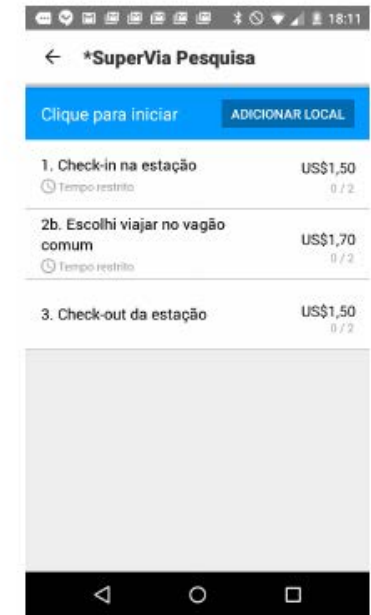
- Elicit revealed preference willingness to pay:
 - Riders can ride either car but are offered varying opportunity cost (additional payment for public space)
- Estimate reduction in harassment from riding the reserved car:
 - Randomize offer of paid ride only on the women-reserved or only on the public car
 - Partial equilibrium - not a measure of policy impact
- Combine estimates to quantify cost of harassment



(a) Revealed preference: zero opportunity cost

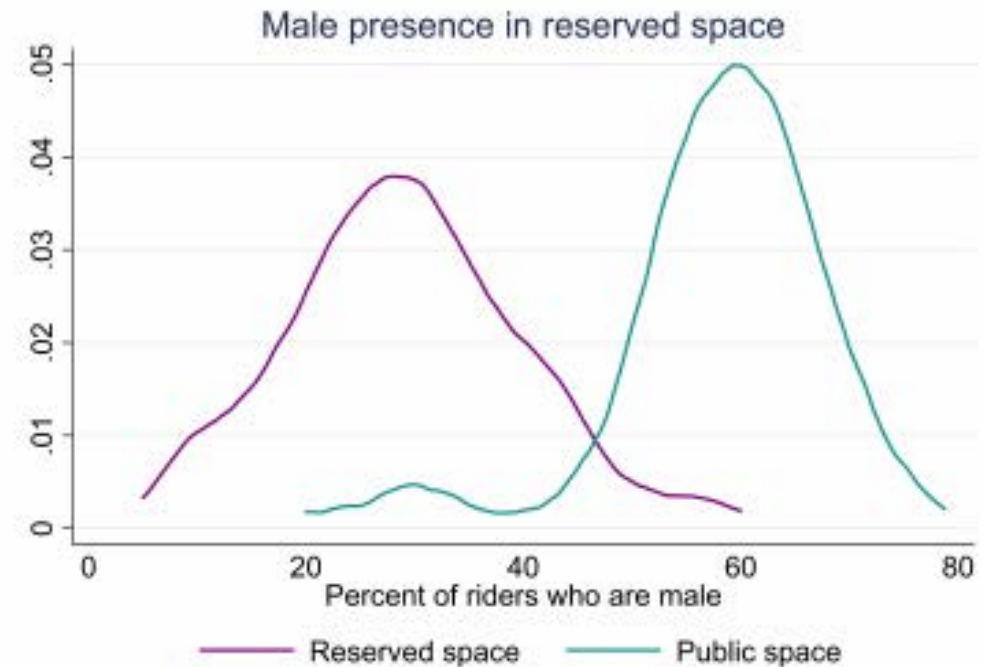


(b) Revealed preference: positive opportunity cost



(c) Randomized assignment to space

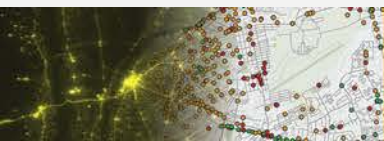
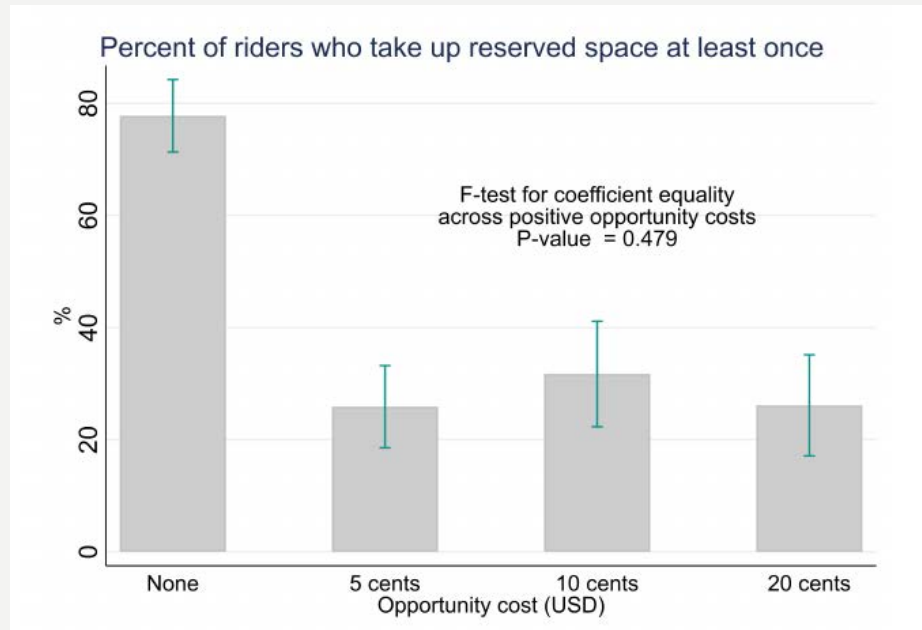
ON AVERAGE
31% OF RIDERS IN THE RESERVED SPACE ARE MALE;
62% IN THE PUBLIC SPACE



PHYSICAL HARASSMENT IN THE PUBLIC SPACE: 2.6% OF RIDES = ONCE A MONTH

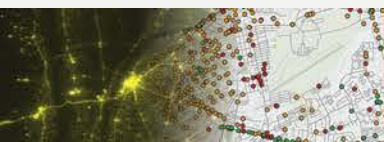
26% OF WOMEN GIVE UP \$0.20 TO USE THE RESERVED SPACE ON SOME RIDES

RIDING THE RESERVED SPACE REDUCES PHYSICAL HARASSMENT BY 50%



RESERVED SPACE CREATES STIGMA FOR WOMEN IN PUBLIC SPACE

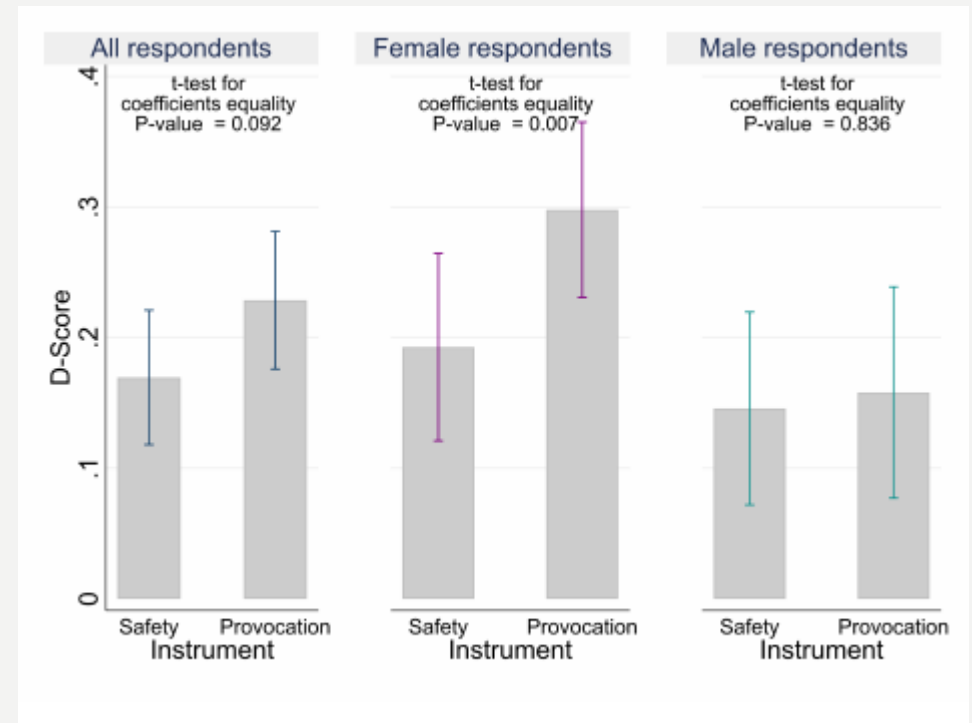
- Women who choose the public space are blamed for harassment
- Half of the men agree that women who choose to ride in the public space are more sexually open
- 20-40% agree that if a woman is harassed in the public space, it is partially her fault: she could have chosen the reserved space



WOMEN IN PUBLIC SPACE ARE NOW VIEWED AS PROVOKING

Implicit Association Test respondents associate:

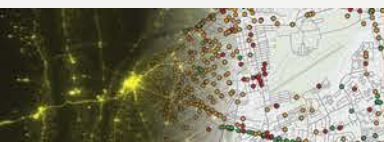
- the reserved space with safety
- the public space with provocation



CONCLUSION

In a setting with a women-reserved space on the public transit system we find:

- Women willing to pay to choose reserved space
- Choice driven by avoiding harassment:
 - randomized assignment demonstrates harassment much lower in women only cars
- Low-bound cost of harassment on intensive margin is equivalent to \$1.17 per incident, or 0.39% of minimum wage
- Stated and implicit attitudes reveal that gender norms put the burden on the victim for not taking up the reserved space - potential unintended consequence in general equilibrium



THANK YOU



Data collection

worldbank.github.io/stata/

stata
Stata Commands for Data Management and Analysis
[View the Project on GitHub](#)
worldbank/stata

World Bank Stata GitHub
This website is a hub for Stata practices from the DIME Analytics team.

DIME Analytics Public Resources

- DIME Wiki
- Manage Successful Impact Evaluations

DIME Analytics Code

- Impact Evaluations Toolkit
- Impact Evaluations Fieldkit
- Stata Visual Library
- Distributional Impact Analysis Toolkit

DIME Analytics Blogposts

- IE Analytics: Introducing the Development Impact Evaluation Wiki
- IE analytics: introducing ietoolkit
- Tools of the trade: Using lemargins to graph impacts with standard error bars (IE Analytics update)

This project is maintained by worldbank
Hosted on GitHub Pages — Theme by underwellist

Step by step guidance

Data analysis

Distributional impact