

Venue-based sampling: a practical tool to sample hard-to-reach populations in political science

Jessie Trudeau¹

¹Department of Political Science, Syracuse University

Contributions of this paper

- Enumerate the reasons why certain populations are hard-to-reach
- Explain how venue-based sampling can be used to survey the hard-to-reach
- Formalize the process and considerations of venue-based sampling as a sampling strategy
- Provide an empirical example (favela residents in Rio de Janeiro)

Challenges of surveying the hard-to-reach

Hard-to-reach populations are harder to find and interview than the general population, yet are often of special interest to political scientists. There are a few categories of the hard-to-reach:

Rare: the target population comprises a small fraction of the population sampling frame

- Difficult to sample: conventional strategies will sample few members of the pop of interest
- Difficult to screen: inefficient or costly to differentiate the target from general population

Hidden: there are access barriers to identifying and contacting the target population

- Difficult to identify: target population conceals identifying characteristics; hard to find
- Difficult to contact: conventional recruitment strategies might overlook the pop of interest

Reluctant: the target population is unlikely to participate in the survey

- Difficult to persuade: target population is too busy or too skeptical to participate
- Difficult to protect: research team or target pop has ethical concerns about participation

→ Often, the target population is hard-to-reach for some combination of the above reasons

What is venue-based sampling

Definition: *venue-based sampling* (VBS) is a sampling technique used to recruit and interview participants at specific locations where the target population is likely to be present.

Examples:

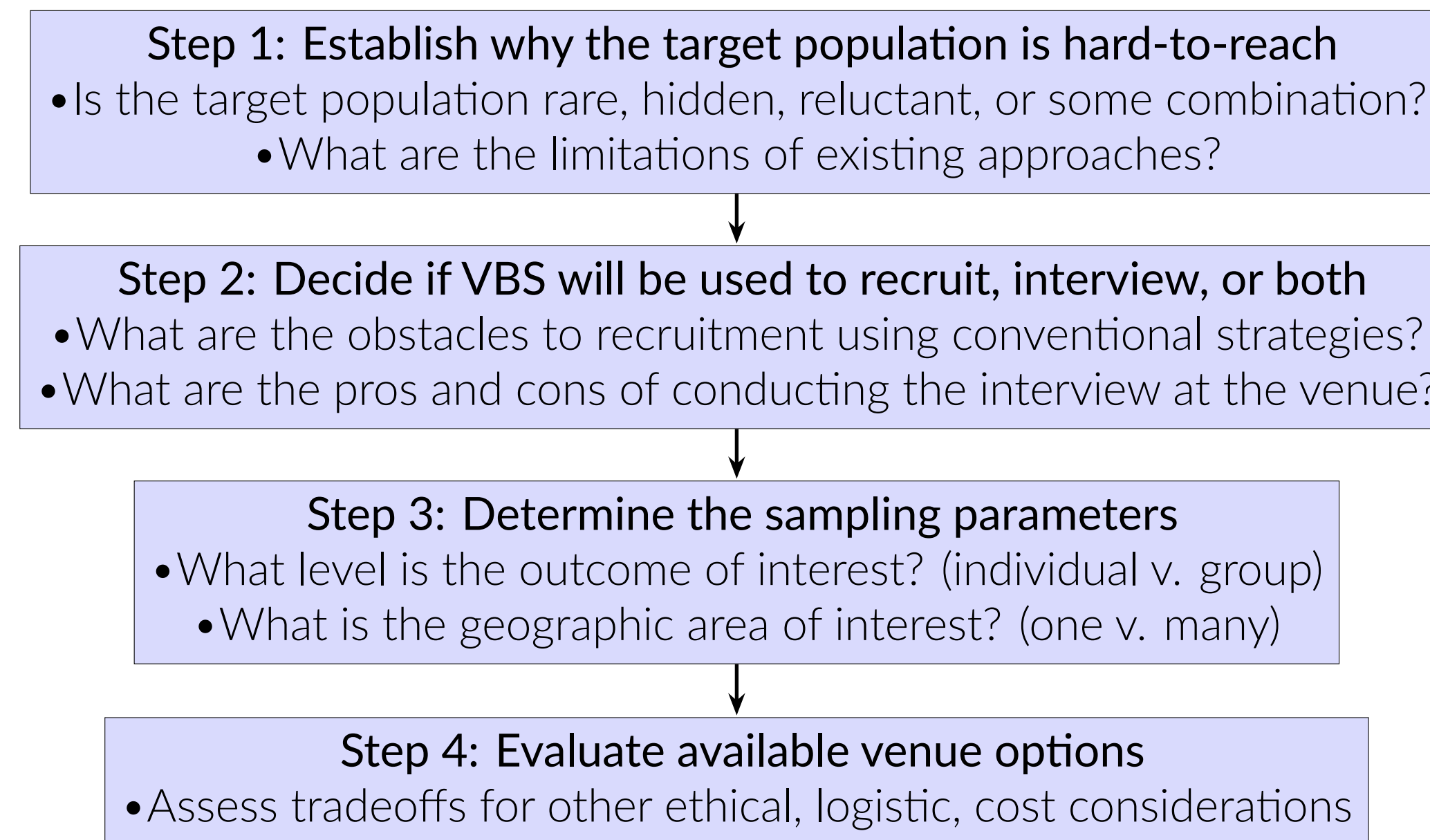
- Intercept sampling: sample visitors to hospitals, health clinics, airports, shopping malls, etc.
- Worksite sampling: sample employees at their workplace instead of their place of residence

Using venue-based sampling to find the hard-to-reach

The public health and demography literatures have long noted that VBS is a useful tool to survey the hard-to-reach. Though political scientists occasionally use VBS, it is rarely elaborated on or justified. Table 1 explicitly lays out the rationale for using VBS in political science research:

Target is...	Use VBS to overcome this challenge by...	Example
Rare	...identifying specific locations where members of the target population are likely to be found	Street vendors at the market (Grossman 2021)
Hidden	...identifying specific locations <i>only</i> frequented by the target population, <i>or</i> ...F2F recruiting members of the target population in a specific location that cannot easily be contacted in other ways	Protestors at demonstrations (Norris et al 2005, Saunders 2014, Van Aelst and Walgrave 2001)
Reluctant	...establishing trust in the research team through a F2F connection, <i>or</i> ...providing heightened neutrality and privacy in the venue that other spaces/modes do not	Migrant workers at public spaces they gather/rest (Boittin et al 2024)

Formalizing an approach to sampling the hard-to-reach using VBS



Empirical application: Using venue-based sampling in Rio de Janeiro

- **Research question:** How do electoral campaigns work in criminally governed areas?
- **Target population:** Residents living under criminal governance, and a comparison group of similar residents *not* living under criminal control. Criminal groups are concentrated in *favelas* (informal settlements). There are more than 1,000 favelas, $\approx 1/3$ of Rio's population.

Step 1: Establish why the target population is hard-to-reach

Favela residents are **hidden** and **reluctant**: little information about the sampling frame and ethical concerns about residential F2F surveys. Fieldwork confirmed that existing tools are inadequate.

- Hire a firm for an in-person survey? All firms declined to provide a quote (safety reasons)
- Internet? Online panels and a DIY approach (Meta) can't fulfill sub-municipal quotas
- Grassroots? Training and sending enumerators into favelas could be unsafe or unethical

Step 2: Decide if VBS will be used to recruit, interview, or both

- **Recruitment:** I intended to recruit participants in a venue where there was a high concentration of favela and comparable non-favela residents, and that offered more anonymity than their neighborhood, if they chose to participate
- **Interview:** I intended to interview respondents at the location. I sought a location that is safe (both private and neutral) for respondents to speak freely about criminal groups

Step 3: Determine the sampling parameters

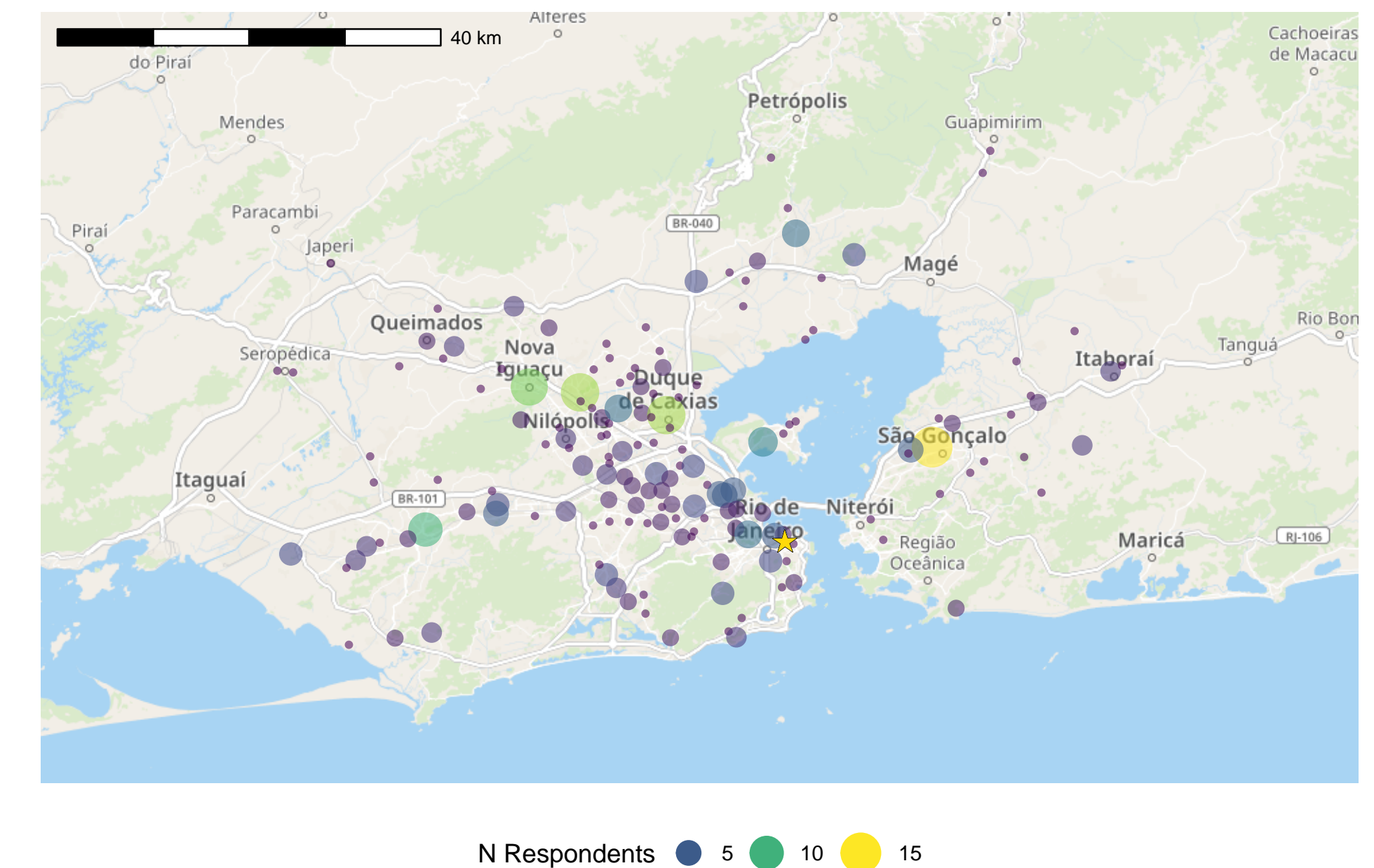
These parameters help the researcher clarify priorities when selecting location(s), namely, how important it is to structure the sampling so it satisfies the requirements of probability sampling

- **Outcome unit:** I was interested in electoral campaigns at the *neighborhood* level to measure how campaigns co-vary with criminal governance across the city → **Group-level outcomes**
- **Geographic unit:** I was interested in comparing variation in criminal governance styles and factions across regions of the city → **Many units**

Step 4: Evaluate available venue options

- I sampled municipal bus employees (drivers and fare collectors) at the *Central Bus Station*, located downtown. A partnership with the bus company legitimized the survey while providing privacy and neutrality, since it was far from respondents' homes.
- This strategy guaranteed a diverse sample of low-income workers residing across the metro area. All employees have to clock out at the Central Station after their shift, even if they drove a faraway route (near their home). I leveraged these "rush hours" to draw my sample.

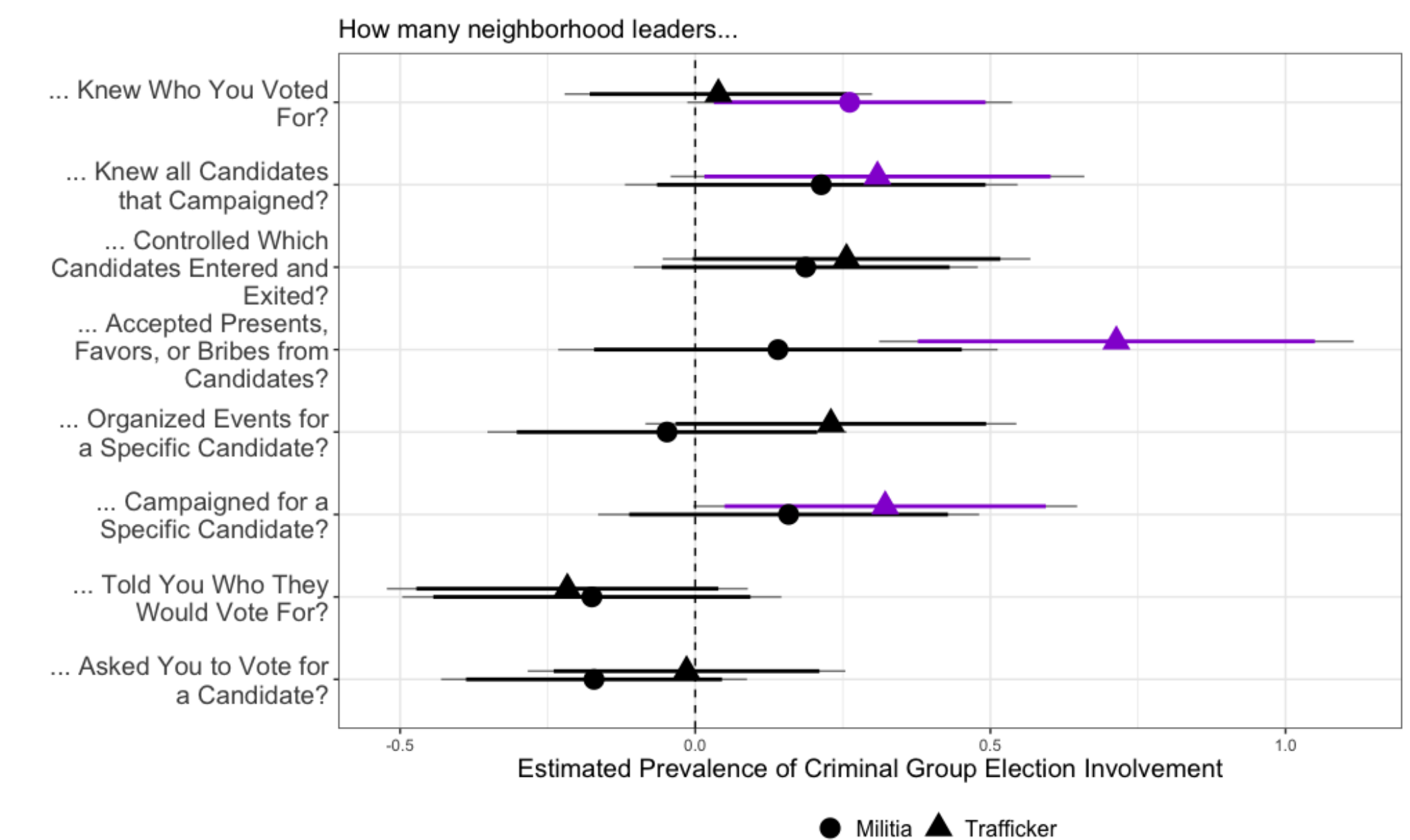
Figure 1: Sample distribution by place of residence



The yellow star indicates the location of the Central Bus Station, where all respondents were recruited and all interviews conducted. My team sampled $N = 354$ respondents from 160 neighborhoods during shift changes at the Central Station.

Other arguments for using VBS for the hard-to-reach

Truth-telling: Facilitates asking sensitive questions when the location “neutralizes” a sensitive topic. Experiences with criminal governance are less sensitive when asked in a neutral location (e.g., work). Below: list experiment, with two criminal group types as treatment arms.



Ethics: VBS can lower the risk of participation for hard-to-reach respondents. Certain locations can reassure respondents of confidentiality and privacy while providing the intimacy of a F2F survey. Below: word cloud with open-ended (positive) reactions to the bus driver survey.

