Urban-rural divide in the use of household safety devices for crime prevention in Brazil

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Outline

Motivation

Safety is a **public good** to which everyone in society should have a right.

However, the particularly **very high rate of crimes** in Brazil motivates people to resort to private security measures, especially for their households.

Research question

Are there differences in the use of safety devices for Situational Crime Prevention (SCP) across areas of different levels of urbanization?

Main objective

The **main objective** is to measure the differences in the use of safety devices for SCP in households across four contexts of urbanization:

1. Urban
2. Peri-urban
3. Accessible rural
4. Remote rural

Specific objectives

Specifically, this paper aims to:

1. Report the proportion of the use of safety devices across levels of urbanization; and
2. Examine the differences concerning the types of safety devices.

Data and statistical procedures

The **2009 Brazilian National Household Survey** (PNAD) and its **special supplement on victimization** were used to perform **descriptive statistics** and **chi-square tests**.

Evidences

Table: Percentage use of household safety device by the level of urbanization, and population.

	Safety device		
	No (%)	Yes (%)	Population (*n*)
Urban	39.3	60.7	158,111,318
Peri-urban	49.2	50.8	2,670,589
Accessible rural	67.5	32.5	4,212,460
Remote rural	74.4	25.6	26,484,206
Brazil	44.9	55.1	191,478,573

χ^2= 1.2e+07 (*p*-value = 0.000)

About 55% of the Brazilian population use private safety measures to protect their households, and this rate is unevenly distributed across levels of urbanization – around 60% of urban residents use safety devices, whereas this rate is only 25% in remote rural areas.

We separated the safety devices into types:

1. Traditional devices: locks, gates, private security, and security dogs; and
2. Technological devices: security alarms, and cameras (CCTV).

Table: Percentage use of household safety device by the level of urbanization and type of device, and population.

	Safety device		
	Traditional (%)	Technological (%)	Population (*n*)
Urban	53.0	7.8	96,029,323
Peri-urban	44.0	6.8	1,355,673
Accessible rural	28.4	4.2	1,370,184
Remote rural	24.5	1.1	6,776,660
Brazil	48.4	6.7	105,531,840

χ^2= 1.2e+07 (*p*-value: 0.000)

We measure the average income of households that use no safety device compared to those that use traditional or technological devices.

Table: Average household income, by the level of urbanization and type of device (in Brazilian currency, R$)

	Safety device			
	No device	Traditional	Technological	Population
Urban	453.9	772.1	1414.0	152,513,038
Peri-urban	424.4	593.2	1776.1	2,582,077
Accessible rural	247.7	396.0	373.9	4,100,268
Remote rural	278.7	421.3	648.8	25,989,092
Brazil	406.2	740.1	1386.5	185,184,475

The households with the lowest average income used no safety device, those with higher average income use traditional devices, and those with even higher income afford technological devices.

It is worth noting that the income discrepancy between the households that use no safety device and those that use traditional devices is lower compared to the discrepancy between those that use traditional devices and those that use technological devices, especially in urban and peri-urban areas.

Our findings

We found:

1. A **negative association** between the level of urbanization and the use of safety devices;
2. A **negative association** between the use of devices and the level of urbanization, irrespective of the type of device;

Our findings

3. A **negative association** between the use of technology and income; and
4. A **staggering income difference** is observed across the types of devices used, irrespective of the level of urbanization.

Thank for watching

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