

# Measuring inequalities with statistical models

March 7, 2024

**The new study by Gian Maria Campedelli, a researcher in the MOBS unit at the FBK Center for Augmented Intelligence, was published in the official journal of the American Society of Criminology**

The [article](#), titled “Homicides involving Black victims are less likely to be cleared in the United States,” was published Feb. 21 and addresses, through a causal statistical approach, a sensitive and long-debated issue: are homicide cases involving African-American victims less likely to be cleared? Attempts to address this issue date back to the 1970s. However, despite its theoretical and political relevance, a comprehensive and not merely correlational empirical answer to this critical question has been lacking until now. With his work, FBK researcher Gian Maria Campedelli applied statistical methodologies to answer it and contribute to the larger literature documenting the existence of racial disparities at various levels in police and criminal justice settings in the United States.

## **Data sources examined**

The data examined cover the period 1991-2020 and come from two sources: the dataset maintained by the Murder Accountability Project, which includes more than half a million cases (N = 522,278), and a dataset gathered from the National Incident-based Reporting System (NIBRS) of the Federal Bureau of Investigation (FBI), which includes nearly 100,000 cases (N = 98,677).

## **Main findings of the research**

By analyzing hundreds of thousands of homicide cases occurring in the United States over the past three decades, the researcher was able to isolate the causal effect of the victim’s race on the probability of arresting the perpetrator. This effect is estimated to translate into a reduction in probability of solving a case that lies between 3.4 and 4.8% when the victim is African-American, depending on the type of statistical specification and dataset used.

Moreover, the same models showed that this disparity moderately – but significantly – increased over the three decades examined and that this differential is slightly larger for males. These findings contribute to the large body of evidence on discrimination against individuals of color in the administration of justice in the United States, calling for structural efforts to reduce this gap.

## **The methodology employed**

The statistical models that were used causally estimate the role of race of homicide victims in the

United States by considering the two aforementioned data sources. Methodologically, the models compare identical homicide cases distinguished only by victim race. More specifically, Campedelli compared homicide cases that occurred in the same decade, in the same jurisdiction, in the same type of location, under the same circumstances and with the same weapons, with victims having the same age and sex, differentiated only by the ethnicity factor. By eliminating possible confounding factors that might explain other channels through which a homicide has a greater or lesser chance of being solved, the approach taken allows us to isolate the weight of being black in the likelihood of an arrest being made following a homicide.

### **Impact in absolute terms**

The larger of the two datasets, maintained by the Murder Accountability Project, records a total of 257,000 black homicide victims in the United States are counted from 1991 to 2020 (264,000, by contrast, are white victims over the same period). In this context, the racial factor emerges substantially: the models estimate that given the sample of black victims, between 8,700 and 12,300 fewer homicides have been solved over the past three decades compared with the sample of white victims. The weight of this differential is attributable only to the racial background of the victims and not to other specific or contextual characteristics related to the crime events, such as weapons used, victim's age, or circumstances under which the event occurred.

---

### **Useful links:**

[Research Paper](#) published on [Criminology](#) (© The American Society of Criminology)

[The Guardian – US](#): *Black homicide clearance rate lower than white*

Center for [Augmented Intelligence](#) at FBK

#### **PERMALINK**

<https://magazine.fbk.eu/en/news/measuring-inequalities-with-statistical-models/>

#### **TAGS**

- #augmentedintelligence
- #criminology
- #inequalities
- #justice
- #police
- #United States

#### **AUTHORS**

- Giancarlo Sciascia