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# Prospects, Problems and Pitfalls in Comparative Analyses of Criminal Justice Data

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Methods, Trends and the Impact on Policy Making”,  
22-23 March 2021

Prospects, Problems and Pitfalls in Comparative Analyses  
of Criminal Justice Data

# 1. INTRODUCTION: APPLES AND ORANGES

# 1. Introduction: Apples and Oranges

- „[C]rime statistics are a construct [...] very sensitive to the rules applied in the process of construction” (v. Hofer 2000).
- Apples are not oranges; and *theft* is not *Diebstahl* is not *vol* is not *κράχα* is not *hurto*!

# Outline

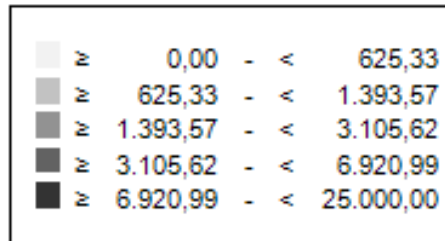
1. Introduction: Apples and Oranges
2. Problems of International Comparison
3. Data Availability and Conformity with Definitions
4. Variation Coefficients
5. Other Important Influences on Comparability
6. Conclusions: Dos and Don'ts of International Comparison

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## 2. PROBLEMS OF INTERNATIONAL COMPARISON

# Total police-recorded crime in 2015 across Europe (Rates per 100,000 population)

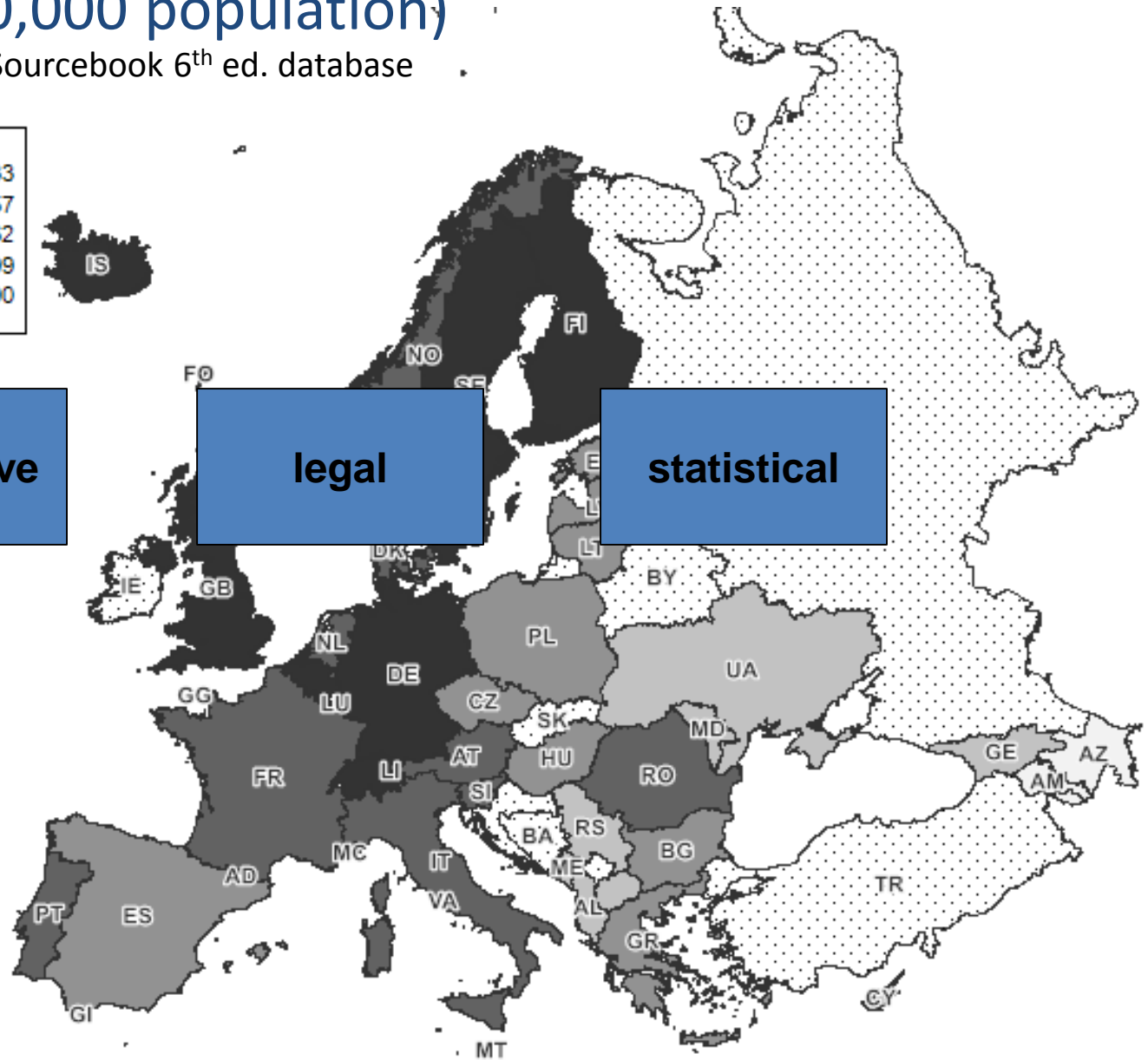
**Data source:** European Sourcebook 6<sup>th</sup> ed. database



**substantive**

**legal**

**statistical**



# Standard definition „intentional homicide“

**General remark for homicides:** Please note that intentional homicide is a general category and that you will also be asked to provide data on the subcategory of completed intentional homicide.

A.3.1 Intentional homicide <sup>2</sup>						ICCS	
Standard definition: intentional killing of a person						0101 0102 0105	
	Indicate if <u>included in</u> <u>or excluded from:</u>						
	police statistics		conviction statistics				
	incl.	excl.	incl.	excl.			
Include the following:							
• assault leading to death					0101		
• euthanasia					0105		
• infanticide					0101		
• attempts					0102		
Exclude the following:							
• assistance with suicide					0104		
• abortion					0106		
• negligent killing (A.2 if traffic related)					01032		
• war crimes, genocide, crimes against humanity					110131, 11014, 11015		

**Comments on the definition** – see Introduction (paragraph 3)

<sup>2</sup> Differently from Anglo-American concepts and the International Classification of Crimes for Statistical Purposes, “homicide” here means both completed and attempted cases.

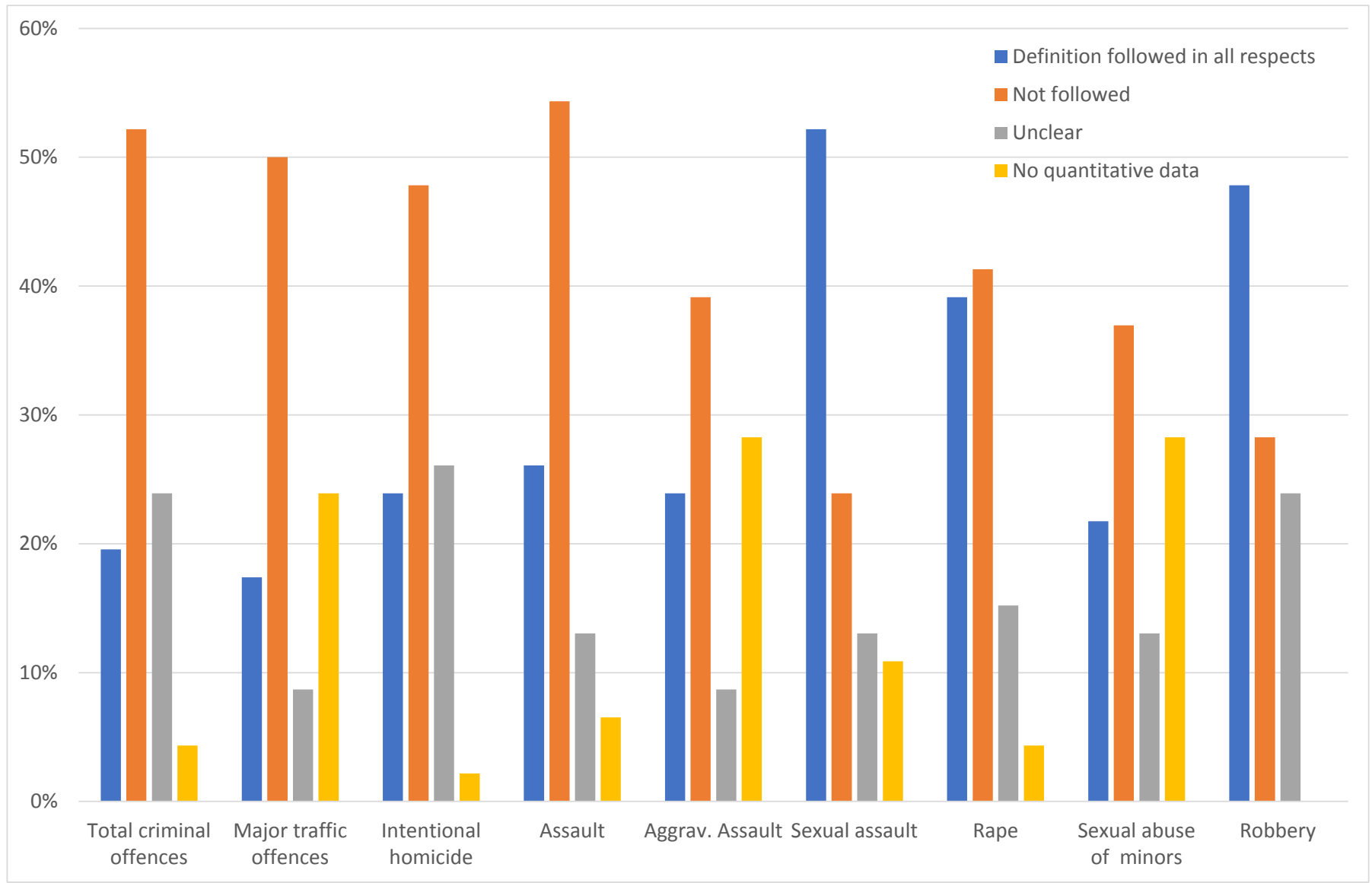
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### **3. DATA AVAILABILITY AND CONFORMITY WITH DEFINITIONS**



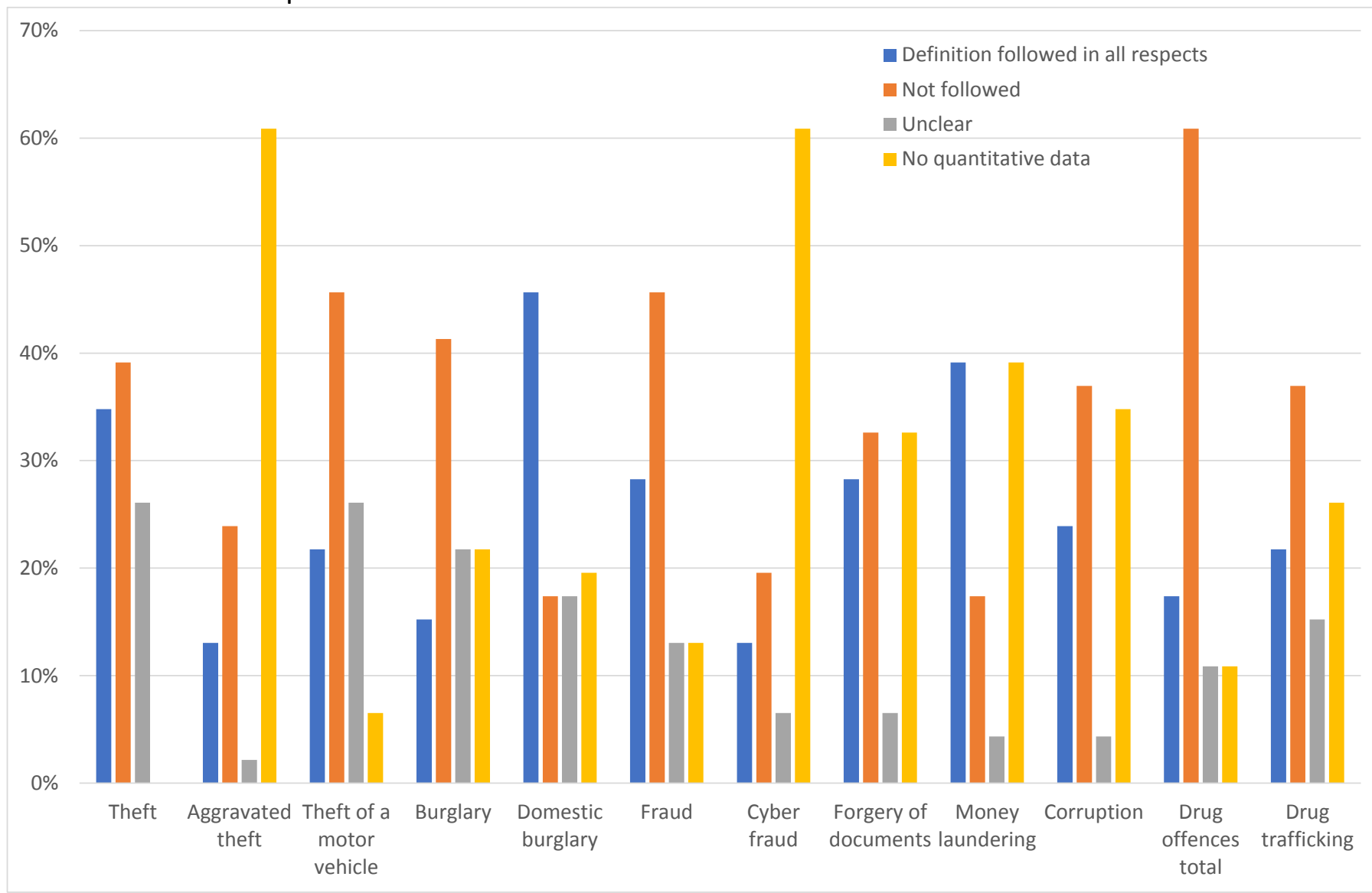
# Data availability and overall conformity on police level for ESB offences (part 1)

**Data source:** European Sourcebook 6<sup>th</sup> ed. database



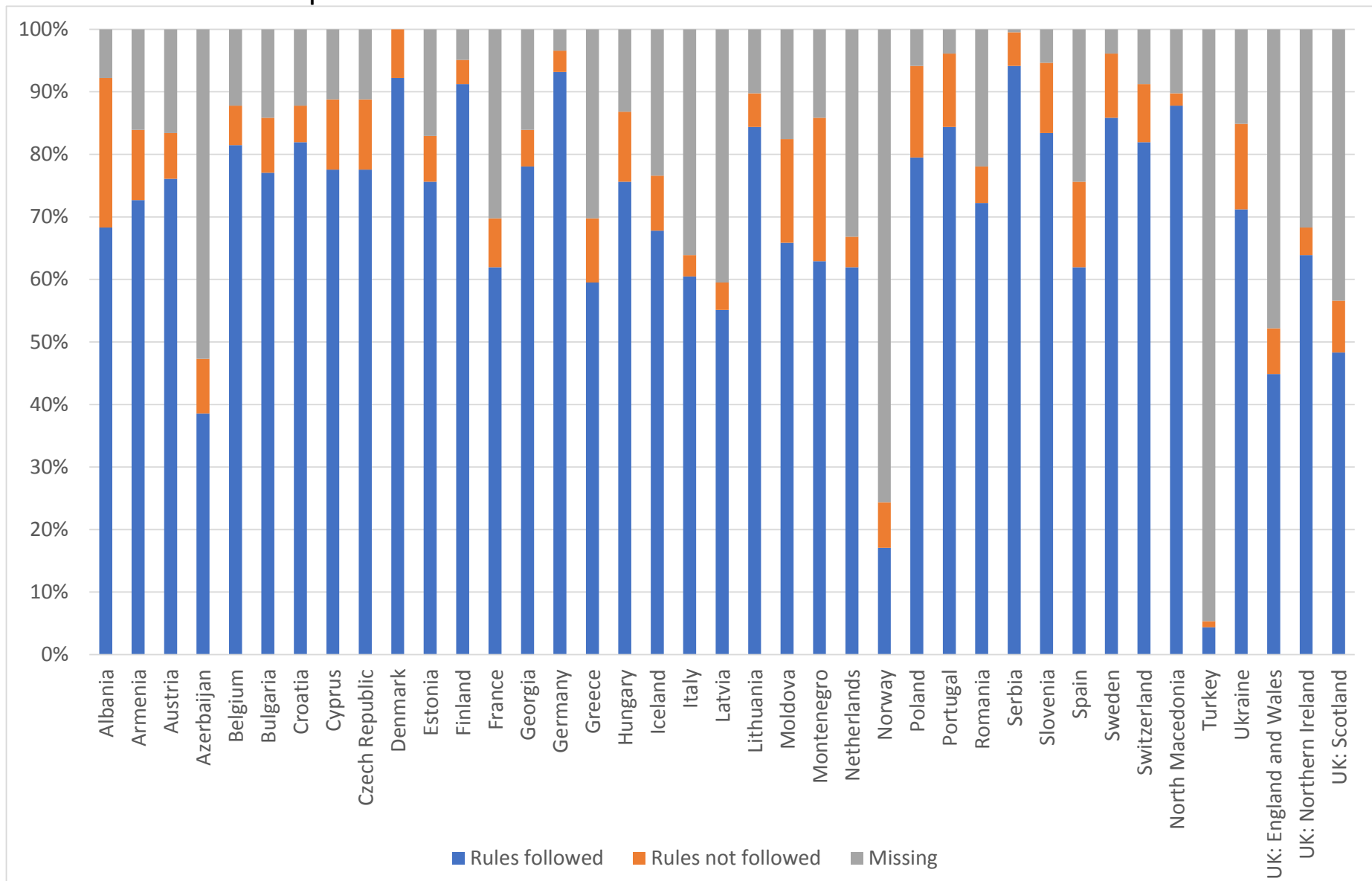
# Data availability and overall conformity on police level for ESB offences (part 2)

**Data source:** European Sourcebook 6<sup>th</sup> ed. database



# Item conformity on police level for ESB offences

**Data source:** European Sourcebook 6<sup>th</sup> ed. database

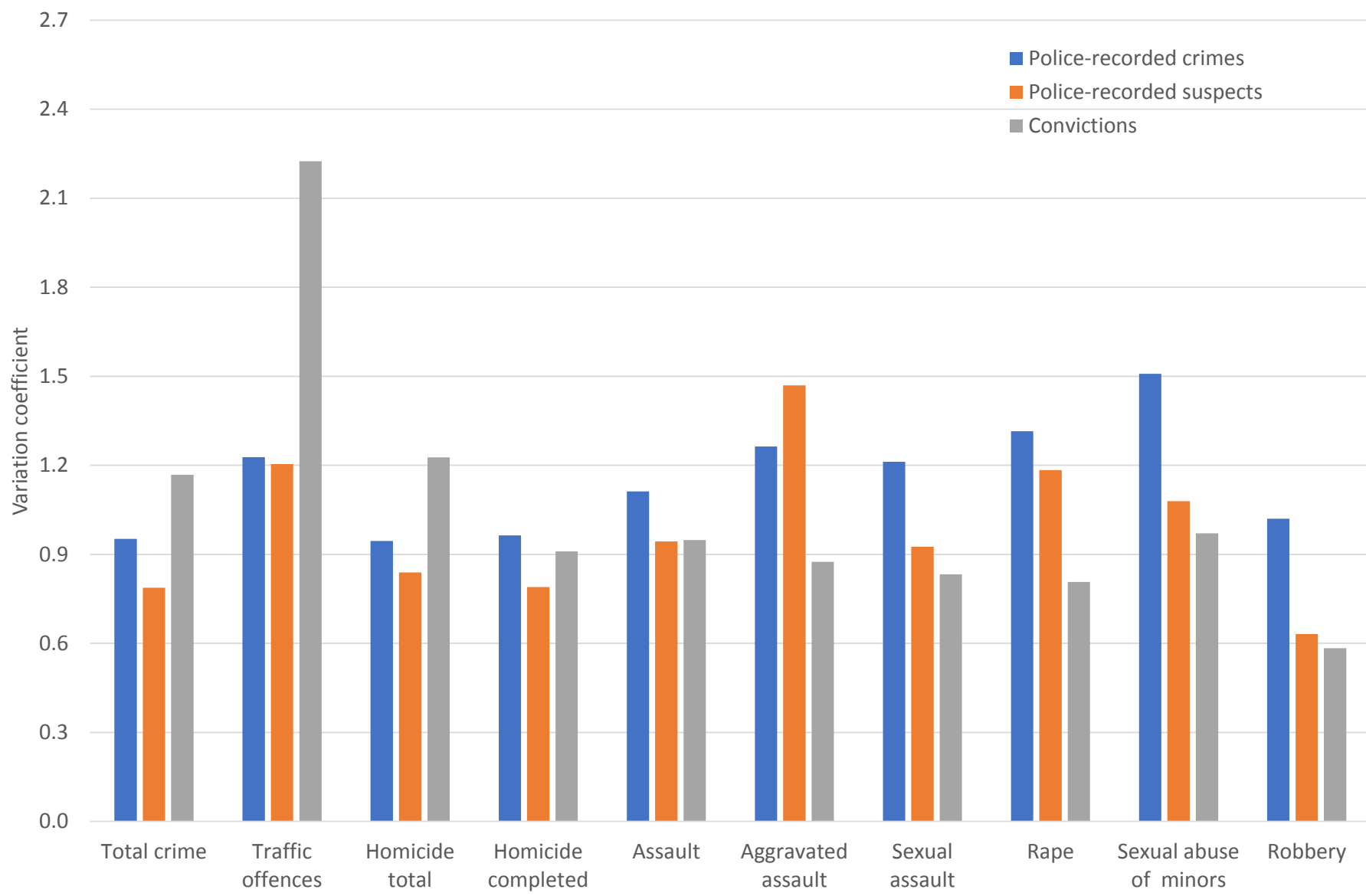


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## 4. VARIATION COEFFICIENTS

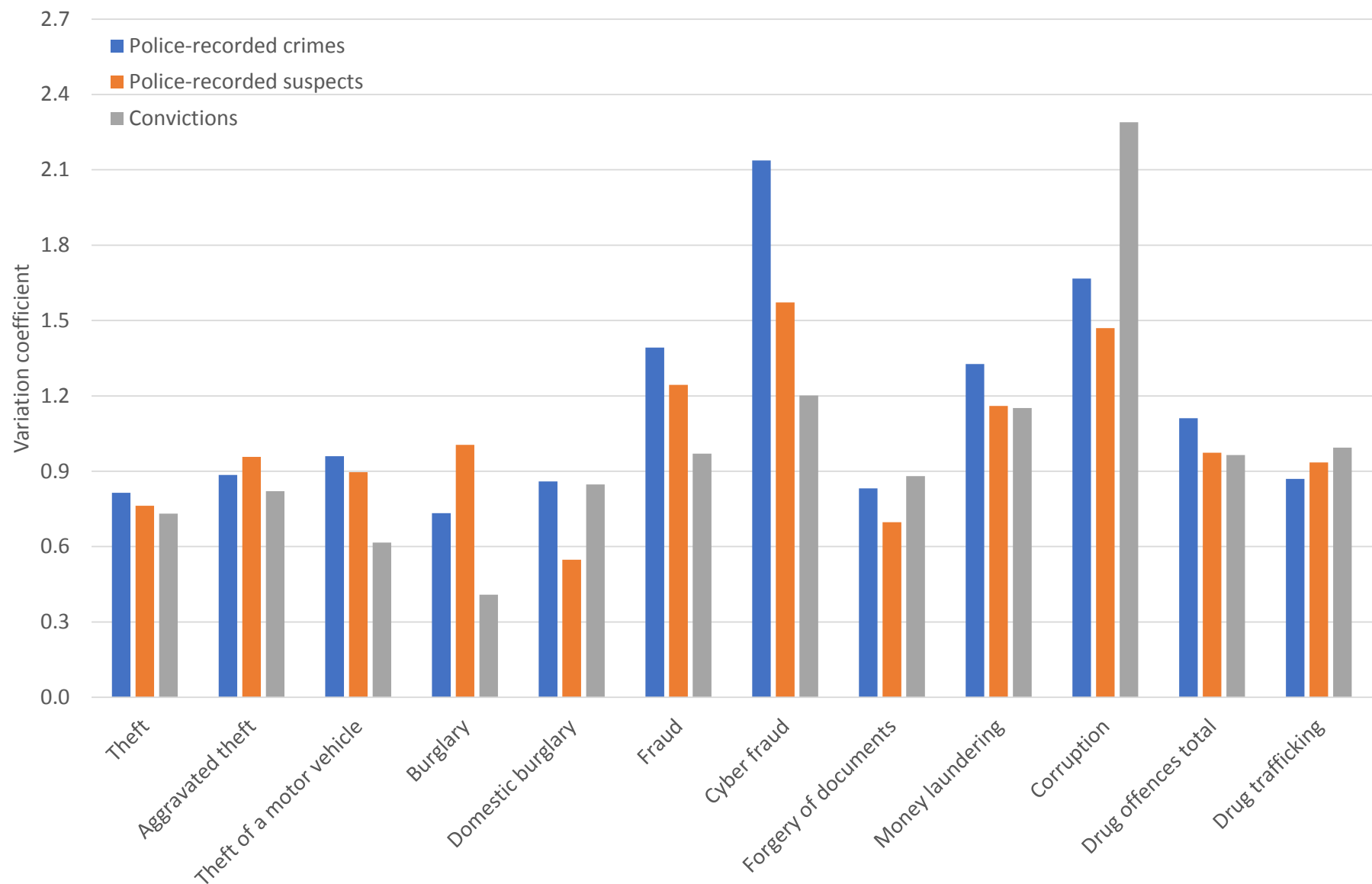
# Variation coefficients for ESB offences (part 1)

**Data source:** European Sourcebook 6<sup>th</sup> ed. database



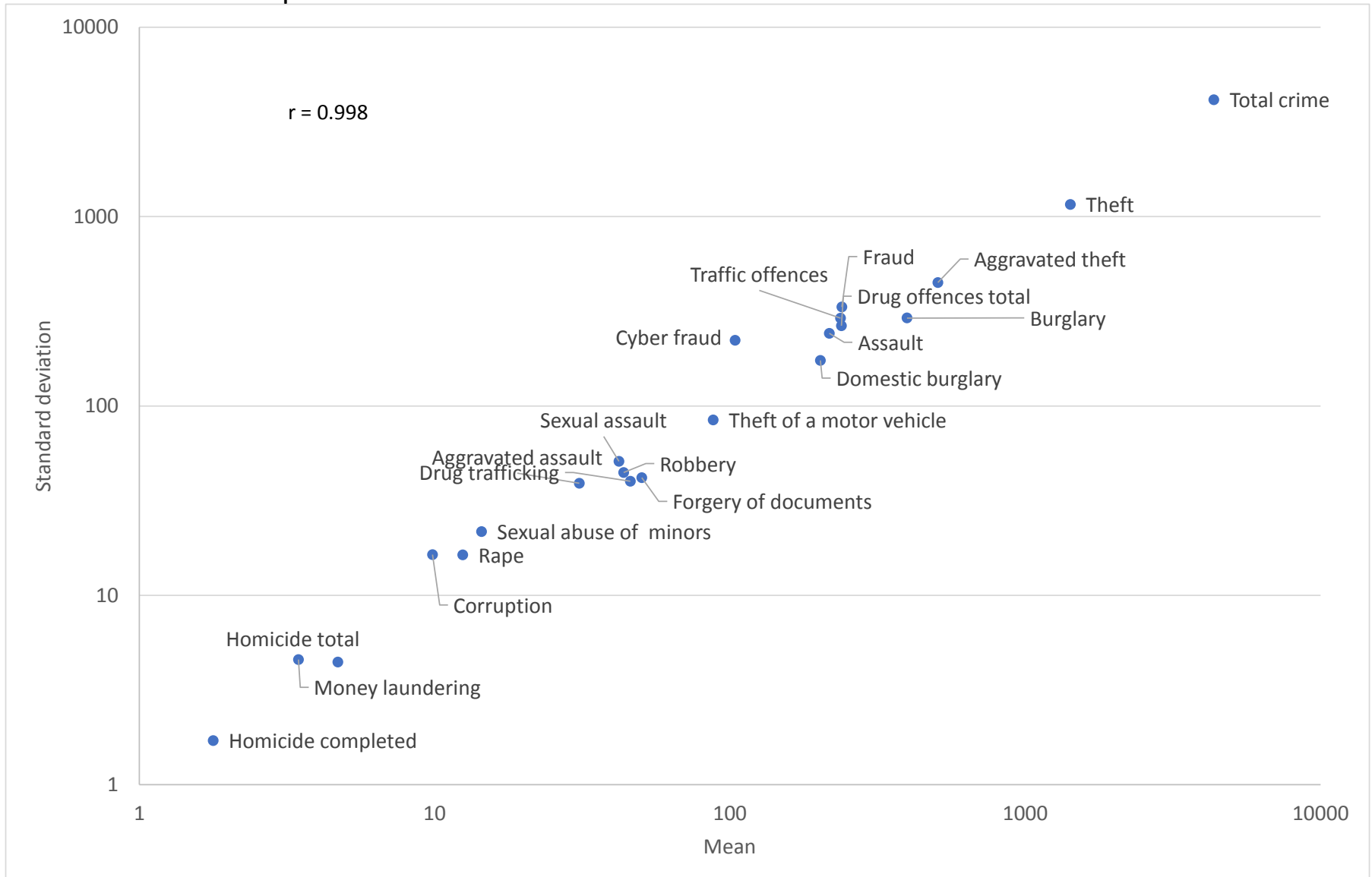
# Variation coefficients for ESB offences (part 2)

**Data source:** European Sourcebook 6<sup>th</sup> ed. database



# Relation between mean and standard deviation for police-recorded offences (ESB; log scales)

**Data source:** European Sourcebook 6<sup>th</sup> ed. database



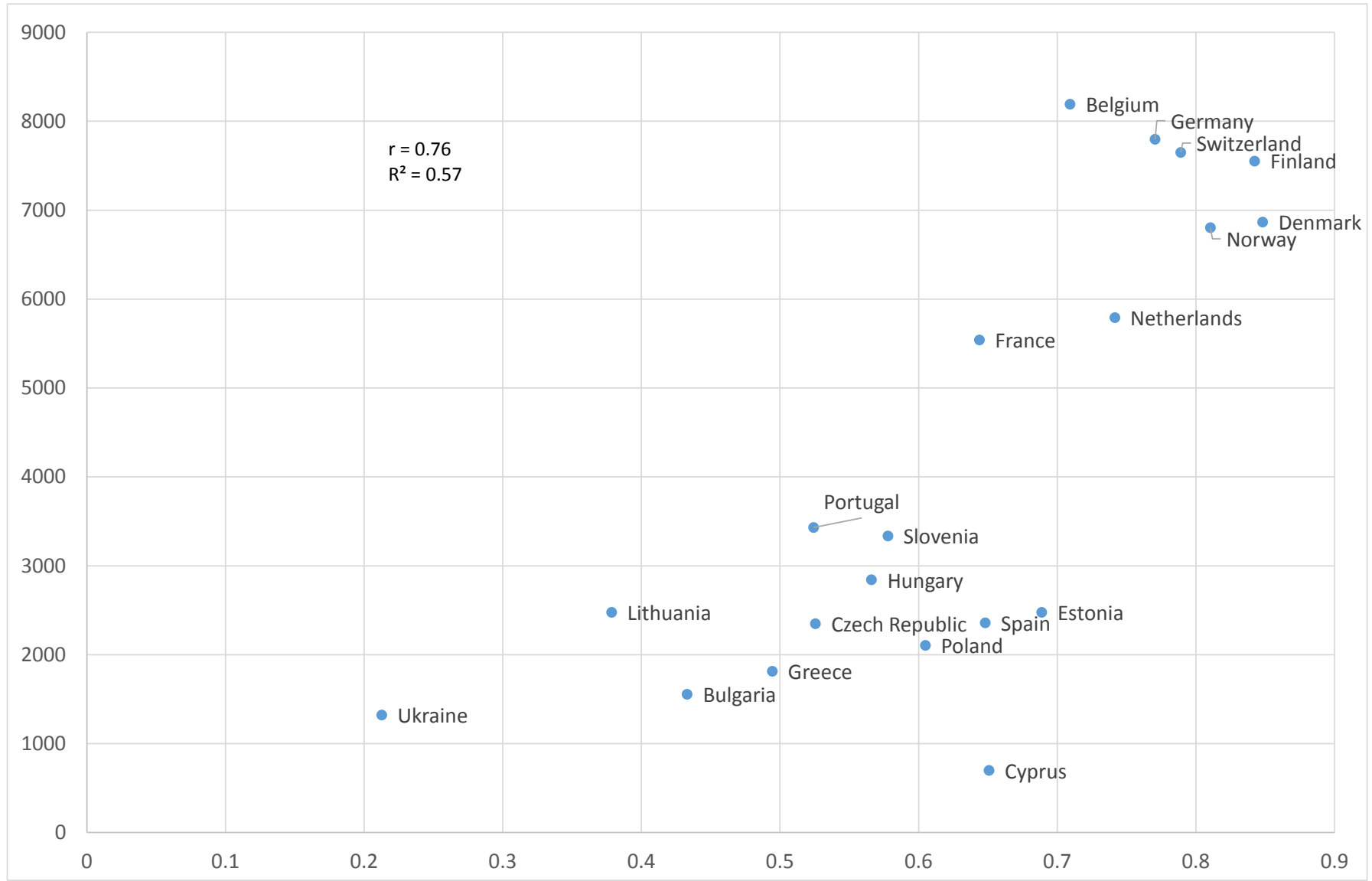
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## 5. OTHER IMPORTANT INFLUENCES ON COMPARABILITY



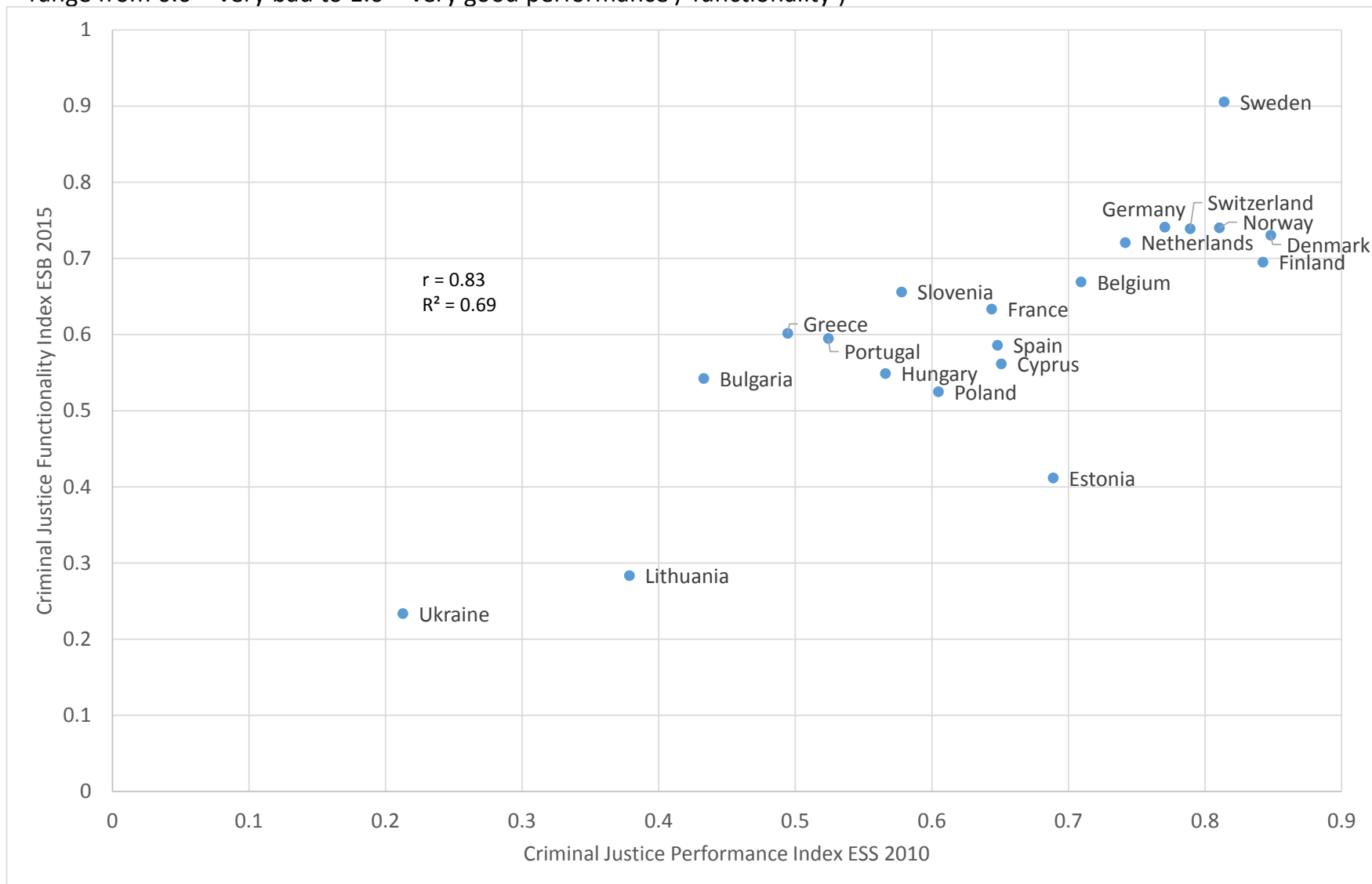
# Police-recorded crimes per 100,000 population 2015 and Criminal Justice Performance Index ESS 2010

**Data sources:** crime data: European Sourcebook 6th ed. database (Sweden excl. as an outlier); CJP Index built on ESS 2010 data; index ranges from 0.0 = very bad performance to 1.0 = very good performance)



# Criminal Justice Functionality Index ESB 2015 and Criminal Justice Performance Index ESS 2010

**Data sources:** CJFI Index built on total crime (0..1 = lowest to highest), homicide completed (0..1 = highest to lowest), total persons imprisoned (0..1 = highest to lowest) from ESB 6th ed. database; CJP Index built on ESS 2010 data; indexes range from 0.0 = very bad to 1.0 = very good performance / functionality )



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## 6. CONCLUSIONS: DOS AND DON'TS OF INTERNATIONAL COMPARISON

## 6. Conclusions:

### Dos and Don'ts of International Comparison

1. Do not use comparative crime and criminal justice data if the research question can be answered by relying on data from international victim or offender surveys. International comparability for these surveys is better.
2. Do not use comparative crime and criminal justice data to investigate the true incidence of crime in different countries; international victim or offender surveys are better for this. However, as an exception, it may be feasible to compare levels and trends for completed homicide in different countries and use them as indicators.
3. Comparisons of rates for crime and criminal justice variables between countries should be made extremely cautiously. This does not rule them out, but the interpretation of differences found may be complex.
4. Crime rates are based on the work of actors involved in the criminal justice process and are necessarily influenced by the quality and efficiency of their work. Some rates, like the total of criminal offenses, can be seen as a proxy for qualitative police performance.
5. Trend comparisons are more reliable than rate comparisons, as the influence of legal and statistical factors is reduced. They should be preferred.
6. Comparability can be improved by controlling for the influence of distorting factors by using indicators calculated as ratios of two different variables.

## 6. Conclusions:

### Dos and Don'ts of International Comparison

7. Country clustering is a difficult task, since data variations between countries are huge. Mean crime rates for the world or even for Europe cannot credibly be calculated. Country clusters are potentially feasible only for countries for which data are highly similar.
8. The best way to obtain comparable data for different countries is to conduct a multi-country study using an identical methodology, e.g. by relying on case files of the courts or prosecution services.
9. If you have to rely on secondary analysis of statistical data instead, never use national data unmodified in comparative projects. Use data from international surveys.
10. Choose the survey that best provides the variables you need and that fits the regional scope of your study.
11. For European studies, the European Sourcebook is preferable to using Eurostat or UN Survey data because it much more fully documents differences in offense definitions and recording practices and has a better validation process.

## 6. Conclusions:

### Dos and Don'ts of International Comparison

12. If data look strange, do not trust them! Look critically at data before using them and check for internal consistency, inexplicable increases or decreases in trends, and differing values for the same or comparable variables from other surveys.
13. Try to correct wrong or problematic data by replacing them with data for an (almost) identical variable from another international survey.
14. Remember in comparing offence-related cross-national data that data for some offences is much more reliable and comparable than for others.
15. When drawing from the European Sourcebook, data for theft, robbery, sexual assault, rape, and homicide, and at the police level also for domestic burglary, are relatively comparable.

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# Thank you for your attention!

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Also see:

S. Harrendorf (2018): 'Prospects, Problems, and Pitfalls in Comparative Analyses of Criminal Justice Data', *Crime and Justice: A Review of Research* 47, pp. 159 – 207.

S. Harrendorf (2012): 'Offence Definitions in the European Sourcebook of Crime and Criminal Justice Statistics and Their Influence on Data Quality and Comparability', *European Journal on Criminal Policy and Research* 18, pp. 23 – 53.