

SceMaps provides big-data analysis to uncover potential corrupt behaviour in public procurement

<https://scemaps.eu/>

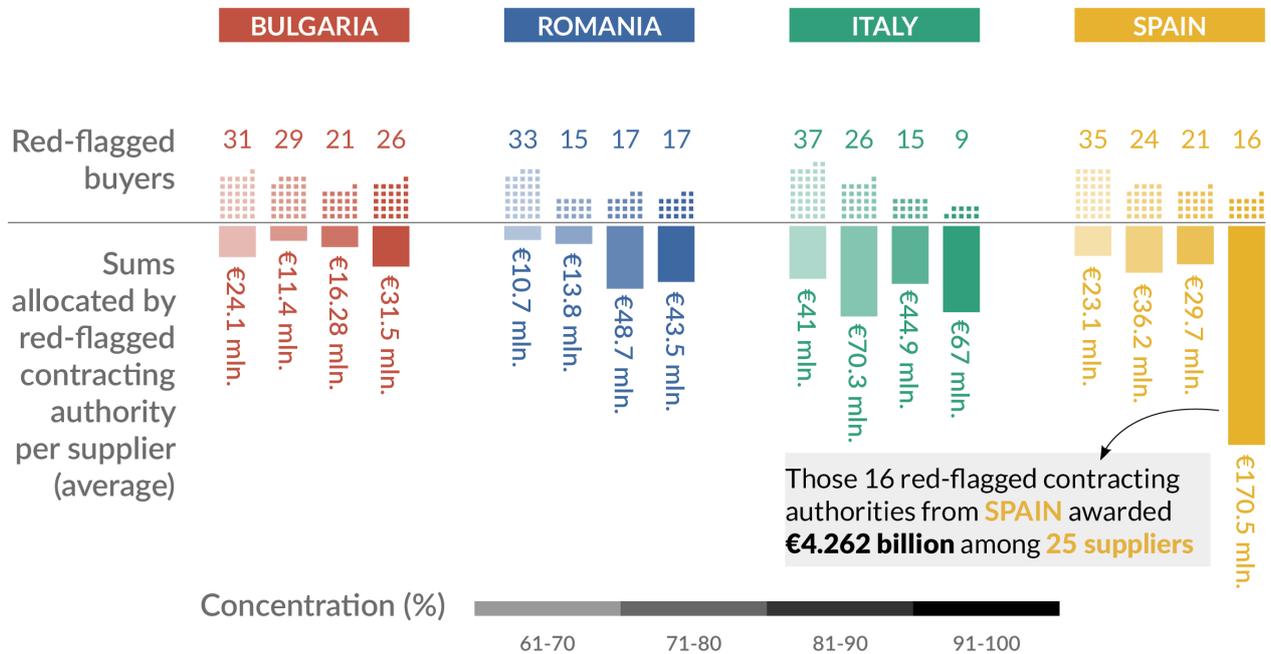
- *SceMaps makes its assessments by combining 'red flags', each of which indicates a risk situation which might be the result of possible corruption or conflict of interests.*
- *SceMaps' big-data analyses were designed to demonstrate that real-time risk assessment is possible, by implementing red flags obtained throughout the tendering process, and integrating these into countries' e-procurement systems.*

14/04/2021 – Over 250,000 public authorities in the EU spend around €2 trillion per year (14% of EU GDP) through public procurement for services, works and supplies, according to [European Commission estimations](#). In Bulgaria, Italy, Romania, and Spain, **SceMaps** has analysed the situation of three sectors where public authorities are the major buyers and which have been identified as some of the riskiest in terms of possible misuse and mismanagement of public spending: Construction, Wholesale of Fuels and Wholesale of Pharmaceuticals. The risk assessment conducted by SceMaps, based on big-data analysis, shows **that public procurement in Bulgaria and Romania is more prone to suspicious behaviour** by both suppliers (companies) and buyers (contracting authorities).

SceMaps makes its assessments by combining '**red flags**', each of which indicates a risk situation which might be the result of possible corruption or conflict of interests. A single red flag is not evidence of wrongdoing, but an accumulation of these for a particular company, contracting authority, sector or country indicates suspicious behaviour in the procurement processes at both the micro (single entity) and macro (sector or country) level that needs to be closely scrutinised.

The **buyer concentration index** is one of the red flags calculated by the SceMaps analytical platform (<https://analytics.scemaps.eu/>), evaluating the concentration of sums awarded by a contracting authority (the buyer), to a particular supplier for the period 2010-2019. The buyer concentration index represents a sign of a company's possible dependence on a particular public body. An index equal to 100% means that a single buyer has provided the entire sum received by a particular supplier in public procurement contracts.

Red-flagged contracting authorities (buyers) by the buyer concentration index



Source: <https://analytics.scemaps.eu>

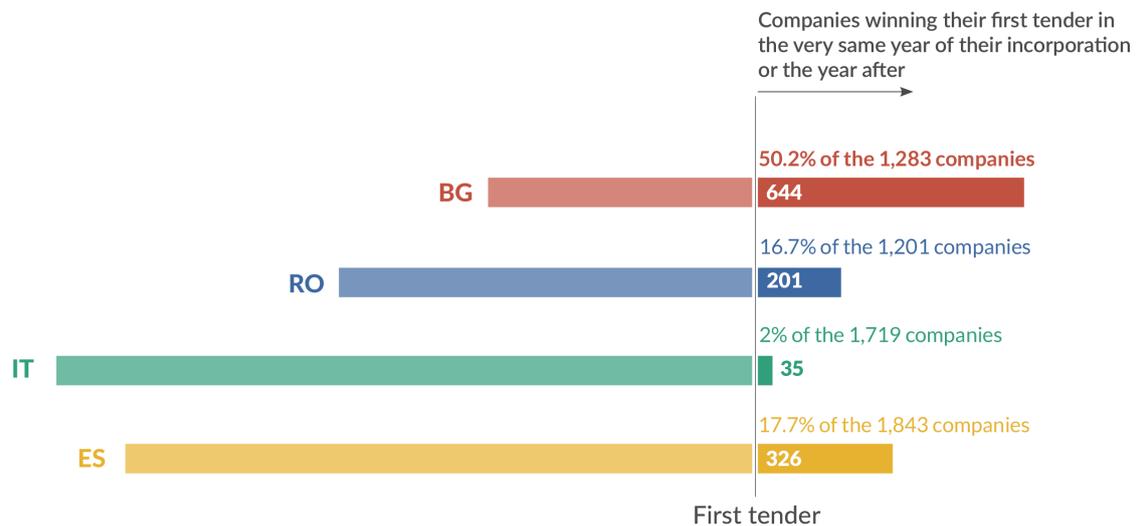
data coverage: sectors of Construction, Wholesale of fuels and Wholesale of pharmaceutical products; 2010-2019

Thus, in Bulgaria, the share of public authorities (buyers) that concentrate over 60% of their sums awarded to a given supplier is almost double (21% higher) those of the other three countries (12% for Italy and Romania and 10% for Spain), according to SceMaps. Bulgaria also has the largest group of buyers accounting for over 90% of the tenders of a given supplier, although the total sum of awarded contracts by these buyers is much smaller than, for example, in Spain. This indicator raises flags for both public authorities and companies, which could be further checked and investigated on a case-by-case basis through the information and profile data of each legal entity, available on the SceMaps platform, and especially in combination with other red flags.

The **incorporation time proximity** indicator calculates the number of companies winning their first tender in the very same year of their incorporation or the year after. This red flag represents the potential risk of an inexperienced company winning a public tender.

Moreover, some investigations of particular suspicious cases reveal that legal entities are often created specifically to win a particular tender. At the macro level (e.g. sector or country), the higher proportion of companies incorporated in the same year or the year before their first tender shows a higher risk that the procurement process is influenced by non-competitive and possibly illegal means.

Red-flagged companies by the incorporation time proximity indicator



Source: <https://analytics.scemaps.eu>

data coverage: sectors of Construction, Wholesale of fuels and Wholesale of pharmaceutical products; 2010-2019

This red flag reveals a systematic problem in the case of the Bulgarian market: more than half of the companies winning public tenders in the three sectors analysed by SceMaps had been incorporated shortly before winning their first public tender. This percentage is three times lower in Romania and Spain, while in Italy it affects only 2% of all companies.

These are just two of the 17 red flags provided by SceMaps. Risk assessment using these indicators offers many possibilities for watchdog and anti-corruption institutions, regulatory and control bodies, law enforcement authorities, investigative journalists and civil society: from assessment aimed at designing preventive measures to reporting irregularities in public procurement. What's more, SceMaps profiles provide detailed information on procurement agencies, companies and tenders, facilitating investigation.



SceMaps' big-data analyses were designed to demonstrate that real-time risk assessment, by implementing red flags obtained throughout the tendering process, and integrating them into countries' e-procurement systems, is possible. We now know that it is

also the future of corruption prevention.

More info:

- **Todor Galev**, Center for the Study of Democracy (Bulgaria): todor.galev@online.bg

- **Daniela Mineva**, Center for the Study of Democracy (Bulgaria): daniela.mineva@online.bg

Project members:



This document is funded by the European Union's Internal Security Fund – Police. The content of this publication represents the views of the author only and is his/her sole responsibility. The European Commission does not accept any responsibility for use that may be made of the information it contains.