

CORRUPTION RISK INDICATORS IN EMERGENCY



THE CO.R.E METHODOLOGY TO ADAPT CORRUPTION RISK ASSESSMENT TO EMERGENCY SCENARIOS

In the CO.R.E project the adaptation of corruption risk assessment to emergency scenarios is mainly obtained through the proposal of a curated selection of 9 red flag indicators specifically settled to measure the risk of corruption in the public procurement process over emergencies and the development of a synthetic indicator of corruption risk called CORE-CI, which normalizes, weights and aggregates the red flags.

The 9 single red flags and CORE-CI are computed through the coresoi open R-package. Then, they feed the CO.R.E dashboard to obtain a mapping at the territorial level of areas and target units (i.e., contracting authorities and awarded companies) at different level of risk.

The 9 single red flags are computed through a new methodology, which takes advantage of the time discontinuity introduced by a crisis and the possibility to distinguish a pre-crisis period and a post-crisis period. It then compares the behaviors of awarding companies and contracting authorities after the crisis with respect to their historical (pre-crisis) behavior, by means of the 9 red flags.

These 9 red flags are computed only for contracts within pertinent sectors/markets to the specific emergency being considered. The identification of pertinent contracts is achieved by relying on the contract subject, as identified through the (CPV) and a difference-in-difference method, which allows us to identify the markets most involved in the crisis at issue. The risk of corruption is then assessed through statistical testing, where hypotheses are set according to the observed market trends during a crisis.

Therefore, the proposed approach mitigates false positives by controlling for market trends and assumes that any statistically significant deviation in the behaviors of target units during the crisis – compared to what expected based on observed marketplace tendencies – may indicate a corruption risk.

The CO.R.E methodology is:

- extensible to other crisis contexts to assess the risk of corruption in public procurement by i. setting the two time-spans in accordance with the entry date of the legislative act acknowledging the beginning of the emergency period; ii. selecting the relevant contracts objects (i.e., CPV), depending on the pertinent markets most concerned with the specific crisis at hand;
- replicable to other national contexts where the data needed for the red flag calculation are available;
- adjustable on account of market trends across the crisis, by setting the statistical test hypotheses accordingly.