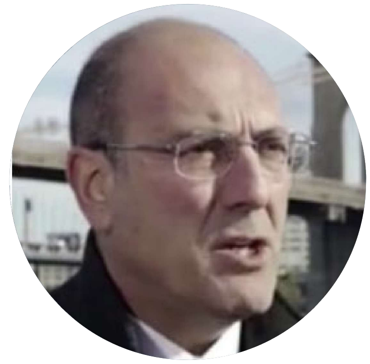

Risk of mafia infiltration abroad

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Abstract

As part of the European multidisciplinary platform against criminal threats, the Central Operations Service of the Central Anticrime Directorate of the Italian National Police led an operational action focused on the priority 'high risk criminal networks'.

The action was carried out in partnership with the Joint Research Centre on Innovation and Crime of the Università Cattolica del Sacro Cuore ([118]) and with the participation of the Guardia di Finanza and the Anti-mafia Investigative Directorate, along with the support of the European Union Agency for Law Enforcement Cooperation (Europol). It was designed to test the possibility of indexing the risk of mafia infiltration abroad on the basis of specific 'indicators' shared with the participants ([119]) by the various Italian institutional stakeholders called upon to contribute to the project.

The analysis, which is innovative and based on the expertise acquired by Italy in the fight against the mafia, has therefore provided an interesting overview, resulting from the comparison between the contextual findings developed by the university and the in-depth studies on the subjects carried out by the investigative agencies involved (National Police, Guardia di Finanza and the Anti-mafia Investigative Directorate).

([118]) Transcrime is the joint research centre on innovation and crime of the Università Cattolica del Sacro Cuore, the Alma Mater Studiorum Università di Bologna and the Università degli Studi di Perugia (www.transcrime.it).

([119]) Participants took part in the project by filling in a questionnaire specially developed in consultation with the university.

The findings of the study, summarised in a series of charts, are therefore the result of a productive interaction established at an international level and provide useful insights into the need to create stable forms of information exchange and analysis that can enhance the ability to prevent and combat mafia infiltration.

1. The start of the project

The aim of the project is to measure the extent of mafia infiltration abroad, without taking into account the parameters of classic 'sentinel crimes' (extortion, damage, etc.) or, rather, profit-oriented crimes (drug trafficking, etc.) that traditionally characterise mafia operations.

These crimes are difficult to interpret in contexts lacking an awareness of the issue at the regulatory and investigative levels or cannot always be clearly attributed to a single mafia organisation, given the cross-cutting nature of the interests that often characterise the behaviour of 'brokers' in drug trafficking.

To this end, and with the aim of encouraging participants to reflect on the ability of mafias to infiltrate foreign economies, we wanted to investigate whether domestic organised crime groups could have launched targeted business initiatives in countries other than Italy based on 'reinvestment' or capitalisation of resources, thereby also acquiring a (potential) ability to distort the regular competitive mechanisms of the market (Savona and Riccardi, 2015; Pinotti, 2015; UNICRI, 2016).

A first explanatory meeting was therefore organised and held in Rome on 1 December 2022. At the meeting, the main characteristics of the mafia network were brought to the attention of the representatives of the countries participating in the project, with the valuable contribution of qualified speakers from the National Anti-Corruption Authority, the Financial Intelligence Unit of the Bank of Italy and the Customs and Monopolies Agency.

At the same meeting, the characteristics and peculiarities of the analytical approach characterising the contribution of the Joint Research Centre on Innovation and Crime of the Università Cattolica del Sacro Cuore (UCSC-Transcrime) were also presented.

1.1. The mafia network: characteristics

Unique features of Italian legislation were the starting point for describing the relational and organisational characteristics of the mafia organisation.

To this end, the characteristics of Article 416 bis of the Italian Criminal Code were highlighted, recalling the elements qualifying a criminal organisation as 'mafia-type'.

In this regard, the traditional mafia sources of income (drug trafficking, extortion and usury) were highlighted and the various reasons that may foster the need or the opportunity for this type of organised crime group to extend its business abroad were highlighted, along with its ability to establish links with professionals and/or trusted individuals that can facilitate its infiltration and/or its entrenchment in the economic and business network (Paoli, 2003; Varese, 2011; Calderoni et al., 2016).

It was pointed out how the diversification of relationships allows the organisation to gain credibility in a specific territory, thanks to its ability to find solutions that avoid the slowness and complexity of bureaucracy (Varese, 2011; Paoli, 2003).

In this context, the characteristics of the globalisation strategies adopted by the Cosa Nostra, Camorra and Apulian mafias were also presented, highlighting the impact of contextual factors (such as the socioeconomic, cultural and political–institutional factors) that may facilitate the globalisation of the mafias and favour the operation of the so-called *fattori di agenzia* (criminal skills, resources, social relations and organisational structure of the criminal organisation) (Varese, 2011; Calderoni et al., 2016).

1.2. The financial intelligence unit study: characteristics of the mafia enterprise

The analysis takes into account the work of Marco De Simoni (2022). The aim of this study is to investigate the infiltration of legitimate businesses by the mafia and the resulting financial profile of criminal firms. De Simoni addresses some of the shortcomings of the existing economic literature in the field (namely, uncertainty regarding the unlawful nature of the businesses analysed, and the limited geographical span) by relying on a unique sample of 237 firms that were seized by the judiciary as part of organised-crime-related prosecutions and are located in most Italian regions (De Simoni, 2022).

He identifies four different types of infiltrated firms and focuses on the two most common ones: 'investment firms' (used as conduits to invest illicit proceeds through legal activities) and 'competition firms' (which are run to gain control of the market of interest, deploying mafia methods to harm competitors) (De Simoni, 2022).

Overall, De Simoni finds that infiltrated firms, despite their higher revenues compared with legal businesses, appear to be less profitable, as they may be pursuing goals other than mere economic performance. Moreover, while all criminal firms feature low inventory levels, investment firms have a larger stock of tangible assets than competition firms, which prefer relying on leased facilities and equipment. That may be because competition firms are more at risk of detection and consequently adopt appropriate strategies to reduce any harmful consequences from potential seizures by law enforcement. Both classes of criminal firms also feature larger cash holdings than non-infiltrated firms in order to have more readily disposable assets in case of detection. Financing costs are lower for competition firms and higher for investment firms when compared with the control sample. Finally, some evidence shows that competition firms have higher costs of labour, suggesting that they may be providing job opportunities to local people and associates so as to gain support for the criminal organisation (De Simoni, 2022).

1.3. Corruption in public procurement: alerts and risk of mafia infiltration

Corruption is considered one of the main obstacles to positive economic, political and social development in various countries, due to higher transaction costs, barriers to entrepreneurship, limited access to finance, resource misallocation and so on (OECD, 2016; Decarolis and Giorgiantonio, 2020).

The specificity of this phenomenon, which appears latent and elusive by its very nature, prevents its clear and accurate measurement and, consequently, a precise understanding and awareness of its real impact on national economies and social systems (Decarolis and Giorgiantonio, 2020).

Cases of corruption that we learn about (e.g. through judgments) represent just the tip of the iceberg, making it difficult to understand the size and characteristics of the submerged parts of the phenomenon.

As a matter of fact, at an international level we observe a profound lack of structured scientific data on corruption that makes it difficult to go beyond a 'surface-level work' or some *ad hoc* work, which is certainly very interesting and full of ideas, but whose contents and results are difficult to extrapolate (Fazekas et al., 2016; Decarolis and Giorgiantonio, 2020).

Corruption is a multidimensional phenomenon influenced by numerous variables, and this characteristic was also confirmed by the analysis of public procurement data. It was observed that public procurement data do not always follow unambiguous trends at the territorial and sectoral levels, thus highlighting the complex dynamics presumably related to the different ways in which corruption can occur (Fazekas et al., 2016; Decarolis and Giorgiantonio, 2020).

1.4. Mafia operations in the gaming and betting sector

The role of the Italian gaming regulator, the Customs and Monopolies Agency (ADM), is fundamental to the gaming sector for the purpose of monitoring games in order to prevent and fight crime, to protect the community and to safeguard risk-exposed individuals.

Throughout the years, the ADM has developed a set of analytical tools for monitoring games in real time. Moreover, the ADM's employees are qualified judicial police officers; therefore they are entitled to lead criminal investigations.

Data analysis of gaming accounts and investigation activities, carried out together with the National Police, show a significant involvement of criminal groups in gaming, especially through organised crime groups (OCGs). Such involvement consists of managing the illegal gambling market through non-authorised operators and controlling gambling shops in the land-based network (Savona and Riccardi, 2017; UNODC, 2021; Europol, 2025).

The cooperation between the ADM and the National Police has been crucial in combating illegal activities and in protecting the market and its players.

1.5. The questionnaire developed by the Central Operations Service and by UCSC-Transcrime

During a meeting held in Rome on 1 December 2022 aimed at explaining the characteristics of mafia operations in the business sector and the scope of the phenomenon of corruption, especially in the field of public procurement, the Central Operational Service (SCO) and UCSC-Transcrime explained the structure of the questionnaire specifically designed to encourage the necessary interaction between the participants in view of the subsequent analysis phase.

UCSC-Transcrime ensured the prior identification of companies – located in the countries involved in the project – that met the two criteria established during the planning phase, namely:

- companies whose managers and/or beneficial owners were born in Sicily, Campania or Apulia, where some of the Italian mafia organisations are historically rooted;

- companies operating in the earth-moving, catering or gaming and betting sectors, traditionally controlled by the mafia and considered, according to investigative experience, to be more profitable for money laundering (Savona and Berlusconi, 2015; Savona and Riccardi, 2015, 2017).

The list of legal entities meeting the above criteria was then sent to the participants, via Secure Information Exchange Network Application messages, so that each representative could select at least three companies considered to be potentially at risk, including on the basis of the information shared during the meeting. The questionnaire requested specific detailed information on each reported company: the full personal details of managers and/or beneficial owners, data to be further investigated by Italian law enforcement agencies, and some background data, relating to the business sector ([120]), to be further studied by UCSC-Transcrime.

Data collection started in January 2023 and was completed in September 2023. The subsequent analysis phase began in September 2023 and ended in December 2023.

2. The sample of examined companies

As mentioned above, the sample of legal entities provided by USCS-Transcrime to the participants relates to the following business sectors:

- catering,
- earth moving,
- gaming and betting.

Participants were asked to report companies considered to be potentially at risk of mafia infiltration, whose managers and/or beneficial owners were of Italian origin and native to the regions of Campania, Apulia and Sicily.

Based on the data obtained through the questionnaire, and taking into account the legal restrictions that did not allow the Netherlands ([121]) to provide the requested data, the sample of companies analysed consists of a total of 59 legal entities (companies). The analysis of the different legal entities reported to the action leader initially revealed a preference for the catering and earth-moving sectors, the latter including building construction and the material transport sector.

([120]) These include the company's annual turnover, percentage of funds allocated, shareholdings in other companies, percentage of taxation based on income, average start-up time, etc.

([121]) The only exception is the Netherlands, where judicial regulations do not allow the acquisition of sensitive data except for limited investigative activities, upon authorisation of the judicial authority.

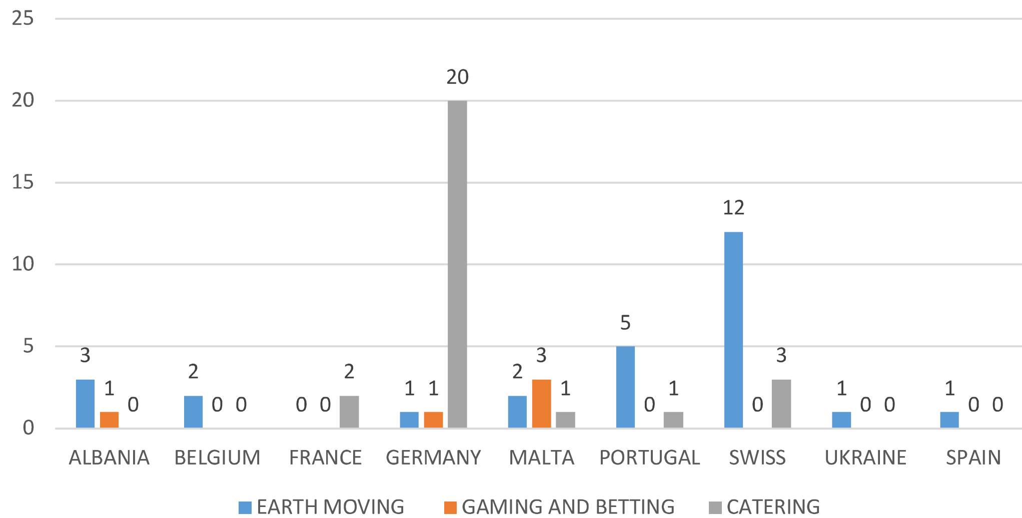

Figure 16.1. Number of companies by sector and country

The data show that the northern European countries are mainly focused on the catering sector, while the central and southern European participants are mainly interested in the earth-moving sector.

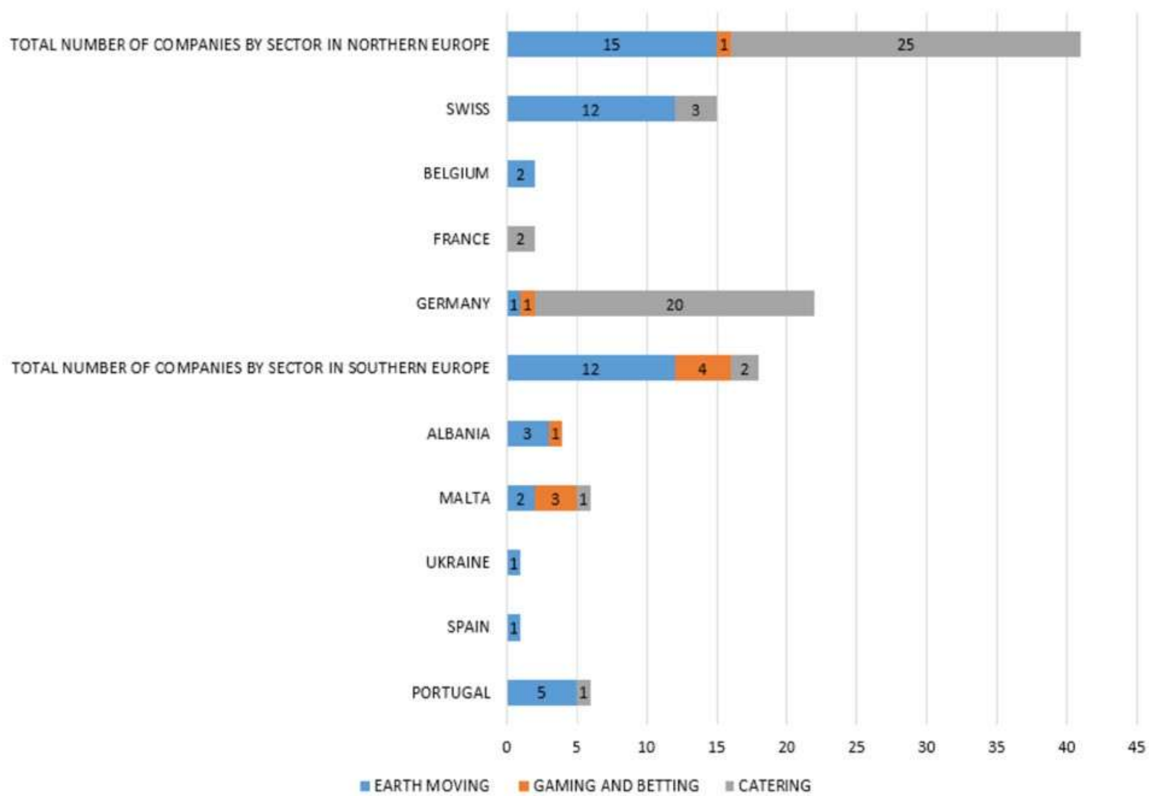

Figure 16.2. Companies by geographical area

3. The analysis process

3.1. The Central Operational Service's approach: method and procedures

The processing method proposed by the SCO of the National Police stems from a series of subjective and objective in-depth analyses based on a complex and multifactorial approach (Savona and Berlusconi, 2015; Bosisio et al., 2021).

To this end, the professional skills of the national law enforcement agencies (LEAs) that joined the operational action – the Anti-mafia Investigative Directorate (DIA) and the Guardia di Finanza Servizio Centrale di Investigazione sulla Criminalità Organizzata – have been duly used, taking advantage of the specific expertise of both investigative agencies.

At the same time, the National Police set up 43 investigative units at the National Police headquarters of the provinces where the subjects involved in the management of or owning the investigated businesses were residing. These subjects included third parties in the corporate structure, even when they did not come from the three regions under consideration (Campania/Sicily/Apulia).

In particular, the analysis provided by the territorial investigative bureaus was based on a series of indicators, developed by the SCO, aimed at analysing individual targets in depth in the following frameworks.

A) Relationships

1. Family relations with organised crime group members (limited to relatives and/or second-degree relatives by marriage).
2. Police checks in which the subject was found together with people who have police records (it is necessary to specify whether they are organised crime group members or connected to organised crime, or whether they have previous records of a different nature).
3. Police checks showing the subject's regular presence in Italy (checks on the owners of the vehicles possibly in use are necessary).

B) Judicial framework

1. Previous records in the LEAs database.
2. The target appeared in judicial contexts.

C) Working/professional framework

1. National Social Security Institute data (work history and area of employment).
2. Chamber of Commerce data (any corporate positions or ownership of legal entities). In case of a positive finding, it is necessary to ascertain:

- the source of the registered capital, through the articles of incorporation;
- whether the registered and operational office really exists.

3. Income ascertained/declared in the past five years.

The subject's profile was then completed with the following.

D) Confidential information

1. Confidential sources.
2. Any mentions of the target in confidential correspondence.

E) Open sources

1. News reports.
2. Analysis of social media accounts (if public).

In this regard, in line with business processes based on a horizontal organisation approach – considered as better suited to a possible infiltration – we intended to carry out the analysis of the data acquired by fostering the equivalence of the targets examined, regardless of the role played in the corporate structures.

Each of the above items was therefore given a numerical value between 0 and 4, according to the principle of the 'reliability' of the source and data (i.e. previous records = 4, police checks proving a regular presence in Italy = 2).

It follows that the overall value attributed to each target is given by the sum of the scores expressed by each item, independent of discretionary factors that would expose the analysis to subjective evaluations (i.e. regardless of the nature and number of the target's police records, the risk factor would always be 4).

Consequently, each business's 'risk value' is the result of the average risk values of individual managers / beneficial owners of the company.

Based on the overall data, four risk categories were identified linked to 'threshold values' in a range between 0 and 23 (identified as the maximum value that is obtained when all risk factors would reach the maximum value).

Table 16.3. Example table

				A) AMBITO RELAZIONALE			B) AMBITO GIUDIZIARIO		C) AMBITO LAVORATIVO/PROFESSIONALE			D) NOTIZIE FIDUCIARIE		E) FONTI APERTE:			
PAESE SOCIETA'	NOME SOCIETA'	SETTORE PRODUTTIVO	NOME SOCIO	1. Relazioni familiari con esponenti della C.O. (limitata a parenti e/o affini di 2° grado)	2. Controlli del territorio con soggetti gravati da precedenti di polizia (specificando se si tratta di esponenti della C.O. – o ad essa contigui – ovvero se si tratta di precedenti di altra natura)	3. Controlli del territorio comunque sintomatici di un'assidua presenza in Italia (con verifica sui titolari dei mezzi eventualmente in uso).	**4.** Precedenti SDI	**5.** Emergenze da atti giudiziari	6. INPS (precedenti lavorativi e settore di occupazione)	7. CAMERA DI COMMERCIO (eventuali cariche societarie o titolarità persone giuridiche)	8. Redditi censiti/dichiarati nell'ultimo quinquennio	**9.** Fonte confidenziale	**10.** Eventuali cenni a pregressi riferimenti con corrispondenza riservata.	11. Eventuali notizie di cronaca	12. Analisi profili social (qualora "aperti")	TOTALE INDICE	MEDIA ARITMETICA INDICE DI RISCHIO
BELGIO	NOME	EARTH MOVIE	COGNOME Nome	0	0	0	0	0	0	0	0	0	0	0	0	0	
			COGNOME Nome	0	0	0	0	0	0	0	0	0	0	0	0	0	
			COGNOME Nome	0	0	0	0	0	0	0	0	0	0	0	0	0	
			COGNOME Nome	0	0	0	0	0	0	0	0	0	0	0	0	0	
			COGNOME Nome	0	0	0	0	0	0	0	0	0	0	0	0	0	
			COGNOME Nome	0	0	0	0	0	0	0	0	0	0	0	0	0	
			COGNOME Nome	0	2	2	4	3	2	2	2	1	1	0	0	19	
			COGNOME Nome	0	2	2	4	0	2	2	2	0	0	0	0	14	
			INDICE DI RISCHIO													33	4,12
FRANCIA	NOME	CATERING	COGNOME Nome	2	2	2	0	3	0	0	0	0	0	0	2	11	
			COGNOME Nome	0	0	0	0	3	0	0	0	0	0	0	0	3	
			COGNOME Nome	0	0	2	0	0	2	0	2	0	0	2	2	10	
			COGNOME Nome	0	0	0	4	0	0	0	0	0	0	0	0	4	
			INDICE DI RISCHIO													28	7

Table 16.4. Threshold values identified by different colours

From 0 to 5	From 6 to 11	From 12 to 17	From 18 to 23
Low	**Medium**	**High**	**Top**

3.2. Transcrime processing

The present chapter includes the results of an analysis of a sample of companies performed by UCSC-Transcrime. The list of target companies to be analysed was provided to UCSC-Transcrime by the Direzione Centrale Polizia Criminale following actors in the operation action having been alerted to the companies and refers to companies believed to be infiltrated or controlled by Italian organised criminal groups ([122]).

Information about operational, financial and ownership characteristics of these target companies was collected by UCSC-Transcrime from the Orbis database by Bureau van Dijk using as input the company names, the countries of registration and, when available, the unique company identifiers (e.g. VAT (value added tax) code). This allowed UCSC-Transcrime to identify 42 of the 59 companies in the list (71 %). The remaining companies could not be uniquely identified and were consequently excluded from the analysis.

Starting from the collected information, a set of risk indicators was defined for each company, allowing the identification of the firms at higher risk of criminal infiltration or misuse for illicit purposes (Bosisio et al., 2021; FATF, 2023).

3.2.a. Selection of the relevant risk indicators

Initially, an extensive array of 466 risk indicators was considered and tested, including alternative specifications of the same indicator or variables regarding different aspects and characteristics of the companies ([123]) (Bosisio et al., 2021). The indicators belong to different risk dimensions, namely:

([122]) Excluding the 'Ndrangheta.
([123]) These risk indicators were developed by UCSC-Transcrime and its spin-off Crime&tech. Specifically, some of the analysis included in this report was produced using the Datacros tool, a real-time analytical platform developed by UCSC-Transcrime, and designed for (and hand-in-hand with) law enforcement agencies, anticorruption authorities, competition authorities and investigative journalists, to support the identification of companies at high risk of corruption, money laundering, tax fraud and financial crimes (for more information, see www.transcrime.it/datacros2).

1. ownership structure risk,
2. territorial risk,
3. anomalous features of key officers (e.g. very high/low age of owners or anomalous gender balance with respect to peers),
4. anomalous financial features (e.g. indicators of shell company activity),
5. adverse events,
6. political exposure.

Each indicator was attributed a value between 0 and 4, where 0 indicates a minimal difference of the recorded value from the average observed among companies in the same country and economic sector, and 4 a very large deviation. These indicators were calculated for all the companies in the sample and for a control group of active companies having similar characteristics ([124]). In particular, the control group was generated by randomly selecting for each company 10 other companies operating in the same statistical classification of economic activities sector and in the same country. As a result, a total of 354 companies were included in the control group ([125]).

The following tables show the number of target and control companies by country and economic sector (Table 16.5 and Table 16.6).

Table 16.5. Number or target and control companies by country

Country	Target	Control	Total
Albania	4	40	44
Belgium	2	20	22
Switzerland	14	109	123
Germany	8	69	77
Spain	1	10	11
France	2	20	22
Malta	6	42	48
Netherlands		1	1
Portugal	4	34	38
Ukraine	1	10	11
Total	42	354	396

([124]) Due to insufficient data, the calculation of risk scores was not possible for all companies. This issue arises from the incompleteness of Bureau van Dijk data regarding, for example, information on the ownership structure of the company or its financial variables.

([125]) The number of companies in the control group is slightly lower than 420 (i.e. 42 target companies multiplied by 10) because some companies were included in the control group for more than one target company operating in the same country and statistical classification of economic activities sector.

Table 16.6. Number or target and control companies by economic sector

Economic sector	Target	Control	Total
Construction	16	132	148
Wholesale and retail trade	6	51	57
Accommodation and food service activities	10	100	110
Gambling and betting activities	3	21	24
Other	7	50	57

From this preliminary assessment, a restricted set of 13 relevant risk indicators was selected following two main criteria: (a) including the indicators that allow us to better discriminate between the target and the control groups; (b) ensuring the presence of at least one indicator for each risk dimension. Table 16.7 summarises and describes the selected risk indicators (Bosisio et al., 2021).

Table 16.7. Selected risk indicators

Selected risk indicators	Dimension	Description
Vertical complexity	Ownership structure risk	Number of layers between a company and its beneficial owners (BOs)
Horizontal complexity – natural person	Ownership structure risk	Number of natural persons with direct or indirect ownership links with the company
Legal arrangements	Ownership structure risk	Number of legal arrangements at the end of the ownership structure that do not allow identification of BOs
Shareholding anomalies	Ownership structure risk	Number of shareholders with a shareholding percentage between 24.90 % and 24.99 %, namely just below the BO disclosure threshold
Active address	Territorial risk	Average of the risk scores associated with the number of other active companies registered at the same address as the target company and with the ratio of active companies on the total number of companies registered at the same address
Previous roles	Anomalous features of key officers	Number of roles previously held in other companies by the key officers of the company (considering the highest value among BOs, directors and shareholders)
BO old age	Anomalous features of key officers	Ratio of BOs who are 80 years old or older
Days for creditors	Anomalous financial features	The average time taken for the company to pay creditors as observed for the last five available periods

The mafia presence index

UCSC-Transcrime and its spin-off Crime&tech defined a composite indicator aiming at measuring the presence of Italian organised crime groups in all Italian municipalities. The index processes public information (provided by the DIA, National Anti-Mafia and Anti-Terrorism Directorate, Italian National Institute of Statistics, Ministry of the Interior and the Agenzia Nazionale per l'amministrazione e la destinazione dei beni sequestrati e confiscati alla criminalità organizzata) and is inspired by the methodology developed by Transcrime for the analysis of the presence of the Italian mafias (Dugatoet al., 2020; Calderoni, 2011). Information included in the index regards evidence of the presence or activities of mafia groups and indicators of political and economic infiltration. Cross-checking this index with information about companies and their BOs or directors, it is possible to identify the companies operating or linked to high-risk Italian municipalities in terms of mafia presence or infiltration. This indicator is particularly helpful for identifying the potential risk of mafia infiltration into the legitimate economy outside the regions where mafias are traditionally present. In this project, the mafia index was used by UCSC-Transcrime at an early stage to identify a preliminary list of companies to be provided to the participants in order to assist in the identification of the target companies.

3.2.b. Definition of the overall risk score

The overall risk score is defined as a composite indicator following the methodology developed by UCSC-Transcrime in previous research (Bosisio et al., 2021). Each risk indicator is attributed to a specific risk dimension. In particular, the exposure dimensions include the risk indicators related to:

- ownership structure risk,
- territorial risk,
- key members' anomalous features,
- anomalous financial features,
- adverse events.

The vulnerability dimension corresponds to the risk indicator related to:

- political exposure.

For each dimension, an aggregated risk score is defined. Then, the overall risk score is the result of the weighted average of those dimensions' risk scores. The score for the risk elements is increased in relation to the exposure elements and further raised in relation to the vulnerability elements. When a company has the same exposure components but different indicators of vulnerability, the company in a more vulnerable context will present a higher overall risk. If a company has maximum risk in all core exposure components, the overall risk will be the highest, regardless of the vulnerability of the environment. Conversely, if only the environment is vulnerable, but the company does not present any exposure components, the overall risk will be 'lower' (Bosisio et al., 2021; FATF, 2023).

The overall risk value is translated into four classes: low, medium, high, very high.

3.2.c. Results of the UCSC-Transcrime risk analysis

By aggregating the values of the different risk dimensions, it is possible to identify 4 companies at very high risk out of the 42 indicated by the participants in the operational action, while the majority of these companies (67 %) are categorised as companies at high risk (Figure 16.1) ([126]).

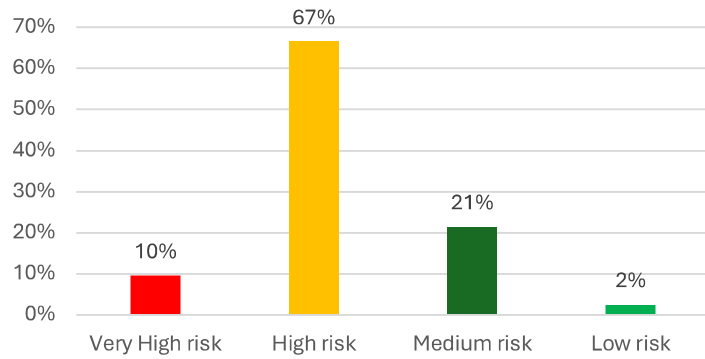

Figure 16.3. Percentages of the target companies by overall risk value

However, considering the scores of the single risk indicators, it emerges that 26 companies out of 42 (62 %) show high risk values (3 or 4) for one risk indicator and 11 (26 %) show a high risk value for at least two different risk indicators. These percentages are about double the ones recorded in the control group (37 % and 14 %, respectively). This suggests the presence of different profiles/types of infiltrated companies that may be better captured by focusing on specific risk dimensions separately (Table 16.9).

([126]) UCSC-Transcrime has diligently and professionally collected the data and information necessary to produce this report, according to the rules of the Italian Civil Code without any obligation of result. The information contained is provided on an 'as is' basis, without warranties of any kind. The user of this report acknowledges that the information communicated to UCSC-Transcrime may be incomplete and may not contain unique identifiers (e.g. date of birth, tax code, VAT number, Chamber of Commerce registration number or equivalent). UCSC-Transcrime does not take any responsibility for cases of homonymy resulting from the absence of such information. The information contained in the reports provided by UCSC-Transcrime should in no case be interpreted as definitive evidence of infiltration of organised crime, money laundering or any type of illegal conduct from a specific company or any connected individual and/or entity. Under no circumstances will UCSC-Transcrime be liable to any person or legal entity for any loss, damage, cost, expense or any other damage connected to any error (due to negligence or other cause), or any other circumstance under or outside the control of UCSC-Transcrime, in relation to the acquisition, collection, elaboration, analysis, interpretation, communication, publication or delivery of any information.

Table 16.4. Number of target companies by risk score for each risk indicator and risk dimension

		Risk score					
		0 (minimum)	1	2	3	4 (maximum)	Data not available
Risk indicators	Vertical complexity	8	12	4	4	1	13
	Horizontal complexity – natural person	16	7	2	3	1	13
	Legal arrangements	28	0	0	0	1	13
	Shareholding anomalies	27	0	0	0	2	13
	Address active	4	3	21	12	0	2
	Previous roles	9	16	8	5	4	0
	BO old age	25	0	0	0	2	15
	Days for creditors	4	2	2	3	1	30
	Financial exposure ratio (standard deviation)	6	0	0	2	0	34
	Fixed asset ratio (standard deviation)	3	6	0	3	1	29
	Personnel expenses on revenue (standard deviation)	5	0	3	1	0	33
	Leaks	33	3	1	0	5	0
	Local administrators	40	1	0	0	1	0
Risk dimensions	Ownership structure risk	6	9	10	4	0	13
	Territorial risk	4	3	21	12	0	2
	Anomalous features of key officers	9	8	18	4	3	0
	Anomalous financial feature	3	1	4	6	2	26
	Adverse events	33	3	1	0	5	0
	Political exposure	40	1	0	0	1	0

Comparing the values of the selected risk indicators calculated for the target companies and the ones estimated for the control group, some distinctive characteristics of the target companies emerge (Figure 16.2).

— **Key officers.** Target companies are 12.9 times more likely to have a high number of elderly beneficial owners. Furthermore, their key individuals are 1.7 times more likely to have been involved in many other companies before.

— **Ownership structure.** Target companies are about 2 times more likely to have complex ownership structures, with more ownership layers between the company and its BOs (vertical complexity) and more individuals with direct or indirect ownership links with the company (horizontal complexity). Furthermore, target companies are 2.3 times more likely to have more ownership links with opaque legal arrangements (e.g. trust, fiduciaries, funds). Finally, they are 2.8 times more likely to have a high number of shareholders with a shareholding percentage just below the BO disclosure threshold.

— **Territorial risk.** Target companies are about 2.1 times more likely to have a higher number of other active companies registered at the same address.

— **Financial features.** Target companies are about 3 times more likely to take more days to pay creditors and to have a higher variability in their financial exposure. These companies are also 1.9 times more likely to have a higher variability in human resources expenses as a percentage of revenues and 1.6 more likely to have an inconsistent fixed asset ratio, which indicates a higher volatility of the company.

— **Political exposure.** Target companies are more likely to have a public administrator among owners or directors of the company.

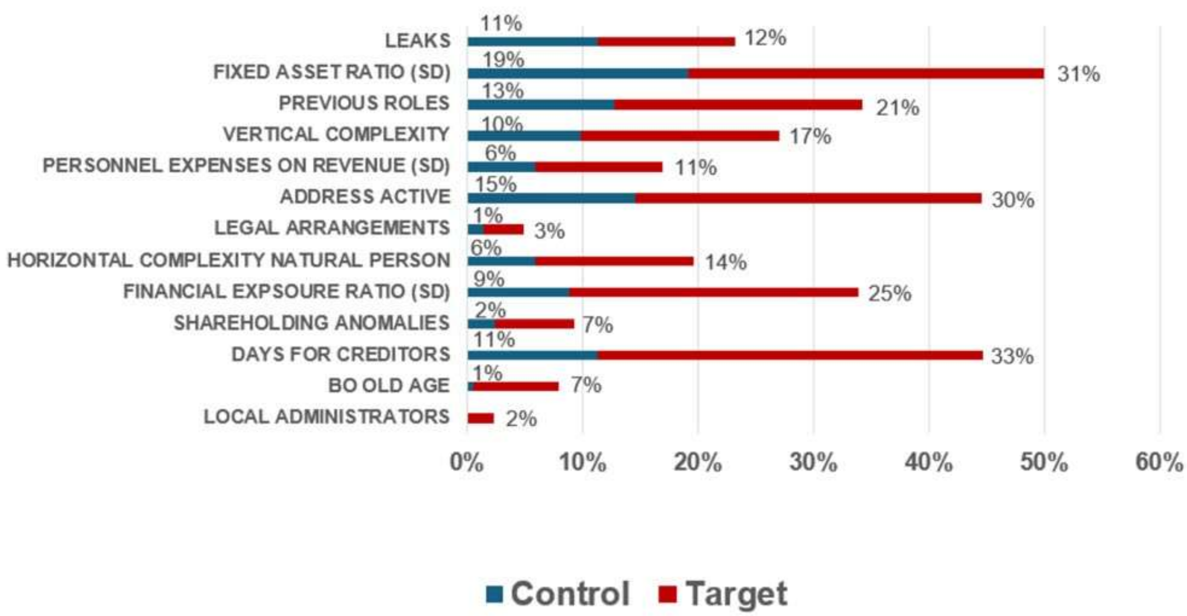

Figure 16.5. Percentages of companies at high or very high risk for each risk indicator among the target companies and in the control group

The results of the study

Firstly, it can be observed that the participants' choices seem to be at least partly influenced by past investigations carried out in the reference countries.

In this respect, we can observe, for example, how Germany – already concerned by the well-known investigations following the Duisburg massacre and the police operation known as Brodo Pollino – preferred to report several catering activities already reported as being carried out by Italians. Similarly, Malta focused its reports on the gaming sector, which had already been the subject of several investigations involving the Italian subjects.

With regard to the composition of the legal entities examined, it was established that in 35.60 % of the cases the companies are managed/owned by individuals from the same region.

In particular:

- 8.48 % of the companies are solely managed/owned by individuals from Campania;
- 11.87 % of the companies are solely managed/owned by individuals from Sicily;
- 15.25 % of the companies are solely managed/owned by individuals from Apulia;
- 44.07 % of the companies are solely managed/owned by individuals from the three regions mentioned above, together with nationals of the countries where the company is physically located;
- 20.33 % of the companies are managed/owned by individuals from the three regions mentioned above, together with third parties who apparently come from outside the state where the company is physically located. It should be noted that South American nationals (5 Brazilians and 1 Argentinian) participate in 50 % of companies.

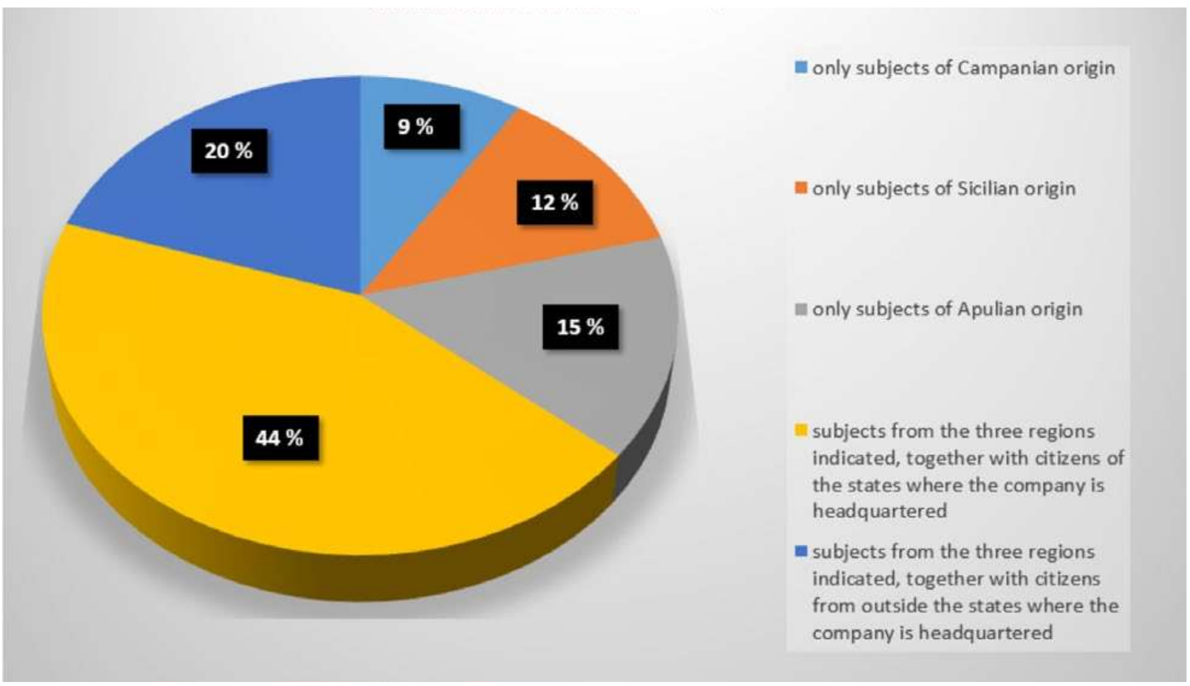

Figure 16.6. Managed/owned companies

Furthermore, it was established that:

- companies solely managed/owned by individuals from Campania prefer to operate in the catering and gaming and betting sectors;
- companies solely managed/owned by individuals from Sicily are active in the catering sector;

- companies solely managed/owned by individuals from Apulia are concentrated on the construction sector;
- companies managed/owned by individuals from the three regions mentioned above, together with nationals of the countries where the company is physically located, prefer operating in the catering sector;
- companies managed/owned by individuals from the three regions mentioned above, together with third parties who apparently come from outside the state where the company is physically located, mainly operate in the construction sector.

Finally, in terms of geographical distribution, it can be noted that:

- companies wholly or partly owned by individuals from Campania are mostly based in Germany;
- companies wholly or partly owned by individuals from Sicily are mostly based in Malta;
- companies wholly or partly owned by individuals from Apulia are mostly based in Switzerland;
- companies managed/owned by individuals from the three mentioned regions, together with foreign nationals, are mostly concentrated in Portugal.

Figure 16.7. Geographical distribution

On the basis of the analysis of the 59 companies reported by the participants, 169 subjects were profiled, divided by their geographical origin in the following chart.

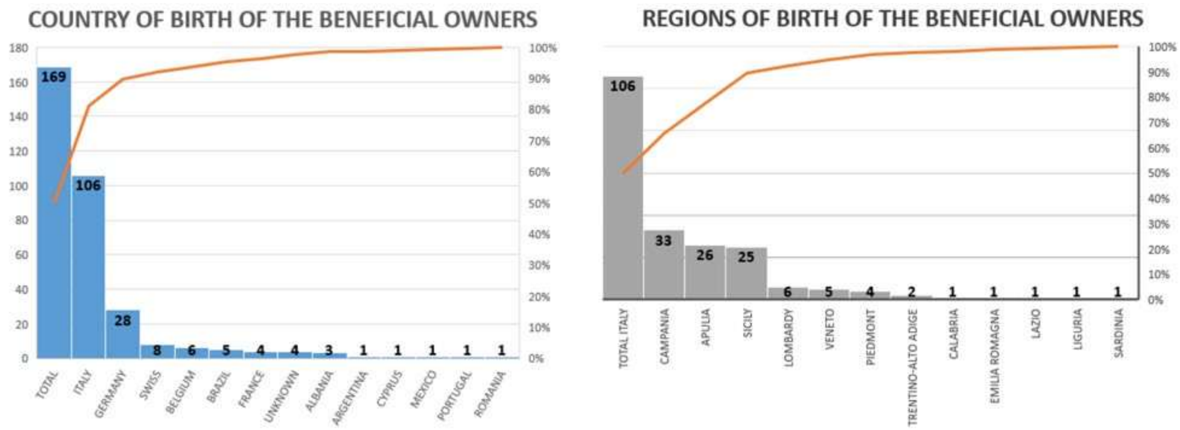

Figure 16.8. Country and regions of birth of the beneficial owners

With regard to this, the following is a preliminary regional projection by sector.

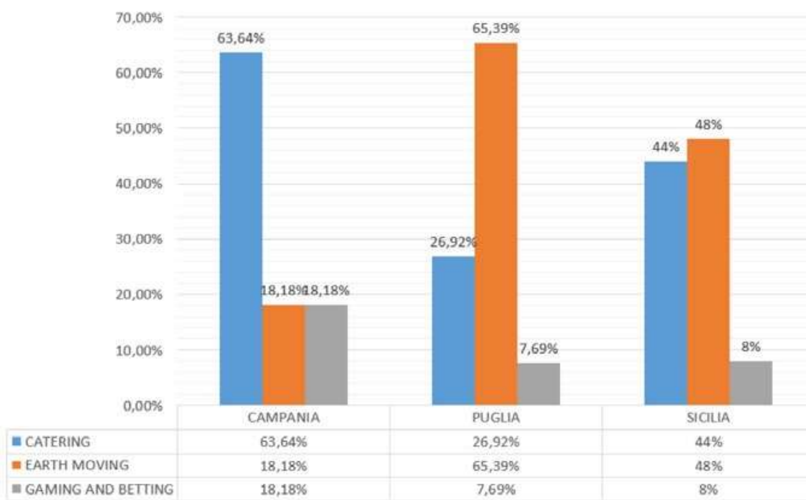

Figure 16.9. Sector by region

In this framework, checks on managers and beneficial owners revealed that an overall 21.30 % of subjects have previous police records in Italy.

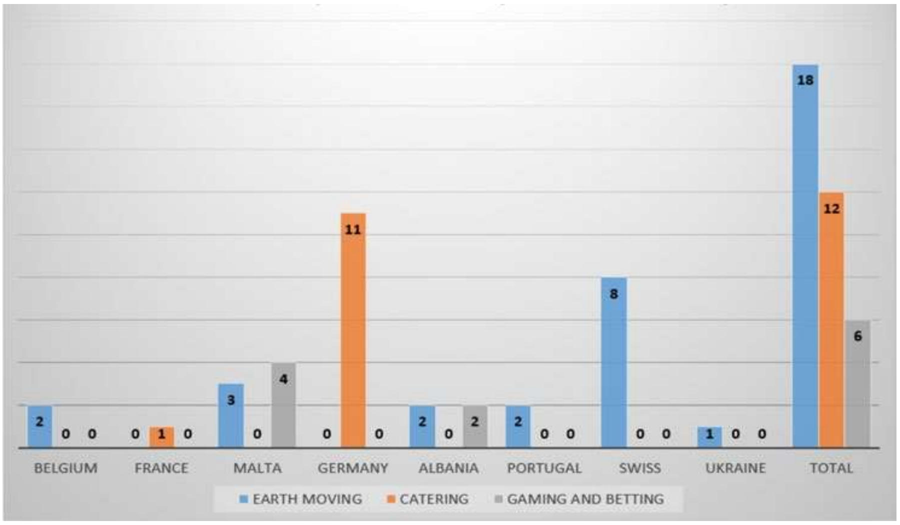

Figure 16.10. Incidence of police records by sector and country

19.44 % out of 21.30 % are involved in mafia-type conspiracy or other mafia crimes.

These companies operate in the following fields:

– 3 in the earth-moving sector;

– 3 in the catering sector;

– 1 in the gaming and betting sector.

Figure 16.11. Incidence of mafia-type conspiracy

According to the above indicators, the companies in Figure 16.11 are within the following risk ranges.

High	Construction
High	Construction
Medium	Construction
Medium	Catering
Low	Catering
Low	Catering
Medium	Gaming and betting

Figure 16.12. Risk range by sector

The projection is then consistent with the potential risk of infiltration (by sector) revealed by the analysis.

On the other hand, it was found that 8.28 % of the subjects examined had kinship/connections with subjects having previous police records for mafia crimes.

In this case, the sectors concerned are the following.

Figure 16.13. Incidence of kinship with mafia members

Therefore, it follows that in the case of companies that are only indirectly linked to individuals with police records for mafia crimes, the potential risk (by sector) identified by the analysis does not match that of the companies owned by these individuals. In particular, the chart shows a greater interest in the catering sector, which actually has a low-risk potential. This figure suggests that these companies pursue a policy of prospective reinvestment, and that the choice to keep a low profile is related to the need to avoid investigations (and assets seizures).

The results of the study conducted by the SCO, taken as a whole, allowed us to draw up a preliminary figure showing the level of infiltration risk identified for each sector examined.

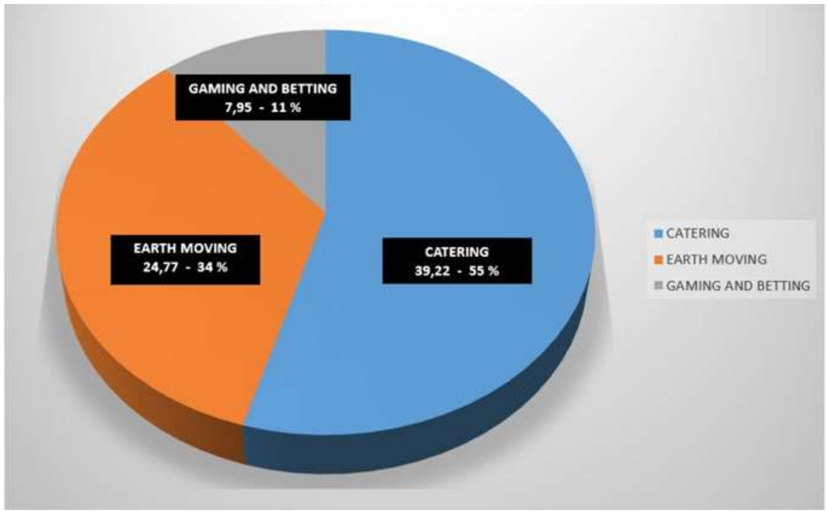

Figure 16.14. Risk index by sector

Furthermore, the comparative analysis of the findings with the checks conducted by the DIA and the Guardia di Finanza Servizio Centrale di Investigazione sulla Criminalità Organizzata allowed us to establish the following.

- In four cases, the companies subject to suspicious transaction reporting are included among those more at risk. In particular, the managers of the two companies more at risk (company 1 and company 2), have been subject to suspicious transaction reporting: the former in 2008, 2018 and 2019 and the latter in 2020, 2021 and 2022.
- Only 15.97 % of the 169 managers / beneficial owners included in the business structure of the 59 companies examined participate in other companies that mostly have the same corporate purpose as the target company.
- Lastly, 11.83 % of the managers / beneficial owners have at least one online gaming account.

Finally, the study also revealed a more than 50 % match between the top 10 at-risk companies identified by the SCO study and the Transcrime analysis. This also shows that the risk of mafia infiltration into the economy can be detected by the combination of subjective and objective factors.

Conclusions and practical implications

The exercise therefore highlighted the possibility of identifying companies at risk of mafia infiltration using a combined approach of both subjective and objective analysis factors (Savona and Berlusconi, 2015; Bosisio et al., 2021; Europol, 2021).

On this point, the data – limited to the framework of the analysis – confirm the involvement of individuals associated with or connected to Italian mafias in many foreign companies, taking advantage of the absence of preventive regulations that would require further investigation into the origin of the capital invested and the past of managers and partners of Italian origin.

The methodology, validated in the ongoing study by further results acquired on the potential interests of the 'Ndrangheta in the foreign economic network, therefore constitutes a valid basis to elevate the analysis technique to a prevention tool aimed at strengthening international cooperation in the fight against the globalisation of mafias (Calderoni et al., 2016; Varese, 2011; Europol, 2025).

This approach, which is useful for raising participants' awareness of the potential of traditional Italian organised crime groups, could also facilitate a process to develop a common definition of organised crime that also includes the hybrid threat posed by the mafia.

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