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Comprehensive methods for investigating crimes in the illegal trafficking of precious metals and stones

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Abstract

The objective of the article was to develop theoretical provisions for structuring comprehensive methods of crime investigation and to form, on their basis, effective recommendations for the dissemination and investigation of crimes committed in the field of trafficking in precious metals and stones. The authors present comprehensive methods for investigating crimes in the field of illegal circulation of precious metals and stones. An archival 300 criminal cases were examined, the preliminary investigation of which occurred between 2015 and 2019, and in addition, an online interview was conducted with 220 law enforcement officers fighting such crimes. As a result, comprehensive methods have been developed to investigate these crimes, as well as a system of provisions and scientific recommendations for the dissemination and investigation of thefts, trafficking, violations of the rules for the delivery of precious objects. He was interested in designing a method for declaring, illegal enterprise combined into a single subject of investigation with due attention to criminal and forensic prerequisites, including the following structural elements: a) comprehensive forensic characteristics of such crimes, and b) activities of dissemination and investigation of such crimes using the situational approach in its various stages.

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Keywords: precious metals; precious stones; illegal movement; organized crime; methods for the investigation of specific crimes.

Métodos integrales de investigación de delitos en el tráfico ilegal de piedras y metales preciosos

Resumen

El objetivo del artículo fue desarrollar disposiciones teóricas para estructurar métodos integrales de investigación de delitos y formar, sobre su base, recomendaciones efectivas para la divulgación e investigación de delitos cometidos en la esfera del tráfico de metales y piedras preciosas. Los autores presentan métodos integrales para investigar delitos en el ámbito de la circulación ilegal de metales y piedras preciosas. Se examinaron 300 casos penales de archivo, cuya investigación preliminar ocurrió entre 2015 y 2019 y, además, se realizó una entrevista en línea a 220 agentes del orden público que luchan contra tales delitos. Como resultado, se han desarrollado métodos integrales para investigar estos delitos, así como un sistema de disposiciones y recomendaciones científicas para la divulgación e investigación de robos, tráfico, violaciones de las reglas para la entrega de objetos preciosos. Interesó diseñar un método para declarar, emprendimiento ilegal combinado en un solo tema de investigación con la debida atención a los requisitos previos criminales y forenses, incluidos los siguientes elementos estructurales: a) características forenses integrales de tales delitos, y; b) actividades de divulgación e investigación de tales delitos utilizando el enfoque situacional en sus diversas etapas.

Palabras clave: metales preciosos; piedras preciosas; circulación ilegal; crimen organizado; métodos para la investigación de delitos específicos.

Introduction

Characterized by small size, high safety and liquidity, precious metals and precious stones are always in the focus of the underworld, therefore this sphere is seriously criminalized. The crimes related to the illegal trafficking of precious metals and precious stones are classified according to their organization, professionalism, seriality, and territory (Wisniewski *et al.*, 2018).

During the rapid development of science and technology, criminals commit even more daring economic crimes using modern technologies. The methods of committing crimes have become sophisticated and diverse. While developing methods aimed at a particular type of crime, it is impossible to cover the entire range of measures for their disclosure and investigation since other types of crimes can organically interweave into the first one (Kirillova and Kurbanov, 2017).

While analyzing the tactical tasks solved during the investigation of such crimes, we established that the existing generic methods help investigate only one type of crimes and narrow the possibilities for investigating various types of theft, illegal trafficking, violations of the rules for delivery to state, as well as the illegal entrepreneurship of precious metals and precious stones. When investigating these types of crimes, most organizational and tactical tasks, as well as methods for their solution, coincide, therefore there is an obvious need to create comprehensive methods for investigating the above-mentioned group of crimes and formulate its theoretical provisions (Chowdhury, 2021).

These methods should cover the following crimes: theft, illegal trafficking, violations of the rules for the delivery of precious metals and precious stones to the state, illegal entrepreneurship. They will allow practitioners to apply a unified approach to the investigation of several types of crimes, regardless of their legal assessment. Its recommendations can be applied once the initial information about the crime of any type is received until a preliminary investigation is completed and an indictment is sent to the court. To simplify the nomination of the proposed approach, we will designate it as a method for investigating crimes in the sphere of precious metals and precious stones.

The study aims at developing theoretical provisions for comprehensive methods of crime investigation and forming, on their basis, effective recommendations for the disclosure and investigation of crimes committed in the sphere of precious metals and precious stones trafficking.

1. Methods

The methodological basis of the research was formed by modern scientific theories and the system of philosophical knowledge as a universal dialectical method of cognizing reality. The study comprises 300 archival criminal cases, whose preliminary investigation was carried out between 2015 and 2019.

The online interviews we conducted embraced 220 law enforcement officers fighting against such crimes, including 107 investigators and 113 operational officers of internal affairs bodies.

During the research, we used historical, systemic-structural, comparative-legal, logical-theoretical, sociological, and statistical methods. These methods were applied comprehensively to ensure the objectivity and reliability of the study results.

The methodological principle of the research was to observe the relationship between the general, the particular and the individual, the historical and the logical, the abstract and the concrete.

The theoretical basis of the research was formed by scientific works in the field of philosophy, sociology, general theory of law, constitutional, criminal, criminal procedure law, criminology and other branches of law, scientific provisions of forensic science, the theory of law enforcement intelligence operations.

2. Results

In the structure of economic crime, crimes in the sphere of trafficking precious metals and precious stones make up no more than 10%. At the same time, acts directly related to the illegal circulation of precious stones account for about 3-5% of the total number of crimes. The study has revealed that in the total volume of stolen precious metals and precious stones, gold is 38%, silver is 28%, platinum and platinoids are 10%, diamonds are 12%; emeralds and alexandrites are 10%, rubies and sapphires are 2% (Coetzee and Horn, 2007). Precious minerals often exist in the form of individual nuggets of various weight, veins and other inclusions, as well as in the form of sand and placers in deposits.

A criminal stealing such objects should know their structural and physicochemical features to establish their authenticity. Natural precious metals and gemstones differ from their artificial counterparts, so a person who steals them requires basic mineralogical knowledge and practical skills to distinguish a precious mineral from others. Thus, an investigator should also have sufficient knowledge in the field of mineralogy.

There are several approaches to the classification of crimes: by the method a crime was committed; by the degree of its concealment; by criminal experience; by the place of its commission; some other criteria.

It is necessary to form a separate category of crimes related to theft, violations of the rules of delivery to the state, illegal entrepreneurship, illegal circulation of precious stones (diamonds, emeralds, rubies, sapphires, alexandrite's) and precious metals (gold, silver, platinoids). This classification should be supplemented with a differentiation based about criminal encroachment, which is typical of crimes in the sphere of illegal circulation of precious metals and precious stones. The basis for

this classification is not only the subject of criminal encroachment but also features of its extraction, enrichment, and protection, which directly affects the disclosure, investigation, and prevention of these crimes.

The following classification can be proposed for the illegal trafficking of precious metals and precious stones (Table 1).

Table 1. The classification of crimes related to the illegal circulation of precious metals and precious stones

Classification related to the objective aspects of a crime:			
By the method a crime was committed:		By the method of concealing a crime, if it is not an integral part of the method of committing the crime:	
Theft by opening washing or enriching devices or through free access; exploiting precious metals and stones without a license; selling precious metals and stones in violation of special handling rules, as well as the illegal transportation, shipment, storage, movement of such goods across the border		Keeping the stolen in hiding places or hiding it inside one's body, including smuggling goods; hiding precious metals and precious stones in private houses, apartments, or vehicles	
Classification related to the object of a crime:			
By a field of activity:	By the place where a crime was committed, or the object of encroachment was located:	By the methods used to protect the direct subject of encroachment:	
The mining industry, metallurgy, manufacturing industry, jewelry, trade, and foreign trade	Places where precious metals and stones are directly mined: enriching factories, dredging engines, open-pit mines, washeries, mines, geological-prospecting sites, etc.; the central regions of the country and the territory of customs terminals when crossing the border	With or without electronic security, with a common security system provided by paramilitary services or departmental services, as well as an unguarded territory	
Classification related to the subjective aspects of a crime:			
With premeditated intent		With sudden intent	
Classification related to the subject of a crime:			
Alone or jointly	For the first time or repetition	Persons who have or do not have access to the object of encroachment	Men and women

Source: own elaboration.

Thus, this criminal classification allows not only to differentiate various types of crimes but also to highlight the methods of their investigation.

When committing crimes related to the illegal trafficking of precious metals and precious stones, the subject of criminal encroachment (a materially expressed element of the object) are precious metals and natural precious stones, including gold, silver, platinum and platinum group metals, diamonds, emeralds, sapphires, rubies, alexandrite's and sea pearls. A condition for criminal liability is the infliction of large-scale damage to citizens, organizations, and the state. Constituent elements of a crime are material and formal. A crime is considered completed from the onset of harmful consequences.

The typical features of the subject of encroachments are presented in the table below (Table 2).

Table 2. Typical features of the subject of crimes related to the illegal circulation of precious metals and precious stones

Sound liquidity for a small size and weight
Extraction causes a real damage to the owner (mainly state)
Are extractable resources and their theft reduces the available supplies of expensive mineral raw materials, while illegal trafficking and smuggling undermines the economic foundation of state
The precious stones and precious metals stolen or removed from legal circulation are an irreplaceable loss for state and next generations of its citizens

Source: own elaboration.

The information about stolen and illicitly trafficked precious metals or precious stones might indicate their movement from places of their theft to buyers, carriers, appraisers, and jewelers; sales channels (within the country and abroad); their temporary storage (apartments, private houses, summer cottages, dormitories, etc.) belonging to the person who committed the theft or their relatives, friends, acquaintances (Flynn, 2009).

We considered the factors forming the structure of the theft of precious metals and precious stones and determined the following interrelated components:

1. The geographical location and natural-climatic conditions of the regions where precious raw materials are mined and enriched.
2. The conditions immediately preceding a crime and accompanying it; their impact on the committed offense.
3. The spatial position of an object (distance from settlements and roads), its structural features.
4. The nature of the terrain, its relief, the presence and state of infrastructures, routes and distance between individual administrative points, the possible communication for arrival and departure from the crime scene, the transportation of the object.
5. The system of features characterizing the object of criminal encroachment (a factory workshop, a mining and processing plant, a mining partnership, a washery for extracting precious raw materials, a storage of mineral raw materials, a tailing dump, its production, technical and communication features).
6. The location of premises, i.e., the object of encroachment in relation to other residential and administrative buildings (structures), their condition, the presence and nature of protection (signaling system), etc.
7. The work schedule of an enterprise (organization), the movement of people and security representatives, transportation (water, rail, air, motor), the state of radio and telecommunications at the crime scene.
8. Circumstances that contributed to or hindered the preparation, commission, and concealment of the crime, and whether the criminal took them into account.
9. Unconventional factors manifested in the current situation and their influence on the crime.
10. A real opportunity to take advantage of an artificially created or objectively developed situation to commit the crime (Nikonovich, 2015).

The above-mentioned set of components can be conditionally subdivided into two groups: permanent and temporary factors. The time a crime was committed is a component of the environment. The study of criminal activity with due regard to the time factor helps to better understand the functioning of the underworld, including the time needed to nurture the idea of organizing illegal activities, preparing the necessary tools, etc. In addition to the place and time a crime was committed, the crime situation

also includes the circumstances that contribute to the commission of such crimes (Van den Eeden *et al.*, 2016).

3. Discussion

A typical feature of crimes that infringe on public relations, ensuring the circulation and safety of precious metals and precious stones, is the fact that they are interconnected and accompany each other. Thus, the theft or violation of the rules for the delivery of precious metals and precious stones to the state might be associated with illegal entrepreneurship and illegal circulation. Furthermore, a series of actions within the objective aspect of a crime can simultaneously be part of another one (Wang *et al.*, 2020). For example, when stealing precious metals and precious stones from enrichment enterprises, a criminal, prior to the sale of this jewelry, has to hide them at home or keep them for some time. In this regard, large-scale storage is a criminal act. The direct object of a crime is public relations that regulate entrepreneurial activity.

While studying methods for investigating the theft, violations of the rules of delivery to state, illegal entrepreneurship, illegal trafficking of precious metals and precious stones, and smuggling, we can conclude that comprehensive and consolidated methods for investigating this group of crimes are necessary for their successful disclosure.

A group of complex methods for investigating crimes should include a set of recommendations based on both the criminal and forensic classification of crimes. Complex methods are built over constituent elements of a crime according to the criminal classification (McLamb, 2015). However, they should also consider groups of crimes united by specific and generic objects, i.e., hybrid and heterogeneous crimes which, if taken in isolation from the forensic criterion, do not have any common patterns.

For example, theft, violations of the rules for delivery to state, illegal circulation of precious metals and precious stones, as well as illegal entrepreneurship in this area, do not have a common criterion since these crimes are of different types. It would be impossible and inexpedient to combine such crimes within a single classification and, accordingly, investigative methods if it was not for the use of an additional forensic criterion. The latter is an area of activity, i.e., the circulation of precious metals and precious stones. In this case, the commonality and interdependence of these encroachments become obvious if these crimes are committed sequentially or in combination, for example, in connection with their abduction, illegal storage and circulation. Additional forensic grounds for classification are presented in the table below (Table 3).

Table 3. Additional forensic grounds for classification

1.	Similar elements of the environment and conditions conducive to the commission of crimes
2.	Similar methods for committing and concealing crimes (for example, methods for concealing the subject of a crime are the same for theft, violations of the rules for the delivery of precious metals and precious stones to state, as well as for their illegal turnover and smuggling)
3.	Similar characteristics of the subjects committing these crimes
4.	Similar features of the investigation

Source: own elaboration.

When considering such acts as criminal activity within the framework of a special forensic classifying criterion (the illegal circulation of precious metals and precious stones), we revealed that these components form its structure.

Complex techniques differ from special ones since they embrace both criminal and forensic grounds for classification (Hall, 2010). In this context, various types of crimes are combined on several criminal grounds. Their commonality is conditioned by the fact that they are performed in real and ideal aggregates. At the same time, their commission stipulates the same intent of organizers, instigators, accomplices and perpetrators of a crime, their common motives and goals, single mechanisms of organized criminal activity. Thus, certain elements of forensic models of seemingly heterogeneous criminal activity are closely interconnected, which ultimately determines the specific advancement and development of versions, their planned verification, tactics of investigative actions and the specifics of conducting tactical operations.

Thus, the subject of illegal trafficking (precious metals and/or precious stones) is stolen or illegally extracted (mined without a license) or is in illegal storage for some time. In this case, it refers to complex criminal activity. It is mainly manifested in the fact that criminals commit several acts in the field of theft, illegal trafficking, illegal entrepreneurship, violations of the rules for the delivery of precious metals and precious stones to the state, which forms inextricably linked real and ideal cumulative offenses in the context of criminal legal qualifications (Miller and Massey, 2018). Methods for investigating this group of crimes should be just as complex.

The conditional selection of complex methods is expressed in the fact that many recommendations introduced into practice, developed as typical or special ones, are outdated at the present stage of the development of crimes and means of combating them. They need to be modernized, enlarged, and transformed into complex ones.

The development of complex investigative methods should be based on both forensic and criminal classifications.

Comprehensive methods for investigating crimes in the sphere of illegal trafficking of precious metals and precious stones is a system of interconnected elements having a certain structure, according to which its elements are arranged in a strict sequence and form their own subsystems (Mateen and Tariq, 2019). An element of this system is a complex forensic feature and the corresponding recommendations for the disclosure and investigation of several types of crimes. Along with forensic recommendations, comprehensive methods also contain their justification in the form of scientific and empirical provisions.

One part (the theft of precious metals and precious stones) of such methods is harmoniously included in the basic investigation of the theft of other people’s property. Its other part (an illicit trade and violation of the rules for the delivery of precious metals and precious stones to state, illegal entrepreneurship) is added into the basic investigative technique for disclosing crimes in the field of economic activity.

At the same time, such methods have a certain degree of generalization since they form a generic group in relation to specific investigative techniques: theft, illegal trafficking, violations of the rules for the delivery of precious metals and precious stones to the state, illegal entrepreneurship (Horsman *et al.*, 2019). The unifying factor is also the generic concept of the subject of crimes, i.e., precious metals and precious stones in conformity with their types (gold, silver, diamonds, etc.).

The system of forensic techniques for investigating crimes in the sphere of illegal trafficking of precious metals and precious stones is presented in the table below (Table 4).

Table 4. The system of forensic techniques

Level One	General provisions of investigative techniques characterized by the greatest degree of abstraction
Level Two	Basic techniques of investigating crimes in the field of economic activity and the theft of other people’s property, and comprehensive methods for investigating thefts, violations of the rules of delivery to state, illegal trade in precious metals and precious stones, illegal entrepreneurship
Level Three	Specific methods for investigating the theft, illegal trafficking, violations of the rules for the delivery of precious metals and precious stones to state, illegal entrepreneurship

Level Four	Special methods for investigating the theft, illegal trafficking, violations of the rules of delivery to state and illegal entrepreneurship of precious metals and precious stones by a certain place: in various industries (the mining industry, nonferrous metallurgy, jewelry); by the subject of encroachment: methods for investigating theft, illegal trafficking, illegal entrepreneurship and violations of the rules for delivering industrial diamonds, emeralds, alexandrites, sapphires, rubies, industrial gold, silver and platinoids to state which have the highest degree of specification
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Source: own elaboration.

Thus, the role of the above-mentioned complex investigative techniques in the system of forensic methods is visible.

When forming group methods in addition to classifications, the following principles should also be taken into account: the establishment of general provisions that underlie a group association; the presence of objective patterns common to the commission of all types of crimes included into the group; the determination of investigation areas that are general (universal) for all the types of crimes included into the group under study; the definition and description of a general approach to the disclosure and investigation of the above-mentioned group of crimes.

The specifics of forming such methods were the generalization of the existing experience expressed in private methods for investigating the theft of industrial gold and diamonds, as well as the illegal trafficking of precious metals and precious stones. Generalization is manifested in the identification of the most general, significant, and essential properties of the studied phenomena and the exclusion of accidental and less significant phenomena.

Conclusion

The study has developed comprehensive methods for investigating crimes in the sphere of precious metals and precious stones trafficking as a system of scientific provisions and recommendations for the disclosure and investigation of theft, illegal trafficking, violations of the rules for the delivery of precious metals and stones to state, illegal entrepreneurship combined into a single research subject with due regard to criminal and forensic prerequisites, including the following structural elements: a) comprehensive forensic features of such crimes; b) activities for the disclosure and investigation of such crimes using the situational approach at its various stages.

The forensic methods for investigating crimes in the sphere of precious metals and precious stones trafficking are divided into four main levels. The first level is general provisions of investigative techniques characterized by the greatest degree of abstraction. The second level includes the basic techniques of investigating crimes in the field of economic activity and the theft of other people's property, and comprehensive methods for investigating thefts, violations of the rules of delivery to state, illegal trade in precious metals and precious stones, illegal entrepreneurship.

The third level comprises specific methods of investigating theft, illegal trafficking, violations of the rules for the delivery of precious metals and precious stones to the state, illegal entrepreneurship. The fourth level is made by special methods for investigating the theft, illegal trafficking, violations of the rules of delivery to state and illegal entrepreneurship of precious metals and precious stones by a certain place: in various industries (the mining industry, nonferrous metallurgy, jewelry); by the subject of encroachment: methods for investigating theft, illegal trafficking, illegal entrepreneurship and violations of the rules for handing over industrial diamonds, emeralds, alexandrite's, sapphires, rubies, industrial gold, silver and platinoids to state which have the highest degree of specification.

While analyzing the forensic characteristics of certain types of crimes included in the above-mentioned group, we established the main interrelationships of their elements and the corresponding four models of the commission of crimes:

1. The connecting element of forensic features of the theft of precious metals and precious stones is the subject of criminal encroachment, which determines, on the one hand, the place of theft (the territory of an industrial enterprise) and its method (through free access); on the other hand, its realization is illegal trafficking (extraction sites: cities, workers' settlements, etc.) representatives of organized crime; b) the main form of embezzlement was theft committed by men previously not convicted who were employees of enrichment enterprises.
2. The main form of illegal circulation of precious metals and stones was their sale to representatives of organized crime, buyers of gold and precious stones, jewelers, representatives of the patriarchy men previously not convicted who kept and carried jewelry or transported them in vehicles.
3. The predominant methods of violations of the rules for the delivery of precious metals and precious stones to state and illegal entrepreneurship in this area were as follows: the unauthorized mining of precious metals in the channels of taiga streams and rivers under the guise of exploration and illegal development of mines,

pits, quarries, tailing dumps by men earlier not convicted stored and carried jewelry with them or transported them in a vehicle.

In general, the complex characteristics of such crimes are interconnected in the following way: the connecting element of this group of crimes is the subject of a crime, i.e., precious metals and precious stones (gold is 41%, silver is 25%, platinum and platinum group metals are 7%, diamonds are 18%, emeralds and alexandrite's are 7%, rubies and sapphires are 2%). Firstly, it correlates with the situation in which crimes are committed (the territory of mining regions and external borders of the country: customs, customs posts, and terminals) in the spring-summer period, on weekends and holidays, in the evening and at night. Secondly, it relates to the methods of committing a crime (theft is 99%, sale is 60%, storage is 25%, transportation and shipment is 15%).

Thirdly, it is linked with the methods of concealing the subject of a crime (in outer clothing and underwear, in the natural cavities of the body, in everyday objects and vehicles). Fourthly, it depends on the personality of a criminal (an adult previously not convicted, having secondary or higher education, a married man positively characterized at the place of work and residence who committed a crime with a mercenary motive). Fifthly, it can be a person who committed a crime in a group of co-perpetrators.

Comprehensive forensic characteristics of these crimes allow one to develop reasonable versions, outline a plan of operational and investigative measures and effectively investigate crimes included in this group without the practice of investigating any type of these crimes. In addition, they allow developing an effective investigation program for all the crimes included in the group.

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