


## Modeling the Performance of Criminal Law Functions in the Context of Safety and Security Development



Jafar Ali Ahmad Hammouri 

Faculty of Law, Jadara University, Irbid 21110, Jordan

Corresponding Author Email: [jafar.ali.hammouri@gmail.com](mailto:jafar.ali.hammouri@gmail.com)

<https://doi.org/10.18280/ijssse.130302>

### ABSTRACT

**Received:** 10 May 2023

**Accepted:** 27 June 2023

#### **Keywords:**

*safety and security, model, criminal law functions, law*

The main purpose of the article is to ensure the safety and security development of the country through the effective implementation of its law functions. For this, the main scientific task is to model the correct execution of criminal law functions in the context of safety and security development (provinces and territories of Canada). The object of the study is the system for ensuring safety and security development. The research methodology involves the use of modern modeling methods. IDEF, SMART, and SWOT methods are used. As a result, we received an information diagram of the performance of criminal law functions in the context of safety and security development. The elements of the novelty of the results of the study are presented by presenting the main stages of the implementation of criminal law functions in the context of safety and security development. The information diagram consists of several blocks that, through arrows, allow you to explain key processes. The innovativeness of the article is presented in the form of a model for the implementation of criminal law functions in the context of safety and security development. The study is limited by taking into account only criminal law functions. One of the limitations is not only the functions, but also the narrowing to the criminal law of only one country, and, as a result, the specifics of the law of other countries are not taken into account. Prospects for further research should be devoted to aspects of ensuring legal security in the framework of safety and security development planning.

## 1. INTRODUCTION

The modern period of safety and security development of the state is the period of changing one device to another since it is no secret that the legacy implies a certain continuity of the positions of the legal doctrine. Also, this or that period is characterized by the change of one power by another, which leads to a change in criminal policy, and it, in turn, to changes or additions to the Criminal Code. This process is accompanied by an aggravation of social contradictions in society and leads to an increase in crime and a change in its structure. The criminal law function of ensuring safety and security development is specific. Its main difference from other branches of the legal system is that this branch of law includes in the subject of its regulation social relations that arise based on the commission of a crime - the most dangerous human behavior and establishes harsh, repressive means of influencing offenders. By prohibiting socially dangerous acts, establishing penalties, and other measures of a criminal law nature, criminal law acts as a more important regulator of safety and security development. But the implementation of criminal law regulations in connection with the commission of a crime brings to life not only positive emotions in society, but also most cases a negative attitude towards criminal law due, for example, to the erroneous application of criminal law or arbitrariness committed by some persons. Law is a human creation and can only be understood through the prism of his ideas; it is "a self-sufficient system of social regulation that arises and is characterized by volitional creative activity". The

criminal-legal function of ensuring safety and security development as the most important component of criminal and social policy is traditionally considered an instrument of social, security, and regulatory influence. In this regard, it is very important to focus on the study of fundamental problems of the theory of criminal law. Without a sufficiently complete understanding of the main provisions of criminal law science, one cannot count on a successful solution to its pressing issues. Among these kinds of problems is the problem of the functions of safety and security development. It is the direction of the influence of law on social relations that is determined by its functions, content, and essence. Functions are inherent in each area of law, they are objective and exist independently of the will of a person, but their content, and methods of ensuring are created by people, therefore the content of the functional impact of law is determined by the consciousness and will of society.

The object of the criminal law function of ensuring safety and security development is social relations that arise in connection with the commission of a crime by a person and end from the moment of repayment or removal from a criminal record. That is the object of the criminal-legal function of ensuring safety and security development is protected criminal-legal relations, legal relations of criminal liability and punishment, as well as other legal relations that develop in the process of implementing the prescriptions of the sanctions complex of criminal law. Thus, the object of the criminal law function of ensuring safety and security development is much narrower in content than the object of criminal encroachment

or the object of criminal law protection in the conditions of the provision of safety and security development.

The consequences of the influence of the criminal law function of ensuring safety and security development extend not only to the person who committed the crime, but also to other persons associated with the perpetrator by virtue of law, kinship, and other circumstances. Because the criminal, like any person, is in different social relations with other people: he is married, is in a contractual relationship, is a father, mother, the only "breadwinner", and is a cohabitant, certain consequences of the influence of the security function are reflected and on the property and non-property interests, rights, freedoms of family members, native criminals of people and other persons. Such consequences of the functional influence of criminal law are especially obvious when assigning specific punishments.

The main purpose of the article is to ensure the safety and security development of the country through the effective implementation of its criminal law functions. The object of the study is the system for ensuring safety and security development. The structure of the article implies a review of the literature, a description of the methods used, a presentation of the main results of the study, their discussion, and the current conclusions.

## **2. LITERATURE REVIEW**

### **2.1 Overview of the basic elements of an article in the scientific literature**

In the scientific and practical literature [1, 2], the dualism of criminal law functions as a branch of law in general, and criminal law norms, in particular, give rise to significant features of system-structural relations, on the one hand, within the framework of the system of criminal law norms, on the other hand, between the norms of criminal law. law and norms of other branches of law. Criminal law, being the only system-structural formation, combines criminal law norms in its composition, each of which has its own properties, but, being in constant interaction and interpenetration with other elements of the system, obeying the laws inherent in this system, acquires new qualities in the conditions of the provision of safety and security development.

It is often noted in the literature [3, 4] that the elements of the system of criminal law are regulatory criminal law norms - norms with the help of which the function of legal regulation of ensuring safety and security development between the state and a person who has committed a socially dangerous act regarding criminal liability or the application of other criminal measures is carried out. The criminal law system is a social formation that is part of a higher level system - the legal system for ensuring safety and security development. Within the framework of such connections, interaction with systems of other branches of law takes place, a special place is occupied by interaction with branches that regulate public relations protected by criminal law. It is quite natural that not all social relations are subject to criminal law protection, but only those that are most important for ensuring safety and security development.

In the literature [5, 6], an analysis of social relations related to the subject of criminal law regulation of safety and security development shows that they differ significantly in terms of the degree of influence of law on them. So, one group of these

relations is those that are associated with ensuring fundamental human rights and freedoms - the right to life, health, freedom, honor, dignity, and inviolability. The specificity of these relations lies in the fact that they are regulated by international legal acts and the Constitution, which recognize these social values as the most important for safety and security development. As a rule, there are no special regulatory legal acts in this area, and the legal protection of such relations is provided for in the rules relating to protected areas of law and establishing responsibility for encroachment on them. For criminal law, such norms are traditional, have a long history, are based on considerable experience in establishing and applying criminal liability for certain acts, and therefore, as a rule, are the most advanced in terms of legislative technique.

### **2.2 An overview of the key fundamentals relating to the topic of the article**

As noted in the scientific literature [7, 8], placing social relations under criminal law protection that are not always regulated by other branches of law, criminal law is more independent and independent from other branches of law in formulating the relevant corpus delicti as the basis for criminal liability for these acts. But even in these cases, the existence of intersectoral links between the system of criminal law and the systems of branches of law that regulate positive social relations cannot be ruled out. For example, the degree of severity of the bodily injury, which is the basis for the differentiation of criminal liability for causing harm to human health, is determined by a legal act related to the system of medical law. At the same time, the norms of regulatory law, when establishing criminal liability for encroachment on these relations, are more of an auxiliary, explanatory nature, "giving all powers" to the norms of criminal law [9, 10].

In general, the literature review shows that there is a basis for updating the theme of safety and security development. We, taking into account the information received in the scientific and practical literature, have established our own scientific task for our article. The main scientific task is to model the correct execution of criminal law functions in the context of safety and security development. In the scientific and practical literature on safety, security and law, modern graphical modeling methods are used very little. That is why you decided to use them.

## **3. METHODOLOGY**

Let us highlight several main methods used for our research methodology.

First of all, this is the SMART method. A goal tree is a structured hierarchical list of project goals in which lower-level goals are subordinate and serve to achieve higher-level goals. At the top is the main, general goal of modeling (in our case, this is to ensure safety and security development due to the functions of criminal law). Since the achievement of the main goal of modeling is a difficult task, then they resort to the division of the general goal into several smaller ones - the decomposition of the goal, the common achievement of which helps to achieve the main goal. The process is then repeated with each lower-level goal until the goal is simple and precise enough to be presented as a task: achievable, realistic, and possible to complete exactly according to the scope and

planned time (S.M.A.R.T. principles).

SMART technology is an approach to setting effective working goals. The systematization of such goals allows at the initial stage of modeling to summarize all available information, determine the deadline for work, establish the availability of the necessary resources, and set clear, precise, specific tasks for all participants in the process.

SWOT method. SWOT analysis is the study of strengths, weaknesses, opportunities, and threats. The purpose of this analysis is to maximize strengths, minimize weaknesses, and use favorable opportunities for safety and security development. SWOT analysis, carried out at regular intervals, allows you to choose the best path for your safety and security development, avoiding threats, effectively using the resources at your disposal, and realizing the favorable opportunities provided by the market.

Thus, when modeling systems of varying degrees of complexity, the well-known cybernetic "black box" method is widely used. More often this method is used to represent the inputs and outputs of a particular model. The model of the "black box" scheme allows the researcher to focus on the interaction of the system with the external environment. To date, the terminology for describing the "black box" is quite diverse. As a rule, we are talking about the input and output parameters of the model, sometimes about the input parameters and values of indicators or criteria. If the "black box" is associated with a complex function, then the value of the vector is understood as the value of the function.

However, the key place is occupied by the method of graphical and functional modeling. To solve such problems, approaches are used that involve the creation of a model of the formalizing action of the process, and the necessary and created information flows, leading to the planned result in the form of safety and security development. Today, a large number of standards and notations are used to create a process model. The most popular standard is SADT and its corresponding IDEF notation.

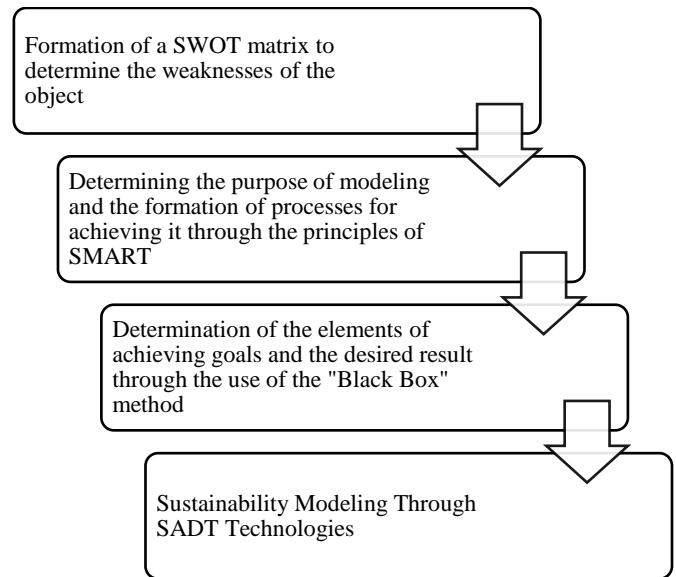
The use of functional and graphical modeling notation makes it necessary to describe the main stages of a personalized object, to show their relationship, which is formed through information flows of reference information, initial modeling parameters (given properties), and the results obtained in the form of possible safety and security development.

Thus, a consistent description and refinement of actions leading to the desired result are carried out while maintaining the context of each functional block (these are under the goals and stages of achieving the goals), which are located at different levels of the hierarchy. The number of levels of the model hierarchy is determined by the purpose of modeling and can be stopped at any level. The logical completion of the modeling process can be determined when the functional block has one (two) inputs and outputs associated with obtaining one result.

After defining the diagram of the zero level (SD0) as the initial stage, its achievement is simulated at three to eight phases of the process, in each of which the controls, mechanisms, and challenges defined in the diagram earlier are fixed, mutual internal inputs and outputs are modeled. This is how you get the model.

All stages of processes and tasks to achieve SD0 will be described in detail later in the text in the results section.

The roadmap for using the proposed methods in the article is presented in Figure 1.



**Figure 1.** The roadmap for using the proposed methods in the article in the conditions of the provision of safety and security development

SWOT and SMART methods lay the foundation for modeling, and determine the current state of the system being modeled. The "black box" method will be the starting point explaining the context of the model.

SWOT-analysis is based on own experience and analysis of scientific and practical literature. Since modeling is only an individual right, a certain system should be chosen as the object. Such a system will be the continuous development of the region - Quebec (1 of the provinces and territories of Canada). This region was chosen as part of our study precisely because all the authors live there and have a good experience with security and legal issues there.

#### 4. RESULTS OF RESEARCH

The first result was a matrix using the SWOT method to characterize the selected province (Table 1).

**Table 1.** SWOT matrix for the province of Quebec

S	W
High transport potential	Lack of an integral province brand
High level of education of the population	Problems of ensuring safety and security development
Sustainability Opportunities	The ineffective function of criminal law
Favorable geopolitical position	Low level of legal protection
O	T
Promotion of the country in other regions and continents	The unstable political and legal situation
Human resource development	Low level of tourism
Improving public policy	Growth of technogenic problems
Investment mechanisms for development	Rising inflation

As can be seen from the table, its main weak point is legal security and low efficiency of the system of sustainable regional development. It is for these aspects that the model will be built in the future. Certain strengths, weaknesses, opportunities, and threats will be used in the modeling process,

taking into account what needs to be corrected. For example, we see a number of weaknesses in security and regional development. That is, the corresponding blocks of the model will have an echo of this.

The results of the implementation of the SMART method are shown in Figure 2.

The "black box" method becomes the initial stage of modeling and is presented in Figure 3 with all the detailed elements. The next step is to use the "Black Box" method to generate the SD0 supply diagram (Figure 3).

Let's decipher each SD0 process "Ensuring safety and security development through the functions of criminal law":

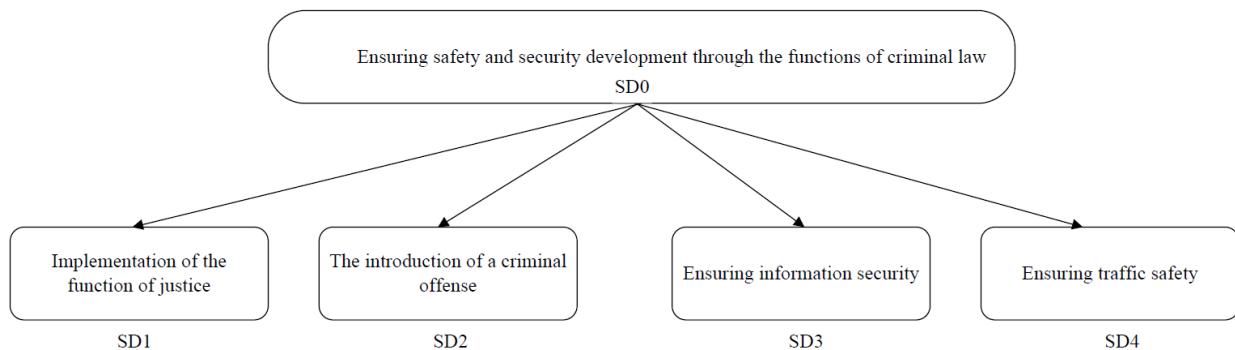
SD1. Implementation of the function of justice. Given the importance of the problem, we can propose to consider justice as a category that defines the idea of what is due and provides for correspondence between rights and duties, deeds and retribution, labor and rewards, crime and punishment, merits and public recognition, the practical role of a person or social groups in society and their social position to ensure safety and security development. Fairness towards other people of the province involves the fulfillment of one's duties and respect for their interests, justice towards oneself is upholding one's rights and views to ensure safety and security development.

SD2. The introduction of a criminal offense. In our opinion, the introduction of such a category of acts as a criminal offense into the criminal law is quite possible, but by no means by mechanically combining minor crimes and individual administrative offenses, since otherwise this will inevitably

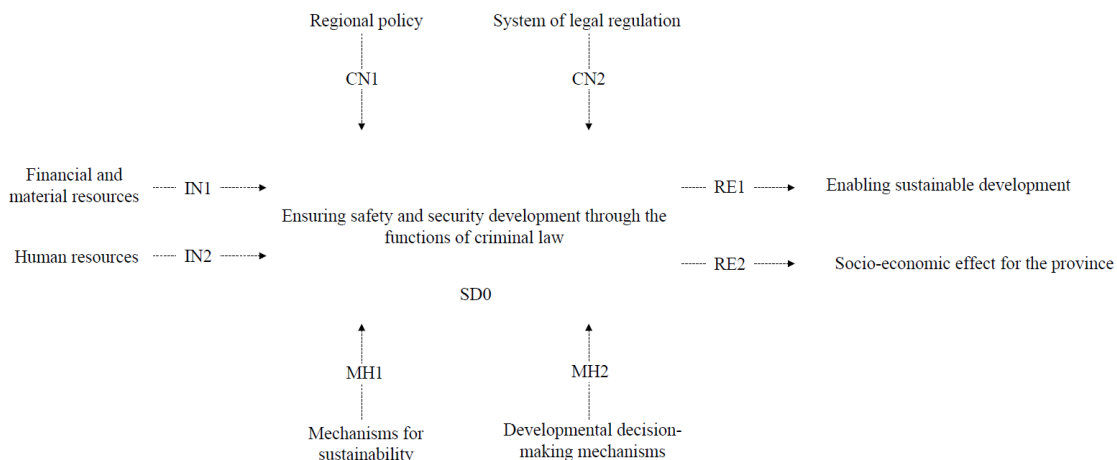
lead to the expansion of the boundaries of criminalization, unbalance the system, and cause many problems related to, for example, cumulative sentencing, the statute of limitations, criminal convictions in a province committed to safety and security development.

SD3. Ensuring information security. It should be noted that when deciding to criminalize infringements on information security, it is necessary to take into account its possible negative consequences, for example the curtailment of democratization processes due to too wide legal possibilities of the state in the field of control over the activities of the mass media, the inability of a certain part of society to implement informational ones due to excessive legal regulation, the inability to fully exercise the right of ownership of information due to excessive criminal law guarantees of access to information resources in the province, which is committed to safety and security development.

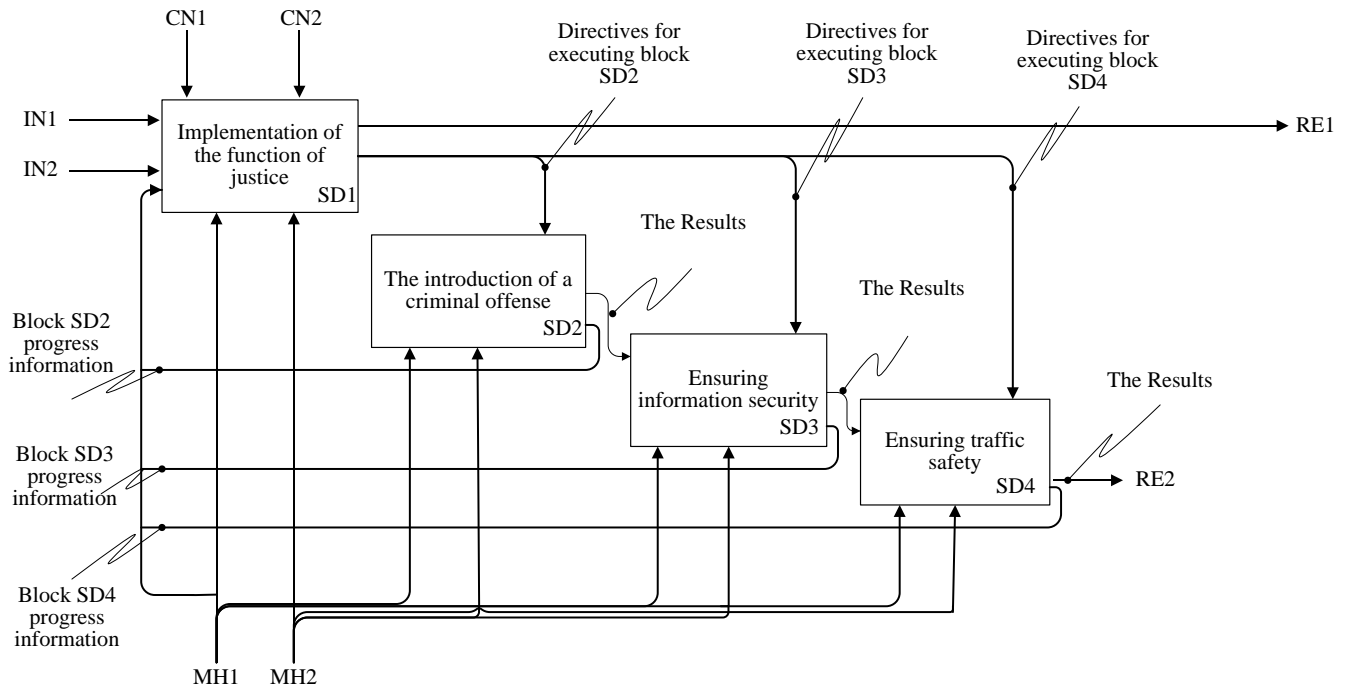
SD4. Ensuring traffic safety. Ensuring traffic safety in the system of safety and security development is one of the priorities of the state policy of the province. The adoption of the main legislative acts, the introduction of a mechanism for targeted traffic safety program management, as well as significant financial and logistical support, will significantly reduce the number of traffic events in the context of safety and security development. The legal framework in this area largely does not meet the requirements of modern times, and the current regulations are mostly departmental and do not meet national interests (Figure 4).



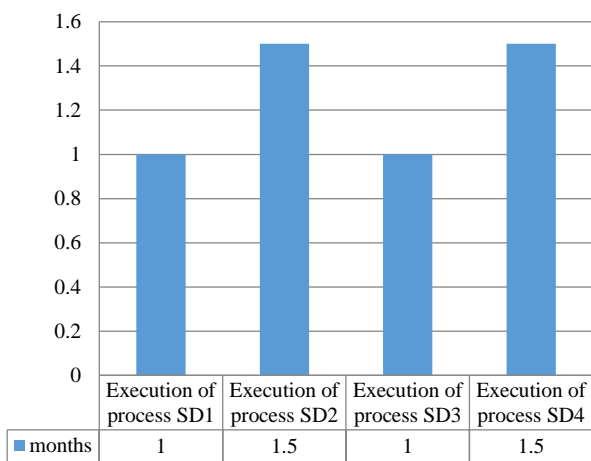
**Figure 2.** Results of applying the SMART method to achieve SD0 in the conditions of the provision of safety and security development



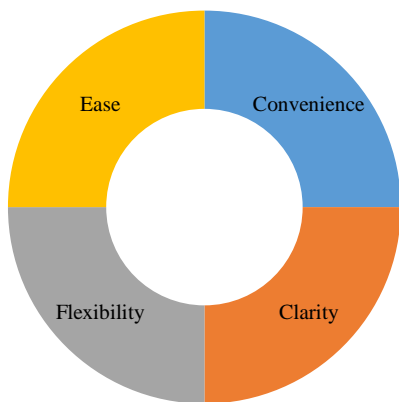
**Figure 3.** SD0 Provisioning Diagram via Black Box Method in the conditions of the provision of safety and security development



**Figure 4.** SD0 modeling results in the conditions of the provision of safety and security development



**Figure 5.** The time of completion of each of the stages for the province of Quebec



**Figure 6.** The key positive features of the proposed methodological approach for the province of Quebec

Applying the proposed model in the practice of the safety

and security development of the province, its regional representation presented a forecast for the time of completion of each of the stages (Figure 5).

The Québec Sustainability Policy Division highlighted the key positive features of the proposed methodological approach during the interview (Figure 6).

Thus, we can talk about the innovativeness of the article, the elements of which are presented in the form of a proposed integrated methodological approach to ensure safety and security development through a system of legal functions.

## 5. DISCUSSIONS

When discussing the results of the study, one should compare them with similar ones. Thus, some scientists concluded that the legal function of ensuring safety and security development is carried out by criminal law by establishing a range of socially dangerous acts recognized as crimes, as well as criminal penalties and other measures of criminal law enforcement applied to those who committed them. By thus protecting social relations, criminal law further regulates other social relations - arising between the state and a person who has committed a socially dangerous act in connection with bringing the latter to criminal responsibility [11, 12].

Other scholars [13, 14], through a methodical approach, prove that the mandatory simultaneous performance by this branch of the law of the functions of ensuring safety and security development, as well as the regulation of criminal law relations proper regarding bringing a person to criminal liability inevitably creates a dualism in the subject of legal regulation of ensuring safety and security development. Such dualism is inherent only in certain branches of law that are part of the legal system since the regulatory branches of law (civil, economic, labor, etc.) in many cases have the opportunity to limit themselves only to the performance of the regulatory function, leaving the function of protecting these relations by

establishing responsibility for non-fulfillment legal prescriptions to the norms of other branches of law, in particular, criminal and administrative in the conditions of the provision of safety and security development.

The results of the activities of other scientists [15, 16] indicate that the protective function of criminal law to ensure safety and security development makes it inevitable that there will be close intersectoral ties with other branches of law that act as a regulator of protected social relations. In cases where legal relations are related to criminal law protection, criminal law determines the violation of the norms and rules established by the regulatory branches of law as the basis for criminal liability. This specificity of criminal law regulation served as the basis for the emergence of disputes in legal science about the existence of an independent subject of legal regulation in criminal law, and therefore the existence of criminal law as an independent branch of law. It is quite natural that such a position has not received wide scientific support, and the further development of the science of criminal law convincingly proves its unfoundedness, primarily due to the presence of its own subject of legal regulation of this branch of law, namely, criminal law relations regarding bringing a person to justice criminal liability in the conditions of the provision of safety and security development.

Scientists [17-20] note the close connection of criminal law with the branches of law that carry out positive legal regulation of safety and security development, which is quite understandable, however, when interacting between these systems, a significant number of difficulties and contradictions arise. As extremes here can be called, on the one hand, the complete disregard of the provisions of regulatory legislation by criminal law (as an example, the establishment of criminal liability for violation of norms and rules, which does not exist at all), on the other hand, the mechanical implementation of the legislative provisions of other branches of law without taking into account the system criminal law, principles of criminal law regulation, rules of rule-making technique.

Discussing and comparing the results of our study, we should note their uniqueness and peculiarity. The elements of the novelty of the results of the study are presented by presenting the main stages of the implementation of criminal law functions in the context of safety and security development. The innovativeness of the article is presented in the form of a model for the implementation of criminal law functions in the context of safety and security development. The proposed model differs in the modeling approach itself, we did not try to present a simple list of safety and security measures. Here we have the opportunity to use a new graphic language that differs from others.

Our study addresses a number of gaps in previous studies, in particular:

1. Emphasizes and expands security aspects in the regions.
2. Expanding the possibility of using the proposed methodological approach to modeling.
3. Introduces new improvement ideas through presented model blocks.

The model could be used by policymakers and practitioners in the field of criminal law to improve safety and security development in Quebec or other regions. In particular, in the form of an information basis for decision-making.

## 6. CONCLUSIONS

As a result, it should be noted that to achieve all the goals

of the legislation, it is necessary, in addition to the external side of the security criminal law function of ensuring safety and security development, to determine its content, consisting of the direction of the influence of criminal law (criminal policy of the state) and the criminal law impact that is carried out through the spiritual revival of society.

Because of the foregoing, we consider it possible to propose our own definition of the security criminal-legal function of ensuring safety and security development, which, in our opinion, should reflect the properties of this phenomenon, characterizing its essence and not reducible to the scientifically accepted and fixed understanding of the function as an elementary direction of legal influence on the system of safety and security development. Thus, the protective criminal-legal function of ensuring safety and security development is a phenomenon, the content of which is to direct the legal impact on the protection of established spiritual and material social relations by determining which acts are crimes (criminal offenses in the future) and which criminal legal methods of influence are applied when they are committed.

When determining the essence of the definition of the security criminal law function of ensuring security and developing safety, it should be noted that we are dealing with criminal law, that is, here we are talking about security and protection itself. This is its features and important to focus on ensuring maximum safety and security.

As a result, we received an information diagram of the performance of criminal law functions in the context of safety and security development. The study is limited by taking into account only criminal law functions. Prospects for further research should be devoted to aspects of ensuring legal security in the framework of safety and security development planning. Also, the restrictions concerned the design itself. It was extremely difficult to imagine more blocks in the diagram/model. One of the limitations is not only the functions, but also the narrowing to the criminal law of only one country, and, as a result, the specifics of the law of other countries are not taken into account.

## REFERENCES

- [1] Shakhathreh, H. (2023). Payment of canal dues by carriers carrying out international overseas transportation – a case of legal discrimination. *Studia Iuridica Lublinensia*. 32(1). <https://doi.org/10.17951/sil.2023.32.1.251-273>
- [2] Višinskis, V., Žalėnienė, I., Tvaronavičienė, A. (2009). Legal environment within the EU: Free movement of lawyers and legal services. *Business: Theory and Practice*, 10(1): 30-37. <https://doi.org/10.3846/1648-0627.2009.10.30-37>
- [3] Dumchikov, M., Utkina, M., Bondarenko, O. (2022). Cybercrime as a threat to the national security of the Baltic States and Ukraine: The comparative analysis. *International Journal of Safety and Security Engineering*, 12(4): 481-490. <https://doi.org/10.18280/ijss.120409>
- [4] Sonhaji, Wibawa, K.C.S., Natalis, A., Noho, M.D.H. (2022). Animal rights in Indonesian Environmental Law: Case studies in disaster prone areas. *International Journal of Safety and security development and Planning*, 17(1): 299-305. <https://doi.org/10.18280/ijssdp.170130>
- [5] Natalis, A., Purwanti, A., Asmara, T. (2023). The law's critical role in developing human-environment relationships after COVID-19 pandemic (a study of

- ecofeminism). *International Journal of Safety and Security Development and Planning*, 18(1): 153-160. <https://doi.org/10.18280/ijssdp.180116>
- [6] Padmanabhan, A.S., Sapna, S. (2023). Forensic investigation approaches of DNA analysis and criminal investigation. *International Journal of Safety and Security Engineering*, 13(1): 129-137. <https://doi.org/10.18280/ijssse.130115>
- [7] De Castro, P.C. (2015). The evolution of International Water Law\*. *International Journal of Safety and Security Development and Planning*, 10(6): 894-900. <https://doi.org/10.2495/SDP-V10-N6-894-900>
- [8] Sand, P. (2015). The history and origin of international environmental law. In *The History and Origin of International Environmental Law*. Edward Elgar Publishing Limited. <https://doi.org/10.4337/9781784716462>
- [9] Fleischhauer, A., Detlef Kammeier, H. (2007). International environmental law and the role of indigenous peoples in protected areas: Hope for creative solutions in a setting of established incompatibility. *International Journal of Safety and Security Development and Planning*, 2(3): 332-352. <https://doi.org/10.2495/SDP-V2-N3-332-352>
- [10] Sylkin, O., Shtangret, A., Ogirko, O., Melnikov, A. (2018). Assessing the financial security of the engineering enterprises as preconditions of application of anti-crisis management: Practical aspect. *Business and Economic Horizons*, 14(4): 926-940. <https://doi.org/10.15208/beh.2018.63>
- [11] Khomyshyn, I., Ortynska, N., Skochylias-Pavliv, O., Andrusiak, I., Rym, O. (2022). The main systemic engineering problems of using computer and digital technologies in legal activities in the context of ensuring security. *International Journal of Safety and Security Engineering*, 12(5): 597-602. <https://doi.org/10.18280/ijssse.120507>
- [12] Khan, M.H., Muktar, S.N. (2021). What's next for green human resource management: Insights and trends for safety and security development. *International Journal of Safety and Security Development and Planning*, 16(1): 181-194. <https://doi.org/10.18280/ijssdp.160119>
- [13] Rushchyshyn, N., Medynska, T., Nikonenko, U., Kostak, Z., Ivanova, R. (2021). Regulatory and legal component in ensuring state's financial security. *Business: Theory and Practice*, 22(2): 232-240. <https://doi.org/10.3846/btp.2021.13580>
- [14] Al Azzam, F. (2019). The adequacy of the international cooperation means for combating cybercrime and ways to modernize it. *JANUS.NET e-Journal of International Relations*, 10(1): 66-83. <https://doi.org/10.26619/1647-7251.10.1.5>
- [15] Alazzam, F.A.F., Saleh A., Aldou, K. (2020). Impact of pandemic COVID-19 on the legal regulation of world trade activity using the example of the medical supplies. *Wiadomości Lekarskie*, 23(7): 1521-1527. <https://doi.org/10.36740/WLek202007139>
- [16] Bazyliuk, V., Shtangret, A., Sylkin, O., Bezpalko, I. (2019). Comparison of institutional dynamics of regional development publishing and printing activities in Ukraine: Methodological and practical aspects. *Business: Theory and Practice*, 20: 116-122. <https://doi.org/10.3846/btp.2019.11>
- [17] Kryshtanovych, M., Akimova, L., Shamrayeva, V., Karpa, M., Akimov, O. (2022). Problems of European integration in the construction of EU security policy in the context of counter-terrorism. *International Journal of Safety and Security Engineering*, 12(4): 501-506. <https://doi.org/10.18280/ijssse.120411>
- [18] Trancossi M., Cannistraro M., Pascoa J. (2018). Can constructal law and exergy analysis produce a robust design method that couples with industry 4.0 paradigms? The case of a container house, *Mathematical Modelling of Engineering Problems*, 5(4): 303-312. <https://doi.org/10.18280/mmep.050405>
- [19] Kryshtanovych, M., Dragan, I., Grytsyshen, D., Sergiienko, L., Baranovska, T. (2022). The public and environmental aspect of restoring sustainable regional development in the face of the negative impact of military actions on the territory of the country. *International Journal of Sustainable Development and Planning*, 17(5): 1645-1651. <https://doi.org/10.18280/ijssdp.170530>
- [20] Sylkin, O., Kryshtanovych, M., Zachepa, A., Bilous, S., Krasko, A. (2019). Modeling the process of applying anti-crisis management in the system of ensuring financial security of the enterprise. *Business: Theory and Practice*, 20: 446-455. <https://doi.org/10.3846/btp.2019.41>