

KONSTANTIN PRES LAVSKY UNIVERSITY OF SHUMEN

Faculty of technical sciences

Management of security systems Department

IVAN IVANOV KANTARDZHIEV

**EFFECTIVENESS AND EFFICIENCY OF THE
COUNTERINTELLIGENCE UNIT IN THE CORPORATE
SECURITY SERVICE**

A B S T R A C T

of

a DISSERTATION

for awarding the educational and scientific degree “**Doctor**”

Doctoral program "Administrative Security"

Professional field: 9.1 National Security

Field of higher education 9. Security and defense

Scientific supervisors:

Prof. Stanimir Stoyanov Stanev, PhD

Prof. Hristo Atanasov Hristov, PhD

SHUMEN

2022

KONSTANTIN PRES LAVSKY UNIVERSITY OF SHUMEN

Faculty of technical sciences

Management of security systems Department

IVAN IVANOV KANTARDZHIEV

**EFFECTIVENESS AND EFFICIENCY OF THE
COUNTERINTELLIGENCE UNIT IN THE CORPORATE
SECURITY SERVICE**

A B S T R A C T

of

a DISSERTATION

for awarding the educational and scientific degree “**Doctor**”

Doctoral program "Administrative Security"

Professional field: 9.1 National Security

Field of higher education 9. Security and defense

Scientific supervisors:

Prof. Stanimir Stoyanov Stanev, PhD

Prof. Hristo Atanasov Hristov, PhD

SHUMEN

2022

The dissertation contains 175 pages, of which 39 figures, 10 tables, and 6 pages of appendices. The references include 169 literary sources in Bulgarian, Russian and English. Five publications have been made on the topic of the dissertation.

The dissertation was discussed and referred for defense by an extended council of the Management of Security Systems Department at the Faculty of Technical Sciences of *Konstantin Preslavsky* University of Shumen, from March 17, 2022.

The Ph.D. student works at the State Agency for Technical Operations (SATO).

The defense of the dissertation will take place on 19.05.2022 at 10:00 in hall D4 of Shumen University, at an open meeting of the scientific jury.

The materials for the dissertation defense are available to those interested, in the library of the Shumen University, building 3, floor 1, and on the website of the University of Shumen "Bishop Konstantin Preslavski" <https://www.shu.bg/category/razvitie-as/proceduri/nauchni-stepeni/>.

Author: Ivan Ivanov Kantardzhiev

Title: EFFECTIVENESS AND EFFICIENCY OF THE COUNTERINTELLIGENCE UNIT IN THE CORPORATE SECURITY SERVICE

Konstantin Preslavsky University Publishing House, Shumen, 2022

CONTENTS

LIST OF THE ABBREVIATIONS USED	3
INTRODUCTION	6
CHAPTER ONE. THEORETICAL ASPECTS OF THE COUNTERINTELLIGENCE ACTIVITY OF THE SECURITY SERVICES OF THE BUSINESS ORGANIZATIONS	13
1.1 National Security and Corporate Security.....	13
1.2 Intelligence and Counterintelligence.....	16
1.2.1 Intelligence and Espionage	16
1.2.2 Counterintelligence, counterintelligence activity and counterintelligence process	27
1.2.3 Types of counterintelligence	37
1.3 Threats to the economic security of the business organizations.....	39
1.4 Competitive intelligence and corporate espionage	45
1.4.1 Competitive intelligence	45
1.4.2 Corporate espionage	49
1.4.3 Corporate counterintelligence unit within the Corporate Security Services	52
1.4.4 Corporate counterintelligence	61
1.5 Effectiveness and efficiency of the secret services.....	66
1.6 Main types of provision of the activity of the Corporate counterintelligence unit	73
1.7 Conclusions	75
CHAPTER TWO. MAIN TYPES OF PROVIDING THE ACTIVITIES OF THE CORPORATE COUNTERINTELLIGENCE UNIT	77
2.1 Study of the problems of the corporate security in business organizations in Northeastern Bulgaria	77
2.1.1. Profile of the organizations studied and of the security environment	77
2.1.2. Activities and provision of corporate security services	83
2.2 Problems of the financial security of the Corporate counterintelligence unit.....	90
2.2.1 General provisions.....	90
2.2.2 Factors influencing the determination of the volume of financing the Corporate counterintelligence unit	92
2.2.3 Financing as a factor influencing the activity of the Corporate counterintelligence unit	96
2.3 Assessment of the financial provision of the Corporate counterintelligence unit	98
2.3.1 Frame of the financial provision of the Corporate counterintelligence	

unit	98
2.3.2 Determining the main types of budget expenditures.....	101
2.4 Algorithm for determining the budget of the Corporate counterintelligence unit	105
2.4.1 Establishment of funds for payment of employees and sources	105
2.4.2 Algorithm for determining the budget of the Corporate counterintelligence unit	107
2.5. Conclusions.....	112

CHAPTER THREE. INCREASING THE EFFECTIVENESS AND EFFICIENCY OF THE ACTIVITY OF THE CORPORATE COUNTERINTELLIGENCE UNIT OF THE BUSINESS ORGANIZATION
.....114

3.1. Methodology for organizing the activities of the Corporate counterintelligence unit	114
3.1.1 General characteristics of the activity	114
3.1.2 Intelligence cycle	119
3.1.3 Types of documents and working with them	122
3.1.4 Methodology for organizing the activities of the Corporate counterintelligence unit	125
3.2. Methodology for determining the effectiveness of the activities of the Corporate counterintelligence unit	130
3.2.1 Effectiveness of the counterintelligence unit	130
3.2.2 Assessment of the effectiveness of the direct implementation of the tasks of the Corporate counterintelligence unit	131
3.2.3 Assessment of the effectiveness of the internal functioning of the unit	135
3.3. Methodology for determining the efficiency of the activity of the Corporate counterintelligence unit.....	141
3.3.1 Assessment of the efficiency of the overall activity of the Corporate counterintelligence unit.....	144
3.3.2 Assessment of the efficiency according to elements of the activity of the Corporate counterintelligence unit	147
3.4. Conclusions.....	149
CONCLUSION.....	152
Contributions in the dissertation	155
List of publications on the dissertation	158
Sources of the scientific research	158
List of the appendices	170
Appendices	170

I. GENERAL CHARACTERISTICS OF THE DISSERTATION

The presented dissertation is in the form of research work with formulated objectives and tasks, analysis and evaluation of the problems, formulation, and modeling, modification of methods, and development of algorithms.

1. Relevance of the problem

Security protection is a function of business organizations (BOs) as a whole and it is carried out by its security structures within their competence and in accordance with the functions assigned to them and the forces, means, and methods of activity provided to them. The choice of specific protection measures depends largely on the structure of the corporation, as well as on the economic condition of the protected organization. There is an objective need for corporate counterintelligence as part of the activities of the corporate security services (CSS). Counterintelligence structures should become a mandatory part of the CSS of large corporations. The relevance of this dissertation research is determined by the need to introduce in support of the owners of BOs proactive tools for planning and organizing the activities of CSS, optimal resource provision, and assessment of the effectiveness and efficiency of the corporate counterintelligence units (CCIU).

2. Dissertation limitations:

The study of the problems of the corporate counterintelligence units goes far beyond a single dissertation.

The present dissertation research concerns the problems of the effectiveness and efficiency of the activity of the counterintelligence units of private economic and business organizations excluding the financial and banking sector. The activity of these units is aimed at protecting trade secrets, which do not constitute classified information according to the Classified Information Protection Act.

The encroachments of foreign state structures on the activity of the BOs are not considered.

The dissertation research is focused on financial provision, as provision, on which all the main types of provisions depend, such as the strengths and funds of the CCIU, information, material, and technical support.

Out approaches to auditing one's own corporate systems and security services are not considered.

3. Objective and tasks of the dissertation

The objective of the dissertation is to develop methods and methodologies for organizing the activity and assessing the effectiveness and

efficiency of the CCIU, which will assist managers in the field of corporate security in managing and optimizing the activities of the structures managed by them.

To achieve this objective, the dissertation solves the following main research tasks:

1. Analysis of theoretical aspects of the activity of the CCIU.
2. Analysis of the factors influencing the effectiveness and efficiency of the activity of the CCIU.
3. Development of methodology and algorithm for financial provision and development of the budget of the CCIU.
4. Development of a methodology for organizing the activities of the CCIU.
5. Analysis of the factors influencing the effectiveness and efficiency and development of methodologies for their determination.

4. Object of the study: the counterintelligence unit within the corporate security service.

5. The subject of the study is the effectiveness and efficiency of the activities of the counterintelligence unit within the corporate security service.

6. Working hypothesis: If methodologies and algorithms are developed and implemented for organizing and assessing the activities of the corporate counterintelligence units, it will be possible to achieve higher effectiveness and efficiency of the overall activities of these units and increase the level of security of the BOs.

7. Research methods: In methodological terms, the dissertation is based on the interdisciplinary and systematic approach and adaptation of conceptual positions from the theory of security and information protection and general scientific methods and research techniques - literature review, historical analysis and synthesis, comparison, and statistical information processing, monitoring, and surveying.

8. Scientific significance and novelty of the results of the dissertation

Scientific knowledge in the field of corporate counterintelligence has been enriched. Original algorithms and methodologies for organizing the activity, financial provision, assessment of the efficiency and effectiveness of the activity of the counterintelligence units have been developed.

9. Practical usefulness and applicability of the results

The results of the dissertation can be used by all those working in the field of security of business organizations in our country and the management of private security and detective agencies. They can be applied in the educational process of students from the Shumen University and other universities training students in the field of “Corporate Security”.

10. Approbation of the results obtained in the dissertation.

The main parts of the dissertation have been reported at various scientific seminars of the training unit, at scientific conferences with international participation in our country, and 5 publications have been made in collections and other scientific publications.

11. Structure and volume of the dissertation

The dissertation is structured in an introduction, three chapters and a conclusion, references, a list of publications related to the topic of the dissertation, and appendices. The volume is 175 pages, of which 157 pages are body text, 39 figures, 10 tables, and 1 appendix. The references include 169 literary sources in Bulgarian, Russian and English.

The numbering of the tables and figures in the abstract corresponds to those in the dissertation.

II. SUMMARY OF THE DISSERTATION

The objectives and tasks of the dissertation are formulated in the **Introduction**.

CHAPTER ONE. THEORETICAL ASPECTS OF THE COUNTERINTELLIGENCE ACTIVITY OF THE SECURITY SERVICES OF THE BUSINESS ORGANIZATIONS

Chapter one is devoted to solving the first task of the dissertation. Theoretical aspects of the counterintelligence activity of the specialized corporate divisions for competitive intelligence and counterintelligence as an element of the national security protection system are considered. Based on the analysis of the threats to the economic security of the business organizations, the structure, functions, and tasks of the CCIU are determined. An analytical review of the types of counterintelligence and the difference between state and corporate counterintelligence is made. The types of provision of the activity of the CCIU in the light of their effectiveness and efficiency are considered.

1.1 National security and corporate security.

For the needs of the present dissertation practically oriented definitions of the basic concepts in it are introduced - security, national security, national security protection system, economic security, corporate security. An effective corporate security system should provide a solution to three groups of problems - identifying threat factors, preventing the negative consequences of their update, suppressing the negative phenomena and processes that actually threaten corporate security.

1.2 Intelligence and counterintelligence.

The classification of intelligence types according to NATO doctrine AJP2.0 (A) and open sources of the US intelligence community has been made. The concepts of espionage and its types and forms are analyzed. A distinction has been made between the terms economic and corporate espionage, although practice shows the interpenetration of these types of espionage.

Competitive intelligence is countered by the CCIU, corporate espionage by the CCIU and competent state authorities, and economic espionage by the state counterintelligence (CI) structures.

A classification of the activity of the intelligence structures for acquiring information has been made. Competitive intelligence acquires publicly available information about its activities. The information carrier of trade secrets and inside information about the BOs is the object of corporate espionage and the classified information of economic espionage.

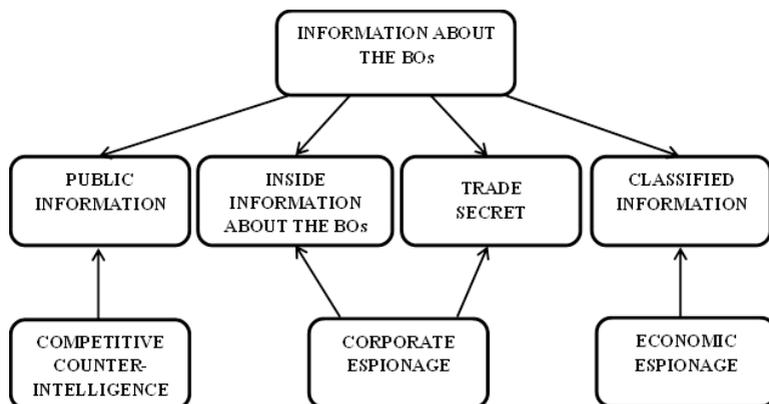


Fig. 1.1 Classification of the activity of the intelligence structures for the acquisition of information.

Different definitions of counterintelligence have been analyzed.

In the dissertation, counterintelligence is understood as a set of three main components: the activities for identification, assessment, neutralization, and use in their interests of the hostile actions of foreign intelligence services and terrorist organizations; the information gathered for this purpose; public services performing these activities.

The types of counterintelligence and the objectives of the counterintelligence activity (CIA) and of the operational-search activity (OSA) are considered. The stages of the counterintelligence process (CIP) are analyzed.

A classification of the types of state counterintelligence has been made. It has been agreed that the counterintelligence theory in Bulgaria is in a transitional stage between the not fully realized remnants of the Russian-Soviet theory on the subject and the need to adapt modern theories of the leading Western countries and the transformation of NATO.

1.3 Threats to the economic security of the business organizations.

A detailed classification is made and the types of threats to economic security are analyzed on the basis of various criteria - source of threat, object

of impact, nature of occurrence, presence of intent, probability of occurrence, predictability, scale of impact, and magnitude of the damage inflicted.

1.4 Competitive intelligence and corporate espionage.

The meaning, goals, and types of competitive intelligence are analyzed. The main differences between competitive intelligence, corporate and economic espionage are the ways in which information is obtained, the types of information that business organizations seek to obtain, their legal status, and their attitude to the ethical norms of entrepreneurship.

A structural scheme of the CSS, which includes a counterintelligence unit, and a structure of the counterintelligence unit according to the areas of activity - information activity, analytical activity, information security and personal data protection, specific activities, and logistics activity are proposed.

1.5 Effectiveness and efficiency of the secret services.

The effectiveness and efficiency of the activity are the main criteria for the work of the CSS.

The terms “effectiveness and efficiency” have different interpretations in specialized publications and definitions, often completely opposite. Therefore, for the purposes of the dissertation, correct definitions have been adopted for the correct directing of the research on the effectiveness and efficiency of corporate security services. The Ph.D. student considers that the formulated objectives and limitations of this study are mainly related to the assessment of the impact of the main types of provision, which have financial dimensions, therefore it is appropriate to use the definitions given in § 1 of the Additional Provisions of the National Audit Office Act in the Republic of Bulgaria. According to these definitions, effectiveness is the extent of achievement of the objectives while comparing the actual and anticipated results of the object, and efficiency is the achievement of maximum results with the resources employed in carrying out the operations.

The effectiveness in the most general sense shows the ratio of the achieved result to the set objective. Effectiveness is related to the appropriateness of the actions. It answers the question of whether the “right” things are being done. It does not take into account costs (energy, labour, financial resources), but only the achievement of the objective. The higher

the degree of achievement of an objective is, the more effective the actions and activities are.

In determining the efficiency, in contrast to the effectiveness, the invested resources are taken into account in relation to the achieved effect. Efficiency shows the ratio of the achieved result to the invested resources (energy, labour, financial resources). Efficiency is related to the economy of the actions. It answers the question of whether things are done economically, in the “right” way. The smaller the resources invested are, the more efficient the actions and activities are. Effectiveness means doing the right things, while efficiency means doing things in the right way.

The main disadvantage of the existing assessments of the effectiveness of the security services in the companies is the inconsistency of the important effectiveness indicators with the system of motivation for their achievement.

1.6 Main types of provision of the activity of the CCIU.

For the successful functioning and effective management of the CCIU, it is necessary to provide it with the necessary material and technical, financial, human, and information resources.

Of these, financial resources are of paramount importance. The importance of the personnel provision with full-time employees of the unit and the importance of the information apparatus are also noted down. The detailed examination of this type of provision goes beyond the scope of this dissertation.

1.7 Conclusions.

1. We are increasingly aware that corporate security is a constructive element of national security, but it does not take into account the fact that corporate counterintelligence is an important component of the national security protection system.

2. The greatest threat to the economic security of the BOs is the actions of hostile public and private intelligence services and agents. Competitive intelligence and corporate espionage, carried out not by government but by corporate services and agents, are a major objective of corporate counterintelligence.

3. The organizational structure of the corporate security service (CSS) is determined mainly by the size of the company's business and the industrial branch. In modern conditions, the CSS should have units for intelligence and counterintelligence.

4. The State CI has functions for the protection of information classified as state secret according to CIPA, CCI protects information constituting a trade secret. Therefore, close interaction between the SCI and the CCI is needed to ensure the overall protection of the BOs, which, however, is not regulated by law.

5. The activity of the CCIU mainly consists in influencing the vulnerabilities and counteracting the encroachments against the security of the BOs. These activities can be successfully carried out through the principles of defensive counterintelligence.

6. The counterintelligence cycle within the CCI practically repeats the one in the SCI. The functions of the state CI and the nature of this activity are a good foundation for organizing the activity of the corporate counterintelligence. But there are a number of differences between state and corporate counterintelligence:

- the possible damages from the realization of the encroachments in the corporations can be protected with the mechanisms of the insurance, which is not possible in the state one;

- the types of insurance in the state CI are based on a fixed state budget, and the provision of CCI directly depends on the budget of the BOs and is often neglected by the owners;

- not all BOs can afford to develop their own CCIU, therefore it is necessary to use external companies for outsourcing and outstaffing services in the field of security;

- the staff of the CCIU in professional terms is less qualified than those of the state CI. Unlike the state CI, the training, which is carried out on the basis of strict planning in the CI, depends on the financial provision of the BO. In the best case, former security officers join the CCIU;

- non-governmental counterintelligence units do not have such databases and information systems as the state ones;

- CCI in our country, unlike the state security services, has no right to use special intelligence means according to the Special Intelligence Means Act.

7. In the USA and in other developed countries there is a tendency for direct participation of state counterintelligence in the protection of trade secrets of large corporations. Free or paid training in the field of counterintelligence is provided for the security officers of smaller business organizations in the form of courses, seminars, workshops, etc. In our country, such activity for the state security services is not normatively regulated with regard to BOs.

8. Counterintelligence units, in addition to all other specific CI tasks, must prevent, through administrative, disciplinary, and socio-psychological methods, the emergence of negative processes in the collectives of the BOs (conflicts with the administration, threats of strikes, etc.).

9. Corporate counterintelligence should not only carry out counter-espionage but also isolate employees from the top echelon of the management of the BOs, who by their actions deliberately harm the company's business and harm the interests of citizens and society.

10. The CIU should not replace law enforcement agencies, and when detecting signs of an impending or committed crime, they should cooperate with the authorities of the Ministry of Interior, the State Agency for National Security, and the Prosecutor's Office.

11. For the successful functioning and effective management of the CCIU it is necessary to provide them with the necessary material and technical, personnel, information, and especially financial resources. Without financial support for the activities of these units, it is pointless to talk about CI activity at all.

12. There are no scientific publications and practical recommendations for determining the effectiveness and efficiency of the CCIU. For this purpose, it is necessary to define key indicators for their definition. As this is a complex issue and its solution exceeds the scope of a single dissertation, it is appropriate to start this activity with a study of the problems in the main types of providing activities of the CCIU with emphasis on financial security and methodologies for organizing and evaluating the CCIU.

CHAPTER TWO. MAIN TYPES OF PROVIDING THE ACTIVITIES OF THE CCIU.

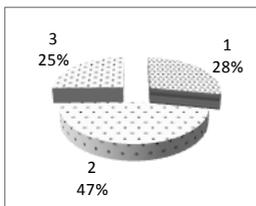
To solve the second and third tasks, in the second chapter to determine the factors influencing efficiency and effectiveness, the results of a survey of corporate security issues in business organizations in Northeastern Bulgaria are analyzed. The problems of the financial provision of the CCIU are analyzed and the main types of the budget expenses of the subdivision are determined. A methodology and algorithm for determining the budget of the CCIU are being developed.

2.1 Study of the problems of corporate security in business organizations in Northeastern Bulgaria.

To study the problems related to corporate security, a survey was conducted of business organizations in Northeastern Bulgaria - 50 business organizations from the districts of Shumen, Targovishte, Razgrad, Silistra and Dobrich were selected. The questionnaire includes 25 questions. A detailed analysis of the answers was made and they have been illustrated with diagrams. The results show a lack of understanding of corporate security issues and underestimation of the role of security services of organizations where they exist. This also applies to the problems of corporate counterintelligence.

The survey shows that only 9% of the respondents believe that establishing a corporate security service requires structures covering the three areas of activity, namely competitive intelligence, counterintelligence, and security. The preference for acquiring information about the activities of competitors and neglecting the activities for protection against such actions against one's own company is clearly expressed.

Regarding the assets subject to protection in companies, 28% of the respondents define them as human resources, 47% as tangible assets, and 25% as intangible assets (Fig. 2.11).



- 1) Human resources;
- 2) Tangible assets;
- 3) Intangible assets.

Fig. 2.11 Assets subject to protection

According to the Ph.D. student, this factor is not correctly reported by 2/3 of the managers who do not consider human resources as an asset to be protected.

Fifty-six percent of the respondents believe that it is necessary to create their own security structure. The remaining 44% believe that this is not necessary (Fig. 2.16).

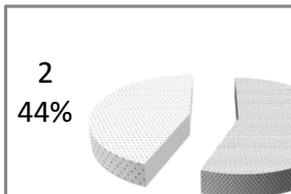


Fig. 2.16 Need to create your own security structure

1) yes; 2) no.

In the dissertation, the analyzes of the results of the answers to the other questions are also illustrated with diagrams. An appendix to the dissertation shows the questionnaire developed by the Ph.D. student.

2.2 Problems of the financial security of the CCIU.

The problem with the financing of the company security service is complex and specific and depends on many factors. Solving it must improve the efficiency of management and contribute to sustainable development, minimize the risks, reduce the losses and the possible damages.

The analysis of the public literature and network sources does not provide the necessary information for forecasting and planning the specific costs by the owners of the BOs, and the access is partial and concerns the financing of various structures of the security system.

The interrelationships and dependence between the financing and the activity of the CCIU are analyzed. They are illustrated by a diagram and explain the Ph.D. student's view of funding as a factor influencing the activities of the CCIU and the factors influencing the financing.

2.3 Assessment of the financial provision of the CCIU.

In order to regulate the measures for counteracting the encroachments and preventing a state of shortage or overspending of financial resources, it is expedient to determine the financial framework on the basis of the analysis of the security of the BOs and the planned actions by the counterintelligence unit.

In case of sustainable development of the economy, as well as when the BO is at the stage of expanding its production, 60-70% of the budget of CSS is provided at the expense of the company's own funds and 30-40% at the expense of return of funds in result of the activity of CSS - "self-financing of CSS". In conditions of significant economic growth and increasing the profitability of the business, the part "self-financing of CSS" increases, and the amount of funds received from the company falls to 40-50%. During crises and depressions with a decrease in the volume and efficiency of production (trade, services), in security investments, the share of "crediting of SS" sharply decreases, and the share of "repayable security funds" increases to 70-80%.

The size of the security budget and its structure largely depends on the level of development of the region and the field of activity in which the business is conducted.

Three approaches to the formation of the budget of the CCIU of the CSS and planning of the framework of their financial provision are considered.

The formation of the financial framework should take into account the practice of such units abroad on the danger of insufficient funding of their own security services. This significantly increases the risk of danger to the company, on the one hand, and the emergence of dissatisfied insiders in the security service on the other.

The option of work of the CCIU at a low budget and payment of additional funds for encouragement and motivation of the employees is considered.

Recommendations were made regarding the development of the budget, its justification (defense), control over the correct implementation, and making adjustments.

Accurate analysis and planning of the financing of the counterintelligence activity will protect the BOs from overspending or lack of funds.

After determining the financial framework of the budget of the CCIU, the planning of the main types of expenditures of the unit is started.

The open sources on the activities of the security services do not address this issue, but the issue of the financing of the CCIU, together with the precise formulation of the objectives and tasks, is important for the success or failure of the unit.

The review of the open literature and network sources does not provide the necessary information for forecasting specific costs by the owners of the company, and the available one is fragmentary and concerns the financing of various structures of the security system. Certain information on the financing of the CCIU can be obtained by analogy with historical data from public sources on the financing of state counterintelligence units. Due to the specifics of the issue, for understandable reasons, details of their current budgets are not known.

Although there is a difference between state and corporate counterintelligence, their activities are essentially similar and it is possible that data on the financing of public services will serve as a guide in determining the financing of the CCIU.

The main types of costs are considered, which are divided into sustainable and variable.

Sustainable are those that are relatively constant in subsequent financial periods. They are directly dependent on plans for the development of the security structure and are easily predictable. The variable costs, in turn, relate to the specific activities of the security structure and depend on a number of factors.

Even before the Second World War, there was the issue of insufficient funding for state security services. On the basis of historical data for specific amounts by types of activities during this time period, a distribution of the most important costs is derived. Percentage distribution of 70% of funding for variable and 30% for sustainable (fixed) costs has been set.

On the basis of these data, calculating the specific amounts for fixed costs, the amount of the variables can be calculated, and hence the total specific amount for financing the CCIU with a sufficiently accurate estimated value for practice.

2.4 Algorithm for determining the budget of the.

A large amount of the budget is spent on the salary fund on the part of sustainable costs and the fund for work with confidential sources of information on the part of the variable ones.

The formation of the salary fund is determined on the basis of the average salary and the number and status of employees. Available data on the salary levels of employees in this sector in Bulgaria, Russia, and the US services DEA (Drug Enforcement Administration) and BATFE (Bureau of Alcohol, Tobacco, Firearms, and Explosives), as well as the Audit Report to work with DEA sources, were used for the specific determination.

The size of the budget sets a general external framework for the activities and capabilities of the counterintelligence unit of the BO. Its determination must be done precisely because small fluctuations in the positive or negative direction of the needs can give large differences in the opportunities. They will directly and mainly affect the variable part of the costs, which in turn provides the specific activities of the counterintelligence unit of the BO.

On the basis of the indicated data for state and private companies in the field of security, a preliminary estimate of the amount of the salary fund for the CCIU can be offered.

Based on data from the 1990s on the average monthly salary, coefficients are derived from the average salary in Russia (Table 2.3).

Table 2.3. Cost coefficients

Type of cost	coefficient
Employee's salary	2
Additional monthly remuneration per resident	0,75
Additional monthly remuneration for the owner of a conspiratorial accommodation	0,29
A one-time monetary incentive for a confidential source	0,36
Representation expenses within one month per employee	1,5

Using these coefficients and the method of analogy with the average salary in Bulgaria for the third quarter averaged in the public and private sector, approximate levels of costs for this activity of the CCIU were calculated.

An analysis of the results of the survey on the security of the BOs in Northeastern Bulgaria was performed. Accordingly, for the average salary of the executives in the CCIU relative to the number of minimum wage for the country 19% of the respondents determine up to 2, 39% from 2 to 4 and 42% more than 4, and the average salary of the employees in a CCIU 35% of the respondents determine up to 2, 62% from 2 to 4 and 3% more than 4. These results show readiness for salary levels of managers and employees in a CCIU allowing the appointment of highly qualified personnel related to the administrative areas provided by the survey.

Based on the analogy with historical data, the available data from private and state similar structures, the survey, and talks with managers of the BOs in Northeastern Bulgaria, we assume that the average salary is BGN 3,000 for a CCIU director and BGN 2,200 for a CCIU employee.

Given the accepted values of remuneration of the director and employees in the unit, as well as the percentage distribution of variable and sustainable costs, the amount of the monthly budget of the CCIU is calculated according to formula (1):

$$(1) B=(R+n*S)/P\%$$

where:

B – monthly budget of the CCIU;

R – monthly remuneration of the director of the CCIU;

n – number of the employees in the CCIU;

S – monthly remuneration of an employee at the CCIU;

P% - wage fund percentage from the budget of the CCIU.

For example, with the accepted average values of remuneration, respectively BGN 3,000 for a director and BGN 2,200 for an employee in the CCIU, the amount of the salary fund is 25% of the total budget of the CCIU and three employees in the composition of the CCIU according to the formula the monthly budget of the CCIU is calculated as BGN 38,400.

The results obtained will be different for each specific BO and will depend on the factors influencing the formation of the budget discussed in paragraph 2.3 of the dissertation.

An author's algorithm has been developed, according to which the determination of the budget amount of the CCIU is proposed.

The algorithm for determining the budget of the CCIU in the composition of CSS begins with the study of the labour market in the part

concerning the specialists in the security sector and more precisely the company counterintelligence. This is done in order to determine the levels of remuneration that will allow the hiring of specialists with the necessary qualities and qualifications for the purposes of the BO. After their determination and according to the number of employees, according to the structure of the CCIU, the necessary wage fund (WF) is calculated. We move on to determining the ratio of the WF to the total budget of the unit. Based on the above analysis of the types of costs and available information, it is concluded that it is recommended that the WF should make up about 25% of the total budget of the CCIU, to ensure the activity and a high level of efficiency. A higher percentage of the WF will reduce the ability to work with confidential sources of information, the cost of which is a large part of the total budget. Based on these data according to formula (1), the total budget of the CCIU is calculated. The determined budget is defended before the owners and the managers of the BO. In case it is not accepted, the funds will be reduced in terms of the level of remuneration or if they are maintained at the expense of the activities of the CCIU, which will change the ratio of the WF to the total budget. In the first case, it will be difficult to provide the CCIU with the necessary number and qualification of employees, and in the second case, the activity of the CCIU will be difficult. After the adjustments and the adoption of the budget, an answer is sought to the question of whether candidates with the necessary qualities and qualifications are available at the determined remuneration levels. In the absence of such, the level of remuneration is adjusted and the cycle is repeated. In the presence of the necessary staff, the implementation of the entire project with the already determined budget of the CCIU is started.

2.5. Conclusions.

1. The survey conducted with the BO managers in the districts of Shumen, Targovishte, Razgrad, Silistra, and Dobrich reveals an insufficient understanding of corporate security issues and underestimation of the role of security services of organizations where they exist and underestimation of human resources as the main asset of organizations. The lack of information of the managers regarding the role of corporate counterintelligence as a means of ensuring the security of the business organizations is impressive, its personnel and resource provision is underestimated. There are no views on

the impact of corporate counterintelligence on the direct financial result of the organization and the mechanisms for its management and assessment.

2. The financing of the activities of the CCIU is a complex and dynamic process due to the many internal and external relationships and the constantly changing environment of the BOs. The amount of funding is directly dependent on the characteristics and features of the specific BO, the environment in which it operates, the views of the owners and managers of the BO, the tasks facing the CCIU, and the efficiency of its activities.

3. Financing directly affects the effectiveness of the CCIU activities and the level of security of the BO, as it affects the ability to perform the tasks and functions of the CCIU, arising from the risk assessment.

4. The analysis of public sources does not provide the necessary information for forecasting and planning the specific costs of the CCIU by the owners of the BO.

5. The following characteristics of the BO influence the determining of the amount of funding - the number of employees of the BO - territorial distribution, annual turnover and profit from its activities, the industry in which it operates, how risky it is, and the dynamics of its processes.

6. The most appropriate approach for the formation of the CCIU budget is the combination between determining the total amount of funding (set financial framework) which is to be distributed according to the composition and tasks it performs, and determining the necessary budget for the activity by the CCIU manager based on the assessment of risks and threats and planned countermeasures.

7. Based on the analysis of public data, the dissertation considers 1.5% of the annual turnover of the BO to be the minimum threshold for financing the funds for ensuring the effective operation of the CCIU.

8. An option for the distribution of the budget of a company counterintelligence unit has been proposed, as the costs are divided into sustainable and variable. The largest share - about 70% of the total funding is for expenditures on specific activities of the counterintelligence unit, and the remaining approximately 30% is for sustainable (fixed) costs. Based on these data, the sum of the variables can be calculated, and hence the total specific amount for financing the CCIU with a sufficiently accurate estimated value for the practice.

9. A key element of the CCIU's activities, provided by the variable budget expenditures, is the data collection phase, which is part of the intelligence cycle. These data are obtained by working with public and confidential sources, for the provision of which certain funds are spent.

10. The size of the budget sets a common external framework for the activities and capabilities of the counterintelligence unit of the BO. On the basis of data on public and private companies in the field of security, a preliminary estimate of the size of the salary fund for the CCIU can be offered. For the current time period, the average salaries amount is justified, respectively BGN 3,000 for the director of the CCIU and BGN 2,200 for an employee at the CCIU.

11. An author's algorithm has been developed, according to which the determination of the amount of the budget of the CCIU is proposed. To ensure the activity and a high level of efficiency, it is recommended that the wage fund be about 25% of the total budget of the CCIU. The derived methodology can be used to determine the monthly budget of the CSS as a whole.

CHAPTER THREE. INCREASING THE EFFECTIVENESS AND EFFICIENCY OF THE ACTIVITY OF THE CCIU OF THE BUSINESS ORGANIZATION.

The solution of the fourth and fifth tasks is performed in Chapter 3. To increase the effectiveness and efficiency of the activity of the CCIU of the business organization, a methodology for organizing the activity and methodologies for determining the efficiency and effectiveness of the activity of the CCIU are developed.

3.1. Methodology for organizing the activities of the CCIU.

The main goal of the CCIU is to ensure the level of security set by the security policy of the BO, the protection of trade secrets and assets of the business organization. The activity of the CCIU is mainly carried out by influencing the vulnerabilities and counteracting the encroachments against the company's security. These activities can be successfully carried out through the principles of defensive counterintelligence and proactive counterintelligence.

Based on the analysis of good practices, the following main tasks of the CCIU can be formulated:

- protection of the legal rights and interests of the BO;
- study and analysis of negative phenomena and processes, events and actions that adversely affect the company's security and pose a threat to it;
- detection and neutralization of encroachments against the company's security committed by employees of the BO, competing companies, or criminal structures;
- information protection of facts, information, and objects constituting a trade secret;
- counteracting the intrusion of technical intelligence;
- obtaining information supporting the acquisition of optimal management;
- partners, clients, and competitors research;
- a survey of job candidates;
- formation of a favorable opinion about the BO in the media, partners, and clients.

The organization of the work of the CCIU begins with the determination of the objects subject to protection. These are human, intellectual, and material resources that carry trade secrets.

When determining the objects of protection, it is proposed to use two criteria - value and functional.

The first easily predicts the damage and loss in the event of an encroachment, and the second determines the significance of the protected object in relation to the overall activity of the BO.

The importance of monitoring protection measures is considered and its main tasks are defined.

The need for information on the overall activities of the CCIU is achieved through the implementation of the intelligence cycle. Its stages are considered:

1. Instruction.
2. Data collection.
3. Data processing, evaluation, and analysis.
4. Distribution.

The documents received as a result of the intelligence cycle and with the activity of the CCIU are analyzed.

The overall activity of the unit is organized and implemented through a counterintelligence process, including the intelligence cycle.

A scheme of this process has been developed as a basis for the methodology for the effective activity of the CCIU.

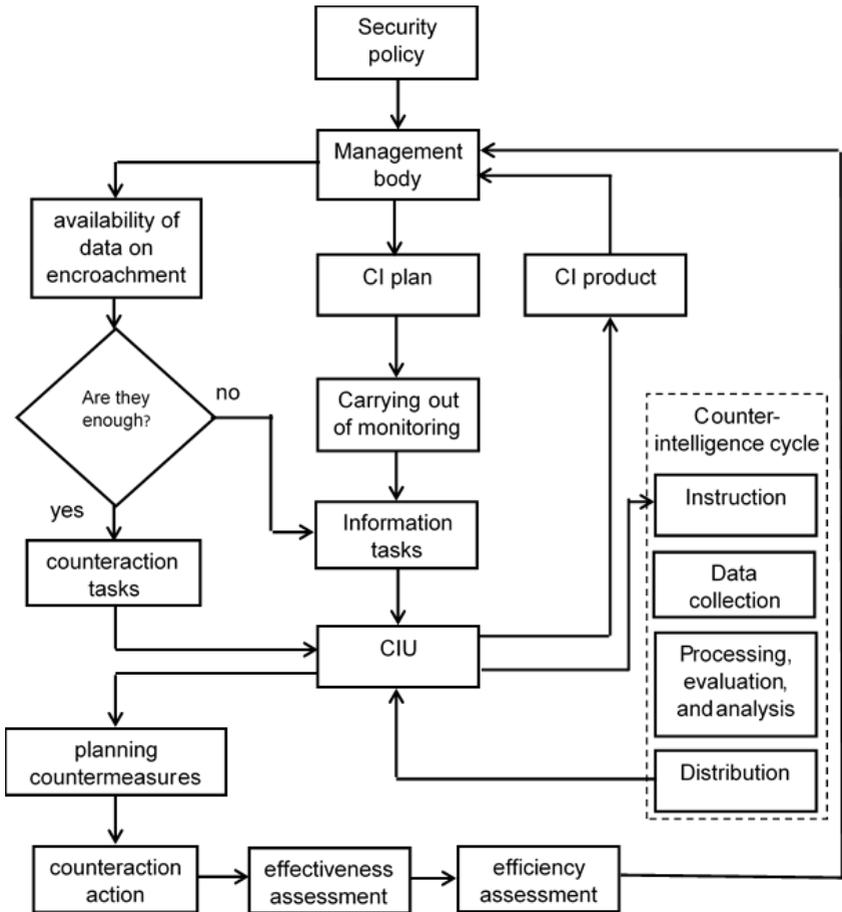


Fig. 3.1 Counterintelligence process

3.2 Methodology for determining the effectiveness of the activities of the CCIU of the business organization.

The effectiveness of the CCIU is the degree of achievement of the objectives of the audited entity in comparing the actual and expected results of its activities.

The dissertation proposes a methodology for determining the effectiveness of the CCIU including the following stages:

- evaluation of the results of the direct implementation of the tasks of the unit;
- assessment of the internal functioning of the unit.

These stages are discussed sequentially in the dissertation.

The obtained results for the level of efficiency in the direct implementation of the tasks are part of the main parameters in assessing the quality of management and the overall activity of the CCIU.

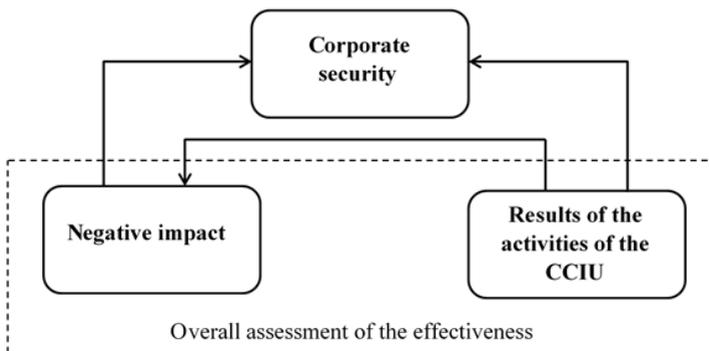


Fig. 3.2 Assessment of the effectiveness of the direct tasks implementation

At this stage, the results of the CCIU as a whole are being assessed. This is done by calculating total and detailed coefficients. In the case of total coefficients, this is the ratio between the number of prevented encroachments and the total number of encroachments against the security of the BO.

$$(1) \quad K_{pe} = PE/E$$

Where K_{pe} – coefficient of prevention of encroachments, PE - number of prevented encroachments, E - total number of encroachments. The

coefficient is in the range between 0 and 1 and the higher value corresponds to the higher efficiency of the unit.

This formula can be used to calculate coefficients by types of security, types of protection, or objects of protection.

Examples are the results of the calculation of the coefficient of information security in relation to steganological protection and in relation to a specific object of protection.

For the detailed counteraction coefficients, the calculation is performed on the basis of coefficients grouped by different criteria.

For encroachments against information security:

$$(6) \quad C_{is} = (C_1 * 0,7 + \dots + C_n * 0,6) / n$$

C_{is} – coefficient of information security, $C_1 - C_n$ – selected coefficients for the specific type of activity, n - total number of coefficients.

Assessing the effectiveness of the internal functioning of the unit makes it possible to identify weaknesses and optimize both individual elements and the system as a whole.

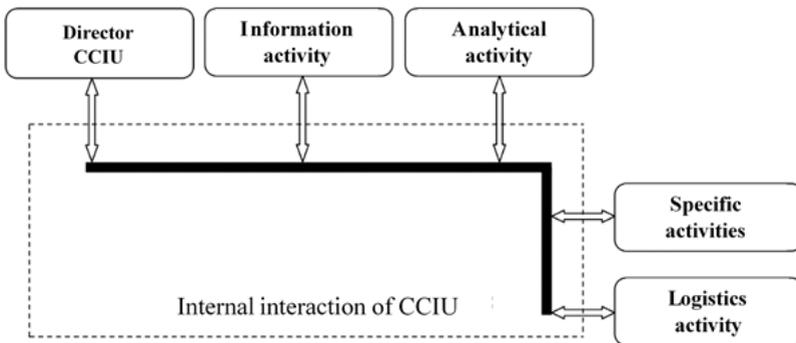


Fig. 3.3 CCIU internal interaction scheme

At this stage, an analysis of work processes, identified weaknesses, objective and subjective difficulties is performed. This is done by analyzing the process of the course and development of the encroachment against the security of the BO, presented in fig. 3.4.

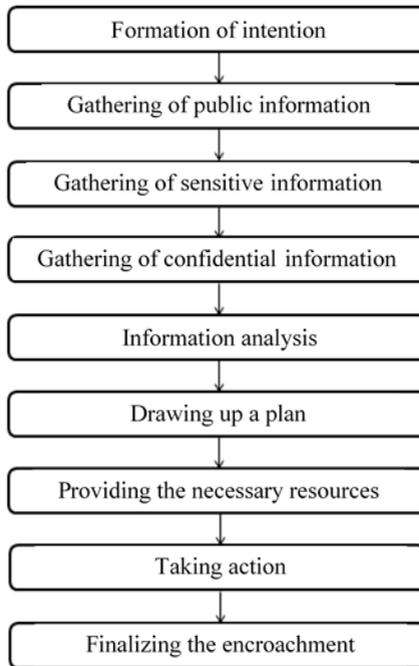


Fig. 3.4 Stages of the encroachment implementation

Assessment of the effectiveness of the internal functioning of the unit is performed using four criteria - Moment of receipt of initial information from the CCIU for the presence of encroachment; a period of time between receiving the initial information and taking action to neutralize the encroachment; a period of time between the decision taken to take action to neutralize and the actual neutralization of the encroachment on the security of the BO.

A table is presented for expertly determined values of the severity in percentages of the effectiveness of the CCIU functioning for counteracting the encroachments according to the stage of their implementation.

Table 3.4 Values of severity in percentages of the activity effectiveness

	Stages the encroachment implementation	Effectiveness %
1	Formation of intention	100
2	Gathering of public information	95
3	Gathering of sensitive information	90
4	Gathering of confidential information	85
5	Information analysis	50
6	Drawing up a plan	40
7	Providing the necessary resources	30
8	Taking action	10
9	Finalizing the encroachment	0

The table determines the values for each specific encroachment and assesses the effectiveness of the activity in relation to the stage of development of the encroachment in neutralizing it.

The results of the activity of the CCIU are materialized through direct and indirect effects on the activity of the BO.

The direct effect is a consequence of the activities for counteraction to the encroachments according to the plan for the protection measures organization and is related to prevention or minimization of losses inflicted on human, intellectual, and material resources of the BO.

The indirect effect of the activity is in terms of results related to improving the moral and psychological climate, increasing trust in the BO by employees and partners, a sense of calmness and security, the belief in an effective security system in the organization. The increase in revenues as a result of the activities of the CCIU is achieved through the indirect effect.

A methodology for assessing the results of the direct effect of the activities of the CCIU has been proposed. The indirect effect is the subject of another development.

The methodology for determining the efficiency of the activity of the CCIU includes assessment of the overall activity and assessment by elements of the activity of the CCIU.

The overall activity assessment gives the level of assets return and the profit realization.

The assessment by elements of the activity is performed for the purpose of a detailed analysis of the activity by the CCIU management as a basis for planning work improvement activities.

For the needs of the methodology it is necessary for the management of the unit together with the financial structure of the BO for the studied period to determine the specific values of the following parameters:

- B – total budget of the CCIU;
- PL – prevented losses due to the activity of the CCIU;
- L_{ie} – the probable value of the losses from the implementation of the encroachments;
- L_{ne} – the value of losses up to the stage of neutralization of the encroachments;
- C_i – invested funds for the provision of an element of the activity of the CCIU.

The methodology for determining the efficiency of the CCIU activity is realized by means of the stages of fig. 3.5.

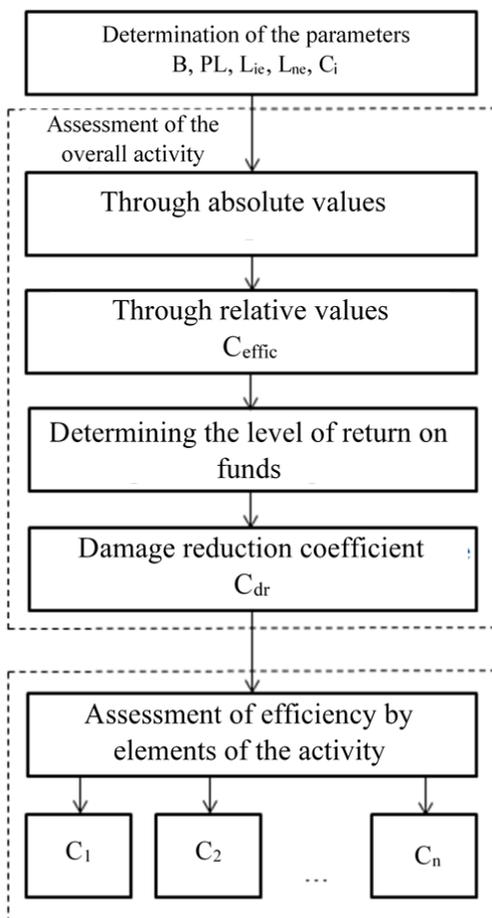


Fig. 3.5 Stages of methodology for determining efficiency

To assess the efficiency by means of absolute values, the difference between the absolute values of the prevented losses and the budget of the CCIU for the studied period is calculated according to formula (7).

$$(7) \quad R = PL - B$$

Where R is the financial result of the activity in absolute values, PL – the prevented losses due to the activity in absolute values, B – the total budget of the CCIU for the studied period. When R is a positive value, the

activity of the CCIU has led to a profit, at $R = 0$ the invested funds are recovered and at negative values of R , the activity of the CCIU is characterized by losses.

This option of financial result determining is suitable for the general determination of the efficiency for informing the owners and assisting in determining the budget for the next planning period.

The assessment of efficiency by means of relative values is performed by means of a coefficient obtained as a ratio between non-allowable losses and invested funds for the functioning of the CCIU and is calculated by formula (8).

$$(8) \quad C_{\text{effic.}} = PL / B$$

Where $C_{\text{effic.}}$ is the coefficient of efficiency of the activity of the CCIU, PL - prevented losses due to the activity in absolute values, B - total budget of the CCIU for the studied period. At $C_{\text{effic.}}$ values greater than one unit the activity of the CCIU has led to a profit realization, at $C_{\text{effic.}} = 1$ the invested funds are reimbursed, and at values of $C_{\text{effic.}}$ between 0 and 1 the activity of the CCIU is characterized by losses.

The assessment of the efficiency by means of relative to absolute values is more appropriate when assessing the activity of the CCIU in relation to specific objects of protection of different sizes and costs.

In order to determine the overall efficiency, it is expedient to determine the levels of return on investment and the damages allowed in carrying out the activities of the CCIU.

To determine the return on investment, a return on the formula (9) and a payback period of the formula (10) are calculated.

$$(9) \quad X = ((B + PL) / B) - 1$$

Where X is the coefficient of return, rate of return, or loss, B is the budget of the CCIU, and PL is the amount of the prevented losses.

To determine the period of time required to recover the invested funds, formula (4) is used:

$$(10) \quad T = (12 \text{ months} * 100\%) / X\%$$

Where T is the recovery period and $X\%$ is the coefficient of funds return calculated by formula (9) as a percentage.

The return can be estimated for a future period when using data for future investments in activities to ensure the level of security and the expected amount of prevented losses.

In carrying out its activities, the CCIU is not always able to prevent encroachments at a stage of their development in which no damage has yet been caused to the BO. Therefore, for a more accurate assessment of the work of the unit, it is appropriate to determine a damage reduction coefficient according to formula (11).

$$(11) \quad C_{rd} = L_{ie} / L_{ne}$$

Where C_{rd} is the coefficient of reduction of damages, L_{ie} is the probable value of the losses from the implementation of the encroachment, and L_{ne} is the value of the allowed losses up to the stage of neutralization of the encroachment.

This coefficient characterizes the speed and quality of the work of the CCIU, the related reduction of losses, and the increase of the efficiency of the activity.

The assessment of the efficiency by elements of the activity of the CCIU gives an opportunity to determine the quality and the way of spending the funds from the determined budget of the CCIU at different elements of the activity. The basis for determining it is the size of the prevented damages in absolute value as a direct effect of the activity of the unit. The coefficients used for this assessment are the ratio between the prevented losses and the funds invested to ensure the specific type of activity. In carrying out these activities, the assessment relates to variable costs.

A key element of the activities of the CCIU, provided by the variable costs of the budget, is the data collection phase, which is part of the intelligence cycle. These data are obtained by working with public and confidential sources, for the provision of which certain funds are spent. Formula (12) is used to determine the relative coefficient characterizing the level of efficiency of this type of activity.

$$(12) \quad C_{is} = PL / F_{is}$$

Where C_{is} - coefficient of efficiency in working with information sources, PL - prevented losses due to the activity in absolute values, F_{is} - funds invested in providing information sources.

The coefficient obtained by comparing to previous periods characterizes the unit work quality in this type of activity on the part of efficiency. It can also be used to assess the efficiency of various objects of protection and others according to the characteristics of the BO.

The C_{is} coefficient characterizes the expenditure of funds to provide information sources in general. For a more complete and detailed analysis, coefficients are calculated in relation to the work with open and confidential sources separately on the basis of formula (12).

Assessment of the efficiency of elements of the activity can be performed in relation to the losses incurred for a certain past period of time and the costs incurred for this type of activity. For example, with regard to the activity of the CCIU with regard to the selection of staff, a coefficient is determined by formula (13).

$$(13) \quad C_{sc} = L / C_{нк}$$

Where C_{sc} - coefficient of efficiency in the selection of candidates, L - loss of funds due to dismissed employees for the study period, C_{bcc} - funds invested in the background check of the job candidates during the study period. The activity of the CCIU is effective at values of C_{sc} from 0 to 1, it is maximum at value 0, and ineffective at 1 and more than 1.

The determination of the number and type of coefficients for assessment of the activity is done by the management of the CCIU according to the tasks for implementation and the characteristics of the BO.

3.4. Conclusions.

1. In order to increase the effectiveness of the activity on counteraction to the encroachments against the corporate security, a methodology for organizing the activity of the CCIU has been prepared and presented, containing several successive stages of action. The organization of the work of the CCIU begins with the identification of the objects subject to protection. The developed methodology can also be used as a basis for auditing the activities of the CCIU.

2. The overall activity of the unit is organized and implemented through the counterintelligence process (CIP). From the point of view of the CIA of the CCIU (CIP) includes an intelligence cycle. Through the intelligence cycle, the CCIU prepares a final information product. This is a cyclical action until the governing body is provided with a sufficient amount of information to decide on the CCIU to take action to neutralize and support the open suspension of activities against the BO. A scheme of the CIP has been developed as a basis for the methodology for the effective operation of the CCIU.

3. Determining the level of effectiveness of the CCIU is one of the indicators that help owners and managers to assess the quality of work, identify weaknesses and take action to address them. The dissertation proposes a methodology for determining the effectiveness of the CCIU including evaluation of the results of the direct implementation of the tasks of the unit and evaluation of the internal functioning of the unit.

4. The results obtained for the level of effectiveness in the direct implementation of the tasks are part of the main parameters in assessing the quality of management and the overall activity of the CCIU. At this stage, the results of the CCIU as a whole are evaluated, i.e. the occurred negative events and the result of the activity of the CCIU are considered. This is done by calculating total and detailed coefficients. In the case of total coefficients, this is the ratio between the number of encroachments prevented.

5. Determining the effectiveness of the unit supports the analysis of internal interaction and the quality of work performed. At this stage of determining the effectiveness, the aim is to analyze the activity from the perspective of the quality and speed of response of the CCIU in counteracting the encroachments against the security of the BO and the total number of encroachments against the security of the BO.

6. The CCIU in the composition of CSS does not realize a direct profit, because it does not operate for other BOs through outsourcing. The results of the activity of the CCIU are materialized through a direct and indirect effect on the activity of the BO. The direct effect is a consequence of the activities for counteraction to the encroachments according to the plan for the organization of protection measures and is related to prevention or minimization of losses inflicted on human, intellectual, and material resources of the BO.

7. Determining the efficiency allows the managers of the CCIU to assess both the state of the activity for the past period and to determine measures for its improvement, as well as to make a forecast for the next one. The proposed methodology for determining the efficiency of the activity of the CCIU includes assessment of the overall activity and assessment by elements of the activity of the CCIU. The main indicators for determining the efficiency of the activity are calculated as absolute values by means of the difference between the invested funds for providing the CCIU and the

prevented losses and in relative amount as a ratio of the prevented losses to the invested funds.

8. The assessment by elements of the activity is carried out for the purpose of detailed analysis of the activity by the management of the CCIU as a basis for planning activities for work improvement. With the accumulation of a sufficient amount of data, it is practically possible to determine threshold values of the coefficients characterizing the level of efficiency of the CCIU.

9. It is proposed to assess the efficiency by means of absolute values as a difference between the absolute values of the prevented losses and the budget of the CCIU for the studied period. Evaluation of efficiency by means of relative values is performed by means of a coefficient obtained as a ratio between non-allowable losses and invested funds for the functioning of the CCIU. The assessment of the efficiency by means of relative to absolute values is more appropriate when assessing the activity of the CCIU in relation to specific objects of protection of different sizes and costs.

10. The evaluation of the efficiency by elements of the activity of the CCIU gives the opportunity to determine the quality and the way of spending the funds from the determined budget of the CCIU with different elements of the activity.

11. The document flow used in the activity of the CCIU needs to be precisely regulated by the management of the BO and CCIU in order to prevent excessive administrative burden and reduce the efficiency of the activity.

12. The developed methodologies have application in the activity of the CCIU in the composition of the CSS of the BO; as a basis for the creation of a CCIU; newly established outsourcing structures; performing an audit by the BO of security activities provided to external companies such as outsourcing.

Conclusion

We are increasingly realizing that corporate security is a key building block of the national security system. Reliable protection of the economy of each BO is possible only with an integrated and systematic approach to its organization. Organizational units that perform three main types of activities - intelligence, counterintelligence, and security are the basis of security

systems. Corporate counterintelligence units are mandatory in the structure of the CSS. In order to justify this to the management of the BO, the directors of these units should have tools to assess their activities, especially in terms of their effectiveness and efficiency.

An effective system for corporate counterintelligence must provide a solution to three groups of problems - identifying the factors of threat, preventing the occurrence of negative consequences, and suppressing the negative phenomena and processes for the security of the BO.

Assessing the overall effectiveness and efficiency of the CCIU as a whole is a complex task that is insufficiently studied by experts in this scientific field, and goes beyond the scope of single dissertation research. Therefore, the dissertation is limited to the study of the effectiveness and efficiency of the main provision of the activity of the CCIU – the financial one.

The present research proves the main hypothesis formulated in the introduction to the dissertation, as the main objective and the main research tasks of the dissertation have been realized.

Chapter one is devoted to solving the first task of the dissertation. Theoretical aspects of the counterintelligence activity of the specialized corporate divisions for competitive intelligence and counterintelligence as an element of the system for the protection of national security are considered. Based on the analysis of the threats to the economic security of business organizations, the structure, functions, and tasks of the CCIU are determined. An analytical review of the types of counterintelligence and the difference between state and corporate counterintelligence is made. The functions of the state CI and the nature of this activity are a good basis for organizing corporate counterintelligence activities. The need for close cooperation between the SCI and the CCI to ensure the overall protection of the BO is justified, which interaction, however, is not regulated by law. Theoretical issues on which the effectiveness of counterintelligence depends are considered. Based on the detailed analysis of the corporate counterintelligence functions and tasks, the main types of providing their activities are identified, and the impact of the most important of them - the financial in the light of their efficiency and effectiveness is considered in detail.

In the second chapter, the second and third tasks of the dissertation are solved. The analysis of the survey conducted with the managers of the BOs in the districts of Shumen, Targovishte, Razgrad, Silistra, and Dobrich reveals the lack of awareness of the managers regarding the role of corporate counterintelligence as a means of ensuring the security of the business organizations, underestimating its staffing and resources. Funding directly affects the efficiency of the CCIU and the level of security of the BO. The analysis of public sources does not provide the necessary information for forecasting and planning the specific costs of the CCIU by the owners of the BOs, therefore by the method of analogy is set a minimum threshold of financial resources to ensure its effective operation which is 1.5% of the annual turnover of the BO and the main types of expenditures of the budget of the division are determined. About 70% of the total funding is for expenditures on the specific activities of the counterintelligence unit. A methodology and algorithm for determining the budget of the CCIU have been developed. The derived methodology can be used to determine the monthly budget of the CSS as a whole.

The solution of the fourth and fifth tasks is carried out in Chapter 3. In order to increase the effectiveness of the activity on counteracting the encroachments against corporate security, a methodology for organizing the activity of the CCIU has been prepared and presented, containing several successive stages of action. A scheme of the counterintelligence process has been developed as a basis for the methodology for effective activity of the CCIU. A methodology for determining the efficiency of the activity of the CCIU has been proposed. It covers an assessment of the overall activity and an assessment by elements of the CCIU activity. Determining the efficiency enables the directors of the CCIU to assess both the state of the activity for the past period and to determine measures for its improvement, as well as to make a forecast for the next one. A scheme has been developed for the implementation of the stages of the methodology for determining the efficiency of the activity of the CCIU. Assessment of efficiency by absolute values and by relative values is proposed. The developed methodologies are used in the evaluation of the activity of the CCIU and in the creation of new CIUs.

As already mentioned, the dissertation is designed to improve awareness of the issues of assessing the effectiveness and efficiency of

corporate counterintelligence units. The Ph.D. student believes that this is the beginning of research work to determine other factors influencing them because within a single dissertation this cannot be realized. This research work should be done in two main directions. Firstly - theoretical research and experiments and secondly - practical applications and determining their results.

The most significant components influencing effectiveness and efficiency are financial security and human resources. In order to continue the theoretical research in the field of financial security, it is necessary to determine the severity and threshold values of the coefficients used in terms of efficiency and effectiveness. Through the different values of the severity of the coefficients, the methodologies are adapted to specific BOs and types of business. Accurate determination of the threshold values of the coefficients will allow for objective determination of the level of security of the BO. These values can be practically determined by accumulating and analyzing a sufficient amount of data for a past period of time.

A perspective theoretical study of the influence of these factors should be based on the development of an organizational and functional model of the CCIU. The methodologies developed in the dissertation can be used to create algorithms for the formation of such units in medium and large BOs.

The result of such theoretical research can be a monograph on the topic of "Effectiveness and efficiency of the CCIU".

In order to study the impact of staffing, it is necessary to propose criteria and methods for the selection of the CCIU staff. The development of the problems for informants selection and management and the participation of women in the composition of the CCIU is topical.

In order to achieve significant progress in increasing the security of the BOs, it is necessary to review the laws and regulations in order to prepare proposals for changes in regulating the existence and operation of units ensuring the security of the BOs, frameworks, and mechanisms for interaction with government agencies, as well as the opportunities for joint activity and training by representatives of the state security services of the employees of the CSS of the BO.

The Ph.D. student considers that by analogy with the trends in advanced countries theoretical research in the field of CIA in the BO is

promising to be carried out by joint research teams including experts on CIA from the academic community and the existing security services.

A promising practical and applied direction is the development of information materials based on the dissertation and results of theoretical research, which to acquaint the relevant managers of the BOs in terms of organization, funding, activities, and the effect of the introduction of CCIU. The development of specialized surveys on the results of the implementation of the developed recommendations for the activity of the CCIU of the BO will be useful for the further practical application of methods for increasing efficiency and effectiveness. This will increase the level of the “culture” on security issues and will contribute to the establishment of security structures in medium and large security agencies in the country where there are none. In the business organizations where they are already established, the managers of the BO will be given the opportunity to take action to increase their efficiency and effectiveness.

Contributions in the dissertation

SCIENTIFIC CONTRIBUTIONS

1. An analysis of the counterintelligence activity in the business organization has been made.
2. The framework of the financial provision of a corporate counterintelligence unit has been determined.
3. Factors influencing the volume of financing of a corporate counterintelligence unit are presented.
4. Factors influencing the effectiveness and efficiency of a corporate counterintelligence unit of a business organization are presented.

SCIENTIFIC AND APPLIED CONTRIBUTIONS

1. An original algorithm for determining the budget of a corporate counterintelligence unit has been developed.
2. A structure of a corporate counterintelligence unit and its tasks have been developed.
3. An author’s questionnaire has been developed to study the problems of corporate security in business organizations.

4. An author's methodology for organizing the activities of a corporate counterintelligence unit has been developed.

5. An author's methodology for determining the effectiveness of the activities of a corporate counterintelligence unit of a business organization has been developed.

6. An author's methodology for determining the efficiency of the activity of a corporate counterintelligence unit of a business organization has been developed.

List of publications on the dissertation

1. Kantardzhiev, I., Stanev, S., Hristov, Hr. Regarding the financial support of the activity of a company's counterintelligence unit, Collection of scientific papers - Scientific conference with international participation "MATTECH 2018" - October 25-27, 2018, ISSN: 1314-3921, item 2, part 1, 2018, pp.96- 108. (*in Bulgarian*)

2. Kantardzhiev, I. Effectiveness of the functioning of the company's counterintelligence unit, Proceedings of the Annual University Scientific Conference, "V. Levski" NMU, June 26-27, 2019, Publishing Complex of "V. Levski" National Military University, ISSN -2367-7481. p. 911. (*in Bulgarian*)

3. Kantardzhiev, I. A study of the topicality of corporate security issues for business organizations in northeastern Bulgaria, International Scientific Refereed Online Journal, Issue 67, March 2020, ISSN: 2367-5721, pp. 191-198, www.sociobrain.com. (*in Bulgarian*)

4. Kantardzhiev, I., Methodology for organizing the activities of a corporate counterintelligence unit, Proceedings of the Annual University Scientific Conference, "V. Levski" NMU, 27-28 May 2021. Publishing complex of "V. Levski" National Military University, ISSN 2367-7481. pp.958-968. (*in Bulgarian*)

5. Kantardzhiev I., Stanev S., Methodology for determining the efficiency of the activities of a corporate counterintelligence unit. "Konstantin Preslavsky" University Publishing House, Shumen, 2021, ISSN 1311-834X pp. 202-209. (*in Bulgarian*)