

FORECASTING IN CONFLICT SITUATIONS

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Abstract: Conflicts as social relations are phenomena that are difficult to avoid and arise as a result of different perceptions and disagreements in relations for the purpose of achieving certain goals, hence the question arises whether they will further manifest as political (non-violent) or in a violent way. Forecasting can be especially useful in important conflicts, as it contributes to the perception of the potential development of events in the future, and thus influences the preparation of an adequate response for action, since surprise in conflict situations can lead to an unexpected and undesirable outcome. Hence, the primary hypothesis of this paper is that forecasting has serious positive implications in the management process in conflict situations, and as a result of forecasting, potential dangers can be promptly detected and practically analyzed, thus achieving in a certain way a higher level of readiness. The purpose of this research is to obtain in-depth knowledge about the role of forecasting and the benefits it can provide in the process of managing conflict situations through analysis. Considering the complexity and multidimensionality of this research, the methodology applied in this paper includes a content analysis method, a description method, a data analysis and interpretation method, an induction and deduction method, and a comparative analysis method.

Keywords: conflicts, conflict situations, conflict management, forecasting, forecasting methods

Introduction

Homo sapiens has been learning about conflict throughout its development. That knowledge is spread across humanity, residing wherever humans live, work, and play. It is folk knowledge, used continuously in everyday life – in commerce, family relations, government, sport, child rearing (Bartos & Wehr, 2002, p. 1).

The understanding one has of a conflict is strongly influenced by the way one thinks about the nature of conflict. Definitions of conflict move backwards and forwards between conflict being perceived as a negative or as a positive process. Some present conflict as a natural phenomenon, others as an alien or abnormal happening in social life, and yet others consider it as a necessary condition for the development and growth of individuals and societies (Council of Europe, 2012, p. 47).

Conflict is manifested through adversarial social action, involving two or more actors with the expression of differences often accompanied by intense hostilities (Jeong, 2009, p.

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3). Hence, conflict is between people, and is a state or relationship that is characterized by disharmony (Henderson & de Coning, 2008, p. 36).

Social conflicts are one of the basic social phenomena. They arise from differences in needs, interests and goals between individuals and groups and are therefore found in all societies at all stages of their historical development (Kešetović, et al., 2013, p. 41).

Social conflicts can be defined as struggles between and within social groups for the realization of interests and values that are mutually contradictory, whereby the participants in this struggle make it difficult for each other, making it impossible to achieve goals. Additionally, so called protracted "social" conflicts possess several unique characteristics. Actually, their focus is religious, cultural or ethnic communal identity, which in turns is dependent upon the satisfaction of basic needs such as those for security, communal recognition and distributive justice (Pavleski, 2022). Hence, researching the nature of such aspirations, as well as the reasons and circumstances for their occurrence, may have a significant role in detecting the most acceptable strategies for conflict managing, transforming and resolving (Pavleski, 2024).

After identifying the conflict situation, the decision maker must first determine all possible courses of action, possible solutions to the conflict situation (Kozarević, 2009, p. 38). The goal holder must project the future state and structure of the conflict, then he will use forecasting methods. With the help of forecasting methods, information about the future situation is obtained based on established laws according to which the structure of the conflict changes (Kozarević, 2009, p. 58).

Forecasting is an integral part of any scientific research and explanation of phenomena, i.e. wherever a person does not want to indulge in blind chance or undesirable social forces, but wants and strives consciously and with full responsibility to organize his life, to protect himself from the unfavorable influences and to plan his action in their prevention (Арнаудовски, 2007, pp. 755-756).

Hence, the paper analyses the forecasting significance in preparation for timely and adequate action in conflict situations, with special focus on the forecasting methods in the process of planning and decision-making in conflict situations.

1. Forecasting

Forecasting is one of the most important tasks of research, because with it, by applying scientific methods, an assessment is made, that is, a forecast of future events is made (Стаменковски, 1996, p. 114).

Accordingly, we will draw attention to several peculiarities of the forecasting:

- it is a research process based on scientific methods;
- studies the future, noting possible dangers and pointing out opportunities;
- enables easier adoption and implementation of business decisions;
- the results obtained in the forecasting process become the basis for planning the operation of the organization;
- forecasting is important, considering that the risk in business operations is reduced to the smallest measure, thereby eliminating or liquidating uncertainties (Marjanović, et al., 2018, p. 101).

Quite simply, good forecasts help to produce good decisions. Recognition and awareness of the decision making environment is the key to effective design, use and

evaluation of forecasting models (Diebold, 2017, p. 35). Hence, the objective of forecasting is to provide managers with information that will facilitate decision making. Virtually every organization, public or private, operates in an uncertain and dynamic environment with imperfect knowledge of the future. Forecasting is an integral part of the planning and control system, and organizations need a forecasting procedure that allows them to predict the future effectively and in a timely fashion (Hoshmand, 2010, p. 2).

However, the purpose of forecasting is not to determine the absolute accuracy of the behavior of the investigated phenomena in the future, but the accuracy and precision of the forecast are affected by a number of factors. The main factors are the following:

- Forecast time period. The time dimension of planning is particularly significant, because the future is determined by the set goals, and the means by which it is achieved differ at the moment of planning (the moment of starting the planning action) and throughout the planning period until the moment of achieving the goals. Generally, if forecasting for a longer period of time then insufficiently accurate forecasting is allowed, but delayed forecasting is not allowed, nor is it acceptable to perceive omissions in the forecasting process. From the mentioned additions it can be concluded that successful planning and implementation of planning decisions in the future also depends on the degree of successful forecasting.
- Stability of factors and conditions in the environment. This significantly increases the certainty of predicting the behavior of a certain system in the future. On the contrary, in the conditions of frequent changes in the country's politics, the certainty of the prediction, in general, decreases.
- Degree of possible influence of the working system in the environment and the methods used in forecasting. It is known that larger working systems, as a rule, have a greater influence on the behavior of environmental factors, and therefore have a greater opportunity for certain forecasts about the future and vice versa (Kečković, et al., 2016, p. 32).
- Adequate scientific forecasting methods significantly increase the accuracy of the results obtained in the forecasting process. The required level of forecasting accuracy will depend on the specific situation, and corresponding methods will be applied accordingly. At the same time, one must not lose sight of the effectiveness of forecasting, i.e. the need for the effects of forecasting to be greater than the costs, because with increasing accuracy, the costs of forecasting also increase (Novković, 2018, p. 30).

1.1. Forecasting process

Despite the specificities found in each specific procedure, certain common stages can be identified during the technique and technology of forecasting, namely: formulation of the problem and goal of forecasting; collection and processing of data and information; analysis of collected data and information; selection and testing of the forecasting method; implementing the forecast and evaluating and revising the forecast (Шуклев & Дебарлиев, 2013, p. 108).

- In the first stage, the formulation of the problem and the purpose of forecasting is carried out. In other words, the subject of forecasting, the purpose of forecasting, the period for which the forecast applies, the bodies and persons that will be included in forecasting, etc. are clarified (Шуклев & Дебарлиев, 2013, pp. 108-109).
- The second phase refers to the collection and processing of the necessary data and information. The quality of our forecasts is limited by the quality and quantity of information available when forecasts are made. Any forecast we produce is conditional upon the information used to produce it, whether explicitly or implicitly (Diebold, 2017, p. 25).
- In the third phase, the collected information is analyzed. It is possible to have too much data as well as too little in the forecasting process. Some data may not be relevant to the problem. Some data may have missing values that must be estimated. Some data may have to be re expressed in units other than the original units. Some data may have to be preprocessed (for example, accumulated from several sources and summed). Other data may be appropriate but only in certain historical periods (Hanke & Wichern, 2014, p. 5).
- In the fourth stage, the selection and testing of the forecasting method is carried out. The choice of the forecasting method, on the other hand, is quite important not only as a methodological issue, but also as an issue on which the expected accuracy depends. Each forecasting method is based on certain assumptions, which should be known before applying it. Under those conditions, the method gives the most accurate results. Each method has specific areas of application. From the many and varied criteria, the goal of forecasting, the nature of the phenomenon presented through a time series of data and the accuracy achieved by applying the appropriate method have a decisive influence on the selection of the appropriate method (Шуклев & Дебарлиев, 2013, p. 110).
- In the fifth stage, forecasting is carried out. This activity can be studied from various aspects, for example: from the aspect of the number of people involved in the forecasting, from the aspect of the technical equipment of the labor during the forecasting and others. Depending on the number of people involved in forecasting, the implementation can be carried out individually or as a team. From the aspect of the technical equipment of the labor, the forecast, as the "final" product of the forecasting, can be performed: manually, mechanically and combined. The machine way of conducting forecasting has a number of advantages over manual and combined, and it is reflected in the speed of forecasting, the accuracy that is achieved and others. On the other hand, the mechanical way of implementation depends on the personnel potential, the financial possibilities for the purchase of machines, etc. The implementation of the forecast includes the determination of the accuracy with which the forecast will be realized, the determination of the desirable limits of deviation of the forecast from the actual data, as well as the determination of the probability of the forecast's occurrence. There are many quantitative and graphical methods for measuring accuracy. It is desirable to measure the accuracy of the forecast

- in a combined manner, i.e. with the quantitative and graphic methods (Шуклев & Дебарлиев, 2013, p. 110).
- In the sixth phase, an assessment and revision of the forecast should be carried out. When evaluating a forecast, we are sometimes interested in whether the forecast could be improved by using a given set of information more efficiently, and we are sometimes interested in whether the forecast could be improved by using more information. Either way, the ideas of information and information sets play crucial roles in forecast evaluation (Diebold, 2017, p. 26).

2. Forecasting in conflict situations

Conflict is universal phenomena. It is part of the universal law and it happens among human being regardless of their religion, ethnicity, culture, etc. Thus, conflict is part of our lives, we need to recognize that fully in order to deal and cope with it in a proper manner (Indartono, 2014, p. 32).

Depending on the nature and sources of conflict, there are different ways to deal with conflict. In many contemporary conflicts, official and unofficial conflict management methods have been utilized in support of communication functions or improvement in relations designed to create a favorable atmosphere (Jeong, 2009, p. 13).

Conflicts are not inherently intractable or inherently co-operative. Some conflicts erupt and are settled peacefully within a short time; others simply defy any attempt at termination. Generally speaking, we can say that conflicts over deep-rooted issues (e.g. identity and human needs) tend to generate more strife and violence and become protracted. Intractable conflicts are not just longer-lasting conflicts, they are also more likely to be violent and destructive, and of course more difficult to deal with or manage. The term intractable conflicts used to describe conflicts that sink into self-perpetuating violent interactions in which each party develops a vested interest in the continuation of the conflict (Indartono, 2014, p. 57).

Parties respond to given conflicts on the basis of the knowledge they may have about the issue at hand. This includes situation-specific knowledge (i.e., "Do I understand what is going on here?") and general knowledge (i.e., "Have I experienced this type of situation before?" or "Have I studied about similar situations before?"). Such information can influence the person's willingness to engage in efforts to manage the conflict, either reinforcing confidence to deal with the dilemma or undermining one's willingness to flexibly consider alternatives (Indartono, 2014, p. 30). If numerous and reliable information is not available, it is not possible to carry out an analysis of the operation in the previous period, to predict the future, to carry out the process of planning and making planning decisions (Стаменковски, 1996, p. 109).

The process of forecasting involves the processing of information about the past and present, in order to assess with maximum reliability, the possibilities of movement of a flow or phenomenon in the future (Нувковић, 2018, p. 25).

According to the classical definitions of the security sector management functions, the forecast function, in some theoretical elaboration as a distinctive function, and in others described as a sub function, is a phase or a derivative of the planning function, presupposes projection of the threats and their analysis in order to counter them by executing appropriate

measures. It is incorporated on the organizational strategic level and in the general operative organizational units (Bakreski, et al., 2022).

Hence, forecast has three main functions identified:

- provides policy makers, stakeholders and those responsible for forecast with an overview of the role of predictability in security policy development and implementation;
- serves as an instrument for forecasting teams (national experts, state decision makers etc.) responsible for carrying out forecasting activities;
- promotes greater awareness of the approaches, processes and results of forecasting to key players involved in the security sector in the form of coordination and information sharing (Bakreski, et al., 2022).

Hence, the reason that forecasting is so important is that prediction of future events is a critical input into many types of planning and decision making processes (Montgomery, et al., 2008, p. 3).

2.1. Forecasting in the planning process in conflict situations

Any conflict is managed through rational planning, with legal formality and procedures, leading to a written agreement that is task-oriented (Indartono, 2014, p. 36).

Planning is a process whereby managers select goals, choose actions (strategies) to attain those goals, allocate responsibility for implementing actions to specific individuals or units, measure the success of actions by comparing actual results against the goals, and revise plans accordingly. In other words, it is a structured process for making important decisions. A plan can provide direction for an organization. It tells everybody what the organization is trying to do, what its priorities are, where it is going, and how it is going to get there. It is a process for marshalling resources and deciding who should do what—for allocating roles, responsibilities, and money. It is also a control mechanism: By comparing actual results against the plan, managers can determine whether the organization is attaining its goals and make adjustments if required (Hill & McShane, 2008, p. 106).

Planners can use forecasting methods to predict the outcomes for alternative plans. If the forecasted outcomes are not satisfactory, they can revise the plans, then obtain new forecasts, repeating the process until the forecasted outcomes are satisfactory. They can then implement and monitor the actual outcomes to use in planning the next period (Armstrong, 2001, pp. 2-3).

Anticipating changes in the environment involves the development of realistic and reasonable projections and plans related to the direction, extent, speed and intensity of changes in the environment (Stanković & Đoković, 2019, p. 54), thus achieving in a certain way a higher level of readiness. For example, a general, on learning that the opposing army is planning an attack, may forestall it by launching an attack of his own (Bartos & Wehr, 2002, p. 112). Hence, these forecasts form the basis for planning (Carpenter, et al., 2012, p. 28).

2.2. Forecasting in the decision-making process in conflict situations

In any situation where a choice is made between certain alternative solutions, a decision is actually made. Therefore, the most precise are the definitions that state that

“decision-making is nothing but a process in which alternative solutions are selected, namely, the alternative that is best as a solution to the problem is chosen” (Бакрески, 2016, p. 178).

When making decisions, managers may face three different conditions: certainty, risk, and uncertainty. Let us look at the characteristics of each. **CERTAINTY.** The ideal situation for making decisions is one of certainty, which is a situation where a manager can make accurate decisions because the outcome of every alternative is known (Robbins & Coulter, 2010, p. 187). **RISK.** A far more common situation is one of risk, conditions in which the decision maker is able to estimate the likelihood of certain outcomes. Under risk, managers have historical data from past personal experiences or secondary information that allows them to assign probabilities to different alternatives (Robbins & Coulter, 2010, p. 187). **UNCERTAINTY.** What happens if you face a decision where you’re not certain about the outcomes and can’t even make reasonable probability estimates? We call this condition uncertainty. Managers do face decision-making situations of uncertainty. Under these conditions, the choice of alternative is influenced by the limited amount of available information and by the psychological orientation of the decision maker (Robbins & Coulter, 2010, p. 188).

As conflict is considered innate in human interactions, research on conflict resolution should pay more attention to decision making in broad social relationships (Jeong, 2009, p. 30).

By making a decision, the existing conflict is resolved by each side in the conflict choosing its own course of action. As a solution to the previous conflict, a result appears in the form of utility for individual parties in the conflict. If the parties in the conflict continue to interact, then the conflict process continues and a new conflict occurs, the intensity of which may be the same, or it may differ from the intensity of the previous conflict. Thus, by making decisions, the conflict of interests between the conflicting parties can be mitigated, but it can also be deepened. For that reason, it is necessary to base the decision on a thorough analysis (Kozarević, 2009, pp. 5-6).

Leaders and decision-makers at all levels should respond in the best possible way and should be informed in advance of problems. And while predicting the future is impossible, it is possible to forecast the kinds of problems looming over the horizon before they arrive (Квигин, 2009, p. 43). Making decisions, especially strategic ones, in conditions of rapid changes, requires that the decision be made up of data and information that refer to the future, and to reduce the participation of the same from the past. In that way, forecasting allows to perceive the future environment in which the decision will be made (Шуклев & Дебарлиев, 2013, p. 105).

Hence, the purpose of forecasting is to improve decision-making under conditions of uncertainty. To achieve this, forecasts should provide an unbiased estimate of what is most likely to happen (point, forecast), along with a measure of uncertainty, such as a prediction interval (PI) (Petropoulos, 2022).

Methods of forecasting in conflict situations

In relation to the time period for which they are made, the forecasts are divided into:

- short-term,
- mid-term and
- long-term (Vujošević, 1997, pp. 78-79).

Forecasting procedures can also be classified according to whether they tend to be more quantitative or qualitative:

- at one extreme, a purely qualitative technique is one requiring no overt manipulation of data. Only the "judgment" of the forecaster is used. Even here, of course, the forecaster's "judgment" may actually be the result of the mental manipulation of historical data;
- at the other extreme, purely quantitative techniques need no input of judgment; they are mechanical procedures that produce quantitative results. Some quantitative procedures require a much more sophisticated manipulation of data than do others, of course (Hanke & Wichern, 2014, p. 3).

Perhaps the most formal and widely known qualitative forecasting technique is the Delphi Method. This technique was developed by the RAND Corporation (Montgomery, et al., 2008, pp. 4-5). Experts were asked to give their opinion on the probability, frequency and intensity of possible enemy attacks, while other experts were to provide feedback anonymously. This process was repeated several times until a consensus was reached among the experts (Малиш – Саздовска, 2021, pp. 88-89). It employs a panel of experts who are assumed to be knowledgeable about the problem. The panel members are physically separated to avoid their deliberations being impacted either by social pressures or by a single dominant individual. Each panel member responds to a questionnaire containing a series of questions and returns the information to a coordinator. Following the first questionnaire, subsequent questions are submitted to the panelists along with information about the opinions of the panel as a group. This allows panelists to review their predictions relative to the opinions of the entire group. After several rounds, it is hoped that the opinions of the panelists converge to a consensus, although achieving a consensus is not required and justified differences of opinion can be included in the outcome (Montgomery, et al., 2008, pp. 4-5).

Brainstorming is the most traditional way to enumerate threats. (Shostack, 2014, p. 31). It is performed in a way that allows each member of the group to express his opinion freely, spontaneously and without criticism from others. During the brainstorming method there should be a certain discipline that manifests itself as a rule while one person speaks, the others listen carefully. Listening carefully and thinking about new ideas at the same time allows for interaction between group members. The speaker expresses his thought briefly, in just a few sentences, which contributes to the dynamism of the Brainstorming method (Lisica & Bajramović, 2021, p. 100). The essence of the procedure is that in the mass of proposed solutions, from round to round, that number is reduced, and therefore filtered. In the end, we will have a conceptual solution, which should be optimal. In fact, that idea will have the full consensus of all experts (Vojnović, 2014, pp. 81-82).

The scenario method makes it possible to develop more possibilities in the direction of the future. Therefore, it is necessary to create a complex attitude, through a schematic description, with all positive and negative consequences, of the relationship between the system and the environment in the future. Of course, it is necessary to provide a qualitative and quantitative description of all possible alternatives, or visions of the future of certain scenarios (Vojnović, 2014, p. 85). The scenario method can also be applied in conflict situations. Although not all possible scenarios can be considered and modeled, the military seeks to play out the most probable attack scenarios. Ultimately, threat modeling is not able to eliminate

the possibility of an attack, but instead increases the state of readiness for which a military unit can effectively respond to a threat (UcedaVelez & Morana, 2015, p. 4).

Role playing is a way of predicting the decisions by people or groups engaged in conflicts. Roles can greatly influence a person's perception of a situation. Thus, when predicting someone's decisions, it may be useful to take his role into account. This is important when people interact (Party A's decisions influence Party B's decisions, and Party A may then react, and so on). Because of these interactions, expert opinions are not accurate for predicting what the parties will do when they encounter new situations. Role playing is especially useful for important conflicts. For example, how would a country react to the threat of a war? How would managers respond to the threat of a strike? How would a major industrial customer react to a new pricing policy? Role playing is an inexpensive and practical alternative to experimentation. Lawyers have used it to forecast jury reactions to various arguments. Military strategists have used it to assess the outcomes of different strategies (Armstrong, 2001, p. 13). To employ role playing, a forecaster asks subjects to put themselves in specified roles and then to imagine how they would act, act out their responses alone, or interact with others in the situation. The forecaster should try to match the decision-making situation as closely as possible, aiming for realism in casting, role instructions, situation description, and session administration (Armstrong, 2001, p. 17).

Game theory studies situations of competition and cooperation between several involved parties by using mathematical methods. This is a broad definition but it is consistent with the large number of applications. These applications range from strategic questions in warfare to understanding economic competition, from economic or social problems of fair distribution to behavior of animals in competitive situations, from parlor games to political voting systems—and this list is certainly not exhaustive (Peters, 2015, p. 1). Game theory got its name from the fact that typical examples of strategic interaction in everyday life are games such as chess, card games, etc. For this reason, game theory mostly uses terms from classic games, but in the analysis of a conflict situation, simplification is made so that only the factors that have the greatest influence on the outcome of the conflict are taken into account. Therefore, using the terminology of game theory, we say that a game is a simplified model of conflict that encompasses the totality of the rules of behavior of the different parties in the game that determine their possible moves as well as the potential results of their choices (Tourki, et al., 1999, p. 352). The foundations of the creation of game theory in relation to security and international relations are found in war games that have been constantly developed by determining the sources of military threats, forecasting possible war scenarios as powerful risks and threats, working out possible outcomes as possible damage to the state or the armed forces and defense facilities as a reference object of protection and testing the uses of their own capacities in the field in various conditions as a form of prevention and opposition to risks and threats. Certainly relying on previous own and other experiences in different forms including many different functions and possible scenarios of risks and threats from different sources of threats (Андонов, 2022, p. 89).

A formal use of analogies can help in expert forecasting. It might reduce biases due to optimism or an unrealistic view of one's capabilities. If you were asked how you expected to perform in a task, such as, how long it would take you to write a book, you might consider similar tasks you had done in the past (Armstrong, 2001, p. 193).

Most forecasting methods are concerned with forecasting time series – data recorded over time. The modeling and forecasting of time series are so important that an entire field called “time series analysis” has arisen (Diebold, 2017, pp. 9-10). Time series are studied in order to determine the specific way of movement of the phenomenon in the past period which will serve as a basis for forecasting (Ристески, et al., 2012, p. 41). The key idea is to exploit the past behavior of a time series to forecast its future development (Ghysels & Marcellino, 2018, p. 173). The list of areas in which time series are studied is virtually endless. The purpose of time series analysis is generally twofold: to understand or model the stochastic mechanism that gives rise to an observed series and to predict or forecast the future values of a series based on the history of that series and, possibly, other related series or factors (Cryer & Chan, 2011, p. 1).

An important place in the methods of statistical analysis belongs to the examination of the influence and dependence between variables. The analysis can refer to two or more variables that are known or assumed to be in some relationship with each other. Based on empirical data, it is possible to express the interdependence of variables with a mathematical function that will express the average or so-called expected dependency or relationship. If it is about two variables, one of which is dependent (Y) and the other independent (X), the relationship between these variables can be expressed by the function: $Y = f(X)$ if the relationship is functional (deterministic) or $Y = f(X) + \varepsilon$, if the relationship is stochastic, where ε is the random error. The task of regression analysis is to discover a functional form - a regression model, which is closest to the quantitative agreement of variations of the observed phenomena, to show how the dependent variable changes in relation to the independent variables and, based on the degree of agreement of their variations, enable the evaluation and prediction of the behavior of the dependent variable. Regression analysis can also be defined as an assessment of the value of the dependent variable based on one or more independent variables (Mutavdžić & Nikolić-Đorić, 2018, p. 78).

To forecast the development and outcome of factors and phenomena, today there are various methods, techniques and models. However, the choice of forecasting method is not always free. There are limitations that condition the application of one or another forecasting method. Hence, it follows that the forecast depends not only on the method, but also on the criteria for choosing the forecasting method. Often, the degree of accuracy in forecasting, the formulation of assumptions about the future, the accuracy, the probability of occurrence of the forecast, etc., depends on the correct choice of the forecasting method. The process of deciding on forecasting methods, as a choice among several possible alternative solutions, is preceded by a phase for formulating criteria for selecting the method. The determination of criteria for the selection of the forecasting method is a complex methodological issue. The complexity arises from the fact that there are numerous and diverse criteria such as: accuracy, time horizon for forecasting, character of the method, character of the decision and others (personnel, financial resources). The future organization and implementation of the forecast depends on the choice of the criterion for selecting the forecasting method. Indirectly, deciding on the forecasting method has its impact on the outcome of the desired action and on the accuracy of the forecast. The nature of the data is a very important factor on which the choice of forecasting method depends. Time series data can reflect trend, cyclical, seasonal and random movements in phenomena. Data are required for any forecasting method. Without data there is no forecasting. Often, the nature of the data determines the

choice of forecasting method. The time horizon, as a determinant, determines which method will be applied. Some of the methods are suitable for short-term and others for long-term forecasts (Шуклев & Дебарлиев, 2013, pp. 111-112).

Conclusion

It is evident that the conflict is an inevitable social phenomenon, accompanied by disharmony and confrontation of the parties (which can escalate to violence), which often has serious negative consequences that can disrupt the smooth functioning of society. For that reason, acting and giving an adequate response in conflict situations should undoubtedly be based on information about the potential development of events in the conflict in the future. In that process of preparing an adequate response, forecasting can have a serious positive contribution.

Forecasting as a function, in conflict situations, is aimed at presenting realistic and reasonable projections for the potential development of the conflict situation in the future, through the application of qualitative and quantitative methods and forecasting models. Although we cannot confirm with certainty that the assumptions resulting from the forecasting process will be realized, however, the forecasting of the potential development of the conflict situation, in any case, represents a good starting point for the planning process, by providing the planner information about the potential dangers, based on which, the planner will be able to adapt the course of action further in the conflict situation. Likewise, forecasting the potential development of events in a conflict situation will contribute to better information for decision-makers. Forecasting provides decision-makers with information regarding alternative actions available to them, which can be used to make an adequate choice for effective action in the conflict situation.

Hence, there is no doubt that forecasting deserves special attention because it makes a serious contribution to providing the necessary information to the competent persons, about the security situation and the future development of the events in the conflict, which contributes to timely and efficient action in dealing with the conflict situation.

References

- Armstrong, J., 2001. *Principles of forecasting: A Handbook for Researchers and Practitioners*. Pennsylvania: University of Pennsylvania, The Wharton.
- Bakreski, O., Cvetkovski, S. & Bardjieva Miovska, L., 2022. *Forecasting as a Function of Security Management*. In: Proceedings of the Economics & Finance Conferences. [online] 16th Economics & Finance Conference. IISES (International Institute of Social and Economic Sciences), pp.41–54. Available at: <http://hdl.handle.net/20.500.12188/23346> [Accessed 16 Aug. 2024].
- Bartos, O. & Wehr, P., 2002. *Using Conflict Theory*. New York: Cambridge University Press.
- Carpenter, M., Bauer, T. & Erdogan, B., 2012. *Management Principles: V. 1.0*. s.l.:s.n.

- Council of Europe, 2012. *T-Kit, Volume 12: Youth Transforming Conflict*. s.l.:Council of Europe.
- Cryer, J. & Chan, K.-S., 2011. *Time series analysis with applications in R*. Second Edition ed. New York, London: Springer.
- Ghysels, E. & Marcellino, M., 2018. *Applied Economic Forecasting using Time Series Methods*. New York: Oxford University Press.
- Hanke, E. & Wichern, W., 2014. *Business Forecasting*. Ninth Edition ed. s.l.:Pearson Education Limited .
- Henderson, I. & de Coning, C., 2008. *Conflict Management for Peacekeepers and Peacebuilders*. 1st Edition ed. s.l.:African Centre for the Constructive Resolution of Disputes (ACCORD).
- Hoshmand, A., 2010. *Business Forecasting: A Practical Approach*. Second Edition ed. New York: Routledge.
- Indartono, S., 2014. *Conflict Management*. Yogyakarta: Aksara Media Pratama.
- Jeong, H.-W., 2009. *Conflict Management and Resolution: An Introduction*. 1st Edition ed. London: Routledge.
- Kešetović, Ž., Korajlić, N. & Tot, I., 2013. *Krizni menadžment*. 2. izmijenjeno i dopunjeno izd. ed. Sarajevo: Fakultet za kriminalistiku, kriminologiju i sigurnosne studije, Univerziteta u Sarajevu; Veleučilište Velika Gorica.
- Kozarević, S., 2009. *Konflikt i teorija igara*. Tuzla: OFF-SET - Tuzla.
- Lisica, D. & Bajramović, Z., 2021. *Planiranje u sektoru sigurnosti*. Sarajevo: Fakultet političkih nauka Univerziteta u Sarajevu.
- Marjanović, M., Mihailović, I. & Spasić, K., 2018. *Strategijski menadžment*. Leskovac: Visoka Poslovna škola strukovnih studija Leskovac.
- Montgomery, D., Jennings, C. & Kulahci, M., 2008. *Introduction to Time Series Analysis and Forecasting*. Second Edition ed. New Jersey: John Wiley & Sons. Inc..
- Pavleski, A. 2022. Conflicts over various values – the role of identity in conflict. *Annuaire de la Faculté de Philosophie 75 (2022)*, Filozofski fakultet – Skopje.
- Pavleski, A. 2024. The subjective factors impact on conflict dynamic. *Security Dialogues*, Vol.15, No.1, Faculty of Philosophy – Skopje.
- Pavleski, A. Towards a sustainable conflict outcomes-challenges and perspectives. *Annuaire de la Faculté de Philosophie 77 (2024)*, Filozofski fakultet – Skopje.
- Peters, H., 2015. *Game Theory: A Multi-Leveled Approach*. Second Edition ed. s.l.: Springer-Verlag .

- Petropoulos, F., 2022. Forecasting: theory and practice. *International Journal of Forecasting*, 38(3), pp. 705-871.
- Robbins, P. & Coulter, M., 2010. *Management*. 11th ed., ed. New Jersey: Pearson Prentice - Hall.
- Shostack, A., 2014. *Threat Modeling: Designing for Security*. Indianapolis: John Wiley & Sons, Inc.,.
- Stanković, J. & Đoković, F., 2019. *Strategijski menadžment*. Beograd: Univerzitet Singidunum.
- Tourki, M., Backović, M. & Cvjetićanin, D., 1999. *Matematički modeli i metodi u ekonomiji*. 4. izmenjeno i dopunjeno izd. ed. Beograd: Ekonomski fakultet.
- UcedaVelez, T. & Morana, M., 2015. *Risk Centric Threat Modeling: process for attack simulation and threat analysis*. New Jersey: John Wiley & Sons .
- Vujošević, M., 1997. *Operativni menadžment: kvantitativne metode*. Beograd: DOPIS.
- Андонов, О., 2022. *Основи на процена на ризици и закани*. Скопје: Воена академија „Генерал Михаило Апостолски“.
- Бакрески, О., 2016. *Основи на безбедносниот менаџмент*. Скопје: Филозофски факултет.
- Квигин, Т., 2009. *Да се види невидливото: разузнавање за националната безбедност во несигурно време*. Скопје: Магор.
- Кековиќ, З., Бакрески, О., Стефановски, С. & Павловиќ, С., 2016. *Планирање и процена на ризик: во функција на заштита на лица, имот и работење*. Скопје: Комора на Република Македонија за приватно обезбедување.
- Малиш – Саздовска, М., 2021. *Прирачник за безбедносен менаџмент*. Скопје: Факултет за безбедност – Скопје.
- Новковиќ, Н., 2018. *Планирање и пројектовање*. Нови Сад: Универзитет у Новом Саду - Пољопривредни факултет.
- Стаменковски, А., 1996. *Планирање на одбраната*. Скопје: Ѓурѓа.
- Шуклев, Б. & Дебарлиев, С., 2013. *Деловно планирање*. Скопје: Економски факултет.