RELATIONAL RISK FACTORS IN PUBLIC SAFETY NETWORKS

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Abstract: The complexity of operations in public safety networks poses a challenge from both an organisational and a social perspective. Problems associated with the limited number of resources or prior experience, as well as those arising from the diversity of expectations and beliefs of individual organisations, may give rise to threats and relational risk. Relational risk is a relatively new research category. This paper is an attempt to fill a part of this research gap by analysing relational risk factors in public safety networks. The performed analyses demonstrate the multidimensionality of risk sources in public safety networks, in addition to relational risk factors. The paper also presents the results of an assessment of the impact of key relational factors in public safety networks and characterises the links between them. The paper ends with conclusions.

Keywords: relational risk, risk factors, public safety networks, public management.

1. Introduction

The need for cooperative action in public management networks arises mainly from legal regulations and the resulting statutory duties of individual organisations. However, the effectiveness of cooperation within these networks also depends on organisational, situational and social conditions (Sienkiewicz-Małyjurek, 2017). The limited number of resources, the variability of circumstances, negative experiences and beliefs can all influence the course of co-implemented processes and cause all kinds of problems, which can in turn reduce the level of trust and interorganisational commitment. In consequence, cooperation between public safety networks is associated with relational risk stemming from the relations between individual organisations (Klimas, 2013; Światowiec-Szczepańska, 2014).

Relational risk is a relatively new category, which emerged along with the development of the interorganisational relations theory. This is reflected in the relatively small number of scientific publications included in the Scopus, Web of Knowledge and Publish or Perish databases. They all indicate that the issue of relational risk has only been discussed in the literature since recently, and less frequently than in the case of business risk or operative risk concepts. At the same time, taking into consideration the modern paradigm of organisational

management based on networks of relationships, there is a need to intensify research in the field of relational risk. This paper is an attempt to fill a part of this research gap by analysing relational risk factors in public safety networks.

2. Research methodology

The aim of this paper will be achieved through the following research:

− A survey of Polish and foreign literature.
− A hermeneutic process carried out in December 2014 in a group of four scientists who actively participated in the research of interorganisational cooperation. Two people had conducted research in this field for 10 years, while the other 2 had been involved in it for 5 years. Brainstorming sessions were conducted on the basis of practical examples and analyses of typical circumstances of cooperation.
− A questionnaire survey conducted in June 2016 among experts dealing with the topic of public safety system operations. 100 questionnaires were completed in the course of the survey, out of which 83 correctly filled-in questionnaires were included in the analysis. The survey was conducted in person, which made it possible to clarify and narrow down the questions.
− A discussion among 43 experts who had taken part in the survey, which enabled a preliminary verification of the results and facilitated their interpretation. It was due to the fact that the experts had pointed out problematic areas of cooperation within the system of public safety management, and used practical examples to explain how co-implemented activities worked.

The research context, including the multidimensionality of risk sources in public safety networks and the relational risk factors existing within these networks, will be presented in the course of these analyses. Next, on the basis of the research carried out with the participation of experts, the results of the assessment of the impact of key relational factors in the studied network will be presented, and the links between these factors will be characterised. The paper ends with conclusions.

3. Multidimensionality of risk sources in public safety networks

Public safety management is an organised activity performed with the use of human, financial, technical and information resources of multiple organisations, undertaken in order to mitigate potential risks, ensure a steady flow of public life and protect the human life and

health as well as property and the environment, which involves compliance with the law and protection of the order with public interest in mind (Sienkiewicz-Małyjurek, 2010). Its functional scope and scale of threats are broad, as they encompass measures taken in the field of social, regional and criminal policy, in addition to the entirety of measures in the sphere of crisis management (Williams, et al., 2009; Tomasino, 2011). Activities in these fields are performed by numerous organisations, including the local government, emergency response units, the media or non-governmental organisations. However, the key players in public safety networks are the Police, the State Fire Service and Medical Rescue Units (Blackstone, et al., 2007; Andrew, and Hawkins, 2013). The activities of these groups are supported by remaining services, inspectorates and guards, while such entities as non-governmental organisations, research and development facilities and local communities perform a supplementary function. Entities within public safety networks form complex systems of different internal structure, operating under certain conditions and connected through numerous internal and external relationships. The activities they carry out are based on cooperation, and the units participate in them in a parallel manner, complementing each other (Waugh, and Streib, 2006; Berlin, and Carlström, 2011; Kapucu, et al., 2010). Their role changes depending on the threat, which always occurs in a different place, has a different intensity, course and range of impact, and requires an individual configuration of capabilities and resources. The diversity of threats and the complexity of actions performed by multiple entities within public safety networks are a source of uncertainty in an unambiguous assessment of the status and future developments, which constitutes a risk in the implementation of activities.

Risk in public safety network is multidimensional in nature; its source is located in both external and internal factors (Kożuch, and Sienkiewicz-Małyjurek, 2017). External factors include conditions which necessitate adaptation, such as legal, social and environmental circumstances. On the other hand, internal factors occur in various areas of activities undertaken by individual entities in public safety networks. Examples of these include the existing procedures, level of communication and coordination of joint operations. Therefore, threats in public safety networks stem from problems in the functioning of individual organisations and also occur in the functioning and cooperation of multiple entities of mutually supplementary competencies. The hitherto conducted analyses indicate that the sources of risks in public safety networks encompass five dimensions (Kożuch, and Sienkiewicz-Małyjurek, 2017):

- The legal dimension, e.g. inconsistency of legal regulations, overregulation or insufficient regulation, incompatibility of legal regulations with working practices etc. This dimension provides the framework for the operation of public organisations.
- The organisational dimension, e.g. inappropriate decisions, inadequate coordination of activities, incorrect interpretation of information, lack of communication between

organisations etc. It results from the structure and organisational culture of individual entities as well as the structure of the entire public safety network.

– The relational dimension, e.g. experience in previous interorganisational relationships, good will and commitment to joint operations etc. It includes organisational behaviour inside the organisation and between different organisations, in addition to formal and informal relationships between them.

– The situational dimension, e.g. uncertainty, changeability and sudden additional threats may result in maladaptation of the actions to the situation or making inappropriate decisions.

– The environmental dimension, e.g. topography and properties of the terrain, the number of surrounding structures, the transport system or the population level affect the implementation of activities, as they can, for example, condition the possibility of reaching the people under threat. This dimension causes the risk of threats to be different in each area, thus requiring an individual approach.

The presence of individual dimensions of risk in public safety networks depends on the course of events, as all or some of them may occur depending on the situation. In every case, there are many variants of implementing the actions, and even choosing the solution which seems to be optimal at a particular moment does not guarantee success. This is due to the fact that it is always possible for additional threats to emerge or for them to cumulate or escalate. Therefore, it is advisable to constantly identify and interpret risk in order to minimise the potential negative consequences of threats. This paper focuses on the relational dimension, which involves the behaviour of individual entities within public safety networks.

4. Relational risk factors in public safety networks

In a general sense, risk includes events or conditions and the consequences thereof, which have both a negative and a positive impact on the realisation of goals (Drennan, et al., 2015; Jonek-Kowalska, 2011). It is a measurable situation which occurs periodically and constitutes the function of uncertainty, increasing along with it.

One type of risk is relational risk, which refers to the probability and consequences of a lack of satisfaction from the cooperation, resulting mainly from the behaviour of entities which are connected through a certain relationship (Mikuła, and Pietruszka-Ortyl, 2006; Światowiec-Szczepańska, 2014). Reflects the fears and beliefs of partners regarding the behaviour of other parties involved in the cooperation. It also determines the shape and structure of relations within networks of cooperation (Das, and Teng, 2001). Relational risk also concerns problems which may hamper the achievement of common goals, such as distortion or provision of incomplete information, lack of commitment, avoidance of

responsibilities (Liu, et al., 2008; Ring, and Van de Ven, 1994). Therefore, it applies to all kinds of barriers in maintaining good relations between organisations.

It is impossible to eliminate risk of any type; it is only possible to take actions which will enable the minimalisation of their probability and consequences. To take appropriate actions, it is necessary to identify the risk factors, namely reasons determining the occurrence of a given phenomenon. Such factors can vary in nature; they can also mutually reinforce their impact, thus contributing to the escalation of threats. In the case of relational risk, they include factors related to interorganisational cooperation, which, in their positive sense, may be the driving force of joint operations, and, in a negative sense, they might be a source of danger. They include (Kożuch, and Sienkiewicz-Małyjurek, 2016a):

- lack of interorganisational proximity,
- low frequency of cooperation between the organisations,
- lack of care for the interests of the collaborating organisations,
- hesitation in solving interogranisational conflicts,
- low benefits drawn from the cooperation between units,
- unclear expectations of the collaborating organisations,
- significant limitations in interorganisational cooperation,
- unrepeatable cycles of interorganisational cooperation,
- uncertain conditions of cooperation,
- unclear roles of individual organisations involved in the cooperation (e.g. leadership, coordination, support),
- lack of balance between dependence and autonomy,
- problems in the specialisation of collaborating entities,
- unfair balance of involvement of individual organisations in the cooperation,
- hermetic nature of the network of collaborating organisations,
- intransparent requirements related to the implementation of shared tasks,
- unsatisfying results achieved as a result of interorganisational cooperation,
- lack of mutual support of the collaborating organisations,
- differing missions, visions and goals,
- individual decisionmaking by the organisations,
- assymetry of interdependencies between individual organsiations,
- incorrect management of interorganisational cooperation (for example, styles, transparency of decisions and instructions),
- lack of interorganisational trust,
- inability to compromise among the organisations.

All of the identified factors affect relational risk, yet to a different degree. Due to this fact, on the basis of the hermeneutic process conducted by a group of four scientists, the strength of their impact was assessed according to the following scale: 1 – minor impact; 2 – moderate

impact; 3 – strong impact. Key factors were determined as a result, including (Kożuch, and Sienkiewicz-Małyjurek, 2016b): asymmetry of interdependencies between organisations, lack of interorganisational proximity, unclear expectations of the cooperating organisations, unclear roles of individual organisations, imprecise requirements concerning the fulfilment of shared tasks, uncertain conditions of cooperation, hesitant solving of interorganisational conflicts, low frequency of cooperation, problems in the specialisation of collaborating entities. These factors can significantly weaken the relations between individual organisations or even lead to their severance. Due to this fact, they require a thorough analysis in the specific context of activities in order to minimise their negative impact.

5. Analysis of key relational risk factors in public safety networks

The effect of key risk factors differs depending on the context of activities. On that account, the identified factors were assessed and discussed on practical examples by experts in the field of public safety networks and referred to subject literature. The results are presented in Figure 1.
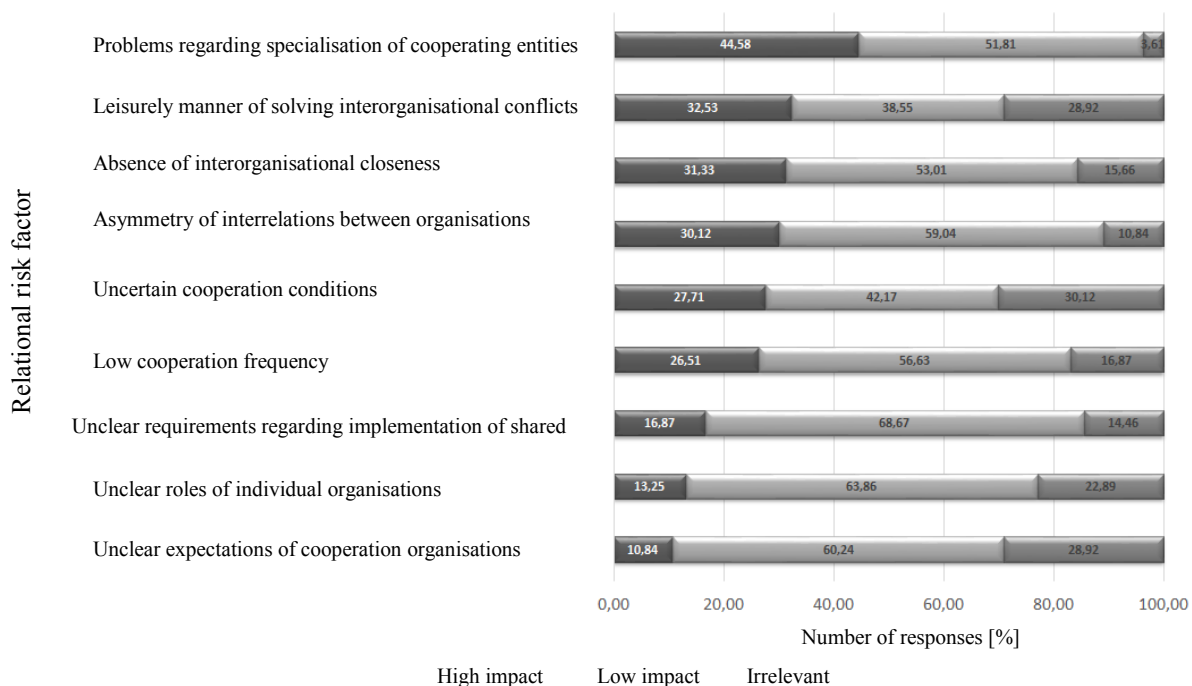

Figure 1. Evaluation of the impact of key relational risk factors in public safety networks. Source: author's own study.

Even though it is impossible to cease joint performance of activities within public safety networks, relational risk factors may significantly influence their quality. According to experts, the following factors have the greatest impact on relational risk: problems in the

specialisation of collaborating entities, hesitant solving of interorganisational conflicts and lack of interorganisational proximity. Specialisation results from the statutory tasks and complementary competencies of individual organisations. However, a clear-cut division of these competencies is not possible. For example, a number of entities can evacuate people from public areas or provide first aid. However, the degree of specialisation and the division of tasks may cause problems in the coordination of activities and constitute a source of conflicts (Lagreid, and Rykkja, 2015; Lindgren et al., 2008). Conflicts arise mainly from organisational individualism as well as from approaching the event through the prism of one's own organisation rather than in a holistic manner. Specialisation and division of tasks create certain expectations of organisations in relation to each other, and the practice of joint activities is not always consistent with these expectations. In addition, the belief in self-sufficiency in dealing with a given situation by one organisation may cause cooperation to be substituted by competition (Berlin, and Carlström, 2011). On the other hand, interorganisational proximity refers to those characteristics of organisations which create the conditions for cooperation, including four dimensions (Balland, et al., 2015; Czakon, 2010; Klimas, 2013; Kramarz, 2017): geographical, organisational, institutional, social and cognitive. The studied factors influence the latter two dimensions of proximity, as they can lead to a lack of understanding for other organisations and failure to meet their needs, which is a source of relational risk.

The following factors also significantly influence relational risk in public safety networks: asymmetry of interdependencies between organisations, uncertain conditions of cooperation and low frequency of cooperation. Interdependencies mean the extent to which the activities of individual entities depend on each other. Their asymmetry reduces the level of trust and interorganisational commitment, which limits the effectiveness of shared activities (Kumar, et al., 1995; Gardet, and Mothe, 2011; Kumar, and Van Dissel, 1996; Wong, et al., 2005). Asymmetry of interdependencies in public safety networks may lead to a passive attitude and a reduced focus on cooperation, which may have serious consequences under uncertain conditions. The uncertainty of the conditions of cooperation stems from the characteristics of the course of action in the analysed networks. Each event, even of the same kind, occurs in a different place and time, has a different course, and in each case, the engaged resources have different configurations and various options for action exist. This generates the necessity of individual approach to every threat, and differences in the perception of events and a lack of a shared image of the situation may lead to misunderstandings and relational risk. In turn, the frequency of cooperation stems not only from the need for shared action resulting from the threats but also from the number of initiatives taken for the sake of cooperation with other organisations, e.g. joint exercises, outings, meetings, discussions. A shortage of such initiatives limits the interorganisational proximity and makes it impossible to know the expectations of other organisations.

Imprecise requirements concerning the fulfilment of shared tasks, unclear roles of individual organisations and unclear expectations of the cooperating organisations also play a significant role in the generation of relational risk in public safety networks. Both the uncertainties concerning the fulfilment of shared tasks and the unclear roles of individual entities arise from problems related to the interpretation of legislation and the resulting possibilities for action. Similarly, omitting and failing to inform other organisations of one's own expectations may lead to a lack of mutual understanding, differing interpretations of the situation, which results in a negative experience and creates relational risk.

The characteristics of relational risk factors indicate that they complement each other and might increase each other's strength. An analysis of the mutual influence of individual factors was carried out on this account, with the results presented in Table 1.

Table 1.
Links between relational risk factors in public safety networks

FORMING FACTOR \ FORMED FACTOR	Problems in the specialisation of collaborating entities	Hesitation in solving interorganisational conflicts	Lack of interorganisational proximity	Asymmetry of interdependencies between organisation organisations	Uncertain conditions of cooperation	Low frequency of cooperation	Imprecise requirements concerning the fulfilment of tasks	Unclear roles of individual organisations	Unclear expectations of the collaborating organisations
Problems in the specialisation of collaborating entities	-	X	X	X	X	X	X	X	X
Hesitation in solving interorganisational conflicts		-	X		X	X	X		X
Lack of interorganisational proximity	X	X	-		X	X	X		X
Asymmetry of interdependencies between organisation organisations		X	X	-	X	X	X	X	X
Uncertain conditions of cooperation			X	X	-	X	X	X	
Low frequency of cooperation	X	X	X		X	-	X	X	X
Imprecise requirements concerning the fulfilment of shared tasks		X	X	X	X	X	-	X	
Unclear roles of individual organisations		X	X	X	X	X	X	-	X
Unclear expectations of the collaborating organisations		X	X		X	X	X		-

Source: own elaboration.

Even though the individual influence of the studied factors on the probability of relational risk in public safety networks is strong (see fig. 1), in practice these factors are coexistent, causing an additional problem of complexity and complication. Links most frequently occur between the following: low frequency of cooperation, lack of interorganisational proximity and imprecise requirements concerning the fulfilment of shared tasks. This indicates a necessity of increasing interorganisational contact, which strengthens the relations between the employees of individual entities, and of paying more attention to improving shared operating procedures.

6. Summary

Public safety networks are complex structures of organisations, groups and individuals connected by formal and informal relations and functioning on the basis of available technologies. Its constituent entities are autonomous organisations of complementary competencies, the actions of which are based on cooperation stemming from statutory tasks and areas of specialisation. However, activities implemented in public safety networks are characterised by complexity and occur in an unpredictable and changeable environment. Their configuration is different in every case, depending on the threat, context of activities and situational requirements. In addition, each case requires a different approach, according to the conditions of operation. Circumstances which generate relational risk may occur as a result.

All of the identified key relational risk factors influence the functioning of public safety networks. However, the most important are the following: problems in the specialisation of collaborating entities, hesitation in solving interorganisational conflicts and lack of interorganisational proximity. In addition, all of the key relational risk factors complement each other and escalate each other's influence. Due to this fact, it is necessary to identify and adopt measures which will make it possible to limit the influence of relational risk on the functioning of public safety networks.

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