A QUALITATIVE ANALYSIS OF THE HINDERING AND SUPPORTING FACTORS OF THE CROSS-BORDER INFORMATION EXCHANGE CONDUCTED BY THE SINGLE POINT OF CONTACT AND THE POLICE AND CUSTOMS COOPERATION CENTRE

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Annotation. Cross-border criminality, emerging hybrid security threats, such as terrorism, trans-border organised criminal activity and most recently the COVID-19 epidemic situation demands efficient cross-border police cooperation and information exchange. To answer this need, various communication channels have been established to facilitate trans-border law-enforcement information exchange. The aim of this paper is to introduce the supporting and hindering factors of the two, most commonly used police information exchange channels, namely the Single Point of Contact (SPOC) and the Police and Customs Cooperation Centre (PCCC). The author tried to achieve this goal by introducing the relevant scientific theories and using them as a starting point for a qualitative study. The subsequent desk research and in-depth interviews helped the researcher to describe the current information exchange process, the hindering and supporting factors, the characteristics and main differences of the SPOC and PCCC information exchange process.

Keywords: police cooperation, cross-border information exchange, SPOC, PCCC, EU.

INTRODUCTION

Cross-border police cooperation and information exchange was probably never as important as it is today when hybrid security threats, such as terrorism, smuggling of weapons and goods, the changing form of radicalization, violence and organised crime are becoming more international and also in nature.[1] Recognizing the importance of cross-border information exchange, different communication channels have recently been used to exchange information, the two most important of which are: Single Points of Contact (SPOC) and the Police and Customs Cooperation Centre (PCCC).

There are 28 SPOCs within the EU. These are centralised departments, located at the central national level of Law Enforcement Agencies (LEA), whose task is to facilitate all types of cross-border police information exchange without geographical limitation. Field officers

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[1] Frontex, '*Risk Analysis for 2018',* 2018, p. 6.

(end-users) send their request to their national SPOC through the established chain of command, and this request will be forwarded by the SPOC to another SPOC. The speed of the information exchange is strongly dependent on the number of intermediate stations. The 64 operating PCCCs are located regionally in the border areas. The PCCCs accommodate LEA staff who exchange information to facilitate a rapid and direct information exchange with neighbouring countries. Field officers usually send their request for information exchange directly to their national colleagues employed by the PCCC, who hand it over to the counterpart foreign police officer. The answer is given in the same way directly to the PCCC staff, who can forward it to the applicant. This channel was created to exchange information between neighbouring countries, however a different interpretation of the regulations led to the use of the so-called 'chain request' system, which allows the exchange of information with non-neighbouring countries by using intermediate PCCCs located on the route between the applicant and the requested country.

The importance of information exchange among LEAs was recognised by various agencies and institutions in the EU[2] [3], yet personal experiences show that there are serious shortcomings in cross-border information exchange when rapid information is required in order to properly fulfil the police job. First of all, the choice of the above-mentioned channels depends on many factors, such as personal considerations, preferences for a certain channel etcetera, 'which are not consistent across and not even within the Member States'[4]. In practice, this leads to confusion and often field officers are unaware which channel to use for a particular information exchange. They choose the channel with which they are more familiar, or which provides faster responses, neglecting that channel which should be used according to the applicable rules. Secondly, the speed of information exchange via these two channels is a weakness. Nothing shows the need for rapid, real-time information exchange better than the existence of informal communication channels. This informal communication is based on personal relationships and networks and is widely used by enthusiastic LEA officers who want to receive a rapid answer about persons, documents, visas and passport stamps in order to do their job at the border or inland properly. I have also experienced that cross-border information

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[2] Frontex, p.1-3
[3] European Police Office, 'Serious and Organised Crime Threat Assessment', 2017.
[4] Doherty, R. et al., 'Study on the Implementation of the European Information Exchange Model (EIXM) for Strengthening Law Enforcement Cooperation', 2015, p. 6.

exchange is sometimes not initiated and therefore appropriate police measures are not taken when the field officers know there is no chance to receive a formal or informal reply rapidly.

The aim of the research is to provide an insight into the process of information exchange conducted by the above-mentioned channels and to find out which factors are supporting and hindering the exchange.

To answer these research questions, literature review and desk research were carried out, using the available open source documents and the results of earlier field studies. Desk research was followed by in-depth interviews to find a more detailed answer to the questions, to discover the current processes, and to provide insight into the supporting and hindering factors of cross-border information exchange.

LITERATURE REVIEW

The definition of police cooperation and information exchange

International police cooperation became vital in 1984, when two countries, France and Germany agreed to gradually eliminate the border control on the common border and transfer it to the external borders. One year later the Benelux countries expressed their willingness to join this initiative. The strengthening of police and customs cooperation was one of several proposed measures[5]. The so-called Schengen Convention[6] was signed five years later in 1990. The convention lists the modes of cooperation, with Article 39 encouraging the police authorities of the Member States (MS) to assist each other in preventing and detecting criminal offences. SPOC and PCCC information exchange are conducted under the umbrella of this convention as a type of cooperation. The SPOC was created to facilitate all type of information exchange by 'putting one police service in every state in charge of international cooperation, a single contact point strategy, therefore centralizing the process of police cooperation'.[7] The creation of the PCCC was the answer to the emerging need for a less centralised and direct channel among neighbouring countries in order to help operational activities in the border

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[5] Zaiotti, R., *Cultures of Border Control: Schengen and the Evolution of European Frontiers,* University of Chicago Press, 2011.
[6] European Union, *The Schengen Acquis,* OJ L 239, 22.9.2000
[7] Weibel, D., 'Police and Border Cooperation in Schengen: The Police and Customs Cooperation Center (PCCC)', Leiden University, 2016, p. 2.

areas.[8] 'They were tasked with rather modest functions, limited to support for local neighbouring police and customs stations in the border areas.'[9]

Information exchange can be defined as the formal and informal sharing of significant and timely information between two or more parties.[10] We can conclude from the academic literature, that information exchange can be conducted on three interrelated levels, namely the inter-personal, intra-organisational and inter-organisational ones.[11] [12] Even though there is a strong distinction between the levels, it is clear that these levels of information exchange are interrelated: Intra-personal information exchange is embedded in the intra-, and inter-organisational information exchange and even further, the intra-organisational information exchange is embedded in the inter-organisational one. The levels should be connected to each other in order to create an efficient information-sharing environment. This theory is supported by another study, which states that weak internal coordination and inter-organisational information exchange can negatively influence cross-border information exchanges.[13]

Besides the (inter)connection of the levels, efficient information-sharing requires adequate organisational-managerial, legal and technological environments, which are determined by various factors such as the Information and Communication Technology (ICT), organisational structure, culture and values, human resources, trust, leadership, rewards, self-interest, legal instruments and regulations.[14] [15]

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[8] Saloven M. et al., 'Study on the Status of Information Exchange amongst Law Enforcement Authorities in the Context of Existing EU Instruments', 2010, p. 70.

[9] Gruszczak, A., 'Police and Customs Cooperation Centres and Their Role in EU Internal Security Governance', *EU Borders and Shifting Internal Security: Technology, Externalization and Accountability,* 2016, p. 172.

[10] Cater, B., 'The Importance of Social Bonds for Communication and Trust in Marketing Relationships in Professional Services', Management, 13(1), 2008.

[11] Mausolf, A., 'Keeping Up Appearances: Collaboration and Coordination in the Fight against Organized Crime and Terrorism', University of Leiden, 2010.

[12] Yang, TM. and Maxwell, AT., 'Information-Sharing in Public Organizations: A Literature Review of Interpersonal, Intra-Organizational and Inter-Organizational Success Factors', Government Information Quarterly, 28 (2), 2011, p. 164..

[13] Saloven M. et al., p. 83.

[14] Yang and Maxwell, p. 171.

[15] Dawes, S., 'Interagency Information Sharing: Expected Benefits, Manageable Risks', Journal of Policy Analysis and Management, 15, 1996, p. 377.

FACTORS EFFECTING INTER-ORGANISATIONAL INFORMATION EXCHANGE

ORGANISATIONAL ENVIRONMENT AND MANAGEMENT

Organisational structure

In the literature two main types of organisational structure are distinguished: the bureaucracy and the adhocracy.[16] [17] Bureaucracy can be characterized by formalized and hierarchized structure, functional departmentalisation and by standardized regulations and procedures.[18] Formalisation can be described as 'the extent to which an organisation's structures and procedures are formally established in written rules and regulations'[19]. Formalisation is often correlated with the 'red-tape', the presence of excessive, rigid and redundant formal rules or procedures that serve no noticeable organisational functions 'and result in inefficiency, unnecessary delays, frustration, and annoyance'[20]. This formalisation can hinder and prevent action or decision-making. Researchers also argue that written rules and formalisation are positively related to psychical and psychological stress, the feeling of powerlessness and have a negative impact on innovation, openness to new ideas, motivation and job satisfaction.[21] In the field of cooperation this limited opportunity for lower level initiative taking also ruins the motivation and interest of the individuals to conduct information exchange.[22] All in all, centralisation and hierarchical structure hinder initiatives and actions for the exchange of information, as individuals lack autonomy and managerial approval is required in most decision making processes[23], which strictly controls the information flow and exchange. In addition, specialization creates conflicting goals which can block inter-, and intra-organisational cooperation.[24]

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[16] Gruszczak, p. 135.

[17] Mintzberg, H 'The Structuring of Organizations' in Asch D. and Bowman C. (eds), Readings in Strategic Management, Palgrave, 1989.

[18] Argote, L. et al., 'Knowledge Transfer in Organizations: Learning from the Experience of Others', Organizational Behavior and Human Decision Processes, 82(1), 2000.

[19] Rainey, H.G., Understanding and Managing Public Organizations, San Francisco: Jossey-Bass, 1992, p. 209.

[20] Bozeman B. and Scott, P., 'Bureaucratic Red Tape and Formalization: Untangling Conceptual Knots', The American Review of Public Administration, 26(1), 1996, p. 8.

[21] Arches, A. 'Social Structure, Burnout, and Job Satisfaction' Social Work 36(3), 1991, p. 202.

[22] Yang and Maxwell (n 12).

[23] Kim, S. and Lee, H., 'The Impact of Organizational Context and Information Technology on Employee Knowledge-Sharing Capabilities', Public Administration Review, 66(3), 2006, p. 370.

[24] Mintzberg (n 17).

Trust

Trust is a crucial relationship building block, which is often 'defined as a belief that one relationship partner will act in the best interest of the other'[25]. Both inter- and intra-organisational trust influence cooperation and information exchange. The lack of trust among national organisations can seriously hamper cross-border information exchange. For example, a previous study has shown that a national authority refused to provide the requested information to the SPOC or to the PCCC because doing so would allow another national LEA to have access to the information.[26] Although there is a lack of empirical testing of inter-organisational trust models[27], a positive relationship between the degree of trust and the will for information sharing seems to exist.[28] This positive correlation can be experienced in the field of international police cooperation where mutual trust and personal relationships are the most compelling forces.[29]

Trust can be developed and maintained by timely, reliable, and adequate information sharing and perceived fairness.[30] Other factors that support inter-organisational cooperation and trust are mutual benefit, mutual bonding, predictability and conflict resolution. A good personal relationship between the managers must also be recognisable for the staff in order to have a trust building effect. Already established trust can be further strengthened with increased mutual bonding: when more colleagues trust each other, their relationship becomes more personal.[31]

Reciprocity

The anticipated reciprocity positively influences the individual's attitude towards information sharing.[32] Moreover, reciprocity plays an important role not just between individuals, but also between organisations. A positive correlation exists between the extent of

[25] Wilson, D.T., 'An Integrated Model of Buyer-Seller Relationships', Journal of the Academy of Marketing Science, 23(4), 1995, p. 335.
[26] Saloven M. et al., p. 83.
[27] Adams B. et al., 'Review of Interorganizational Trust Models', Ft. Belvoir: Defense Technical Information Center, 2010, p. 105.
[28] Dean W, Goldenberg I and Soeters I., 'Information Sharing in Military Operations', Springer, 2017, p. 85.
[29] Hufnagel, S., *Policing Cooperation across Borders,* London: Routledge, 2016, p. 86.
[30] Bstieler, L., 'Trust Formation in Collaborative New Product Development', Journal of Product Innovation Management, 23(1), 2006, p. 56.
[31] Hufnagel, p. 86.
[32] Constant, D., Kiesler, S. and Sproull, L., 'What's Mine Is Ours, or Is It? A Study of Attitudes about Information Sharing', Information Systems Research, 5(4), 1994, p. 400.

information sharing and the degree of reciprocal interdependence meaning that each participating organisation possesses information that others need and vice versa.[33] Consequently, some academic literature concludes that reciprocity promotes and stabilizes international cooperation.[34]

Organisational values, norms and cultures

Organisational values, norms and cultures also influence the attitudes of individuals and the collective actions regarding information sharing.[35] Organisational differences, such as the diverse national systems, the different culture, the different geographical locations of the national services, the different division of police tasks result in a different structure of cross-border information exchange. The cultural diversity creates misunderstandings and the 'lack of synchronisation in the communication between police forces can hamper cross-border police cooperation'[36]. Intra and inter-organisational information exchange are positively influenced by an organisational culture that emphasizes mutual interests, shared goals.[37] Researchers also found that the strong social network (informal social interactions and personal relationships) is also an important promoting factor.[38]

Incentives and leadership

Performance based reward or bonus system designed specifically to encourage information exchange motivates individuals to share information and thereby greatly facilitates information exchange.[39] On the other hand, in general, non-specific incentive methods can create competition that hinder inter-organisational information exchange[40], therefore, the importance of information exchange in performance assessment should be emphasised and assigned.

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[33] Travica, B., 'Information Aspects of New Organizational Designs: Exploring the Non-Traditional Organization', Journal of the American Society for Information Science, 49(23), 1998.

[34] Axelrod, R., *The Evolution of Cooperation*, Cambridge University Press, 1984, p. 128.

[35] Constant, Kiesler and Sproull, p. 410.

[36] Styczyńska I. and Beaumont, E.Z., 'Easing Legal and Administrative Obstacles in EU Border Regions', Case Study No.8, European Commission, 2017, p. 9.

[37] Bock et al., p. 87-111.

[38] Kim and Lee, p. 370-385.

[39] Willem, A. and Buelens, M., 'Knowledge Sharing in Public Sector Organizations: The Effect of Organizational Characteristics on Interdepartmental Knowledge Sharing', Journal of Public Administration Research and Theory, 17(4), 2007, p. 581.

[40] Zhang, J., Dawes, S. and Sarkis, J., 'Exploring Stakeholders' Expectations of the Benefits and Barriers of E-government Knowledge Sharing', Journal of Enterprise Information Management, 18(5), 2005, p. 548.

The attitude of the leadership also determines the reward and bonus system. Resteigne and Bogaert found that 'the style of the leadership can enforce the negative and positive attitude towards information exchange'[41]. An authoritarian leadership style can dissuade staff from developing a positive approach towards information sharing. Contrary to this, transformational leadership supports initiate taking and encourages staff to exchange information.[42]

Staff condition

The researcher argues that the conditions of the human resources also influence the exchange of cross-border information. The lack of staff can hamper cross-border information exchange, as the agency 'may focus on urgent issues within its own organisation when the immediate benefits of sharing information cannot be foreseen'[43]. However, not only the number of staff, but also their knowledge plays an important role in order to exchange quality information. The lack of training courses for field officers and the lack of awareness could hinder cross-border information exchange.[44]

Language

In the field of cross-border information exchange, communication in a foreign language can be a major obstacle and cause complications for daily police cooperation.[45] Insufficient knowledge of the foreign language significantly hinders cross-border information exchange.[46] Furthermore, the proficiency in a common language is a precondition of optimal information sharing as it makes it easier to understand the organisational culture, the information needs and it could also help to create social networks.[47]

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[41] Resteigne, D. and Van den Bogaert, S., 'Information Sharing in Contemporary Operations: The Strength of SOF Ties' in I Goldenberg, J Soeters and W Dean (eds), *Information Sharing in Military Operations. Advanced Sciences and Technologies for Security Applications,* Springer, Cham, 2017, p. 58.

[42] Goldenberg I. and Dean, H.W., 'Enablers and Barriers to Information Sharing in Military and Security Operations: Lessons Learned' in I Goldenberg, J Soeters and W Dean (eds), *Information sharing in military operations,* Springer Cham, 2017, p. 251-267.

[43] Yang and Maxwell, p. 170.

[44] Council of the European Union, 'Draft SPOC Guidelines for International Law Enforcement Information Exchange, 6721/3/14', 2014, p. 15.

[45] Hofstede, G. et al., *Coopération Policière Transfrontalière Entre La Belgique, l'Allemagne et Les Pays-Bas Avec Une Attention Particulière Pour l'eurégion Meuse-Rhin,* Maastricht: UPM- Universtaire Pers Maastricht, 1993.

[46] European Commission, 'Enhancing Police and Customs Cooperation in the European Union COM (2004) 376 Final', 2004.

[47] Goldenberg and Dean, p. 251-267.

POLICY, LEGAL ENVIRONMENT

The ruling policies and the legal environment have an impact on the behaviour of the individuals and of the organisation, and therefore on the cooperation between the organisations. Stable and accountable legislation and administrative procedures can mitigate the risks and can enhance inter-organisational cooperation.[48] Researchers argue that confidentiality and privacy should be supported by the legal environment in order to facilitate information exchange.[49] Clear legislation, regulation and policies are therefore fundamental to reduce uncertainties created by a difference in organisational culture, conflicting political and legal principles and competing values such as 'privacy, system integration, security, and confidentiality, which constantly threaten to put restrictions on information sharing into inflexible legal forms'[50]. On the other hand, a rigid legal environment and policies that prohibit sharing sensitive and regulated information in domains such as public safety and security can create barriers to cross-border information exchange and may hamper cooperation.[51] In the field of cross-border information exchange studies pointed out that the requirements of different national legal systems, different data protection and privacy regulations, different interpretation of the EU law, secrecy and confidentiality issues are among the main hindering factors of cross-border information exchange.[52]

TECHNOLOGICAL ENVIRONMENT

Efficiency of inter-organisational collaboration and information exchange can be increased by the advancement of the ICT.[53] An appropriate ICT environment can ensure shorter response times and better data quality.[54] The ICT system supports information exchange if different systems are homogeneous, the system combines user friendly ICT applications and has a high number of users.[55] The large number of different and non-interoperable databases

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[48] Zhang, J. and Dawes, S. 'Expectations and Perceptions of Benefits, Barriers, and Success in Public Sector Knowledge Networks', Public Performance & Management Review, 29(4), 2006, p. 433.
[49] Gil-García J.R. and Pardo, T.A., 'E-Government Success Factors: Mapping Practical Tools to Theoretical Foundations', Government Information Quarterly, 22(2), 2005, p. 187.
[50] Zhang, Sharon and Sarkis, p. 548.
[51] Gil-García and Pardo, p. 190.
[52] Styczyńska and Beaumont, p. 7.
[53] Zhang, Sharon and Sarkis, p. 548-567.
[54] European Commission, 'Strengthening Law Enforcement Cooperation in the EU: The European Information Exchange Model (EIXM), COM(2012) 735 Final', 2012, p. 12.
[55] Kim and Lee, p. 370-385.

and communication systems create duplications and hinder cross-border information exchange as it results in delayed responses.[56] More databases and ICT systems make information exchange more difficult, therefore the homogeneity and interoperability of information systems should be improved according to the European Commission.[57] The level of information security, the lack of secured communication channel and the old-style data transfer systems are other factors which can hinder inter-organisational information exchange.[58] Ensuring access authorization, authentication, security and confidentiality are critical in the design of the ICT system.[59]

A case management system which helps to evaluate, classify and disseminate the information originating from all channels and which has an interface to a secured communication platform, increases the efficiency of cross-border information exchange if it is accessible for the information exchange channels.[60]

RESEARCH METHODOLOGY

This research should answer the question of how law enforcement agencies exchange cross-border information, what factors impede and support this process and how obstacles can be overcome. In order to understand the case study[61], the process of cross-border information exchange and the influencing factors qualitative research strategy was chosen, desk research and in-depth interviews were conducted[62].

The desk research analysed the available open source data and documents in the field of cross-border information exchange, paying special attention to the organisational, legal and technological environments and the implications for information exchange. A content analysis was conducted to analyse the desk research. The data analysis was done by open coding, where the researcher broke down, examined, compared, conceptualised, labelled and grouped the gained data.[63] The results of the content analysis of the documents were compared with the

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[56] European Commission, 2004.
[57] European Commission, 'Stronger and Smarter Information Systems for Borders and Security, COM(2016) 205 Final', 2016.
[58] Saloven M. et al., p. 84.
[59] Chau M. et al., 'Building an Infrastructure for Law Enforcement Information Sharing and Collaboration: Design Issues and Challenges', *Proceedings of The National Conference on Digital Government Research,* 2002.
[60] Doherty, R. et al., p. 48.
[61] Yin, R.K., *Case Study Research Design and Methods*, 5th edn, Thousand Oaks ,CA:Sage, 2014, p. 1.
[62] Bryman, A., *Social Research Methods,* Oxford University Press, 2012, p. 628.
[63] ibid 569.

results of the analysis of the semi-structured interviews. This offers the opportunity to view the results from a different perspective.

Purposive sampling[64] was used for the three in-depth interviews to find answers to some practical questions. Three semi-structured interviews with one representative of each channel and one field officer were conducted via Skype to receive in-depth information about the research topic and to collect complementary information to support the desk research.[65] Interview questions and informed consent forms were sent out to the interviewees two days before the interviews. The transcripts were elaborated anonymous and shared with the participants for a cross-check to identify possible misunderstandings. The thematic analysis technique was used to code the semi-structured interviews.[66] The text was examined to conceptualise and categorise the information and the elaborated coding matrix helped to understand the data and the theories by sorting out the relevant information.

Quality aspects were ensured during the semi-structured interviews. The auditing approach ensured the dependability. Within the framework of respondent validation[67], the findings were shared with the interviewees ensuring the correspondence between the findings and the experiences of the interviewed persons. Each group and their viewpoints are represented equally in the research in order to ensure fairness.

RESULTS OF THE DESK RESEARCH

ORGANISATIONAL ENVIRONMENT

Culture

Police organisational culture is different in each EU MS, which comes from the diversity of the socio-cultural-, historical backgrounds, education, mentalities, work traditions, habits and fragmentation of the law enforcement tasks and authorities. We can find countries with single police services with two police services and with more than two police authorities. Although the historical roots are common 'neither police organisations nor their daily actions

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[64] ibid 418.
[65] Saunders, M., Lewis, P. and Thornhill, A., *Research Methods for Business Students,* Pearson Education Limited, 2008, p. 320.
[66] Bryman, p. 578–581.
[67] ibid 391.

are uniform'[68] in all countries. The police structure is centralised in some countries, and decentralised in others, some countries have single police force others have multiple.[69] This structural and cultural diversity and their effect on cross-border information exchange was recognised by the European Commission, they emphasised the importance of creating a common culture and common instruments in order to increase cross-border information exchange and cooperation.[70]

The general framework of international police cooperation is characterised by the diversity of the above written national structures and by the regional police organisations and EU instruments. Therefore, the structure of cross-border information exchange and the number of used channels depends on the number of police entities in a country and the level of centralisation of these agencies.[71] We distinguish two structures, the centralised and the decentralised one, depending on the general governing structure of the country.

Work of the channels

In reality, different units and services are dealing with different parts of law enforcement cooperation and information exchange in several countries and there are significant differences between the MSs regarding the responsibilities of the services. This complex legal and operational landscape formulates the need to establish a network of databases and creating a 'one window' system by putting one police unit in charge of international police cooperation in each country. This has resulted in the creation of the SPOC. SPOCs can be found on the central national level. SPOCs are usually divided into several functional subunits, which are responsible for conducting different types of cross-border activities. This simple and uniform approach at the national level aims to ensure that all information exchange requests are dealt with efficiently.[72] SPOCs are mostly operating 24/7, although this still does not mean a SPOC can immediately answer to requests especially if SPOC depends on other units which are not working round the clock. The work division is different in each country. In some countries the same staff exchange information on behalf of different agencies and also perform cross-border

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[68] Aden, H., 'Convergence of Policing Policies and Transnational Policing in Europe', European Journal of Crime, Criminal Law and Criminal Justice, 9(2), 2001, p. 99.
[69] Bayley, D.H., *Patterns of Policing: A Comparative International Analysis,* Rutgers University Press, 1990.
[70] European Commission, 2004.
[71] Saloven M. et al., p. 19.
[72] Council of the European Union, 2018, p. 32.

information exchange with other national LEAs, while in other countries the workforce is separated according to the channels and tasks. The desk research shows that the SPOC seems to be one of the most efficient tools for cross-border information exchange, and that communication is easier and more efficient within the MSs which have a SPOC.[73] However, the application of the SPOC concept varies across the MSs and the created structures just partly comply with the 'one window' criteria.[74]

Most SPOCs prioritise serious and organised crimes, although cross-border criminality embraces less serious offenses[75]. This and new challenges within the Schengen area needed a less-centralised information exchange channel at the internal frontiers, this has led to the creation of the PCCC. PCCCs are located regionally, they facilitate instant, direct and smooth information exchange with neighbouring countries, support the operational units in the border areas and help to make quick decision.[76] The generally high number of cross-border information exchanges is usually not related to the most serious and organised crime, as petty and medium crime, illegal migration and public order related information exchange is conducted mostly by the PCCCs.[77] The legal basis for the operation of the 64 currently existing PCCCs in the EU, is the Schengen Convention.[78] As the convention regulates the use of the communication channel only to a limited extent, the contracting parties define the basis for their cross-border cooperation in bilateral or multilateral intergovernmental agreements. Given the lack of a commonly agreed legal framework these agreements are very diverse. This has created an opportunity for using the so called 'chain-communication'. Chain-communication let the non-neighbouring countries exchange information by involving the neighbouring, intermediate PCCCs and by omitting the SPOCs[79]. As a result, the information was eventually exchanged between countries which have never signed an intergovernmental agreement on cross-border information exchange. A 'significant proportion of police information exchanges are believed to take place via PCCCs, which in many cases are believed to occur without the SPOC being made aware of them'[80].

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[73] Saloven M. et al., p. 19.
[74] Doherty, R. et al., p. 50.
[75] Saloven M. et al., p. 70.
[76] Council of the European Union, 2018, p. 44.
[77] Doherty, R. et al., 51.
[78] European Union, Art. 39, 44.
[79] Doherty, R. et al., p. 58.
[80] ibid 51.

Choice of the channels

Not only the differences of national structures, but also the variety of the nature of the exchanged information and the different legal backgrounds contributed to the creation and the wide choice and use of various information exchange channels. Different channels make 'more difficult to know which channel, and what means of communication, should be used for the cross-border information exchange'[81], and this sometimes leads to confusion.

The choice of channel is partly regulated by EU law, in some cases the use of a certain channel is mandatory, but the choice of channel in other cases is up to the MSs.[82] This seems to be supported by the Swedish Initiative[83], as it states: MSs can choose any channels which are used for international LEA cooperation. Contrary to this, the Schengen Codex states that, the request must be sent to the central national agencies which are responsible for international police cooperation. If the requested authorities do not have the authority to compete the request, it should be forwarded to the competent authority. If the request cannot be made in good time using the central authority, it can be sent directly to the competent police authority. The central authority shall be informed by the requester about the request as soon as possible. The decision of the MS about which channel will be used in a specific case usually depends on the subject matter, the requested country, the level of confidentiality and urgency. However, the Manual on Law Enforcement Information Exchange states that the requester (end-user) has a significant autonomy in choosing the channel which is considered to be the most appropriate and efficient.[84] Despite all these factors, the choice of channel depends on many factors, such as personal considerations, preferences for a certain channel etcetera, 'which are not consistent across and not even within the Member States'[85]. Two important factors which influence the choice of channel are trust and knowledge, as police officers are more willing to use those channels in which they trust and with which they are more familiar. Countries recognised this, therefore various training courses are available in several MSs. Training on cross-border information exchange is offered to SPOC staff in all MSs, however this is not true in case of

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[81] Saloven M. et al., p. 53.
[82] European Commission, 2016, p. 6.
[83] Council of the European Union, 'Council Framework Decision 2006/960/JHA', 2006, p. 89.
[84] Council of the European Union, 2018, p. 55.
[85] Doherty, R. et al., p. 6.

field officers.[86] In reality, staff lack adequate training, and the end-users lack knowledge of existing channels.

The previously discussed unstructured choice of channel poses problems for the players and officers who are engaged in information exchange and poses a risk to the quality of information exchange.[87] The unstructured choice also serves as a ground for sending requests via more communication channels, which causes duplications. This is not forbidden, as the manual on Law Enforcement Information Exchange allows one to send a request through more than one channel in exceptional cases, but this should be indicated to all channels. The change of channel and its reason also should be communicated to all parties.[88] The SPOC plays an important role in avoiding duplication according to different MSs.[89] Also, the national case management systems are efficient to detect rare redundancies.[90]

In addition to the above-mentioned formal channels, informal communication, typically via personal contacts also plays an important role. The extent of the use of this channel is impossible to estimate, but there are cases where informal communication channels are used to receive the answer rapidly or to speed up the already ongoing information exchange.[91] As the received information cannot be used in the judiciary procedure, an informal request is usually followed by a formal request at a later stage.[92]

LEGAL ENVIRONMENT

Several EU legal instruments emphasize the importance and create the legal background for the cross-border information exchange. Thanks to the 'principle of availability' rule introduced in the Hague Programme[93], the information available for a national LEA should also be available to each MS LEA, which in practise means that the exchange of available information cannot be refused by a MS LEA. The programme also emphasizes the importance of border areas where closer cooperation and better coordination is indispensable to deal with

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[86] ibid 79–83.
[87] ibid 6.
[88] Council of the European Union, 2018, p. 56.
[89] Doherty, R. et al., p. 49.
[90] Saloven M. et al., (n 8) 99.
[91] Doherty, R. et al., p. 58.
[92] Saloven M. et al., p. 76.
[93] Council of the European Union, The Hague programme: Strengthening freedom, security and justice in the European Union (2005/C 53/01), 2005, p. 1.

crime and security threats.[94] According to the desk research the 'principal of availability' is a goal that cannot be fully achieved due the existing differences between the national laws and technical systems, operational capabilities and the lack of interoperability.[95]

The Swedish Initiative[96] ensures that the same procedures be used for cross-border information exchange that is used within the national LEA. Exchange of information can only be refused for very few specific reasons. The 'principle of equivalent access' basically means that cross-border information exchange should not be more complicated or restrictive than information exchange at national level. The initiative also defines the time limit to provide the requested information which is 8 hours in urgent and one week in ordinary cases. Desk research shows that only 11% of the requesters often use urgent requests, since 57% seldom use and 32% have never used.[97] These numbers suggest that urgency is not an essential aspect during cross-border information exchange.

TECHNOLOGICAL ENVIRONMENT

The current ICT systems are appropriate and help cross-border information exchange, but because of the lack of secured communication channels and in order to ensure privacy and security still a large proportion of information exchange is still done by using 'old school' techniques, such as postal mail and fax.[98] To overcome these security concerns, some PCCCs started to use the Secure Information Exchange Network Application (SIENA)[99]. SIENA is a state-of-the-art platform which provides a secured and fast ICT environment for EU law enforcement agencies. It supports information exchange between MSs and Europol (within the Europol mandate) and it also facilitates bilateral data exchange between MSs (outside of the Europol mandate). Contrary to the PCCC, we could not find any information whether SPOCs are using SIENA for bilateral information exchange, although the suggestion to use SIENA as a default tool was already emphasised by the European Commission.[100]

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[94] Gherman, A.C., 'Cross-Border Police Cooperation in the European Union', Annals of University of Oradea, Series: International Relations & European Studies, 7, 2015, p. 212.
[95] Saloven M. et al., p. 36.
[96] Council of the European Union, 2006.
[97] Saloven M. et al., p. 38.
[98] ibid 84.
[99] More information is available at https://www.europol.europa.eu/activities-services/services-support/information-exchange/secure-information-exchange-network-application-siena, (accessed 12 March 2020).
[100] European Commission, 2012, p. 10.

Most MSs have a large number of different databases and several national LEAs have different policies, legislation and authorization regarding the use and management of their databases. Furthermore, not all necessary databases are available in a timely manner or to all of the staff who conducts information exchange.[101] Following the instructions of the SPOC guideline, several MSs also work with the case management system and its database which helps to evaluate, classify and disseminate the information originating from all channels and national authorities and which has an interface with SIENA and other platforms.[102]

RESULTS OF THE INTERVIEWS

ORGANISATIONAL ENVIRONMENT

Organisational structure and culture

The organisational structure generally supports the cross-border information exchange according to each interviewee, SPOC respondent furthermore added: '*Single law enforcement service, centralised control and the homogeneity of the structure is supporting the inter-agency information exchange, provides quality and timely answers'*. However, prioritisation can create obstacles, SPOC respondents continued as '*The police itself is doing multiple tasks, and sometimes information exchange has less priority than other police duties'*.

The organisational culture supports the cross-border information exchange and is evaluated by each respondent to be similar to its counterparts. However, the SPOC respondent stated that the culture *'has not too much impact on the efficiency'*, as their work is regulated by the legislation and therefore, they fulfil their tasks regardless of the similarity in organisational culture.

Leadership and management, staffing

All the interviewees agreed on the importance of managerial support in the efficiency of information exchange which is mostly manifested in the use of incentives and awards. No tailor-made performance evaluation procedure is systematised therefore according to the respondents, managers are voluntary using the non-institutionalized feedback system to motivate the staff: The PCCC interviewees started to organise regularly staff meetings in order to brief his colleagues about the results of their work. '*It's worth as this is the biggest motivation, more*

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[101] Saloven M. et al., p. 85.
[102] Doherty, R. et al., p. 48.

useful than the mostly administrative and unsupportive performance evaluation procedure' *(PCCC – respondents).* A manager of the SPOC reported the same experience: the motivation of the staff and then the efficiency of information exchange will increase after the introduction of a feedback system.

With respect to the management style interviewees stated that it is mostly open minded, but when new ideas or bottom up initiatives are conflicting with the current legislation, such as data protection rules, the managerial support decreases.

In the field of staffing, on one hand staff-shortage, overwhelmed staff and fluctuation were mentioned as the most important hindering factors. On the other hand, all of the respondents agreed that the staff is professional, efficient and capable to conduct efficient information exchange. Training courses are regularly organised which help to gain and maintain the necessary knowledge.

Personal relationship, trust

The personal relationship between the counterparts can influence the speed of the information exchange, all interviewees agreed. Field officer and PCCC staff interviewees emphasised the importance of mutual interest, social bonds and personal relationships to speed up the information exchange process. '*The biggest advantage of the PCCC is that the counterparts are working under the same roof which creates good personal relationship, this increases the speed of exchange. (PCCC - respondent)*

The representative of the SPOC on one hand stated that the personal relationship can speed up the information exchange, but the '*mutual interest and reciprocity is not important, as our job is regulated by the legislation*'. The information exchange will be done in an efficient way even in case of bad personal relationships or negative previous experience. Contrary to this, field officer and PCCC respondent emphasised the importance of the mutual interest, '*I can see the differences in efficiency when our counterpart is not interested in a case'.* One example was mentioned in the field of drug related requests between countries with different legislation, penalization (conservative-liberal): '*More difficult to cooperate with them in this case.' (PCCC - respondent)* The trust and reciprocity are also important, the field officer emphasised. The loss of trust and the experienced lack of reciprocity permanently eliminate the informal channel.

All respondents believed that personal relationship can be fostered by joint operations, workshops, various team-building activities and social events. The SPOC interviewee emphasised: *'the teambuilding activities with other countries are very useful, conferences help to improve personal relationships and settle problems'*. The interviews showed that the staff of the PCCCs have more opportunity to conduct more diverse trust building activities with their counterparts than the others: '*We are organising team once a year, celebrating birthdays, retirements on a monthly basis. In addition to the trust-building, these meetings are providing a huge opportunity to solve problems.' (PCCC - respondent)*

WORK AND CHOICE OF THE CHANNELS

Interviewees unanimously agreed that the requesters have a relatively large freedom in the choice of channel: *'The choice of channel is depending on the personal experiences of the requester' (SPOC – respondent).* PCCC respondent added: *'If a police officer has good experience with the PCCC (s)he will use it mostly for information exchange.'*

The SPOC

All of the channels exchange information on persons and objects, but SPOC is the only channel which can be used for all types of information exchange. Regarding to the speed of the information exchange conducted by the SPOC, both the field officer and the manager from the PCCC stated that '*the information comes quite slow' (Field officer-respondent*). *'The SPOC is slower, not suitable for everyday needs. It happens we receive the same request which was sent to the SPOC weeks ago and left unanswered.' (PCCC-respondent)* However, they agreed on that the SPOC is the most efficient channel when complicated or confidential information exchange need to be conducted, or investigative measures are carried out. Another common case for using the SPOC is when the requested information is foreseen to be used in the court procedure. This request is usually preceded by the PCCC or informal information exchange and the SPOC 'legitimising' only the information already known, stated the field officer.

The SPOC exchanges information without geographical border as its counterparts can be not only a neighbouring country but each EU MS and several third countries. Half of the exchange takes place with non-neighbouring countries and most of the exchange is complicated and requires more steps to provide answers. The exchange of information can be initiated via the command structure by mail or by specially designed e-networks. According to the SPOC

respondent, the added value of the SPOC is that, they *'exactly know which channel is the most efficient for a certain request in a specific country, so we can save time and can ensure efficiency'.* Same interviewee noted: '*The use of a specific network is mandatory in some few cases, in this case the use of alternative methods is not allowed.*' Contrary to this, the field officer stated that practical considerations and experiences are more important during the choice of the channel than the text of the legislation. '*Various factors shall be taken into consideration,*' he further explained, '*such as the chance to receive answer in time, available manpower, operational and legal consequences.*' *(Field officer - respondent)*

The PCCC

'The PCCC can conduct information exchange in 5-20 minutes, therefore it is a very efficient channel when fast and simply information exchange is requested from, as a general rule, neighbouring country' (PCCC-respondents), interviewees from the field and from the PCCC stated. The information exchange is based on intergovernmental agreements, which provides flexibility. The area of responsibility usually covers the whole country but sometimes it is limited to the border region. Even if previously mentioned geographical limitation is in force, some PCCCs are allowed to exchange information out of their limited AOR as it was stated by the interviewee from the PCCC: '*We can exchange information out of the border region we are not limited to the region, in this case we have only one restriction, the information exchange request shall be urgent.' (PCCC - respondent)*

Recently PCCCs have started to exchange information directly with non-neighbouring PCCCs, with the staff of LEAs of non-neighbouring countries and even with the staff of Frontex operations who serve abroad: '*We started to receive information, which is related to other, non-neighbouring countries. We also receive requests directly from non-neighbouring countries in case the requester needs information from my country or from my counterparts. Direct contact also exists, we are receiving requests from foreigner (EU MS) police officer from the field and not through their PCCC.' (PCCC – respondent)* Field officer agreed with this, he stated: '*I have a list about the PCCCs within the EU, I send them request regularly, sometimes I receive answer sometimes not, it is not consistent even within one PCCC.'*

Furthermore, the PCCC information exchange with non-neighbouring countries can be conducted by using the so-called 'chain of request technique'. The Swedish Initiative is used as a legal background when information exchange is conducted with non-neighbouring

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countries. '*If my country has no PCCC with the country from where I need the information, I can send my request to one of my national PCCC, who will use the chain of request or snow ball method, and will send it to the appropriate PCCC by using interim PCCC.' (Field officer - respondent)* The purpose of the chain of request is to eliminate certain legal problems arising from the nature of intergovernmental agreements, which are mutatis mutandis limiting the information exchange only to the signatory parties. In this case, the intermediate PCCCs only play the role of messengers and forward the request to the final PCCC destination: '*If we receive a request which is not related to our country, we use chain request, but this is under 10%.' (PCCC - respondent)*

Another task of the PCCCs is the facilitator role: '*Several countries do not accept requests from countries which are not the parties of the bilateral agreements, in this case the request can be sent to that PCCC which is the member of the agreement and which accepts request from outsiders. This PCCC, based on the bilateral agreement will request the information exchange from its counterpart and when the requested information is received it simply forwards it to the original requester.' (PCCC - respondent)* The facilitator role is also used to overcome language barriers: As some PCCCs cannot communicate in foreign languages, the facilitator counterpart PCCC can be used to translate the request and to forward it to the target PCCC, stated the PCCC – respondent. This statement was supported by the field officer respondent also.

The informal channel

As a result of the complications introduced above, the use of informal channels has been increased, according to the field officer: '*As the official channels are simply incapable to provide the necessary answers such a short time, we have basically two options: using informal channels or not using them, and despite our suspicion, let him or her cross the border and enter or exit the EU, but honestly saying to let somebody crossing the border with e.g. fake passport is a security risk.'*

Informal channels are used when something is suspicious, but the available information is not adequate to create well-grounded suspicion and the officer has only a few, maximum fifteen minutes to decide what actions must be taken. An informal request is usually followed by an official request in case of a positive answer and when further action is needed. According to the field officer '*informal channels, trust and maintain trust have an utmost importance.*

Mutual interests make me to use informal channels.' Trust originates from previous work experiences, joint activities, conferences, workshops, common workplaces etc. Closed messenger groups or phone are used for informal information exchange. Informal channels are not used by the staff of the PCCC and the SPOC, we learned from the interviews.

Parallel channels

Parallel channels are mostly used by the field officers to get timely response. '*As one case management system is used, parallelism is immediately spotted',* said the PCCC respondent. Contrary to this the interviewee from the SPOC said that: '*The duplications cannot be identified automatically because of the lack of a common case management system with the police'.* Therefore, the duplication can only be detected manually which is really time consuming. Duplication that is signalled in time does not hinder the information exchange, as only one request will be answered. Increased workload only occurs when parallelism is not noticed and both channels work on the same request. '*We are not using more channels frequently, just if one channel is not responding or acting',* was said by the SPOC interviewee.

LEGAL AND TECHNOLOGICAL ENVIRONMENT

Legislation influences the efficiency of the information exchange and data protection regulation hinders the exchange of information each respondent agreed. The EU legislation makes the system inflexible, the *'Interpretation of the legislation, bilateral agreements are different by the PCCCs even sometimes by the staff within one PCCC, which can block the information exchange' (PCCC - respondent).* As it was mentioned before by the representative of the PCCC, this rigidity can be absorbed by intergovernmental agreements, in this case '*the Schengen regulation and the Swedish Initiative which complicates the information exchange can be neglected*' (PCCC – respondent). Contrary to the opinion of the PCCC and field officer interviewees, the SPOC respondent stated that the legislation is not strict, it *'provides flexibility and thanks to this the ruling regulations do not hinder the information exchange'.*

Finally, in the area of the technological environment, everyone agreed on the importance of interoperability: '*If the systems are interoperable it really can speed up the process.' (SPOC - respondent)* The availability of various databases can also increase the efficiency we learned from the PCCC and the field officer respondents, one said: *'We need more access to more*

databases. We need access to all EU databases if we want to work for a safer EU.' (PCCC – respondent).

CONCLUSIONS AND RECOMMENDATIONS

Three main environments have an impact on the exchange of cross-border information, such as the organisational/management, legislation/policy and the ICT environment. The supporting and hindering factors can be integrated into this concept, in these environments.

Firstly, the highly centralised organisational structure, 'red-tape' bureaucracy and authoritarian leadership style, lack of institutionalised reward and feedback system, weak internal coordination, diverse organisational cultures, internal and external competition, lack of trust and reciprocity and the overwhelmed staff are among the most important organisational obstacles in the field of cross-border information exchange found in this study. However, the organisational structure and culture, the quality of the staff generally supports the cross-border information exchange. Researcher found that, the international police cooperation varies with the organisational structure of the national services, by the regional constellations and relationships and by the ruling EU instruments. Therefore, the cross-border information exchange process, the use of the channel is not consistent, it highly depends on the number of the police entities in a country, the level of centralisation, the ruling policies, legislation and the ICT environment. It also can be concluded that the choice of channel is unstructured, it depends on personal experiences, knowledge and trust towards a certain channel. When the official channel is passive or slow, the rules are sometimes violated by using informal networks. The existence and use of the informal channels indicate that there are significant disadvantages of the official channels, which are mainly reflected in the speed of the information exchange process. However, the existing good personal relationship between the counterparts, trust, mutual interest and the reciprocity can contribute to a faster exchange.

Secondly the legislative environment (various requirements of the national legislations, differences in data protection and classification rules and uncertainty about which information can be provided by a country) slows down the information exchange and poses a threat to the efficiency of cross-border data exchange. The lack or inappropriate harmonisation of the EU instruments and the different national interpretations are also hindering factors found in this study.

Third, the obsolete or different levels of the ICT system, the lack of interoperability and compatibility and finally the proliferation of various national databases can cause delayed responses, and this has a negative impact on the efficiency. Another problem is the lack of a commonly used case management system and the lack of secure communication channels that ensure the enforcement of the required rules on data protection and confidentiality in the exchange process.

Based on the research results and the identified gaps one of our most important suggestions is to create a unified and harmonized legal background for the cross-border information exchange and to equip all channels to be able to conduct fast cross-border information exchange. Also, acknowledging that the speed is a big advantage of the PCCC in the information exchange, at first the legal base should be created which ensures a geographically unlimited cross-border information exchange for this channel. Furthermore, the management must be aware of the importance of supporting, transformational leadership in the efficiency of the information exchange, which can be ensured by organizing managerial training courses. Management could introduce a tailor-made incentive system and provide appropriate feedback. Next, interoperability should be ensured to increase the speed of the channels. User friendly and advanced ICT system should be created which support rapid and secured information exchange. Access to the EU databases should be granted to the channels and to the field officers so that they can respond automatically to certain requests. Finally, in order to avoid duplication and to decrease the unnecessary workload of channels, a case management system should be set up to identify parallel requests.

REFERENCES

1. Adams B. et al., 'Review of Interorganizational Trust Models', Ft. Belvoir: Defense Technical Information Center, 2010.
2. Aden, H., 'Convergence of Policing Policies and Transnational Policing in Europe', European Journal of Crime, Criminal Law and Criminal Justice, 9(2), 2001, p. 99-112.
3. Arches, A. 'Social Structure, Burnout, and Job Satisfaction' Social Work 36(3), 1991, p. 202-206.
4. Argote, L. et al., 'Knowledge Transfer in Organizations: Learning from the Experience of Others', Organizational Behavior and Human Decision Processes, 82(1), 2000, p. 1-8.
5. Axelrod R, *The Evolution of Cooperation,* Cambridge University Press, 1984
6. Bayley D.H, *Patterns of Policing: A Comparative International Analysis,* Rutgers University Press, 1990.
7. Bock G-W et al.,, 'Behavioral Intention Formation in Knowledge Sharing: Examining the Roles of Extrinsic Motivators, Social-Psychological Factors, and Organizational Climate' MIS Quarterly, 29, 2005, p. 87-111.
8. Bozeman B. and Scott, P., 'Bureaucratic Red Tape and Formalization: Untangling Conceptual

ISSN 2029-1701
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Mokslinis žurnalas
VISUOMENĖS SAUGUMAS IR VIEŠOJI TVARKA
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Knots', The American Review of Public Administration, 26(1), 1996, p. 1-17.

9. Bryman A, *Social Research Methods,* Oxford University Press, 2012.

10. Bstieler, L., 'Trust Formation in Collaborative New Product Development', Journal of Product Innovation Management, 23(1), 2006, p. 56-72.

11. Cater, B., 'The Importance of Social Bonds for Communication and Trust in Marketing Relationships in Professional Services', Management, 13(1), 2008, p. 1-15.

12. Chau, M. et al., 'Building an Infrastructure for Law Enforcement Information Sharing and Collaboration: Design Issues and Challenges', *Proceedings of The National Conference on Digital Government Research,* 2002.

13. Constant, D., Kiesler, S. and Sproull, L., 'What's Mine Is Ours, or Is It? A Study of Attitudes about Information Sharing', Information Systems Research, 5(4), 1994, p. 400-421.

14. Council of the European Union, 'Council Framework Decision 2006/960/JHA on Simplifying the Exchange of Information and Intelligence between Law Enforcement Authorities of the Member States of the European Union', 2006.

15. Council of the European Union, 'The Hague programme: Strengthening freedom, security and justice in the European Union, 2005/C 53/01, 2005.

16. Council of the European Union, 'Draft SPOC Guidelines for International Law Enforcement Information Exchange, 6721/3/14', 2014.

17. Council of the European Union, 'Manual on Law Enforcement Information Exchange, 6727/18', 2018.

18. Dawes S, 'Interagency Information Sharing: Expected Benefits, Manageable Risks', Journal of Policy Analysis and Management, 15, 1996, p. 377-394.

19. Doherty, R. et al., 'Study on the Implementation of the European Information Exchange Model (EIXM) for Strengthening Law Enforcement Cooperation', 2015.

20. European Commission, 'Enhancing Police and Customs Cooperation in the European Union, COM (2004) 376 Final', 2004.

21. European Commission, 'Strengthening Law Enforcement Cooperation in the EU: The European Information Exchange Model (EIXM), COM(2012) 735 Final', 2012.

22. European Commission, 'Stronger and Smarter Information Systems for Borders and Security, COM(2016) 205 Final', 2016.

23. European Police Office, 'Serious and Organised Crime Threat Assessment', 2017.

24. European Union, *The Schengen Acquis*, OJ L 239, 2000.

25. Frontex, *Risk Analysis for 2018,* 2018.

26. Gherman, A.C., 'Cross-Border Police Cooperation in the European Union', Annals of University of Oradea, Series: International Relations & European Studies, 7, 2015, p. 203-2016.

27. Gil-García J.R. and Pardo, T.A., 'E-Government Success Factors: Mapping Practical Tools to Theoretical Foundations', Government Information Quarterly, 22(2), 2005, p. 187-216.

28. Goldenberg I. and Dean, H.W., 'Enablers and Barriers to Information Sharing in Military and Security Operations: Lessons Learned' in I Goldenberg, J Soeters and W Dean (eds), *Information sharing in military operations,* Springer Cham, 2017, p. 251-267.

29. Gruszczak, A., 'Police and Customs Cooperation Centres and Their Role in EU Internal Security Governance', *EU Borders and Shifting Internal Security: Technology, Externalization and Accountability,* 2016, p. 157-175.

30. Hofstede G et al.,, *Coopération Policière Transfrontalière Entre La Belgique, l'Allemagne et Les Pays-Bas Avec Une Attention Particulière Pour l'eurégion Meuse-Rhin,* Maastricht: UPM-Universtaire Pers Maastricht, 1993.

31. Hufnagel S, *Policing Cooperation across Borders,* London: Routledge, 2016.

32. Kim, S. and Lee, H., 'The Impact of Organizational Context and Information Technology on Employee Knowledge-Sharing Capabilities', Public Administration Review, 66(3), 2006, p. 370-385.

33. Mausolf A, 'Keeping Up Appearances: Collaboration and Coordination in the Fight against Organized Crime and Terrorism', University of Leiden, 2010.

34. Mintzberg H, 'The Structuring of Organizations' in Asch D. and Bowman C. (eds), *Readings in Strategic Management*, Palgrave, 1989.

35. Rainey, H.G., Understanding and Managing Public Organizations, San Francisco: Jossey-Bass, 1992.

36. Resteigne, D. and Van den Bogaert, S., 'Information Sharing in Contemporary Operations: The Strength of SOF Ties' in I Goldenberg, J Soeters and W Dean (eds), *Information Sharing in Military Operations. Advanced Sciences and Technologies for Security Applications,* Springer, Cham, 2017, p. 51-66.

37. Saloven M et al.,, 'Study on the Status of Information Exchange amongst Law Enforcement Authorities in the Context of Existing EU Instruments', 2010.

38. Saunders M, Lewis P and Thornhill A, *Research Methods for Business Students*, Pearson Education Limited, 2008.

39. Styczyńska I. and Beaumont, E.Z., 'Easing Legal and Administrative Obstacles in EU Border Regions', Case Study No.8, European Commission, 2017, p. 1-60.

40. Travica, B., 'Information Aspects of New Organizational Designs: Exploring the Non-Traditional Organization', Journal of the American Society for Information Science, 49(23), 1998, p.1224-1244.

41. Weibel, D., 'Police and Border Cooperation in Schengen: The Police and Customs Cooperation Center (PCCC)', Leiden University, 2016.

42. Willem, A. and Buelens, M., 'Knowledge Sharing in Public Sector Organizations: The Effect of Organizational Characteristics on Interdepartmental Knowledge Sharing', Journal of Public Administration Research and Theory, 17(4), 2007, p. 581-606.

43. Wilson, D.T., 'An Integrated Model of Buyer-Seller Relationships', Journal of the Academy of Marketing Science, 23(4), 1995, p. 335-345.

44. Yang, TM. and Maxwell, AT., 'Information-Sharing in Public Organizations: A Literature Review of Interpersonal, Intra-Organizational and Inter-Organizational Success Factors', Government Information Quarterly, 28 (2), 2011, p. 164-175.

45. Yin, R.K., *Case Study Research Design and Methods*, 5th edn, Thousand Oaks ,CA:Sage, 2014.

46. Zaiotti, R., *Cultures of Border Control: Schengen and the Evolution of European Frontiers,* University of Chicago Press, 2011.

47. Zhang, J. and Dawes, S. 'Expectations and Perceptions of Benefits, Barriers, and Success in Public Sector Knowledge Networks', Public Performance & Management Review, 29(4), 2006, p. 433-466

48. Zhang, J., Dawes, S. and Sarkis, J., 'Exploring Stakeholders' Expectations of the Benefits and Barriers of E-government Knowledge Sharing', Journal of Enterprise Information Management, 18(5), 2005, p. 548-567.