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## Importance of Information in Crisis Management – Statistical Analysis<sup>5</sup>

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**Abstract:** *The article reports on a statistical analysis of the importance and role information plays in crisis management. The purpose of the research is to empirically examine the impact that information makes on crisis management and on activities conducted by crisis managers. The empirical research is conducted using the questionnaire approach. Questionnaire was designed to capture the most relevant aspects of crisis management as perceived by respondents with an aim to examine how information affects crisis management and which organizational factors affect the information flow in crisis. The research sample included 299 respondents from the wider area of the City of Belgrade. The data were analyzed using the SPSS Software Package. The research results indicate that appropriate methodology enables organizations to manage crisis and better avoid its consequences, as well as that quality of crisis managers, professional staff, informing process, internal and external communication, timely sharing and information accuracy in crisis, as well as knowledge and capabilities of employees and managers to use information have average to high impact on the quality of crisis management.*

**Keywords:** *information, crisis management, statistical analysis*

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## Statistička analiza značaja informacija u kriznom menadžmentu

**Apstrakt:** Rad prikazuje statističku analizu uloge i značaja informacija u kriznom menadžmentu. Svrha istraživanja je da empirijski ispita uticaj koji informacije ostvaruju na krizni menadžment i na aktivnosti koje sprovode krizni menadžeri. Empirijsko istraživanje je realizovano primenom anketnog upitnika. Upitnik je dizajniran na način da omogući prikupljanje podataka o stavovima ispitanika o relevantnim aspektima kriznog menadžmenta sa ciljem da se ispita na koji način informacije utiču na krizni menadžment i koji organizacioni faktori utiču na protok informacija. Istraživanje je sprovedeno na uzorku od 299 ispitanika sa šireg područja Grada Beograda. Prikupljeni podaci su analizirani u statističkom softveru SPSS. Rezultati istraživanja su pokazali da adekvatna metodologija omogućava organizacijama da upravljaju krizom i bolje ublažavaju njene posledice. Takođe, rezultati ukazuju i da kvalitet kriznih menadžera, stručnog osoblja, informisanja, interne i eksterne komunikacije, pravovremenog i tačnog informisanja, kao i znanja i sposobnosti menadžera i zaposlenih da koriste informacije ostvaruje umereno do visok uticaj na kvalitet kriznog menadžmenta.

**Gljučne reči:** informacije, krizni menadžment, statistička analiza

### 1. Introduction

Some of the major issues associated with crisis management refer to information and communication system. The term information is used to describe a quantified and measurable notice. Information must be available at the right time, respectively at the time when a decision is being made, and its value is determined by the time specificity, knowledge specificity and terms of its use. Qualitative and accurate information can mitigate the impact of crisis and direct and facilitate the decision-making process in crisis management. Efficient communication is a major challenge for emergency responders during crisis management, and missing information and information overload are important factors that determine the success of crisis management (Netten & van Someren 2011). As a process of exchanging data, communication relies on information.

Information exchange is important under ordinary conditions, but even more during crisis when success of crisis' resolution depends on the response provided by management. A crisis is the perception of an unpredictable event that threatens important expectancies of stakeholders and can seriously impact an organization's performance and generate negative outcomes (Coombs, 2012, p. 2–3). Crises result when an environmental threat interacts

with an organizational weakness (Egelhoff & Sen, 1992, p.6). On the one hand, the lack of information negatively affects the decision-making, and decisions are an integral part of problem solving. The number of decisions that must be made increases when crisis occurs. On the other hand, an information overload also has a limiting impact on the effectiveness of decisions. Research suggests that organizations are often unprepared for the information gathering and dissemination tasks required for the effective handling of a crisis (Coombs, 1999).

Information is based on data collection, analysis and interpretation. Having the right information, in the right place, in the right form, and of sufficient completeness and quality to meet the needs requires a set of activities referred to as information management (Jones, 2008). Information management includes collecting, processing, storing, organizing, and distributing information. Management information system is a comprehensive human-machine system providing the supporting information of decision and operation in a social formation and organization (Schoderbeck, Kefalas & Charles, 1975).

In the modern era the number of communication channels has rapidly increased. Information technology development has made the transfer of information easy and fast in all aspects of human activity. The intensive flow of information within an organization ensures information needed for good decision-making. Modern complex systems are designed to support the processes of knowledge management and even produce knowledge from data or information (Mašić et al. 2017). Along with the abandonment of a traditional approach in which one person is responsible for information, the role of IT sector becomes increasingly important. The IT sector emphasizes not only the high quality but efficient storage and collection of information as well.

Effective crisis management is determined to a large extent by information and response activities. The role of information is complex because it shapes the crisis management plan and facilitates the crisis response activities. What the organization says and does once a crisis begins can have a significant effect on the success of the crisis management effort (Benoit, 1997).

This article reports on a statistical analysis of the importance and role information plays in crisis management. The purpose of the research is to empirically examine the impact that information makes on crisis management and on activities conducted by crisis managers. The empirical research is conducted using the questionnaire approach as a qualitative method of data collection. The questionnaire was designed to capture the most relevant aspects of crisis management as perceived by respondents with an aim to examine how information affects crisis management and which organizational

factors affect the information flow in crisis. The Statistical Package for the Social Sciences (SPSS) is used to analyze the collected data.

In accordance with the defined research objective, the basic hypotheses were set as follows:

- 1) Crisis affects all aspects of human life and work, and methods of crisis management determine the success of its consequence avoidance;
- 2) Information – its value, methods of transmission, sender and receiver affect crisis management and activities conducted by crisis managers.

## **2. Literature review**

This section describes and summarizes research findings that have focused on the role that information and communication play in crisis management.

When attempting to cope with crisis, every entity e.g. individual, organization or society must implement a crisis management plan and prepare for the unexpected occurrences. Because crises are always associated with uncertainty and risk, success in crisis management is determined by many factors such as information exchange, good decision-making, efficient communication with all relevant stakeholders and coordination of response activities. Pearson & Clair (1998) summarized four aspects of planned and ad hoc responses that influence the degree of organizational crisis management success: (1) team versus individual responses, (2) alliance and coordination of stakeholders, (3) information dissemination, and (4) organization or industry visibility. As for information dissemination, the authors proposed that crisis management efforts will be more successful if information is disseminated quickly, accurately, directly, and candidly to critical stakeholders.

Egelhoff & Sen (1992) developed a model that views crisis management as an information-processing situation and organizations that must cope with crisis as information-processing systems. They use the term "information-processing" to encompass not only communication but also decision-making and the gathering and storage of information in organizations.

The value of information refers to the price a decision-maker is ready to pay before a decision is made. This indicates the importance of accessing the right information at the right time. In case information is not accessible at the right time, it loses its value. Claeys & Cauberghe (2012) investigate the moderating impact of the timing of crisis disclosure on the effect of crisis response strategies on organizational post-crisis reputation. These findings stress the importance of timing to disclose crisis information in addition to the content of crisis communication strategies.

The lack and inadequacy of information particularly becomes relevant during crisis. According to Reddy, Abraham, Mc Neese, De Flicht & Yen (2009) designing information and communication technologies that facilitate coordination of crisis response activities is often proposed as one of the solutions for information and communication related challenges. Liu, Austin & Jin (2011) indicate the importance of strategically matching crisis information form and source when organizations respond to crises.

Stubbart (1987) describes the potential problems associated with organizational decision-making during crisis. Research studies describe the following dangers associated with cognitive reduction or simplification: a tendency to ignore uncertainty, reasoning by analogy and metaphor, group thinking, intolerance of ambiguity, defensive reasoning, and considering too narrow a set of stakeholders (Egelhoff & Sen, 1992, p. 445).

Communication can be used to influence how stakeholders interpret a crisis and the organization in crisis (Coombs & Holladay, 1996, p. 4). Bergman (1994) and Trahan (1993) found that information and compassion are the two dominant message factors noted by crisis experts. Crises can affect stakeholders, and hence, stakeholders want and need to know what a crisis involves and if it will affect them. Allen & Caillouet (1994) and Marcus & Goodman (1991) stated that an organization will use communication strategically as a response to legitimacy threats because corporate discourse does shape how stakeholders view an organization.

For data to become useful information, a process of collecting, storing, managing and maintaining information is needed. Efficient decision-making is supported by information management. Some of the major challenges associated with team coordination during crisis management include information mismanagement (Comfort & Zagorecki, 2004; Kyng, Nielsen & Kristensen, 2006), resource allocation issues (Seifert, 2001) and ineffective communication (Hale, Dulek & Hale, 2005; Mattox, 2001). These challenges collectively can lead to coordination and communication breakdowns between these teams. One solution to alleviate these challenges proposed by Reddy, Abraham, Mc Neese, De Flicht & Yen (2009) is to design information and communication technologies (ICTs) that facilitate coordination of crisis response activities.

Technological progress and use of information and communication technologies has changed the method information is collected, processed, stored and distributed. Bahman (1991) noticed that as many studies are conducted regarding the collection, processing and transferring information, the current era is called information and communication era. Technologies and information systems provide support to efficient crisis management. The management information systems increased the managers' information and even the experts of various levels of the organization and by raising new

concepts not only extended their knowledge scope about what they can do and what is their decision and helped them in doing their activities and responsibilities( Jams & Kent, 2003)

There is an emerging research that empirically documents how and why social media affect successful crisis communication management (e.g., Coombs, 2008; Yang, Kang, & Johnson, 2010). The research conducted by Perry, Taylor & Doerfel (2003) shows evidence of emerging trends in the use of computer-mediated communication as a crisis communication tool. They examined how organizations integrate the Internet into crisis communication. The research results show that most surveyed organizations turn to the Internet to communicate with public and news media during crisis; organizational type does not appear to influence the integration of the Internet in crisis response; crisis type does not appear to influence an organization's decision to use the Internet in its immediate crisis response; most organizations incorporate both traditional and new media communication tactics into their crisis responses, there is a continued preference for traditional tactics. According to Edelman (1998) technology has created a new generation of crisis response where the immediacy of news allows for no grace period designated as response time in crisis situations.

Social media has become powerful communication channel during crisis. Particularly, it is an efficient tool used by crisis managers to communicate with stakeholders and mitigate the reputation risk. Increasingly, publics consider the Internet to be the most reliable source for news, especially ideal for generating timely communication, unique information, and interactive conversations (Seltzer & Mitrook, 2007; Taylor & Perry, 2005 in Liu, Austin, & Jin, 2011). Research methodology should unambiguously describe the process of collection and processing (including statistical methods) of data used in the research with all necessary information needed for repeated investigation.

## **2. Research methodology**

The importance of information in crisis management is empirically examined using the questionnaire-based method. The questionnaire was designed to collect data on different aspect of crisis management as perceived by surveyed respondents. Questions were organized along three thematic blocks. The first one includes questions on characteristics of respondents' work organizations such as the number of employees, the main sector of activity, number of years in business, geographical scope of business (local, regional, national, international), as well as whether there is a crises and emergency sector and a person in charge for information transmission, and

level of respondents' engagement in management activities in organizations. The second block includes questions on how crisis management is organized and implemented and on the quality of information in organizations. The third one refers to factors affecting occurrence and outcome of crisis.

The research sample included 299 respondents representing different organizations in the wider area of the City of Belgrade. The sample fulfilled basic requirements of representativeness and adequacy of population in terms of age, gender, type of activity, etc. Before completing the questionnaire, the purpose and content of research were clarified to the respondents. The questionnaire was conducted in the period January-March 2017.

The collected data were analyzed using the SPSS Software Package. The analysis is based on the most important indicators of descriptive statistics (mean, median, standard deviation, frequency tables, etc.), and the Wilcoxon signed-rank test used in hypotheses testing.

The research results are given in tabular form and the main conclusions are discussed.

## **2. Results and discussion**

In examining the importance of information in crisis management, a questionnaire method was used to collect data on perceptions of respondents on different aspect of crisis management in their work organizations. Descriptive statistics was used to describe the basic features of the data. The research hypotheses were examined using the Wilcoxon signed-rank test.

In the first step, the collected data on characteristics of respondents' work organizations were described. The basic characteristics included the number of employees, the main sector of activity, number of years in business, geographical scope of business (local, regional, national, international), as well as whether there is a crises and emergency sector and a person in charge for information transmission. Also, this questionnaire block provided information on the respondents' level of management engagement in organizations.

As for distribution of organizations by number of employees all respondents' answers were classified into 4 categories. The majority of respondents to the questionnaire (around 70%) work in organizations with 50-249 and 250 and more employees. Approximately 20% of surveyed respondents work in

organizations employing 10-49 employees, while the share of organizations employing fewer than 10 people is less than 10.

Distribution of organizations by main sector of business activity showed the dominant share of health sector (18%), followed by trade sector (14%), and defense and security sector (13.4%). Education sector accounts for 9.7% of the total number of responses, while all remaining sectors all together account for less than 9%.

Regarding number of years in business, 31.11% of respondents work in organizations operating more than 75 years, 20% work in organizations operating between 11 and 25 years, while the share of respondents who work in organizations operating less than 10 years, between 26 and 50 years, and between 51 and 75 years is approximately equal.

When looking at geographical scope of business activity, organizations operating within the boundaries of Serbia emerge as the most presented group in the sample along with organizations operating locally. However, organizations operating internationally account for a significant share in the total number of organizations (approximately quarter of the sample).

Respondents were also asked whether their work organization has a crises and emergency sector. A little more than 50% of respondents work in organizations in which there are crises and emergency sectors. The other two categories which refer to respondents who work in organizations with no crises and emergency sector and respondents who don't know whether such a sector exists in their organization together account for another 50% of the total number of surveyed respondents, while their individual participation is approximately equal.

A similar distribution of respondents' answers is found concerning the presence of a trained person in charge of information transmission. Approximately 55% of respondents work in organizations in which there are such persons, while the remaining 45% accounts for respondents who work in organizations in which such a person is not present and respondents who don't know whether there is such a person, while their individual participation is approximately equal.

Distribution of responses by level of management engagement shows that executors account for 41.5% of the total number of respondents. Middle management level ranks second with the share of 32.4%, while upper and lower management levels account for 12% and 14% respectively.

In the second step, the data on the quality of crisis management is described along with descriptive statistics provided in table 1.

Table 1. Descriptive statistics of estimates on crisis management quality

Description	N	Mean	Std. Deviation
1. Crisis management	299	3,3043	1,13709
2. Professional staff	299	3,5485	1,05876
3. Informing in crisis	299	3,4281	1,03497
4. Internal communication in crisis	299	3,4783	1,12418
5. External communication in crisis	299	3,3813	1,10298
6. Timely information sharing when crisis occurs and during crisis	299	3,5151	1,08480
7. Information accuracy	298	3,5705	1,06840
8. Knowledge and capabilities of employees to use information	299	3,5619	1,11969
9. Knowledge and capabilities of managers to use information	299	3,5953	1,10221

Source: Authors' calculation

Quality of crisis management is scored on a scale of 1-5, 1 being "very low", 2 being "low", 3 being "average", 4 being "high", and 5 being "very high". The analysis results show that average scores are above the median level with high compliance among scores. The quality of crisis management, professional staff, informing, internal and external communication, timely sharing and information accuracy in crisis, as well as knowledge and capabilities of employees and managers to use information are scored between "average" and "high".

In the third step, the data on significance of factors affecting occurrence and outcome of crisis are described along with descriptive statistics provided in table 2.

Respondents ranked the significance of factors affecting occurrence and outcome of crisis on a scale of 1-5, 1 being "not significant at all", 2 being "nonsignificant", 3 being "neither significant neither nonsignificant", 4 being "significant", and 5 being "very significant". Like previous question, the ranks are highly compliant and on average above the median value which points out that respondents consider all given factors as significant for occurrence and outcome of crisis. However, the impact of internet frauds has slightly lower rank, while the impact of information accuracy on crisis occurrence and outcome has slightly higher rank.

Table 2. Descriptive statistics of scores on factors affecting occurrence and outcome of crisis

Description	N	Mean	Std. Deviation
1. Political factors	299	3,6321	1,12854
2. Legal factors and regulations	299	3,7358	1,05888
3. External stakeholders who affect the operation of your organization (buyers, suppliers, banks, etc.)	299	3,7291	1,11587
4. Internet frauds	299	3,3779	1,18193
5. Organizational culture	299	3,7291	1,00177
6. Organizational reputation	299	3,8629	,98543
7. Management plan	299	3,7525	1,07392
8. Crisis management quality	299	3,6522	1,10797
9. Crisis management team	299	3,6890	1,18445
10. Timely information sharing	299	3,9064	1,09816
11. Information accuracy	299	3,9833	1,09746
12. Methods of information management	299	3,9264	1,05929
13. Source of information	299	3,9398	1,06329
14. Methods of information processing	299	3,8796	1,05815
15. Managers' knowledge base on how to use information adequately	299	3,8863	1,04614
16. Employees' knowledge base on how to use information adequately	299	3,9298	1,00590
17. Internal communication in case of crisis	299	3,8629	1,07031
18. External communication in case of crisis	299	3,9064	1,00231

Source: Authors' calculation

The fourth step is hypotheses testing.

H1: Crisis affects all aspects of human life and work, and methods of crisis management determine success of consequence avoidance.

The first hypothesis testing refers to the analysis of respondents' perceptions on the impact of crisis on all aspects of human life and activity with focus on the significance of certain factors on avoiding crisis consequences. The respondents' perceptions are ranked on an ordinal scale of 1-5, 1 being "not significant at all", 2 being "nonsignificant", 3 being "neither significant neither nonsignificant", 4 being "significant", and 5 being "very significant". The median value is 3 being "moderately significant". Descriptive statistics already showed that the average rank values are greater than the median. However, to generalize the conclusion from sample to population, the formal statistical testing is conducted. In case respondents perceive that given factors are more than moderately significant for the occurrence and outcome of crisis, the median rank of significance of each factor is statistically greater than 3. Because the survey data are not in continuous scales and normally distributed, the hypothesis cannot be tested using standard t-test. Since the ranks of significance are ordinal in nature and their distribution is not known in advance, the hypothesis is tested using the non-parametric Wilcoxon signed

rank test as it has more statistical power when the assumption of normality is violated. The test's null hypothesis states that the median for population is equal to some specific value. The results of the Wilcoxon signed rank test are presented in table 3.

*Table 3. Results of One-Sample Wilcoxon Signed Rank Test - factors affecting crisis occurrence and outcome scores*

No	Null Hypothesis	Sig.
1.	Median of Political factors equals 3.00	.000
2.	Median of Legal factors and regulations equals 3.00	.000
3.	Median of External stakeholders who affect the operation of your organization equals 3.00	.000
4.	Median of Internet frauds equals 3.00	.000
5.	Median of Organizational culture equals 3.00	.000
6.	Median of Organizational reputation equals 3.00	.000
7.	Median of Management plan equals 3.00	.000
8.	Median of Crisis management quality equals 3.00	.000
9.	Median of Crisis management team equals 3.00	.000
10.	Median of Timely information sharing equals 3.00	.000
11.	Median of Information accuracy equals 3.00	.000
12.	Median of Methods of information management equals 3.00	.000
13.	Median of Source of information equals 3.00	.000
14.	Median of Methods of information processing equals 3.00	.000
15.	Median of Managers' knowledge base on how to use information adequately equals 3.00	.000
16.	Median of Employees' knowledge base on how to use information adequately equals 3.00	.000
17.	Median of Internal communication in case of crisis equals 3.00	.000
18.	Median of External communication in case of crisis equals 3.00	.000

Source: Authors' calculation. Note: the significance level is .05.

The first table column defines the "Null Hypothesis" as the "Median of specific factor equals 3.00". The column "Sig" presents the p value of the Wilcoxon signed rank test based on which suggestions on whether to reject the null hypotheses are generated. For all 18 factors, the Wilcoxon signed rank test suggests that there is inequality between the median and hypothetical value of 3.00. Consequently, the Wilcoxon signed rank test suggests the rejection of the null hypotheses which confirms the significance of all analyzed factors for crisis occurrence and outcome. However, because the Wilcoxon signed rank

test is a two-sided test the rejection of null hypothesis does not automatically mean that the sample mean is significantly greater than the hypothetical value. Anyways, considering the descriptive statistics indicators which are all above 3, it can be concluded that respondents perceive factors as very significant for crisis occurrence and outcome. All given factors are perceived as significant for crisis occurrence, but it is the appropriate methodology that enables organizations to manage crises and better avoid their consequences. Accordingly, it can be concluded that the hypothesis is approved at a significance level of 5%.

H:2 Information – its value, methods of transmission, sender and receiver affect crisis management and activities conducted by crisis managers.

The second hypothesis testing considers the respondents' answers to two blocks of questions. The first block refers to the quality of crisis management and includes the ranks of the quality of professional staff, informing, internal and external communication, information timeliness and accuracy, and knowledge and capabilities of managers and employees to use information. The second block refers to the significance ranks of factors affecting crisis occurrence and outcome i.e. information, its timeliness, accuracy, source and processing methods, and knowledge and capabilities of managers and employees to use information and internal and external communication in crisis.

The Wilcoxon signed rank test results are provided in table 4. The second hypothesis testing is conducted the same way, as descriptive statistics again indicated that the average rank values of quality are greater than the median.

Table 4. Results of One-Sample Wilcoxon Signed Rank Test – crisis management elements scores

No	Null Hypothesis	Sig.
1.	Median of Crisis management score equals 3.00	.000
2.	Median of Professional staff score equals 3.00	.000
3.	Median of Informing in crises score equals 3.00	.000
4.	Median of Internal communication score equals 3.00	.000
5.	Median of External communication score equals 3.00	.000
6.	Median of Timely information sharing score equals 3.00	.000
7.	Median of Information accuracy score equals 3.00	.000
8.	Median of Knowledge and capabilities of employees score equals 3.00	.000
9.	Median of Knowledge and capabilities of managers score equals 3.00	.000

Source: Authors' calculation. Note: the significance level is .05.

For all 9 factors, the Wilcoxon signed rank test suggests that there is inequality between the median and hypothetical value of 3.00, and consequently the null hypotheses are rejected.

Finally, the Wilcoxon signed rank test is used to analyze the data on factors affecting crisis occurrence and outcome. The results of the test are presented in table 5.

Table 5. Results of One-Sample Wilcoxon Signed Rank Test –selected factors affecting crisis occurrence and outcome scores

No	Null Hypothesis	Sig.
1.	Median of Timely information sharing equals 3.00	.000
2.	Median of Information accuracy equals 3.00	.000
3.	Median of Methods of information management equals 3.00	.000
4.	Median of Source of information equals 3.00	.000
5.	Median of Methods of information processing equals 3.00	.000
6.	Median of Managers' knowledge base on how to use information adequately equals 3.00	.000
7.	Median of Employees' knowledge base on how to use information adequately equals 3.00	.000
8.	Median of Internal communication in crisis equals 3.00	.000
9.	Median of External communication in equals 3.00	.000

Source: Authors' calculation. Note: the significance level is .05.

Based on the results of the Wilcoxon signed rank test for both blocks of questions, and the results provided by descriptive statistics, it can be concluded that the hypothesis stating that information – its value, methods of transmission, sender and receiver affect crisis management and activities conducted by crisis managers is adopted.

In order to determine the importance and role that information plays in crisis management, the quality of crisis management and the significance of factors affecting crisis occurrence and outcome were analyzed. The data analysis showed that all given factors are considered important for the quality of crisis management. More precisely, the surveyed respondents perceive that the quality of crisis management is determined by the crisis management activities, professional staff, informing process, internal and external communication, timely information sharing, information accuracy and knowledge and capabilities of employees and managers to use information. Also, the crisis occurrence and outcome is significantly affected by political and legal factors, external stakeholders, organizational culture and reputation, management plan, crisis management quality, crisis team, timely information

sharing, methods of information management, information accuracy, information source, information processing, managers' and employee's ability to adequately use information, internal and external communication in crisis, while the impact of information accuracy is slightly higher.

The Wilcoxon signed rank test provided the generalization of conclusions. All given factors are perceived as significant for crisis occurrence, but it is the appropriate methodology that enables organizations to manage crises and better avoid their consequences. The quality of crisis managers, professional staff, informing process, internal and external communication, timely sharing and information accuracy in crisis, as well as knowledge and capabilities of employees and managers to use information have average to high impact on the quality of crisis management.

### **3. Conclusions**

As crises are always associated with uncertainty and risk, success in crisis management is determined by many factors among which information and communication play significant role.

The research results pointed out to the importance of quality, value and timeliness of information for crisis management. Information serves as a basis for good decision-making, efficient communication with all relevant stakeholders and effective implementation and coordination of response activities.

The conducted empirical research provides an insight on the main factors affecting the quality of crisis management and the occurrence and outcome of crisis. In addition to the theoretical background presented in the paper, it shows evidence on the importance of information value, methods of transmission, sender and receiver for crisis management, and it is the method of managing crisis that determines how successful will organization avoid or mitigate the crisis consequences.

The topic of crisis management is becoming increasingly important in today's highly uncertain and dynamic environments. Crisis refers to different types of situations, but it always requires a crisis management response. Information is one of the most important factors to successful crisis management as it provides basis for efficient decision-making, communication with relevant stakeholders and response activities coordination. Along with information technology rapid development, the flow of information and the use of different communication channels in resolving crises gain in importance.

Scientific relevance of the research is referring to the identification of key information related determinants which based on the empirical research evidence provides valuable implications for managers and emphasizes the importance of information for successful crisis management. Since there has not been much empirical research on this topic in Serbia, it fills the gap in the existing scientific knowledge thus providing validity to the more extensive use of research results in the business practice. Also, it suggests the use of questionnaire for collecting data on various aspects of business behavior and the use of statistical analysis in order to examine the relationship between collected data and to draw conclusions and generalize. However, the conducted research has several limitations and deficiencies primarily in terms of other information related aspects of crisis management which can be considered to obtain more comprehensive research results. Also, larger sample size covering more organizations would enable additional validity of research results and conclusions for crisis managers in the business sector, as well as in other segments of life and work in which crisis most commonly occurs.

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