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RESEARCH OF CONTROLLING IN THE SAFETY MANAGEMENT SYSTEM

Abstract: *This paper presents the comparative analysis of research viewpoints of controlling in the safety management system, which was conducted in Serbia and Croatia. The research was conducted by survey using a written questionnaire containing 9 basic groups of questions. The objective of the analysis and comparison of research results is to determine similarities and differences in controlling in safety management system in these countries. Conclusions are derived on the basis of a comparison of views on stages of control, level control applied, applied techniques of control, application control efficiency requirements, customer control in a particular area of safety management systems, the effect of controlling on implementation of safety and responsible persons for controlling the safety management system.*

Key words: controlling, management, safety, system.

INTRODUCTION

Controlling

Controlling represents measuring and correcting parts of the process in order to ensure fulfillment of business objectives, among which are the objectives of safety management. Therefore, the basic control system is comprised of set of indicators, performance measurement indicators and the correction of deviations from the indicators and plans. [13]

Every manager wishes to have available effective control system. A control that is implemented must be adapted to the task and the person to whom it serves.

Since plans vary in complexity and in detail it is necessary to set specific indicators. Setting indicators actually represents the determination of the efficiency criteria. [16] They are points set out in the planning process of implementing efficiency measurement of certain business process. To develop meaningful key point indicators of success, managers responsible for safety need to understand the business security risks, evaluation of risk management systems, understand the business plan of the company and organizational culture. [2]

Measurement of performance indicators is a procedure that determines whether the set standards are met and in what sense. [4] To ensure the effectiveness of performance measurement, collecting and data processing must have a certain dynamic. Therefore, depending on the need the collection of data will be conducted daily, weekly, monthly, semi-annually or annually. Controlling can be performed on the basis of feedback system and by advance control. At feedback system control, control is carried out based on information feedback that shows deviations from the indicators and initiates changes. Control gives advance notice in which period could problem occur if immediate necessary measures are not undertaken to prevent its occurrence.

Correction of deviations from indicators and plans actually is evaluation of set performances. Performances evaluation represents analytical and diagnostic skills of manager, regardless of whether the analysis of the deviation cause is conducted by him or it is carried out by the authorized service. What will it take and what corrections will be undertaken depends on the reasons that influenced the deviation from the set standards or criteria. Good performance evaluation is an assumption for choosing appropriate directions for further action to eliminate deviations from established standards or criteria. [4]

From the level of management, there are four levels of control, such as: control of the individual, functional, divisional and corporate level. Control at the individual level refers to the results achieved by each individual in the workplace executing tasks that are assigned to it. Functional level is characterized by the existence of a group of related or similar operations which are called business functions. Divisional level implies profit centers and investment or strategic business units, while the corporate level involves choosing an organizational structure for the effective implementation of a number of different jobs. Out of controlling techniques applied are statistics, specific reports and analysis, internal audit or internal operational controls and personal observations.

Safety management system

Safety management system is continuous, adjustable process comprised of numerous activities, phases, elements and actions and it enables normal flow and functioning of business processes and systems that include all participating personnel in organizational business processes. [6] Therefore, safety management is one of the complex and responsible jobs in an

organization and it demands many activities, attention and thinking from organizations management. Basic functions of management are applied for efficient safety management system, among which one that has most important role is controlling.

Petersen has by researching sorts of safety measures that are used determined, its inadequacy for realistic assessment of safety performances. Instead „failure measurement", by statistic of accidents, injuries at work and compensation of damage to the worker, Petersen claims that the best way for measuring safety level on all levels of organization is to use diverse sorts of tools, as perception research and implementation of system audit. Measurement should exists on all levels of organization. [7]

Petersen noted that the monitoring of safety performances for many reasons is often inadequately implemented, and the responsibility for this is attributed to middle and top management. Therefore, the author proposes a set of guidelines aimed at improving the skills of controlling and procedures that are implemented in the incidents studies, thereby allowing control authorized person to improve the effectiveness of its programs to prevent accidents. Notwithstanding the level of management in question, the manager has a key role in the implementation, monitoring and improving the safety procedures and practices. [8] A systematic approach to safety management involves application of control in the safety management system, which is of particular importance for achieving goals. [10] On the basis of its research Petersen has developed a method of analyzing the effectiveness of the safety system, which among others includes the analysis of the control and supervision in the management system. [9]

Empirical research of work problematic of independent experts for occupational safety and health in the medium-sized business organizations in Croatia, it was found that most respondents (41.12%) evaluate internal supervision over the implementation of safety rules with a very good grade, followed by a grade good from 21.60% of respondents. Negative grade is present in 0.59% of respondents, in other words experts for occupational safety in business organizations. Most respondents (44.67%) evaluate encouragement of employers and their authorized persons that competent services of the employer eliminate the deficiencies identified in respect of occupational safety and health with very good grade. [3]

A special contribution to the development of research on control of the safety management system gave the outcome of the research issues and problems in protection services at work in business organizations in Croatia, where it was found that internal control over the implementation of safety rules in 40.74% of respondents evaluated as very good grade, while in the same proportion (23.70%) came grades excellent and good. Encouraging employers and their authorized persons in the competent services of the employer to eliminate the deficiencies identified with regard to occupational safety 57.78% was graded as very good. [5]

Measuring the safety performance should include the quantity and quality of the work, as well as the measurement of adverse events. [11] Mostly, performance of occupational health and safety measures only adverse events (injuries, illnesses, deaths) with all their characteristics, such as lost work time and other expenses, [12] but the safety performances are actually many other safety characteristics such as, planning, implementation of key activities [1], safety culture, human resource management and other. [14] Also, it is considered that the application of the requirements of Norms OHSAS 18001 and ISO 14001 can effect on improvement of control in safety management system. [15]

Research in viewpoint of controlling in the safety management system in Serbia and Croatia contributes to knowledge about one of the most important elements that promote the effectiveness of safety management systems and thus complement and extend the knowledge gained in previously conducted research.

The aim of the research, hypotheses, and research tasks

The aim of the research is to determine current knowledge and standpoints on controlling in the safety management systems in Serbia and Croatia. Based on these standpoints obtained results will be determined and compared.

The study includes a comparison of the results obtained according to hypotheses:

- Hypothesis H1: In majority of cases (over 50%) in the safety management system all stages of control are set (setting indicators, indicator performance measurement, correcting deviations of indicators and plans).
- Hypothesis H2: In majority of cases (over 50%) at controlling the safety management systems all levels of control are implemented (individual, functional, divisional, corporate).
- Hypothesis H3: In majority of cases (over 50%) at controlling the safety management systems out of control techniques implemented are personal observations and statistical data.
- Hypothesis H4: Respondents have evaluated implementation of condition of control effectiveness in safety management system with the least average score of 3.5.
- Hypothesis H5: Satisfaction by controlling in a particular field of safety management systems (occupational health and safety, fire protection, environmental protection, private protection, information protection, personal data protection, data confidentiality, business intelligence, integrated security) is evaluated with a minimum average score of 3.5.

- Hypothesis H6: It is considered that the effect of controlling in the safety management system to implementation of safety in majority of cases (more than 50%) is significant to say at least.
- Hypothesis H7: In majority of cases (over 50%) responsible person for controlling the safety management of the organization is the employer himself.

In accordance with the determined goal, objectives of this survey are to determine and compare:

- opinion on implementing phase control in safety management system
- opinion on implementing control levels in safety management system
- opinion on implementing control techniques in the safety management system
- evaluation and opinion on implementing conditions of effectiveness of control in safety management system
- evaluation and opinion on implementing control in a particular area in safety management systems
- evaluation and opinion on the effect of controlling in the safety management system to implementing safety
- who are the persons responsible for controlling the safety management.

METHODS

Research method

For conducting the survey, method of written questionnaires was used. The questionnaire is comprised of questions that include general information about the respondent and the organization, and the views of respondents on the organization of the safety management system of the organization in which they work. In total, the survey consists of 10 basic questions that contain sub-questions. Questions are in Likert - type intensity of five offered answers deployed from unsatisfactory (1), satisfactory (2), good (3), very good (4) to excellent (5). The same are also the numerical evaluations of certain indicators which are being investigated by the survey.

Statistical methods

For the data analysis accumulated by the survey, used methods were ones of descriptive and inferential statistics. These methods allow describing phenomena and drawing conclusions about the characteristics of the population based on the data. In the analysis and presentation of research results frequency (f), percentage (%), sum (Σ), the arithmetic mean (M), population standard deviation (*s*) and coefficient of variation of the population (V) expressed as a percentage (%), were used. Statistically significant differences between the results, the evaluation of application types of planning and evaluation of each security planning areas are tested in chi-square test ($\chi 2$). In order to determine whether there are statistically significant differences in result so called "null hypothesis" H0 is set which assumes that there is "no statistically significant differences among the samples."

Sample

The study included 167 participants from Serbia, of which 163 valid questionnaires, and 179 respondents from Croatia, of which 175 valid questionnaires.

Characteristics of the survey sample

In Serbia, 28.22% of the respondents comes from the manufacturing industry, 12.27% of respondents comes from other services, 11.04% of respondents comes from the wholesale and retail markets and 8.59% of the respondents comes from construction industry. With 5.22% in the survey are participants from the electricity business, gas, steam and sewer, and a 4.29% respondents are from the business of water supply, sewerage and waste management .

Total of 46.01% of respondents from Serbia are from companies that employ up to 50 employees, 29.45% of the companies that have from 50 to 250 employees, and 19.02% are from companies with more than 250 employees.

Total 49.69% of respondents from Serbia are security experts, 22.70% are authorized personnel by the employer, 1.23% are the immediate authorized personnel, 6.13% worker trustees, and 19.63% of respondents have another function in the safety management system.

The largest number of respondents in Croatia (26.29%) are employed in other service industries, followed by respondents from the manufacturing industry (15.94%) and construction (13.71%). With 6.29% in the sample are respondents engaged in wholesale and retail trade and in the public administration, defense and compulsory social security, followed with 5.71% by those from the business of providing accommodation and food services.

Among respondents from Croatia, total of 51.43% of the respondents are from companies and institutions that employ up to 50 employees, 18.86% are from companies and institutions that have from 50 to 250 employees, 29.71% of the respondents are from companies and institutions that have more than 250 employees.

Up to 77.14% respondents from Croatia have another function in the safety management system, which means that they are not directly related to safety affairs. Furthermore, 14.29% of respondents are safety experts, 5.71% are authorized personnel by the employer, and 2.86% as worker trustees for safety at work.

RESULTS

Implemented phase control in the safety management system in the organization

In Serbia, 81.60% of respondents implement set of indicators, 64.42% implement performance measurement indicators, while 68.71% implement correction of deviations of indicators and plans. In case average of 71.57% all phases of control are implemented.

In Croatia, 78.86% of respondents in the safety management system have implemented set of indicators, 62.86% implement performance measurement indicators, while 62.29% implement correction of deviations of indicators and plans. In average case of 68% all phases of control are implemented.

Levels of control implemented in the safety management system in the organization

In Serbia, 89.57% of the respondents in the safety management system implements controls on the individual level, and 65.64% of the respondents implements control on the functional level. Control on divisional level is implemented in the 63.19%, while 65.03% implement control on a corporate level. In average of 70.86% in safety management systems all levels of control are implemented.

In Croatia, from the levels of control 80% of respondents in the safety management system have implemented controls at the individual level, and 72% of respondents implements controls on the functional level. Control on divisional level is implemented in the 58.29%, while 55.43% implement control on a corporate level. In average of 66.43% in safety management systems all levels of control are implemented.

The implementation of control techniques in the safety management system of the organization

In Serbia, at controlling most commonly is used personal observation (85.28%), followed by statistical data (62.58%), specific reports and analysis (60.74%), and internal auditing or internal operational control (57.67%). In average 66.56% in safety management system all techniques of control are implemented.

In Croatia, at controlling in safety management system the most commonly used techniques are personal observation (81.14%), followed by statistical data (69.71%), specific reports and analysis (66.29%) and internal auditing or internal operational control (60%). In average 69.29% in safety management system all techniques of control are implemented.

Evaluation of implemented conditions of the effectiveness of control in safety management system

In order to evaluate implemented conditions of effectiveness of control in safety management system, respondents were asked eight (8) questions that they were able to evaluate on the scale from negative (1) to excellent (5). Table 1 shows the percentages of ratings of individual questions of implemented conditions of the effectiveness of control from negative to excellent, followed by the arithmetic mean, standard deviation, coefficient of variation and the amount of chi-square test for each question.

Table 1. *Evaluation of implemented conditions of the effectiveness of control in safety management system*

	Serbia				Croatia			
Grade (%) / Question	Arithmetic mean (M)	Standard deviation (s)	Coef. of variation (V)%	Chi-square test	Arithmetic mean (M)	Standard deviation (s)	Coef. of variation (V)%	Chi-square test
1. Adjusting control to plans and places of implementation	3.46	0.68	19.75	206.29	3.24	1.03	31.71	75.65
1. Adjusting control to plans and places of implementation	3.47	0.75	21.58	200.18	2.95	1.01	34.10	53.99
1. Adjusting control to plans and places of implementation	3.41	0.92	27.00	124.06	3.13	1.03	33.02	74.49
Tendency toward control objectivity	3.45	0.93	26.91	135.18	3.40	1.01	29.72	58.79
5. Ensuring control flexibility	3.30	0.78	23.76	181.63	3.38	1.07	31.75	49.33
6. Adjusting control to organizational culture	3.26	0.95	29.06	110.89	3.16	0.94	29.72	90.67
7. Achieving cost-control	3.32	0.86	25.96	157.34	3.40	1.02	29.99	70.51
8. Establishing control that encourages corrective action	3.38	0.73	21.75	158.47	3.33	1.08	32.32	53.92
Arithmetic mean, M (Σ)	3.38	0.83	24.47	159.26	3.25	1.02	31.54	65.92

In Serbia, by the highest average score of 3.47 was rated area of adjustment control to individual managers, while with the worst average score of 3.26 was rated adjustment control to organizational culture. With a population standard deviation s = 0.83 and coefficient of variation of the population V = 24.47%, a average score of implemented effectiveness of control in safety management system is 3.38.

In Croatia, by the highest average score of 3.40 were evaluated areas that pursue objectivity control and achieve cost - control, while the worst average score of 2.95 was rated adjustment control to individual managers. With a population standard deviation s = 1.02 and coefficient of variation of the population V = 31.54%, average score of implemented effectiveness of control in safety management system is 3.25.

Table 1 shows that among all the individual evaluations of implementing conditions of effectiveness of control in safety management systems in Croatia and Serbia, there is a statistically significant difference. This distinction confirms the value of chi-square test, which is for all individual questions greater than marginal value of 15.086 (for P 0.01, safety 99%, risk 1%). Therefore, a "null hypothesis" which was defined as "no statistically significant differences among the samples" is rejected. From the results it is evident that the differences between the frequencies of all scores of implementing conditions of effectiveness of control in safety management system, statistically is significant and are not coincidental, and based on these results statistically valid conclusions can be made.

Evaluating control in a particular field of safety management systems

For the purpose of evaluation (satisfaction) of control in particular field of safety management systems, respondents were asked nine questions (9 areas) which there were able to evaluate on the scale of negative (1) to excellent (5). Table 2 shows the results of the analysis of respondents' answers with the emphasis on the arithmetic mean (M), standard deviation (s), coefficient of variation (V) and chi-square test for each question which determines whether there is a statistically significant difference between respondents' answers.

In Serbia, the highest average score of 3.74 in organizations and institutions rated controlling in occupational health and safety. The worst rated average score of 3.42 was controlling in area of integral protection. Average controlling of certain fields of the safety management system was 3.56 (with standard deviation of the population s = 1.09 and the coefficient of variation of the population V = 30.76%) .

In Croatia, the highest average score of 3.61 in organizations and institutions rated controlling in the area of fire protection. At the same time, the worst rated average score of 3.10 was controlling in the area of Business Intelligence. Average controlling of certain fields of the safety management system was 3.44 (with standard deviation of the population s = 1.12 and the coefficient of variation of the population V = 32.68%).

Table 2 shows that among all the individual evaluations of controlling in a particular field of safety management system in Croatia and Serbia is a statistically significant difference. This distinction confirms the value of chi-square test, which is for all individual questions greater than the marginal value of 15.1 (P 0.01, safety 99%, risk 1%). Therefore, a "null hypothesis" which was defined as "no statistically significant differences among the samples" is rejected. From the results it is evident that the differences between the frequencies of all scores of controlling in certain fields of safety management systems are statistically significant, and they are not coincidental. Based on these results statistically valid conclusions can be made.

Table 2. *Evaluating control in a particular field of safety management systems*

	Serbia				Croatia			
Grade (%) / Question	Arithmetic mean (M)	Standard deviation (s)	Coef. of variation (V)%	Chi-square test	Arithmetic mean (M)	Standard deviation (s)	Coef. of variation (V)%	Chi-square test
1. Occupational health and safety	3.74	0.92	24.65	131.06	3.57	1.05	29.29	74.15
2. Fire protection	3.67	1.02	27.66	89.25	3.61	1.06	29.39	88.96
3. Environmental protection	3.54	1.11	31.44	48.39	3.42	1.10	32.24	45.55
4. Private protection	3.54	1.20	33.80	74.75	3.37	1.06	31.31	65.37
5. Information protection	3.60	1.12	31.08	65.18	3.50	1.12	31.89	49.05
6. Personal data protection	3.52	1.11	31.44	70.77	3.57	1.20	33.46	37.19
7. Data confidentiality	3.58	1.22	34.07	59.14	3.51	1.20	34.03	32.87
8. Business intelligence	3.47	1.14	32.81	41.62	3.10	1.29	41.74	15.94
9. Integral safety	3.42	1.02	29.84	74.89	3.28	1.01	30.73	60.78
Arithmetic mean, M (Σ)	3.56	1.09	30.76	72.78	3.44	1.12	32.68	52.21

Evaluation of controlling impact in safety management system to implementing safety

In Serbia, 55.83% of respondents believe that the controlling impact in safety management system on implementing safety is significant, and 17.79% consider it highly significant. Total of 73.62% of respondents consider that controlling significantly and highly significantly impacts on the implementation of safety.

In Croatia, 43.43% of respondents consider that the controlling impact in safety management system to implementing safety is significant, and 22.29% consider it highly significant. Thus, a total of 65.72% of respondents consider that controlling significantly and highly significantly impacts on the implementation of safety.

Responsible person for controlling in safety management in the organization

In Serbia, in 65.03% of cases, responsible for the control over safety management system is safety expert, while in 28.83% of cases for controlling is responsible employer himself.

In Croatia, in 49.71% of cases the employer is responsible for controlling the safety management of the organization, while in 28.57% of cases responsible for controlling the safety management system is safety expert.

DISCUSSION

Safety management is one of the most complex and demanding tasks in the organization that seeks and requires a lot of activity, attention and thinking by the organizations management. As previously mentioned the implementation of safety directly affects health, prevents injuries, illnesses and deaths casualties of employees and all other individuals, but also affects the protection of tangible and intangible assets which may be compromised due to the implementation of certain business processes. Controlling represents measuring and correcting parts of the process in order to ensure fulfillment of business objectives, among which are the objectives of safety management. The first step of the control is defining plans. Since plans vary in complexity and in detail it is necessary to set specific indicators that actually represent the determination of the efficiency criteria. These indicators are pointed out in the planning process in which performance measurement of an organization process is implemented, including process of safety. On the basis of these, control is carried out in the safety management system.

Results of the survey show that in the safety management system in Serbia (71.57%) and in Croatia (68%) in more than 50% of the cases all phases of control are implemented, thus confirming the set hypothesis.

In the field, the control is carried out on four basic levels, and with research is according to set hypothesis confirmed that in Serbia (70.86%) and in Croatia (66.43%) in the safety management systems all levels of control are implemented.

According to the results of survey in Serbia (85.28%) and in Croatia (81.14%) when controlling the safety management system out of the techniques, most frequently used is personal observation. The results show that all four controlling techniques are applied in more than 50% of cases. Considering that in majority of cases (over 50%) in controlling the safety management systems all the techniques of controlling are implemented, the set hypothesis is accepted.

Average evaluation score of implemented conditions of efficient control in the safety management system in Serbia 3.38 and in Croatia is 3.25. It is necessary to emphasize that the implementation of all conditions of efficient control in both countries is rated as less than 3.5. Based on these results, the hypothesis that respondents have evaluated implementation of conditions of the efficient control in safety management system with a least average score of 3.5, is rejected.

Respondents from Serbia satisfaction by controlling certain fields of safety management had rated with an average score of 3.56, while respondents from Croatia had rated satisfaction by controlling with an average score of 3.44. Therefore, the set hypothesis is accepted in Serbia but is rejected in Croatia.

A total of 73.62% of the respondents from Serbia consider that the control has a significant and highly significant impact on the implementation of safety. In Croatia, a total of 65.72% of respondents consider that controlling the safety management system has a significant and highly significant impact on the implementation of safety.

In Serbia the employer is responsible for controlling in 28.83% of cases, while in Croatia in 49.71% of cases, the employer is responsible for controlling safety management in the organization. Based on the results obtained by the survey the hypothesis that in more than 50% of cases, the person responsible for controlling safety management in the organization is the employer himself, is rejected.

Control is the function of every manager, in other words the person who manages other people. The basic control system includes a set of indicators (performances), indicators performance measurement (performances) and the correction of deviations from the indicators (performances) and plans as this is in the field of safety management of great importance for achieving set objectives of the system. Effective controlling increases the effectiveness of safety management system. Other studies that have been conducted do not deal exclusively with controlling, but only deal with some process management functions. The results of these other studies can not be compared with the results and conclusions of this comparative analysis. Comparative analysis in the field of controlling the safety management system was not found.

SUMMARY

Effective controlling increases the effectiveness of safety management system. Control is the function of every manager, in other words the person who manages other people. The basic control system includes a set of indicators (performances), indicators performance measurement (performances) and the correction of deviations from the indicators (performances) and plans as this is in the field of safety management of great importance for achieving set objectives of the system.

Based on the survey outcome, obtained results are compared according to set hypotheses and hypotheses are accepted or rejected.

- Hypothesis H1: In majority of cases (over 50%) in the safety management system all stages of control are implemented (seting indicators, measuring the indicator efficiency, correcting deviations of indicators and plans).

The hypothesis is accepted. In Safety management systems in Serbia (71.57%) and in Croatia (68%) in majority of cases (over 50%) all phases of control are implemented.

- Hypothesis H2: In majority of cases (over 50%) at controlling in safety management systems all levels of control are implemented (individual, functional, divisional, corporate).

The hypothesis is accepted. The safety management systems in Serbia (70.86%) and in Croatia (66.43%) in majority of cases at controlling have implemented all levels of control.

- Hypothesis H3: In majority of cases (over 50%) at controlling in safety management systems out of control techniques implemented are statistical and personal observations.

The hypothesis is accepted. In Serbia, techniques commonly used in controlling are personal observation (85.28%) and statistical data (62.58%), while in Croatia majority has implemented personal observation (81.14%) and statistical data (69.71%).

- Hypothesis H4: Respondents have evaluated implementation of condition of control effectiveness in safety management system with the least average score of 3.5.

The hypothesis is rejected. Average evaluation of implementing conditions of control effectiveness in the safety management system in Serbia is 3.38 and in Croatia is 3.25. Among all individual evaluations of implementation of control effectiveness in safety management system in Croatia and Serbia, there is a statistically significant difference, which confirms the value of chi-square test. The specified value for all individual questions is greater than the marginal value. From the results it is evident that the differences between the frequencies of all the ratings are statistically significant, and they are not coincidental.

- Hypothesis H5: Satisfaction by controlling in a particular field of safety management systems is evaluated with a minimum average score of 3.5.

The hypothesis is accepted in Serbia, but rejected in Croatia. The average score of satisfaction by controlling in a particular field of safety management systems in Serbia is 3.56, while in Croatia is 3.42. Statistical analysis showed that among all the individual scores there is a statistically significant difference which confirms the value of chi-square test. From the results it is evident that the differences between the frequencies of all scores are statistically significant, and they are not coincidental.

- Hypothesis H6: It is considered that the effect of controlling in safety management system to implementing safety in majority of cases (over 50%) is significant to say at least.

The hypothesis is accepted. In Serbia total of 73.62% and in Croatia a total of 65.72%, of respondents consider that controlling in safety management system has significant and highly significant impact on the implementation of safety .

- Hypothesis H7: In majority of cases (over 50%) responsible person for controlling in safety management of the organization is the employer himself.

The hypothesis is accepted in Serbia, but rejected in Croatia. The employer himself in Serbia in 65.03% of cases, and in Croatia in 49.71% of cases is responsible person for controlling in safety management of the organization.

As previously mentioned the implementation of safety directly affects health, prevents injuries, illnesses and deaths casualties of employees and all other individuals, but also affects the protection of tangible and intangible assets which may be compromised due to the implementation of certain business processes. Controlling represents measuring and correcting parts of the process in order to ensure fulfillment of business objectives, among which are the objectives of safety management.

Conducted analysis of controlling in safety management system in Serbia and Croatia showed some similarities but also differences. Established methodology has proven to be suitable for conducted empirical research of views on controlling in safety management system in Serbia and Croatia. Based on collected data, a more detailed analysis of each specific issues with determining interaction of certain aspects is possible.

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BIOGRAPHY

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ISTRAŽIVANJE KONTROLE U SISTEMU UPRAVLJANJA BEZBEDNOŠĆU

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Rezime: *Rad predstavlja komparativnu analizu istraživačkih stanovišta kontrole u sistemu upravljanja bezbednošću, koja je sprovedena u Srbiji i Hrvatskoj. Istraživanje je sprovedeno anketiranjem pomoću pisanog upitnika koji sadrži 9 osnovnih grupa pitanja. Cilj analize i poređenja rezultata istraživanja je da se utvrde sličnosti i razlike u kontroli u sistemu upravljanja bezbednosti u ovim zemljama. Zaključci su izvedeni na osnovu poređenja gledišta u fazi kontrole, nivou primenjene kontrole, primenjenih tehnika kontrole, zahteva efikasnosti primene kontrole, kontrole kupaca u određenoj oblasti sistema upravljanja bezbednošću, efekata kontrole na sprovođenju bezbednosti i odgovornih lica za kontrolu sistema upravljanja bezbednošću.*

Ključne reči: kontrolisanje, manadžment, bezbednost, sistem.