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# THE BENEFITS OF BUSINESS CONTINUITY MANAGEMENT IN CZECH ORGANIZATIONS

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## Abstract

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This contribution is concerned with identifying benefits of applying business continuity management based on international standards; it also makes an effort to provide an assessment of causes leading to and consequences arising from its implementation or non-implementation. This article presents the verification of theoretical benefits mentioned in foreign literature in comparison with a practical application of business continuity management according to the standards in Czech organizations. Furthermore, it also points out its negative aspects. Primary data was assessed statistically by means of a factor analysis which confirmed the initial suppositions. Moreover, the outcomes obtained were compared with the outcomes of similar surveys conducted abroad. The data for verification was gathered by means of a questionnaire survey and through interviews. The results confirm that organizations applying business continuity management according to the standards see benefits primarily in the area of employees' awareness of potential threats and in the improvement of crisis management, particularly in large organizations operating in the tertiary sector. The results affirm that the application of business continuity management does not primarily lead to increasing the organizations' performance but it rather results in minimizing disruptions of organizations' business activities and in maintaining their performance level.

Keywords: business continuity management, standards, benefits, organizations, sector, size, ownership of organizations

## INTRODUCTION

Business continuity management (hereafter BCM) is a managerial discipline focusing on identifying potential impacts that organizations have to face in case an incident occurs. It creates a base ensuring a certain level of resistance and ability to react to unexpected events; thus, it protects not only the key processes in an organization, but also its global interests, such as the value of its shares on the market (Siponen, Willison, 2009; BSI 2005a, b). The above-mentioned base may either apply to all organization's processes and areas or, alternatively, solely to the crucial ones, such as information technologies. Although scientific articles define information and communication technologies as the core area of business continuity management (Luftman, Zadeh, 2011; Cow, Ha, 2009) – this has been confirmed by the survey conducted by Venclová and Urbancová (2012) – it is necessary to realize that there are other processes where business continuity needs to be ensured. The main factors motivating organizations to implement an appropriately designed project of business continuity management may include ensuring personnel safety and internal communication, the restoration of critical business processes and functions, ensuring compliance with contractual obligations, reasonable risk management and maintaining clients' trust and the company's good name on the market (Lindström *et al.*, 2010). If an organization wishes to succeed in a competitive environment and be protected against the threats imposed by it, the above-mentioned processes

need to be maintained and continuously improved (Smith *et al.*, 2010). Business continuity management may assist in achieving this.

When applying business continuity management, organizations may take into account international standards that systemize business continuity ensuring. The most common standards applied in Europe include the BS 25999-1 and 2 standards. This has been confirmed in surveys conducted by KPMG (2010) and also by Sharp (2009). However, the information obtained from the standards should be adjusted to meet the specific needs of individual organizations (Siponen, Willison, 2009), as organizations may define different key areas where continuity needs to be ensured as well as different key factors that influence them (Järveläinen, 2013).

Apart from fulfilling statutory requirements, the requirements of regulators (Elliot *et al.*, 2010) and customers, Sharp (2009) also states that the introduction of business continuity management may have real benefits. One of the significant benefits according to Sharp (2009) lies in gaining a competitive advantage based on the organizations' ability to demonstrate to potential customers that they have proven plans to ensure future supplies despite operation discontinuation. Applying BCM according to the standards may be a part of a marketing package that serves to attract new customers and to give the existing ones a good reason for renewing their contracts; furthermore, it protects the organization's reputation and brand image. Financial benefits are not easy to detect (Sharp, 2009) since they are visible only after eliminating weaknesses inside the organization. However, if business continuity management is well presented within the organization, it may ensure higher employee commitment and increased involvement in the successful performance of the organization in question. Therefore, the research question was formulated based on the above-mentioned observations: What benefits do organizations in the Czech Republic see in the application of BCM according to the standards?

The aim of this article is to identify, based on the principle of causality, the benefits of applying BCM following the standards in relation to the organization's size, the sector in which it operates and its ownership. The partial goal is to recognize and evaluate reasons for BCM applying, to specify consequences that organizations not applying BCM have to face and to provide recommendations for organizations. This article's structure traced the following individual steps. First, the relevance and significance of the given topic was established and individual benefits of BCM application were determined based on the comparison of opinions of Czech and foreign authors. Moreover, this was followed by the formulation of preconditions and the description of methodology that was applied to obtain primary data and to evaluate it. The evaluation was carried out statistically by means of a factor analysis. It had a validating function in this article since the results of the questionnaire survey backed the presented theoretical suppositions which were obtained from literature and subsequently confirmed by the results of interviews. Finally, a synthesis of the obtained results was performed and recommendations to organizations were formulated. The survey took place in 2012 in organizations in the Czech Republic representing all sizes and economic sectors. Respondents were chosen among specialists in the given field. The topic is relevant and important particularly for organizations active on international markets and for organizations providing services the interruption of which (e.g. supply of services and products) may have a negative impact not only on clients, customers, consumers, etc., but also on lives of citizens of the given country (Wang *et al.*, 2010).

## Theoretical Background of the Work: Business Continuity Management and its Benefits

Järveläinen (2013) states it is not surprising that for decades organizations have been aware of the fact that ensuring business continuity contributes to the elimination of threats (natural or technical) that organizations may face. Despite this, organizations still have not introduced processes for sufficient ensuring of business continuity. This claim has been supported by the results of the survey, showing that only 19% of organizations in the Czech Republic (n = 106) apply BCM according to the relevant standards and they have restoration processes in place (Urbancová, Venclová, 2013). A similar situation can be observed abroad; KPMG surveys (2010) reveal that only 58% of organizations around the world that took part in the surveys (n = 800) apply BCM according to the standards and norms. Although the International Organization for Standardization publishes background information on the process of risk management, business continuity and information safety ensuring (Järveläinen, 2013; Sharp, 2009; Siponen, Willison, 2009), standards specifically "tailored" to suit individual organizations do not exist. Therefore, the methodology needs to be adjusted according to the organization's specific features (its size, business sector, the size of the market, etc.) before applying the standard.

Business continuity ensuring clearly signalizes to the surroundings that the management of the organization in question is aware of its importance on the market and its significance for customers. BCM plans generally follow the BS 25999-1 and 2 standards (Ahmad *et al.*, 2012; Cow, Ha, 2009) and they may consist of between 3 and 30 pages. Rather than by their extent, the quality of such plans is determined by whether or not they respect the specifics of the organization in question and the conditions prescribed in the legislation. The aim is to develop a standard that is as precise as possible but not overtly descriptive. If it is brief, its reading requires little time and it is easy to consult. On the contrary, an intensely general plan does not help in

the event of an extraordinary situation. Therefore, it is essential to adjust the standard in order to meet the precisely identified needs of the given organization (Sharp, 2009).

The development of and adherence to BCM plans with respect to the standards is an obligation; however, their implementation is determined, for example, by the resources provided by top management (a proactive attitude of top management) or by the employees and management (Conlon, Smith, 2010) accepting that the issue must be taken care of by a certain group of people and the procedure will consume a certain number of days per month.

BCM has its pros and cons. When introducing BCM standards, organizations need to count with higher costs and as well as with the fact that it is a time-consuming process. Furthermore, it places higher requirements on specialists in the given field and stricter demands on formulating local rules and implementing changes. Employees need to be informed about the application of BCM according to the standards in advance. Also, they need to be notified about the threats endangering the organization in question that need to be eliminated. A suitably set organizational culture will help organizations to make their employees aware of these facts. Only employees who understand reasons for implementing BCM are willing to accept it. According to Järveläinen (2013), Conlon, Smith (2010) and Sharp (2009), all processes need to be shielded by top management. Järveläinen (2013) also adds that the support of top management is one of the crucial factors since no implementation of BCM following the standards is possible without such support. According to Sharp (2009), the biggest disadvantages of non-applying BCM following the standards arise from duplicating one of the key processes, low return on investment, a negative impact on service provision, the damage or loss of reputation, endangering personnel safety, the violation of privacy and the failure to meet statutory or regulatory requirements.

According to Sharp (2009) and Ezingear *et al.* (2005), the application of BCM according to the standards brings benefits to organizations. This is also confirmed by Urbancová and Venclová (2013). Therefore, the following preconditions have been formulated:

- Precondition 1: It is presumed that applying BCM in organizations in the Czech Republic produces benefits.
- Precondition 2: Applying BCM in organizations in the Czech Republic does not have, according to their representatives, impact on improving their performance.

According to BSI (2005a, b), Elliott *et al.* (2010) and Sharp (2009), the main benefits include the following:

- a development of clear, structured and interlinked plans of action for extraordinary events;
- guaranteed availability of vital and key processes thanks to a proactive management system;
- transparent specification of areas and priority activities necessary for the restoration of processes that permit to preserve the main activities of the organization;
- a systematic and concept-based approach to the BCM process;
- identification of risk areas and possible impacts and consequently the readiness to face grave situations;
- winning management support (approving a new restoration strategy, review of priorities, optimization of original planned costs);
- unambiguous allocation of responsibilities and tasks during crisis management, detailed documentation of emergency management;
- compliance with the requirements of an international regulator and audit;
- a BCM project is a strategically relevant option, the results have a significant impact on changes in emergency planning;
- elimination of financial losses in the event of business continuity interruption;
- business benefits arising from the performance aimed at clients and customers.

The level of benefits gained, however, may differ from organization to organization (Sharp, 2009). The eight main benefits identified by Sharp (2009) and Elliott *et al.* (2010) are the following: new business segments, the employees' awareness of risks, the improvement of the organizational climate, the enhancement of the organization's prestige, the insurance expenditures cutting, the strengthening of a competitive advantage, the improvement of crisis management, and better financial stability.

The application of BC standards depends on the size of the organization and the industry in which it operates. It is possible to say that BCM standards are most frequently applied by large organizations; however, it is difficult to apply them based on the same principles without any adjustments in mid-sized or small organizations (Sharp, 2009). It is always necessary to modify the processes in a way to suit the organization in question, taking into account its size and sector. Organizations with a foreign majority shareholder have more strictly defined internal organizational conditions that need to be fulfilled (e.g. applying one specific standard, organizational structure, minimal number of specialists for the given field, etc. – in general "a creation of a corporate template").

While bearing in mind what has been said above, it is the goal of this article to identify the benefits that Czech organizations see in the application of BCM according to the standards and to examine individual benefits with respect to the size of the organization, the sector in which it operates (Sharp, 2009) as well as the ownership of the organization.

## MATERIALS AND METHODS

This article has been based on the analysis of secondary sources, a synthesis of the outcomes and the evaluation of the research results. The results were confirmed by a qualitative survey consisting of interviews with BCM specialists from questioned organizations. The first part of the article focuses on the theoretical approaches to business continuity management and its benefits for organizations. The second part analyzes the outcomes of the research carried out among specialists within the business continuity management field in the Czech Republic.

The findings presented were obtained through a quantitative survey using a questionnaire technique of data collection. The survey took place in the Czech Republic in 2012.

The choice of a representative sample of organizations across sectors was made by a random selection (N = 779). In accordance with statistical data from the Czech Statistical Office, the structure of organizations in the research (sector of economy[1], size and ownership of organization) was the following: 75.5% organizations from the tertiary sector, 15% from the secondary sector and 9.5% from the primary sector. 43% organizations consisted of up to 50 employees (small organizations), 28% with 51 to 249 employees (medium-sized organizations) and 28% with over 250 employees (large organizations); 84% organizations represent the major Czech ownership as opposed to 16% that have the major foreign ownership. Only specialists on business continuity management were questioned. The return rate was 13.6% (n = 106).

The results obtained through the questionnaire survey reveal that only 19% (n = 20) of responding organizations apply BCM following the standards. According to the interviewed BCM managers, this number of organizations corresponds to the actual level of BCM application in the Czech Republic. The group of organizations (n = 20) applying BCM according to the standards (or norms) may be considered a basic sample group for determining the benefits arising from the application of BCM according to the standards.

The benefits gained by organizations thanks to its application were also examined. The sample consists of 20 organizations applying BCM according to the BS 25999-1 and 2 standards and other organizations following other standards (e.g. ISO/PAS 22399). 70% of organizations applying BCM according to the above standards come from the tertiary sector (most frequently operating in the area of banking and insurance), 25% and 5% from the secondary and primary sectors respectively. Concerning their ownership, the sample consists of 50% of Czech organizations and 50% of foreign organizations. In terms of their size, 75% of them are large organizations, small organizations represent a 15% share and mid-sized organizations account for 10%.

The results of the quantitative survey were verified by a qualitative survey and new facts were looked for. The qualitative survey was conducted by means of interviews with two respondents (R1 – security manager; R2 – deputy BCM manager) from organizations applying BCM according to the standards. The interviews took place between 20th May and 8th July and they lasted for approximately 45 minutes. Using a qualified estimate, the interviews with BCM specialists revealed that in the Czech Republic fifteen organizations do indeed apply BCM according to the standards. The survey claimed the number amounted to twenty.

Primary data was evaluated using the tools of descriptive statistics and also the methods of comparison, induction, deduction and synthesis were applied. Within the frame of descriptive statistics, the following tools were used: absolute and relative frequency, the non-parametric Pearson Chi-square test (for $n > 40$ and the Fisher test for $20 \geq n \leq 40$); the level of dependence was measured based on Cramer's V and a scale according to de Vaus (2002) was applied. To evaluate the data, the IBM SPSS Statistics Data Editor, version 20 and MS Excel 2007 were used.

In order to confirm the survey preconditions, to statistically support the results of the quantitative survey and to verify the results of the qualitative survey, a method of multidimensional statistics in the form of a factor analysis was made. The goal of the factor analysis was to describe the newly developed variables based on their dependencies in relation to the original variables. The analysis identified new individual benefits arising from the application of BCM according to the standards. As an input to the factor analysis 8 variables were defined. The variables were deduced from the surveyed benefits specified in the theoretical background.

The factor analysis has a verification role in the article; the outcomes, however, may not be generalized due to n = 20. The factor analysis uses the Varimax Rotation (Hebák, 2006; Hendl, 2012). Also, the Kaiser-Guttman rule was applied to select a group of significant factors; based on the recommendations of Anderson (2009), only determinants with an absolute value of over 0.3 were selected as significant for factor development;

1 According to the CSO, the tertiary sector of the economy includes the service sector, the primary sector includes the primary agricultural raw materials extraction and the secondary sector includes processing of the raw material, i.e. industry and construction. This distinction is according to the CSO due to differences in the nature of work and the final product; it also reflects the level of economic development. The tertiary sector plays the most important economic role in the Czech Republic.

positive and negative dependency was further analyzed according to its final benefits.

The acronyms used in the article are the following: Business Continuity Management = BCM; BC = Business Continuity; Czech Statistical Office = CSO; P = preconditions; R = respondent.

## RESULTS AND DISCUSSION

This chapter evaluates the results obtained in the primary survey focusing on BCM applied according the BC standards in the Czech Republic. The results below were provided by the quantitative survey, the outcomes of statistical testing and result analysis and synthesis. The results gained by the qualitative survey are also provided.

### The Causes and Consequences of BC Ensuring and the Benefits from Applying BCM

As a part of the survey, the reasons that motivated organizations to introduce BCM according to the standards and the situations they encountered were examined. The results show that the most common causes of situations that organizations have to face within the area of BCM and that have the strongest impact on them (30%) fall within the category of technological errors (hardware and software). The lowest number falls within the category of unintentional and intentional human errors (10%); this has also been confirmed by the interviews outcomes R1; R2). The relationships between variables in the contingency tables show that small organizations are predominantly worried about the possible impacts of human errors, technological errors and the loss of key employees. Mid-sized organizations are concerned about natural disasters and epidemics as well as the loss of key employees and knowledge. Large companies, which ensure BC more than other organizations, see the causes most frequently in technological errors, followed by the loss of key employees and natural disasters; intentional human errors are perceived as less frequent. Large companies believe that all causes of situations that would affect them the most are those declared by the official standards. In terms of ownership, foreign companies in particular place emphasis on the causes in the technological area; Czech organizations rather stress the loss of key knowledge. All causes of situations subsequently influencing organizations mentioned in the standards are harmful especially for organizations in the tertiary sector (74%).

The reasons for ensuring BC according to the standards are similar in these organizations. Respondents (R1; R2) mentioned the following among the most common reasons for ensuring BCM according to the standards:

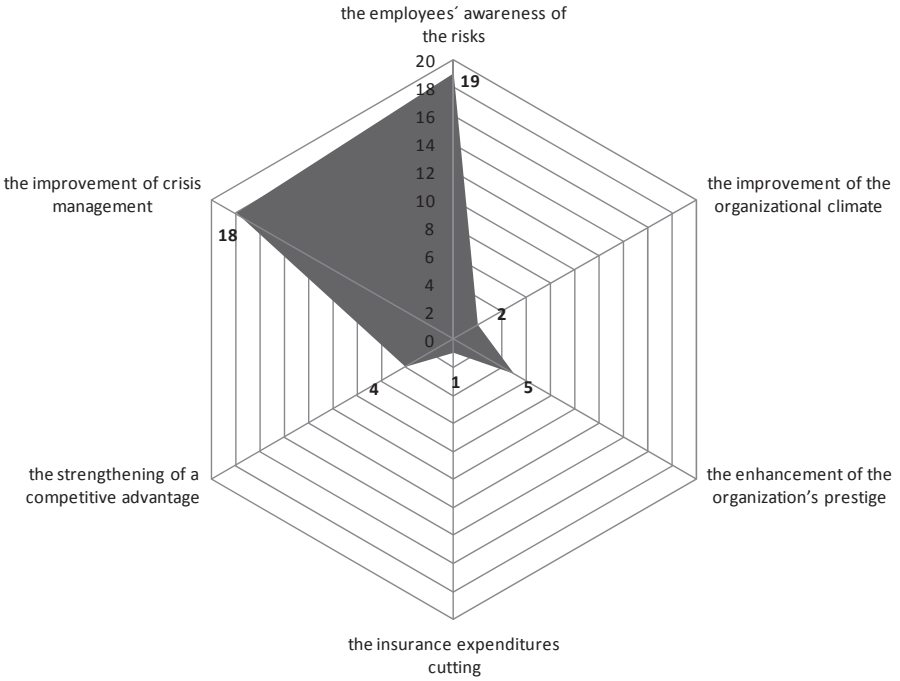
- ensuring the meeting of requirements by people (in relation to the certification and norms);
- meeting customers' requirements – "organizations should always strive to provide good and high-quality services even if their standard activity is disrupted" (R1);
- ability to prove continuity ensuring in emergency situations – "continuation of activity in unfavorable situations because it has an impact on a whole chain of organizations" (R2);
- maintaining the quality of services.

Based on the summary of the theoretical background, a tested construct of benefits has been developed (Anderson, 2009) and further evaluated (through quantitative and qualitative surveys). In general, respondents in organizations applying BCM according to the standards claimed the following to be the major benefits: the employees' awareness of potential impacts (95%), the improvement of crisis management (90%), the increase of the organization's prestige (25%), gaining a better competitive advantage (20%), the improvement of the organization's climate (10%) and the decrease of insurance expenditures (5%). None of the organizations mentioned the opening of new business segments or a higher financial stability among the benefits. Therefore, these two benefits were excluded from further testing (the construct of 6 benefits is taken into account). The above-mentioned results are in compliance with the responses of R1 and R2. Detailed results are shown in Fig. 1.

Bearing in mind the interviewees mentioning that the area of benefits was dependent on the size of the organization (R1; R2), this supposition was tested for dependencies in contingency tables. In total, six working null hypotheses were tested (individual benefits and their relation to the size of the organization) by means of the Pearson Chi-Square Test. If a null hypothesis was rejected ($p < 0.05$), an alternative hypothesis stating the existence of dependency was accepted (H1). If this was the case, the level of dependency was tested using the Cramer's coefficient. Based on the evaluation, it may be stated that in total, four working null hypotheses cannot be rejected (the conditions for theoretical frequencies according to Pecáková (2011) were not met) and alternative hypotheses were accepted for the remaining two. The calculations show that employees' awareness of the BCM impacts is dependent on the organization's size (p-value = 0.000; Cramer's V = 0.457; medium strength of dependency) and also the improvement of crisis management within BCM is determined by the organization's size (p-value = 0.000; Cramer's V = 0.483; medium strength of dependency). The dependency has been proven by the Pearson's Chi-Square Test (for n = 106), but also by the Fisher's Test for n = 20 (testing in organizations having a BCM standard).

The results clearly show that the two major benefits of BCM application are as follows:

- the employees' awareness of the impacts demonstrates itself predominantly in large organizations (74%) and predominantly in




1: *Benefits from BCM in absolute frequencies*
Source: author's elaboration

organizations active in the tertiary sector (68%); the extent of this awareness is almost identical in organizations with both a Czech and foreign majority shareholder;

- an improvement of crisis management primarily in large organizations (78%) and organizations operating in the tertiary sector (67%); this benefit is identically identified by both organizations with a Czech and a foreign majority shareholder.

## Evaluation of the Results of the Factor Analyses

This chapter presents the results of the factor analyses; the first focuses on the benefits for organizations resulting from BC application. The other factor analyses (the second, the third and the fourth) follow organizational characteristics specified in Material and Methods (size, sector, ownership) and calculate values of a similar group of organizations.

The first factor analysis takes into account the factors identified through the theoretical starting points (see Material and Methods). The calculated correlation coefficients in the factor analysis indicate to what extent the newly created variable correlates with the original variables. In other words, the higher the value of the correlation coefficient, the more significant is the correlation among the examined benefits resulting from applying BCM. Based on evaluating the calculated data, the questionnaire survey has revealed two important factors fulfilling the set methodological criteria. Tab. I shows the importance of individual examined factors in both percentage points and their grand total.

The range for factor 1 may be considered the most crucial. In total, these two identified variables account for approximately 68% of the behavior of the sample as well as the possible final characteristics. The results of the questionnaire survey factor analysis are displayed in Tab. II.

The first factor proves and illustrates the importance of the internal organizational environment supported through BCM standard application. It triggers a positive response on the employees' part (0.821) and influences their relationships with colleagues (0.598); this subsequently contributes to building the brand or the organization's prestige not only in the eyes of its employees, but also of those of its customers, suppliers, etc. These organizations put emphasis on creating a suitable environment which supports BCM. Last but not least, crisis management on the organizational level is also improved

I: *Variance explained by factors*

| Factor | Total Variance | Total % of Variance | Cumulative % of Variance |
|---|---|---|---|
| 1 | 2.907 | 48.443 | 48.443 |
| 2 | 1.178 | 19.626 | 68.069 |

Source: authors

II: *Resultant factors by the Varimax method*

| Variable | Factor 1 | Factor 2 |
|---|---|---|
| The employees' awareness of the risks | **0.821** | 0.302 |
| The improvement of the organizational climate | **0.598** | –0.043 |
| The enhancement of the organization's prestige | **0.766** | 0.007 |
| The insurance expenditures cutting | –0.085 | **0.946** |
| The strengthening of a competitive advantage | 0.458 | **0.692** |
| The improvement of crisis management | **0.828** | 0.309 |
| **Total % of Variance** | **48.443** | **19.626** |
| **Name of factor** | **Organizational environment** | **External environment** |

Source: author

(0.828). Therefore, the first factor may be termed "Organizational Environment". The coefficients of detected factors range from 0.598 to 0.828, which means a relatively high quality of the found factors. The second factor comprises two variables relating to the external environment; therefore, it may be termed "External Environment". The insurance expenditures display a coefficient of a high quality (0.946). These organizations take into account the external environment that may affect the benefits of BCM.

The following tables show the calculated results of the factor analysis that considers also the examined organizational characteristics (i.e. the organization's size, sector and ownership). In the process of factor analysis preparation (Tab. IV) it was presumed that the size determines the benefits of applying BCM according to the standards; therefore, the size of the organization is considered to be a hidden variable (the positive or negative dependency was further explained within the frame of its final effect according to the coding of respondents' answers entered into the analysis (Anderson, 2009)). Based on statistical calculations, two factors that explain approximately 59% of the behavior of the sample group were identified (Tab. III).

The first factor consists of the employees' awareness, the improvement of the organizational climate, the enhancement of the organization's prestige, strengthening of a competitive advantage and the improvement of crisis management (Tab. IV). This factor accounts for 42% of behavior and this means a relatively high quality of the detected factors (0.514 till 0.792). The results of the analysis show that suitable organizational conditions that affect the benefits of applying BC are emphasized primarily by medium-sized and large companies. The second factor consists of insurance expenditure cutting and strengthening of a competitive advantage. This is also valid for large and mid-sized organizations (values 0.717 and 0.937 – a relatively high quality of the detected factors).

The following factor analysis (Tab. VI) takes into consideration the "economic sector" hidden variable. In total, two factors that explain 58% of the sample's behavior (Tab. V) were identified.

III: *Variance explained by factors*

| Factor | Total Variance | Total % of Variance | Cumulative % of Variance |
|---|---|---|---|
| 1 | 2.987 | 42.675 | 42.675 |
| 2 | 1.183 | 16.898 | 59.573 |

Source: authors

IV: *Resultant factors by the Varimax method*

| Variable | Factor 1 | Factor 2 |
|---|---|---|
| Size of the organization (small) | –0.021 | –0.018 |
| The employees' awareness of the risks | **0.672** | 0.274 |
| The improvement of the organizational climate | **0.678** | –0.020 |
| The enhancement of the organization's prestige | **0.792** | 0.029 |
| The insurance expenditures cutting | –0.121 | **0.937** |
| The strengthening of a competitive advantage | **0.514** | **0.717** |
| The improvement of crisis management | **0.676** | 0.278 |
| **Total % of Variance** | **42.675** | **16.898** |
| **Name of factor** | **Organizational environment** | **External environment** |

Source: authors

V: *Variance explained by factors*

| Factor | Total Variance | Total % of Variance | Cumulative % of Variance |
|---|---|---|---|
| 1 | 2.907 | 41.535 | 36.649 |
| 2 | 1.179 | 16.849 | 58.366 |

Source: authors

VI: *Resultant factors by the Varimax method*

| Variable | Factor 1 | Factor 2 |
|---|---|---|
| Sector of economy (primary and secondary) | 0.017 | 0.041 |
| The employees' awareness about the risks | **0.828** | 0.279 |
| The improvement of the organizational climate | **0.599** | –0.066 |
| The enhancement of the organization's prestige | **0.766** | –0.017 |
| The insurance expenditures cutting | –0.056 | **0.949** |
| The strengthening of a competitive advantage | **0.480** | **0.674** |
| The improvement of crisis management | **0.836** | 0.285 |
| **Total % of Variance** | **41.535** | **36.649** |
| **Name of factor** | **Organizational environment** | **External environment** |

Source: authors

VII: *Variance explained by factors*

| Factor | Total Variance | Total % of Variance | Cumulative % of Variance |
|---|---|---|---|
| 1 | 3.117 | 44.524 | 44.524 |
| 2 | 1.178 | 16.833 | 61.357 |

Source: authors processing

VIII: *Resultant factors by the Varimax method*

| Variable | Factor 1 | Factor 2 |
|---|---|---|
| Ownership (Czech organization) | **0.441** | **0.302** |
| The employees' awareness of the risks | **0.818** | 0.306 |
| The improvement of the organizational climate | **0.611** | –0.023 |
| The enhancement of the organization's prestige | **0.743** | –0.020 |
| The insurance expenditures cutting | –0.087 | **0.949** |
| The strengthening of a competitive advantage | **0.430** | **0.666** |
| The improvement of crisis management | **0.827** | 0.315 |
| **Total % of Variance** | **44.524** | **16.833** |
| **Name of factor** | **Organizational environment** | **External environment** |

Source: authors

The range for factor 1 may be considered the most important (41.535). Tab. VI reveals that factor 1 again consists of the organizational environment, but also of a competitive advantage. The values range from 0.599 to 0.836; that means a relatively high quality of the detected factors. On the contrary, the second factor consists of benefits which arise from and are determined primarily by the external environment – cutting of insurance expenditures (0.949) and also gaining a competitive advantage (0.674). As far as the first factor is concerned, the results refer to the tertiary sector, which is also confirmed by the "competitive advantage" variable that is included in both factors.

The last factor analysis focuses on organizations' ownership (hidden variable). At first, two factors that account for 61% of the examined sample's behavior (Tab. VII) were identified and subsequently, the factor analysis was performed (Tab. VIII).

The first factor includes all variables except for lower expenditures for insurance. The results of the analysis indicate that this is probably Czech-owned organizations which put emphasis on appropriate organizational environment supporting BC. The second factor comprises insurance expenditure cutting and gaining a competitive advantage (other values are represented in both factors; however, only the stronger one is interpreted). A conclusion may be drawn suggesting that Czech-owned organizations pursue benefits in insurance expenditure cutting and thus they increase their competitive advantage.

Moreover, it is possible to summarize that there are two types of organizations in the Czech Republic; the first group primarily focuses on creating an appropriate organizational environment from which they subsequently expect positive benefits concerning business continuity. The second group of organizations concentrates rather on the benefits in the external environment although they can hardly influence this environment.

The executed evaluation confirmed that the application of BCM in organizations in the Czech Republic brings specific benefits (P1). The results also show that, as stated by Järveläinen (2013); Siponen, Willison (2009) and Sharp (2009), the application BCM according to the standards itself as well as its benefits are determined by the characteristics of the given organization (e.g. its size, business sector, ownership, the size of the market, etc.); this is also confirmed by the conclusions of the interviews (R1; R2). It is possible to state that benefits connected to the internal organizational environment are more evident and more important for organizations. This is due to the fact that the change of the organizational structure and culture, the improvement of the organization's climate, enhancing of employees' awareness, etc. may be carried out in a relatively shorter time period compared to the building of a competitive advantage or cutting insurance expenditures. The latter processes are also determined to a greater extent by the external environment and not all organizations are in a position allowing them to directly or indirectly control these factors; this often requires a longer time horizon and it is more demanding in financial terms. Nevertheless, even these factors may be deemed important since they need to be considered in the process of risk management and BCM plans development (Blos *et al.*, 2010).

The statistical testing has shown no impact of the BCM application according to the standards on the improvement of performance (P2). This was also a subject for further testing in the qualitative survey. Respondents agreed (R1; R2) that in normal circumstances without any threats, no distinction needs to be made between organizations with BCM and without it; R1 stated that it was a kind of a safeguard. Provided all processes are realized in a standard way no problems occur. The difference, however, is perceived by customers who know that in case of crisis an organization applying BCM according to the standards will be able to handle such a situation. Since it is a specialized activity, R2 mentioned that for small organizations it would be more suitable to rather use the services of consultants. By way of summary, it may be stated that BCM as such, despite being meticulously applied according to the standards, does not result in an improvement of the organization's performance. The survey showed that benefits are evident but in terms of performance, rather than anything else, it is a question of maintaining a maximum level of activity in emergency situations.

Furthermore, the results also suggest that thanks to applying BCM according to the standards organizations are able to deal with structural issues, including poor organization of working processes or transferring processes from their original purpose within the organization model. BCM allows for these issues to be identified and eliminated in a more efficient way. Moreover, analyses of situations influencing organizations can be interpreted better; this may contribute to the organization's optimization which enables it to reduce costs. However, according to Sharp (2009), it is a long-term process in terms of observing financial effects. Organizations should not forget that the probability of recovering from an incident is directly proportional to the simplicity of processes that are established in the affected organization. Applying BCM according to the standards helps to optimize the organizational structure and it has positive effects on the organizational culture and consequently also on its climate. This is equally supported by the survey conducted by Järveläinen (2013) who states that these are important factors that encourage the introduction of BCM. She also considers the support of top management to be a key factor. Only the awareness of benefits arising from BCM application will allow for its efficient implementation. Successful business continuity management will be supported by the development of fast and efficient communication systems that may be used on a daily basis for incident management. Järveläinen (2013) considers ICT to be a crucial area of BCM. This has been also confirmed by the results of the surveys, since 90% of responding organizations focus on information processes within BCM (Venclová, Urbancová, 2012). In conclusion, it is vital to realize that the efficiency of tools dealing with the protection of organizations (such as material safety, information safety, risk management, insurance, knowledge continuity ensuring, etc.) may be increased if they are interlinked with BCM applied according to the standards with an emphasis on specific critical activities in the given organization.

## CONCLUSION

This article increases awareness of BCM benefits within the conditions existing in organizations in the Czech Republic. Moreover, it shows how these benefits vary in relation to the organization's size and the sector in which it operates; also its ownership is taken into consideration. The majority of organizations ensuring BC according to the standards see the greatest benefit in their employees' awareness of BCM impacts and in the improvement of their crisis management. However, achieving these benefits is dependent on internal factors (Järveläinen, 2013).

The theoretical contribution of the article lies in the verification of theoretical benefits mentioned in foreign literature, their interrelation with the monitored characteristics (size, sector, ownership) in the Czech entrepreneurial environment and in demonstrating their relationship. In the Czech Republic, it is primarily large organizations (with over 250 employees) that apply BC according to the standards most frequently. These are predominantly organizations with a foreign majority shareholder operating in the service sector, particularly in the banking industry. The legislative and legal rules regulating this area of business constitute a significant factor.

The practical contribution of this article lies in demonstrating the benefits linked with the application of BCM according to the standards to organizations that might attempt introducing it in the future (i.e. benefits that will manifest themselves in the future). It is also necessary to point out the negative aspects such as high costs connected with its application; this currently represents an important decision-making factor for BCM introduction in Czech economic conditions. This was mentioned by 16.3% of organizations that do not apply BCM according to the standards. The article also mentions that the application of BCM following the standards is not primarily aimed at an improvement of organizations' performance, but rather at minimizing performance drops in the event of business disruption.

The relevance of the findings herein is limited due to the low return rate of the questionnaires from organizations applying BCM according to the standards since Czech organizations do not yet attach much importance to this area; also, it focuses solely on the Czech Republic. In a future survey it would be beneficial to increase the organizations' motivation to take participate in it (a form of co-operation with the academic sector) and to compare the results with specific countries within the EU which are likely to apply BCM according to the BS and 25999-1, 2 standards on a more extensive basis.

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