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The More is Applied, the Better Results are Reached? Empirical Lessons Learned from the Usage of Career Management Tools

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Abstract

According to certain career theories, although the employees are responsible for their own careers, they need the help of the organizations, as they cannot realize their career aims without the support of the employer. For this reason organizations should take an active role in the career management process of their workforce in order to retain them as long as it is possible. This concept requires partnership between the employers and the individuals in which the participants are not only aware of their own needs and aims but also the expectations of their partner.

The aim of this paper is to analyze the usage of the career management tools and to find the most commonly used solutions. The study also points out the techniques applied by successful organizations. Furthermore, the authors examine the relationship between the organizational performance and the application of career management tools. Our other goal is to prove that the usage of career development techniques has a positive impact on the organizational achievements.

The investigated database for this purpose comes from the 2014/16 round of the Cranet survey, consequently represents different part of the world (e.g.: from America, Europe and Asia). The applied statistical methods are frequency queries and variance analysis. For further analyses two career management indicators are created, which are intended to show the number of different career development tools used by the respondents.

The paper designates some interesting points of the lessons learned from the analyses: e.g. organizations should not necessarily use complex career development systems where it may also be appropriate, if they use only some techniques consciously. Some of the most popular career management tools among the surveyed companies are related to the organization (e.g. on the job training, project work) and some are individual techniques (e.g. mentoring, coaching).

Keywords

Career, career development, career management tools, organizational career management.

Introduction

Based on the latest surveys (Kelly Services, 2014, 2015) conducted by Kelly Services, the employees wish more career development activities but, little do the organizations take it into consideration. According to their findings only 38% of the respondent employees (18% in Hungary) took part in a career development consultation. Every second (globally 48%, 44% in Hungary) from them thought that it was useful for future improvement. A lot fewer workers answered that they have the opportunity to improve at the current workplace (globally 35%, 28% in Hungary). Globally less than 1/3 can see a clear career path, while it is 20% in Hungary. (Kelly Services, 2014) According to the results from 2015, a vast majority of employees want to nurture their skill sets (70%) but only a minority experiences that their organization invests in training/upskilling. An employer who can offer these opportunities can be really attractive for workers – concluded Kelly Services 2015.

We can identify further challenges which several organizations have to face regarding the current employment situation in Europe and in Hungary. These are for example: aging society, difficulties in succession planning, gaining and retaining talented employees, more and more often job changes. There is a common point in the solution of the mentioned problems above: the organizations could handle them with a properly conceived and operated career management program.

The aim of this study is to investigate usage of the career management tools indicated by the respondents of the last Cranet survey (2014/16 round) and to show whether:

- *there is a connection between the application of career management solutions and the organizational performance,*
- *there are differences in the usage of career management methods between the better and weaker performing companies.*

1. Organizational career management and its tools

According to Kong, Cheung and Hang (2010), organizational career management can be interpreted as sum of the programs and actions provided by the organization with the aim of facilitating the career of its employees. Noe (2008) thinks that the effective career management system helps employees, managers and the company to identify the career development needs; furthermore, it includes self-assessment, environmental analysis, goal-setting and activities planning. This approach, however, is not complete because it only focuses on the design phase.

Based on the view of Farkas, Fodor, Lóránd and Vajkai (2007), organizational career management can be described as a supported, formal career development of employees. The target group of this activity can be the whole staff or just a part of it. On one hand this aspect refers to the fact that the career management activity is linked to the organization; on the other hand it also shows that the target group of this practice is not necessarily all employees of the organization; it can address just specific groups.

Based on the view represented by Arnold (1996) the definition can be explained more precisely: a series of formal and less formal activities planned and managed by the organization, through which the company seeks to influence the career development of its employees, thereby to increase organizational efficiency. According to this approach, the needs of the organization are dominant in the career management practice and the goal is the organizational success.

Leibowitz, Farren and Kaye's (1986) opinion emphasizes that the system cannot work effectively without the contribution of the employees. They state that career management is a combination of formal and planned efforts to create consistency between individual career needs and organizational resource needs. Consequently, based on Csányi's writing (2004) we can affirm that the objective of organizational career management is to coordinate the organization's human resources needs with the individual's ideas related to her/his career.

There are several career management tools which the organizations can apply during the development of their workers. Different factors can influence the usage of the diverse solutions like organizational and individual goals and needs, the operational framework and financial conditions. There are just quite few studies which examine the application of these tools and they are a little outdated as Lewis and Arnold (2012) summarize it.

Baruch has a longer list about the used career management solutions by organizations. He tested them with his co-authors many times. Baruch and Peiperl (2000) used factor analysis to group 17 organizational career management practices into five categories as follows:

- *basic (e.g.: job postings and formal education),*
- *active planning (e.g.: performance appraisal as a basis for career planning and career counselling),*
- *active management (e.g.: formal mentoring and career workshops),*
- *formal (e.g.: written personal career planning and common career paths) and*
- *multi-directional (e.g.: peer appraisal and upward appraisal).*

They showed how these categories correlate in practice, both with one another and with certain organizational characteristics. Based on their results they elaborated recommendations for organizations which can help them to select and use the appropriate career tools.

Based on the outcomes of the literature review dealing with usage of the career management techniques, we can state that the most popular means are: job postings (i.e. internal notification of vacancies), formal education, performance appraisal for career planning, career counselling with line manager (Baruch 1996; Baruch & Budhwar, 2006; Baruch & Peiperl, 2000), career reviews, informal mentors and career-path information (Iles & Mabey, 1993).

Iles and Mabey (1993) found that the most often used tools tended to be those that could be easily carried out on a day-to-day basis, while the less common ones usually required more organizational effort in the form of e.g. a "special program".

Lewis and Arnold (2012) carried out a research about 20 career management tools used within the UK retail buying and merchandising (B&M) community. They found that internal job posting, performance appraisal for career development, induction, personal development plans and competencies were the most commonly used solutions. They used the clusters from Baruch and Peiperl (2000) to group them. According to their results, the basic techniques (internal job posting, training and educational opportunities, induction) were used most often. They think in accordance with Baruch and Peiperl that these are the most popular techniques because they are easy to use and require only a moderate level of organizational contribution. On the other hand, the most consistently favoured techniques (by the employees) were training/educational opportunities, career-planning workshops, personal development plans, induction and fast-track programs. It was an important result since these preferred solutions were not very extensively applied by the surveyed companies.

The research mentioned in the introduction part concluded that globally only 1/3 of the surveyed employees are satisfied with the career management solutions provided by their employers. This rate is only 15% in Hungary. (Kelly Services, 2014) Our paper is going to investigate only the organizational side of the topic so we will show the most commonly applied methods and their impacts on the organizational performance.

2. Research and results

2.1. The basic research data

Our investigation is based on the database of Cranfield Network (CRANET – Human Resource Management Research Network coordinated by Cranfield Business School, UK) from the 2014/16 round. The questionnaire used by the network has been applied for 25 years with minor changes. Among the more than 60 questions one is dealing with the extent of application of career management tools. The analysis and findings of this study were carried out based on the answer concerning this question.

There are 6481 responses from organizations in the research sample. The larger part (71%) of it comes from European respondents (the number of Hungarians is 273). Among the almost 30% respondents we can find American, Japanese, Russian, South African, Brazilian and Australian participants also who answered the questions. The surveyed organizations operate in the private, public or non-profit sector. The relevant sample considering our research topic consists of 5625 organizations, since we filtered out those respondents from the whole database who did not answered any of the questions in connection with usage of career management tools. The following results only refer to the filtered sample.

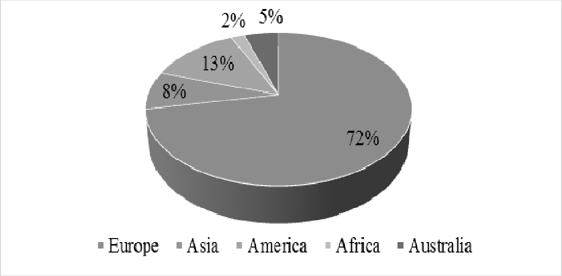

Figure 1 Distribution of the organizations by continents (n=5625)
Source: The authors

On Figure 1 we can see that the proportion of the European organizations is the highest in the relevant sample (72%), too. The American respondents represent 13% while the share of the responses from Asia, Africa and Australia is less than 10%. In this sample there are 268 (5%) Hungarian answers.

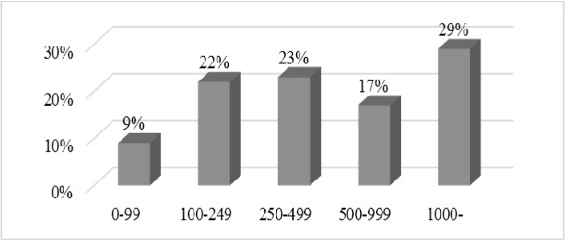

Figure 2 Distribution of the organizations by employees (n=5573)
Source: The authors

Figure 2 shows that 1/3 of the respondents employ less than 250 people. It means that these participants belong to the small and medium sized companies based on the number of employees. The highest proportion (69%) of the respondents came from the large companies employing more than 250 workers.

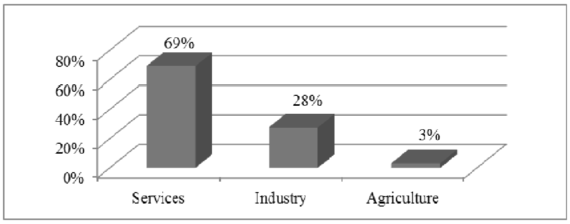

Figure 3 Distribution of the organizations by sectors (n=5362)
Source: The authors

The distribution of the respondents by sector is represented on Figure 3. The larger part (69%) of the participants operate in the service sector, 28% come from the industry sector, while only 3% work in agriculture. This is not a surprising fact since most of the surveyed organizations come from developed countries where the service sector is the dominant.

2.2. The most commonly used tools for career development

After description of the basic characteristics of the sample we present the application of career management tools by the respondents. Table 1 represents to what extent the respondents use each of the career management tools.

Table 1 The scope of application career management tools

Tools used for career management	n	Mean	Std. deviation
Training on-the-job	5404	**2.61***	1.287
Participation in project team work	5530	**2.15**	1.290
Special tasks	5508	**1.67**	1.302
Projects to stimulate learning	5510	**1.66**	1.314
Mentoring	5551	**1.56**	1.314
Coaching	5536	**1.55**	1.283
Succession plans	5529	**1.38**	1.303
Computer bases packages/ e-learning	5527	**1.37**	1.356
"High flier" schemes/ High potentials	5513	**1.24**	1.383
Formal career plans	5515	**1.21**	1.260
Formal networking schemes	5491	**1.11**	1.192
Planned job rotation	5520	**1.00**	1.140
International work assignments	5506	**0.87**	1.185
Development centres	5331	**0.77**	1.169

** Where 0 = not at all, 4 = very widely used*

Source: The authors

As we can see in Table 1 the most frequently applied method used for career management is on-the-job training (2.61). Its modus is 4, meaning that most of the organizations are using it very widely. The second popular tool is participation in project team work (2.15), whose modus is 3, so a larger part of the respondents apply it to a great extent. The third one is special tasks (1.67), whose modus is 2, which means that most of the participants use it to a moderate extent. Further favoured techniques are projects to stimulate learning (1.66), mentoring (1.56) and coaching (1.55). These and the other tools have a modus with value of 0, so most of the organizations do not use them. Furthermore we found that talent programs (1.24) are not really frequent among the respondents.

To compare our results with the outcomes of the literature review – most popular tools were: job postings, formal education, performance appraisal for career planning, career counselling, career reviews, informal mentors and career-path information – we can highlight some similarities and also some differences. The differences can be explained once that the investigated tools are not the same in our and the earlier mentioned studies, twice most of the previous examinations are older ones except Lewis and Arnold's (2012) research, so the techniques could have changed over time. We found that training and education is still a popular tool for career management. Although the Cranet questionnaire does not contain performance appraisal as a career management technique but there is a question which examines whether the surveyed organizations use the results of performance measurement for career moves decisions. According to the 74% of the valid answers they utilize these outcomes. So we can conclude that most organizations still apply the results of the performance appraisal, too. The mentoring activity is also still popular among the respondents. However, formal career plans are rarely used. We do not have information about internal job postings. Our survey seems to contradict the following finding of the literature: while earlier those career management tools were popular which could be carried out easily, based on the new results, we can see that those solutions are also common which require more effort from the organizations – like project work and special task.

We have to note that the averages do not represent so high values which can be interpreted because either the respondent organizations do not care about career management, or just concentrate on the usage of some tools, or they apply other techniques which were not listed in the questionnaire – like job enrichment or career workshops.

2.3. Career management indicators

The further part of our paper focuses on those organizations which use career development tools (considering frequency they indicated at least one for this question, so they use career management techniques at least to a small extent.) To investigate these respondents we created two career management indicators, which are intended to designate the number of different career development tools used by the respondents. These indicators are the following:

- *comprehensive use of career management tools (CCMT),*
- *focus-used career management tools (FCMT).*

2.3.1. Indicator for comprehensive use of career management tools (CCMT)

The indicator of comprehensive use of career management tools (CCMT) expresses the number of answers by a respondent with at least the value of one among the fourteen examined career development tools. Thus, they use the given tool at least rarely, so the indicator can have a value between 0 and 14. The value is 0 if the respondent does not use any of the tools at all and it is 14 if the respondent uses all tools at least rarely. Figure 4 presents the percentage distribution of the value of the examined indicator.

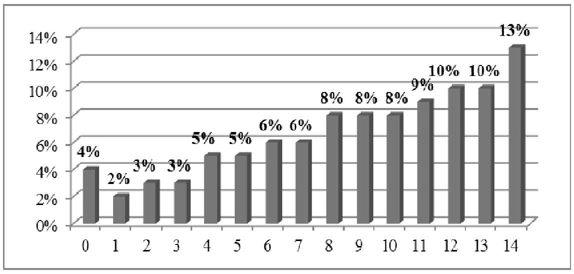

Figure 4 Breakdown of the CCMT indicator (n=5625)
Source: The authors

It can be concluded that the highest proportion (13%) of the examined organizations answered that – if only to a small extent but – they use all of the tools indicated in the questionnaire. 4% use none of the techniques. It can be observed on the figure that it is typical practice that respondents apply rather more tools (8-14) than just one, two or three methods.

2.3.2. Indicator for focus-used career management tools (FCMT)

The purpose of the indicator of focus-used career management tools' (FCMT) is to identify the practice of respondents who frequently apply career management tools. Thus, it shows the number of answers given by a surveyed respondent with at least the value of three among the fourteen examined career development tools. In other words, it shows the tools that are used regularly or for a wider group of employees. This indicator can also have a value between 0 and 14. The value is 0 if the respondent does not use any tools regularly and it is 14 if the respondent uses all tools regularly or especially frequently. The figure 5 represents the percentage distribution of the value of this indicator.

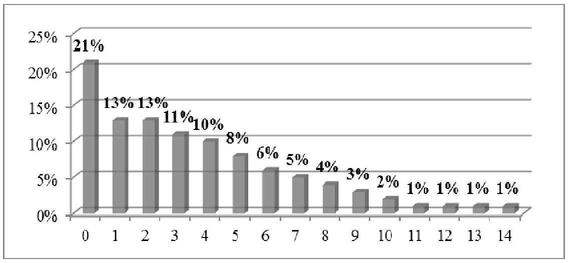

Figure 5 Breakdown of the FCMT indicator (n=5625)
Source: The authors

The results concerning the focused indicator indicate the opposite trend of the previous index since the participants use only few career management tools to a great (or a very great) extent. The higher the number of the implemented tools is, the lower the rate of the respondents implementing them to a great extent is. 21% of respondents stated that they do not apply any of the techniques to a great extent. However, we can see that half of the organizations are using several tools (1-2-3-4-5) to a great extent. These tools are the same which are the most popular in general; however, they have a bit different average values: on-the-job training (2.85), participation in project team work (2.19), special tasks (1.63), projects to stimulate learning (1.56), mentoring (1,46) and coaching (1.43).

2.4. The use of career management tools and organizational performance

The aim of the further analysis is to determine whether we can show any connection between the degree of implementation of career management tools and organizational performance. For this purpose besides the CCMT index we had to consider the scale expressing the relation between the organizational revenues and costs, the relative value of profitability (compared to the competitors) and relative values of productivity level (compared to the competitors). Since these three organizational indicators were measured only on an ordinal scale, we had to test the independence with one way analysis of variance (ANOVA), whose results are illustrated in Table 2.

Table 2 The averages of CCMT index by different levels of gross revenue, profitability and productivity

Gross revenue	**n**	**CCMT average**	**Profitability** (compared to the competitors)	**n**	**CCMT average**	**Productivity** (compared to the competitors)	**n**	**CCMT average**
So low as to produce large losses	113	8.34	Poor or at the low end of the industry	105	7.57	Poor or at the low end of the industry	47	9.43
Insufficient to cover costs	359	8.28	Below average	510	8.69	Below average	315	8.33
Enough to break even	584	8.07	Average or equal to the competition	1663	8.78	Average or equal to the competition	1637	8.56
Sufficient to make a small profit	1609	9.15	Better than average	1598	9.52	Better than average	2019	9.47
Well in excess of costs	1399	9.96	Superior	742	9.70	Superior	990	9.45
Total	4064	9.17	Total	4618	9.15	Total	5008	9.10

Source: The authors

Table 2 shows some details from the one way ANOVA. We have to note that p-values for the expected values for testing conformity in each case are less than 0.01. Based on the results – level of significance (p1, p2, p3=0,00) and the F values (F1=31,867, F2=17,088, F3=17,408) – we can conclude that there is significant relationship between the organizational performance and usage of career management tools. Unfortunately, because of the limits of the research we do not have opportunity to explore the cause-effect relationships, so we cannot prove that:

- *organizations applying career management solutions more commonly are reaching higher performance, or*
- *well-performing organizations are using more career tools or not.*

Then the next step was to discover whether there is a "recipe for success", i.e. whether we can find differences between the types of career development tools used by the better or weaker performing respondents. In this respect our findings are contradicting with our basic assumptions. Namely, the applied techniques are the same in all types of performers, and these are as follows:

- *On-the-job training*
- *Participation in project team work*
- *Special tasks*
- *Projects to stimulate learning*
- *Mentoring*
- *Coaching*

One interesting finding in this respect is that the better performing participants prefer coaching to mentoring – but we have to note that the difference in the averages is really small in the case of these two solutions. Furthermore, we found that there are differences in the averages of the career tools usage among the better or weaker performing organizations. The better companies use these techniques to a greater extent, while the weaker use them to a smaller extent.

As a conclusion we can state that the same career management techniques are popular among the companies at the top and at the bottom level of performance. There are differences just in the averages of application.

Conclusion

Our study presented that the organizations that participated in Cranet survey 2014/16 are using certain career management tools more commonly to help the career development of their employees. Based on our results we could prove the relationship between the extent of using career tools and the organizational performance, but we could not show its directions partly because of the limits of the survey.

We cannot state that if more career management techniques are applied, the better results can be reached. Since there is no difference between the better or weaker performing companies concerning the type and number of applied tools. All of them use the same solutions which are:

- *On-the-job training*
- *Participation in project team work*
- *Special tasks*
- *Projects to stimulate learning*
- *Mentoring*
- *Coaching*

We found that they apply them to different extents: the better companies use these techniques to a greater extent while the underperformers choose them to a smaller extent.

To compare our results with the outcomes of the literature, we found that training, development and mentoring are still popular tools for career management. Most organizations still apply the results of performance measurement for underlying the career moves decisions.

Our finding appears to contradict with the results of the literature, indicating that the popularity of the career management tools are in line with their usage. Namely the most popular is the more easily applicable. Based on our results, we can state that solutions requiring more effort nowadays are also popular, e.g. project work or special task.

To summarize our findings, we can state that there is a relationship between the frequency of the usage of career development tools and organizational performance, but such a connection cannot be proved between the type of the tool and the level of performance. We have to note that the averages do not represent such high values which can be interpreted either the respondent organizations do not care about career management, or just concentrate on the usage of some tools, or they apply other techniques which were not listed in the questionnaire – like job enrichment or career workshops.

Finally we think that organizations should consider paying more attention to the organizational career development practice, because the employees would require it – as we could see at the beginning of our paper. It is not necessary to build up a complex career management system, but it could be useful if the employers applied only several methods, but consciously. SM

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The Importance of Corporate Branding in School Management

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Abstract
Corporate branding in school management is a relatively new term. The basic element of the marketing process of education makes the service itself, i.e. employees in education. This paper analyzes the role of employees in the construction of a brand that is specific to the school management. We describe a model for managing brands through brand identity, image and corporate reputation. The models that were used are The ACID Test of Corporate Identity Management, The Corporate Identity Mix and Keller's CBBE model. We analyzed the service from the aspect of creating the brand, which is based on Kapferer's brand metaphor connecting the role of employees as providers and promoters of corporate identity. Finally, we review brand perceptions as key factor in building corporate performance in school management. The importance of corporate image, corporate reputation and communication is crucial for creating Communicated identity. Furthermore, we indirectly achieve desired identity based on the creation of communication identity of the organization.

Keywords
Brand, corporate branding, school management, Corporate Identity Mix.

Introduction

The brand is not only the character or reputation. Long term brand regarded as a static product segment which in its integration of images, characters and symbols goes beyond today's understanding of the brand. The brand is a complex set of intangible and tangible characteristics that project the emotional and social benefits to consumers. Brand in its essence must have added value because it increases the expected value. Intangible brand equity participation in the company's value and such value is constantly increasing. It should be noted that intangible value of brands account for 80% of success, although they account for only 20% of the cost (de Chernatony & McDonald, 2003, p.8). The brand becomes a "living organism" (Kapferer, 2008, p. 12) that depends on the consumer's perception, emotion and experience. The brand represents an upgrade of the product and provides added value that is not inherent in competitive brands. Because of the above, it is possible to build a unique association from the brand.

Corporate brand includes a much wider range and requires coordination of a number of elements that influence the outcome. Also, a plurality of brands companies is a reflection on the creation of brand personality (Aaker, 1997, p. 352). The brand represents the promise that eventually develops in corporate reputation. Therefore, the corporate reputation is becoming the most important assets in modern management. An important strategic decision for every business entity is the way how to mark the brand (Kotler & Keller, 2007, p. 296). Brand image interactively affects the consumer's self-images. The symbol that represents the brand is viewed through the context of symbolic value. The brand is perceived in the context of the image, i.e. the model of associations and images. Such perceived structure of attitudes and opinions, beliefs and prejudices, represents the image in its widest sense of the word.

1. Methodology

The methodology of Kapferer's hexagon brand (Kapferer, 2008, p.183) and Balmer's corporate identity model C^2ITE (Balmer, 2001a, pp. 248-

291) were used for the research of the corporate brand in non-profit organizations. Keller CBBE model (Keller, 2001, pp. 15-19; Keller, Aperia, & Georgson, 2008, pp. 42-87) and the theory of brand personality (Aaker, 1997, pp. 347-357) were also implemented. Models were researched with comparative method, the method of analysis, synthesis, deduction and deconstruction. The role of the employees in school management was analyzed. We explained the model of brand personality, identity and image, and showed the correlation method ACID test (Balmer & Soenen, 1999, pp. 69-92). From the aspects of school management, the identity of brand corporation was analyzed by C^2ITE, elements of brand corporations (Hatch & Schultz, 2001, p. 133) and construct of brand personality corporation (Davies, Chun, de Silva, & Roper, 2004, pp. 125-146). Deconstruction of the brand depends on the customers' impressions and is implemented in methodology of Aakers brand personality construct, which was compared with other models.

The paper analyzes the brand companies within the school management from the point of creating a brand that is based on metaphors. We used the interpretive methods, methods of deduction, analysis and deconstruction. Phenomenological and discourse analysis were used for the metaphor of the brand. We also used hermeneutic spiral and theoretical triangulation method. Inductive approach, holistic perspective and synchronic-diachronic context were used according to methodology of qualitative research.

2. The role of brand

The brand is a very complex symbol. For its positioning, it is necessary to observe the brand through complete marketing mix benefits that is called proposed equity (Kotler & Armstrong, 2007, p. 208). Suggested brand equity was perceived through consumer intangible category. The brand represents the promise that the company provided and it that must be fulfilled. The brand goes beyond the basic value and refers to the consumer's satisfaction and added value. Analysis of competition depends on a number of factors, and decisions about the target market we look at in terms of competing points-of-parity (Kotler & Keller, 2007, pp. 312-314):

a) Points-of-parity
b) Points-of-difference
c) Points-of-parity versus Points-of-difference

Points-of-differences include features or benefits that consumers associate with the brand and have expressed positive connotations to the brands they believe. According to the model of points-of-differences, consumers are developing positive and unique associations that may be based on tangible and intangible values. Points-of-differences represent positive emotional and rational impressions according to brand. The points-of-parity represent associations that are not always related to a specific brand, but can occur in competing brands. The appearance of points-of-parity is manifested through two modules: the competition and categories. Similarities include competitive negative association against competitive brands, while categorical points-of-parity indicate significant association to consumers against competitive categories. Points-of-parity function according to the principle of recognizing and brand recall, while the role of the association reflects the real image of the brand positioning in the market.

It must be a certain number of consumers who will believe that the selected consumer brand is superior to achieve points-of-parity versus points-of-difference. It is interesting that such consumers perceive the brand as superior, even though it does not have to be of higher quality. It is crucial that they are based on the emotional brand impressions, ignoring rational. Since the brands by their nature reflect certain distinctiveness, with existing typical utility such as recognition, identification and assurance, we conclude that the key positioning is not in the points-of-difference, although it looks like because of positive associations that consumers develop, but just in points-of-parity.

It is possible to build a unique association of brand, which is based on the foundations of semiotics. Kapferer's brand as a "living organism" consists of three categories (Kapferer, 2008, p. 12): the product, the name and the concept of brand. The concept of brand includes tangible and intangible values and its title includes the name of the brand and the meanings that this name evokes in the consumer's awareness. Finally, the service itself indicates the concept of experience with the brand (de Chernatony & McDonald, 2003, p. 647). The concept of brand identity has attracted the interest of the field of brand management, the theory of consumer behaviour (Khan, 2006) and marketing strategy. The precondition of building a successful brand is the creation of an appropriate brand identity. Brand identity can be seen as a vision beyond the brand with its values, promised benefits, diversity and uniqueness to which the consumers react.

2.1. Brand identity

Brand identity is a unique set of associations located in the impressions of consumers and other interested stakeholders (Aaker, 1996, p. 27), and constitutes one of the key factors of brand architecture. Brand identity is understood as a vision followed by the brand with its values, promised benefits and uniqueness to which the consumers react. The components of the brand identity in strategic terms (de Chernatony, 2002, p. 47) were seen as models of construction, which Aaker calls architecture brand (Aaker & Joachimsthaler, 2000). Brand identity is observed through six aspects which Kapferer calls brand identity prism. At first it begins with physical characteristics that are perceived as tangible value, and end on consumer's self-image. Brand image reflects the current perception of the brand; therefore it includes three distinctive communicative features (Aaker, 1996, p. 180):

a) augmented image
b) reinforced and exploited
c) softened and diffused

Augmented image refers to the situation where the brand identity does not match with the brand image, which is often the case in the demographic segmentation. Unlike the extended image, reinforced and exploited image includes some added associations that consumers develop. However, the brand image should not be assigned position in the market. Reinforced image improves brand personality (Aaker, 1997, pp. 347-357). Softened and diffused image is opposite to enhanced and utilized image. A combination of consumer segments shows that the image is not always well integrated in marketing communication. Such relocation of consumer categories is common, because the consumer trends change so that the brand image must adapt. Table 1 presents the models of brand associations in school management.

Table 1 Strategies of brand association in school management

Strategy	Perception	Example
Attributes	technical or technological characteristics	ICT in schools, e-diary
Features	offered needs or benefits	preparing state graduation
Opportunity	place, time and opportunity to us	summer and winter workshops
Users	new segments of users	education of adults
Activities	special, specific activities	LiDraNo
Famous persons	personalization of fame brand personality	A. G. Matoš
Competition	benchmarking	gymnasiums, private schools
Class	brand goes beyond the original class product	college, university

Source: The author

As can be seen, associations in school management have been conceived as a strategic form of creating a school culture, and building brand according to the model of corporate reputation (Urde, Greyser, & Balmer, 2007, p. 11). Figure 1 shows the identity of the brand, i.e. six models which together form the brand identity prism.

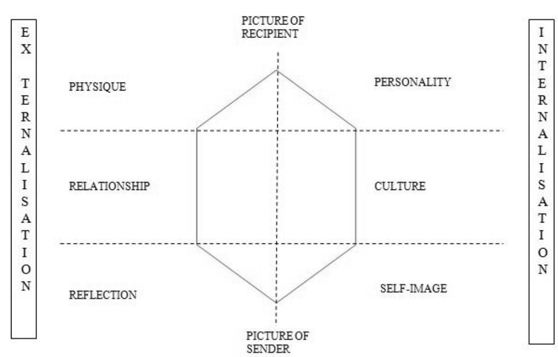

Figure 1 Brand hexagon
Source: Kapferer, 2008, p. 183

Each of the six characteristics of brand identity is crucial in certain elements of building the brand (Azoulay & Kapferer, 2003, p. 146), and the characteristics of brand personality, self-images and culture are extremely important for the development of brand companies as associated image, personification of brand and reflection identification. Physical properties represent the amount of the basic characteristics and predispositions of products or services, such as schools look and behaviour of employees.

Attributes represent contemporary technical features that make schools distinct from competition, such as e-journal, e-book and virtual notebooks. Association of users and celebrities can be combined in one model because they complement each other, as well as new segments of users, training of adult learners, summer camps and promotion of employees, and services through famous former participants. Also, some authors (Balmer, 1995, p.p 24-46; Keller et al., 2008, p. 58; Urde et al., 2007, p.11) emphasize the importance of brand culture heritage and personalization of celebrities in brand awareness. Places of brand origin tells us about the quality of education from a certain region, a comparison with better and represent the brand that goes beyond the original brand services, i.e. when the school management develops from high school to higher education level.

Below is brand personality, the perception of brand properties identification with the personification of animals or people (Epley, Waytz, & Cacioppo, 2007), model according to model from the brand heritage. The third element of identity is culture and it is closely related to the model of culture of the organization, and refers to the set of values, inspiration, and building brand essence as opposed to relationships that make up the intangible exchange between brands and consumers. The last two elements of identity are a reflection of the self-image, and they reflect the consumer's image and become part of the identification. Brand identity includes the message that the brand transmits through the name, visual and sound elements and advertising. The image includes beliefs and emotions according to specific brands or consumer's impression.

2.2. CBBE model

The main contribution to theory of brand building is provided by Keller's model (Keller, 2001, pp. 15-19), which introduces the concept CBBE (Customer-Based Brand Equity) and inaugurates the hierarchy of the brand. Figure 2 shows CBBE model that looks at building a brand as input of series of steps, from bottom to top, or from the visibility and identity to relationships or resonance. Brand resonance is defined as the conceptual strength or depth of the psychological connection that the consumer has with the brand, as well as the level of activity elicited by this connection (Kotler & Keller, 2007, p. 280). Customer-Based Brand Equity is defined as the way in which knowledge of the brand influences the reaction of consumers in relation to the presentation of the brand (Keller et al., 2008, p. 57). These steps set the foundation for building a framework of fundamental strong brands. CBBE model represents the way in which knowledge of the brand influences the reaction of consumers in relation to the presentation of the brand (Keller et al., 2008, p. 57). The brand has a positive CBBE when the consumer is more likely to choose products that are presented to the market.

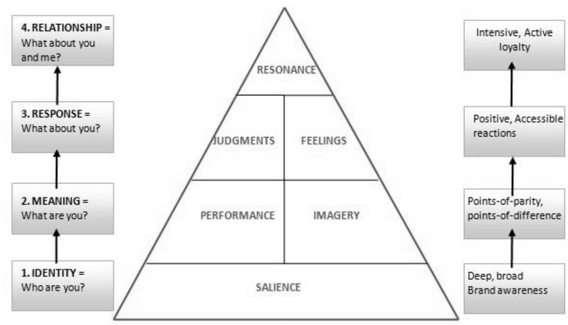

Figure 2 Brand resonance pyramid
Source: Keller et al., 2008, p. 57

But the brand can have a negative CBBE when the consumer is less favourable to products which are under the same conditions presented in the market. Exactly that experience of the brand makes corporate management, since the holders of services in school management are employees. Brand resonance pyramid includes four steps: a) ensure the identification of the brand with consumers, b) determine the overall significance in the minds of consumers, c) encourages appropriate response of consumers according to identify and signification of the brand, d) changes the response to the brand to create a strong relationship between customer loyalty and brands.

According to this model Keller establishes the so-called six building brand blocks with consumers. These steps set the foundation for building a fundamental framework for strong brands. Brand building includes the initial stage of development of the brand identity, while hierarchically climbs to the top, i.e. brand resonance that represents the relationships and a strong and active brand loyalty. It is important to point out that Keller emphasizes hierarchically display and warns that the progress on the "branding ladder" creates a model of building brand that determines the specific stages.

3. Corporate branding

Corporate brand is specific construct which was created according to the theory of brand personality (Aaker, 1997, pp. 347-356). Although the concept of brand personality is associated with the products or services of the brand and the corporate brand, there are very significant differences in the consumers' impression. Furthermore, the model C^2ITE (Balmer, 2001a, pp. 248-291) is five characteristic features of corporate brand, a brand associated with the brand personality. Table 2 shows characteristics of the model of corporate brand C^2ITE through five key concepts, starting from cultures which includes "cultural roots" (Balmer, 2001a, pp. 248-291; Balmer, 2001b, pp. 11-21; Balmer, 2001c, pp. 1-17; Balmer & Gray, 2003, pp. 972-997), i.e. emphasizes the value of corporate culture, sub-culture environment, regionalism and nationalism.

Table 2 Model C^2ITE

Characteristics	Performance
Cultural	"cultural roots"
Intricate	multidimensional
Tangible	brand architecture
Ethereal	emotional response
Commitment	corporate image

Source: Balmer, 2001c, p. 3

Corporate brand personality is based on the behaviour of employees (Punjaisri & Wilson, 2007, p. 59), i.e. corporate culture. The construct of corporate brand personality reflects the values represented by the company and is projected through the activities of the organization itself. The specificity of the construct is based on the relationship between culture and reflection on identity (Kapferer, 2008, p. 183) non-profit organizations such as the characteristic of the school management. If a core value within the strategy of school management is to provide a service (knowledge) and taking care of customers (Hooley, Saunders, & Piercy, 2004, p. 26), then the qualities of caring and responsibility should be implemented in the corporate brand personality, like Aaker said in her theory of brand personality (Aaker, 1997, pp. 347- 356).

Corporate brand increases company's visibility, recognition and reputation. Table 2 shows the model C^2ITE which clearly shows the characteristics of the corporate brand. The concept of corporate branding consists of five characteristics: cultural, intricate, tangible, ethereal and commitment. Therefore, the cultural characteristics include strong cultural roots of the corporation, or start from the strong loyalty of employees in the brand. Then they include connection and commitment of all employees with the vision of the corporation. By doing so, the tangible and intangible values of the brand are correlated with the employees' values. In order to create a corporate image, employees must be linked to the performance of the organization. Brands are closely associated with the employees in the service sector, especially in school management. School management should be aware that their image is projected through the employee's interactions with clients, stakeholders and consumers. In order to build positive brand personality (Saucier, 1994, pp. 506-516) is important for school management to have a vision of the company's development.

In Table 3 brand identity was analyzed according to Kapferer's methodology. It is obvious to have all six segments mutually intertwined and connected, but it is also indicative that the last two segments: reflection and affirmation represent the final consumer. We should point out that the school system in terms of marketing communications is the least in the central part, in segments of culture and brand relationships with consumers.

Table 3 Corporate identity in school management

Physique	The layout of the building, hall, library, projects
Brand personality	Reputation employees, specialization, mentoring
Culture	The attitude of employees towards consumers
Relationship	CRM
Reflection	Customer satisfaction, customer loyalty
Self-image	The trust, tradition, awards

Source: The author

Unsatisfied and unmotivated employees damage the reputation of the organization, and prevent the development of the central part of hexagons brand identity. School management cultivates only the left part of hexagons, or part of the externalization of the sender, precisely only visual features. All other dimensions are not used, but the most important segments, i.e. the employees are continuously marginalized. School climate here is understood as a metaphor that characterizes the individual characteristics of non-profit organizations, and it can be perceived as a complete emotional impression (Owens, 2004, p. 183). The concept of cultural roots in school management, in contrast to the sub cultural roots and nationality or reputation (Urde et al., 2007, p. 11), here is based on the values, symbols, phrases and ceremonies. In particular, school culture is not a static characteristic because it constantly creates and forms, and the most developed through the relationship with employees. In fact, all the elements of a school model C^2ITE are build on elements of the brand companies (Hatch & Schultz, 2001, p. 133) and dimensions of CBBE model (Keller et al., 2008, pp. 47-81).

Corporate identity is necessary to create the reputation of the company (Motion, Leitch, & Brodie, 2003, p. 1082) and the quality of service is crucial to the strategic approach to the success of the organization. School management is a young discipline of managing non-profit organizations which in its essence is one of the segments of management in education. Marketing in school management is defined as a set of activities that develops the planning, implementation, distribution and communication. The school management has a complex management model (Bush & Glover, 2003, pp. 37-160), and the basic premise of the marketing of non-profit organizations, like schools, is based on service users. Also, the dominance of non-economic objectives further complicates evaluation of objective attitudes of business success. Marketing in schools in terms of service providers is a key factor in enterprise value. Therefore, the classification of services is classified as pure services since it offers a high level of intangible elements. Figure 4 shows a model of school management by which we can build a corporate brand. As it can be seen, the key elements are employees.

Figure 3 Model three circles in school management
Source: The author

The basic marketing elements of the education process are: instructional processes, technology and teaching staff. The quality of school usually depends on a systematic concern and motivation of teachers and providing autonomy to work. Characteristics of a climate within a given school stem from the interaction forms, i.e. it is possible and inevitable impact on any person and any other group. Therefore, the role of employees in education is crucial. Model of three circles inaugurated by Adair (Adair, 1983, p. 4) represents the key factors that can be compared in the case of non-profit organizations like schools in the purpose of its improvement. In the first place Adair points out the duties and responsibilities of school management, then teams or groups of employees such as assets or associates and individuals within teams, i.e. individual employees.

In such an understanding, it is clear that inspiration is a very important component, not only interpersonal skills but also of certain leadership styles. Employees who are not motivated lead to lower productivity, avoid liability, bad service, leaving the organization and ultimately, to the new cost of the institution itself. We will analyze a model of corporate identity with Corporate Identity Mix method and the ACID test.

Corporate Identity Mix consists of three models (Balmer & Soenen, 1999, p. 74): Soul, Mind and Voice. Soul core model includes values, cultures, and internal images and employee’s affinity. Mind comprises vision, strategy, product or service performance, corporate performance, brand architecture and corporate ownership. Finally, a model includes Voice-controlled communication, non-controlled communication, symbolism, or corporate employee behaviour and indirect communication. Corporate Identity Mix represents three dimensions of corporate personalities that comprise the core values and history Corporation or its culture and preferences of employees. The school management is about values and employee motivation and organizational culture. This model Balmer called the Soul because it makes the essence of creating corporate identity.

Also, the vision of the corporation, providing services and performance represent model Mind. Finally, model Voice makes symbolism, indirect marketing communications, i.e. creating a brand. As it can be seen, a model can be compared with Figure 3, which shows model of three circles in the school management because it highlights the positive environment of the organization, employees and the provision of services. At the same time, a model of Corporate Identity Mix confirms the theory of identity brand can be seen from Table 3 where all six of the features included in the model of Soul, Mind and Voice. To verify the importance of corporate identity and corporate branding and school management, we will use the method Acid Test (Balmer & Soenen, 1999, pp. 82-85). As it can be seen in Table 4, the model of ACID test includes four types of identity: Actual Identity, Communicated Identity, Ideal Identity and Desired Identity. The highest point of corporate identity management is achieving a dynamic congruency between the four types of identity (Balmer & Soenen, 1999, p. 82).

Table 4 ACID test in school management

Identity	Performance	School management
Actual	what the organization is in reality	poor management, unmotivated staff, weak principals
Communicated	how the organization is perceived by its publics	representation in the media, success in competitions, reputation managers
Ideal	the optimum positioning in markets	positioning at national level, social responsibility, fidelity
Desired	wish to acquire	desire to be the best school in the region, the best results

Source: The author

Model Actual Identity represent values based on the management, it is a real, true picture of the organization. Also, the first model includes performance of the organization and the services provided, and even the behaviour of employees. The school management it is very difficult because employees are unmotivated, interpersonal communication is very weak, and the directors are bad managers. Communicated Identity is a dual concept that refers to corporate reputation and overall corporate communication. In particular, in the school management it represents a success at school competition, media coverage, reputation managers and school success. Ideal Identity represents the positioning of the organization in the market. It is ideal identity that is realized by CBBE model and model of Kapferer's brand identity or personality of the brand and loyalty according to brands. Finally, Desired Identity construes vision of the corporation, the organization's mission. It is equivalent to brand resonance pyramid.

Conclusion

The brand represents the promise that eventually develops in the reputation of the corporation. Corporate brand can supply sustainable advantage to companies if it is understood as a form of corporate identity. In order to achieve corporate branding, it is necessary to pay attention to organizational behaviour that is evident at all levels, especially in the interaction with clients and stakeholders. Successful corporate brand is formed between the strategic vision, brand image and organizational culture. The success of the brand is closely associated with the behaviour of employees, and corporate reputation represents image evaluation that is retained in the consumers. Corporate brand reflects the values and work of the employees individually and collectively.

Since the employee motivation is the subject of management research, and in correlation with the corporate image and brand management, analysis of brand architecture was seen holistically. To research the corporate brand we have used different models of the most important theorists of brand architecture: building brand identity (Aaker, 1996), hexagon brand (Kapferer, 2008, p.174), model CBBE (Keller et al, 2008, p.57), the brand personality (Aaker, 1997, p.347-357) and model of C^2ITE (Balmer, 2001c, p.3). Brand image and the image of the corporation are based on the consumer's perception, therefore, the role of associations, and consumers' perception of itself as the primary analysis in the building brand corporate in the school management. Brand image and the image of the corporation is based on the consumer's perception, therefore, the role of associations, and consumers' perception in the analysis of corporate brand building in the school management sets as primary. Corporate identity is necessary to create the reputation of the company. Model ACID test confirms the hypothesis model of three circles in the school management as well as CBBE model. SM

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Sale Potentials of Organic Food in the Autonomous Province of Vojvodina in On-line Business Conditions

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Abstract
Organic food market is growing globally. This is due to the increasing of levels of acceptance of organic food by consumers, but also as the consequence of support of a number of countries to organic food producers. In domestic conditions, this trend is interpreted as a potential export opportunity. On the other hand, the domestic organic food market is characterized by a pronounced offer of imported products. The issue of sale of domestic production of organic food to our market is open, and the actors in the value chain are facing different challenges. Also, one of the pertinent issues for companies in today's business environment is an adequate response to the process of digitizing business. With this in mind, the subject of this paper is to explore the potential sale of organic food in the AP Vojvodina in the on-line conditions. Comparative marketing research method is being used. The results show that organic food sale through on-line channels is present, but there are numerous possibilities for further development of such sale.

Keywords
Organic food, sale, on-line business, AP Vojvodina.

Introduction

Organic food market is growing globally. According to FiBL-IFOAM study of certified organic agriculture in 160 countries worldwide (Willer & Kilcher, 2012) total revenue from the sale of organic food and drinks amounted to 59 billion US dollars in 2010, and the market tripled within a decade (in 2000, the sum amounted to 17.9 billion US dollars). Even in crisis conditions, despite the fact that the growth was somewhat slower, the sale continued to grow at significant rates, especially in North America and Europe.

The above is due to the increasing levels of acceptance of organic food by consumers, but also as the consequence of support of a number of countries to organic food producers. Actually, what is of special interest for future growth and development of the organic food market is acceptance by consumers (Bonti-Ankomah & Yiridoe, 2006; Hughner, McDonagh, Prothero, Shultz & Stanton, 2007). Furthermore, in addition to this market-driven approach (Dimitri & Oberholtzer, 2005), i.e. the pull strategy (Sudarević & Vujošević, 2004), there is also an approach facilitated by governments (Dimitri & Oberholtzer, 2005), i.e. the push strategy (Sudarević & Vujošević, 2004), where organic agriculture is understood as provision of public asset, justifying the intervention of government on the market. In connection with this, according to the European Commission Report (Anon, 2010), organic farmers received more on the average than conventional farmers, both in absolute amount and per hectare (in EU-27 in 2007, subsidies received by the organic famers amounted to 127 euros per hectare on the average, whereas the conventional farmers received 24 euros per hectare).

In the domestic conditions, the global growth of the organic food market is interpreted as a potential export opportunity, while on the other hand the domestic organic food market is characterized by a pronounced offer of imported products (März, Stolz, Kalentić & Stefanović, 2012). The issue of sale of domestic production of organic food on our market is open, and the actors in the value chain are facing different challenges. Sudarević, Salai and Pupovac (2011) highlight the importance of domestically oriented development strategy of organic agriculture (implying, above all, an increase in the consumption of organic food by domestic consumers) in relation to export oriented. The advantage of such an approach is reflected in lower risks that would occur in comparison with orientation to foreign market, with the illustrative example of Hungary, which has had exactly such a negative experience, as the countries which used to import Hungarian food saw the advent of cheaper organic food of the same quality level from India, China, Egypt and other countries. On the other hand, Đokić and Milićević (2016) point out that 69% of domestic consumers do not wish to increase the frequency of consumption of organic food.

In addition to all the above mentioned facts, one of the relevant issues for companies in the contemporary business environment is the adequate response to the business digitalisation process. Bearing this in mind, the subject of this paper is research into the sale potentials of organic food in AP Vojvodina in on-line conditions. The following objectives are set before the paper:

- to consider on-line distribution in the context of existence of different physical distribution channels,
- to present the state on the organic food market in domestic conditions,
- to identify obstacles to the further development of the organic food market in domestic conditions,
- to research the state of on-line sale of organic food in domestic conditions, and
- to explore the sale potentials of organic food in AP Vojvodina in on-line business conditions.

Comparative method was used within the marketing research.

1. Physical distribution channels

In the immediate consumption sector, products can be distributed from producers to consumers in various ways. They can be delivered directly, or through retail stores. Figure 1 shows basic channels, through which products are distributed to retail stores.

Producers can deliver their products to retail stores directly from production facilities or through their own warehouses (distribution centres). On the other hand, products can also be delivered to retail stores through retail and wholesale warehouses, “cash & carry” facilities, brokers, specialised logistic and transport organisations.

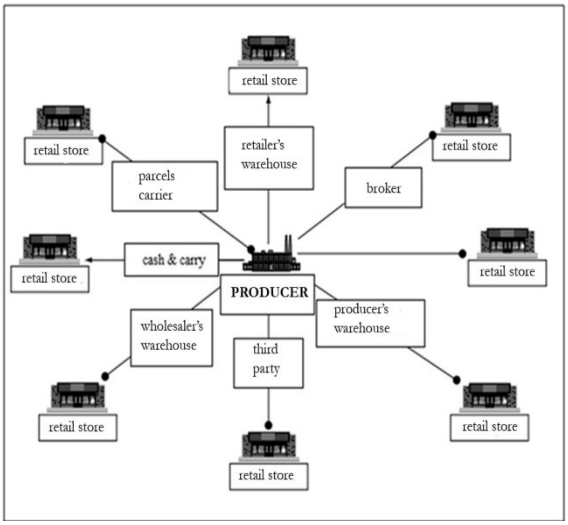

Figure 1 Distribution channels to retail stores
Source: According to Rushton, Croucher and Baker, 2014.

In addition to the above mentioned channels, Rushton, Croucher, and Baker (2014) point to the importance of alternative distribution channels, outside retail store. On B2C market, these include:

- Mail order. Goods are ordered by catalogue, and delivered to the consumer's home address by post or parcels carrier.
- Factory direct to consumer – a rare alternative, commonly used for one-off products that are specially made and do not need to be stocked in a warehouse
- On-line shopping from home – the products are ordered through the internet, while delivery is increasingly outsourced to organisations specialising in home delivery.

With the development of information technology, internet shopping is gaining increasing significance. This form of channels offers numerous benefits to customers, in the form of a rich product range, a larger volume of information, faster performance of distribution function, easy switch from one supplier to another and lower cost of repeat purchases (Končar, 2008, p. 42). Certain benefits are also available to suppliers, through reducing administration tasks, requirement for real estate, inventory costs etc. (Končar, 2008).

2. Organic food market in Serbia and obstacles to further development

Willer and Lernoud (2014) state that in 2012, Serbia had 6,340 hectares of farming land certified for organic food production, and with the inclusion of wide collection, the area that can be considered for various forms of organic production in Serbia increases to 6,420 hectares. In the same year, Serbia had 1,073 producers, 32 manufacturers, 30 importers and 9 exporters of organic food. At the same time, the volume of organic food market in Serbia was 40 million euros, and average spending for organic food was 5.5 euros per capita.

As already pointed out, domestic organic products are considered as a potential export opportunity, but the domestic organic food market is also characterised by a pronounced offer of imported products (März et al., 2012). However, in the context of the issue of sale of domestic production of organic food on our market, in addition to the above mentioned fact that 69% of domestic consumers do not wish to increase the frequency of consumption of organic food (Đokić & Milićević, 2016), one must also bear in mind that other consumers also face certain obstacles: price (14.7%), availability (10.7%) and trust (5.0%).

The presentation of the market situation regarding organic food in Serbia can be supplemented with data from the Organic Europe website, pertaining to the presentation of state in it, provided by Jelena Milić from the Ministry of Agriculture, Forestry and Water Management (Organic Europe, 2015). In addition to growing, but still insufficient supply of domestic organic food, the limiting growth of the domestic market is also seen in the consumers' low purchasing power. Organic products are sold in specialised stores, on farmers' markets of major cities (Belgrade, Novi Sad, Subotica), and a few supermarket chains. With the exception of organic milk, there is a noticeable shortage of organic food of animal origin.

3. On-line sale of organic food in AP Vojvodina

Viewed globally, despite the advantages of alternative distribution channels, the organic food market is still dominated by traditional distribution forms. The prominent role of the leading retailers in this sector is especially manifest in Great Britain (Morgan & Murdoch, 2000). Organic products first appeared in the product range of the largest retail chains (Sainsbury's, Asda and Tesco) in 1980s, with their number increasing from year to year. Sainsbury's, where the sale of organic food accounts for 1% of total sales, has more than 180 different lines of organic products (Morgan & Murdoch, 2000).

As regards the situation in domestic conditions, typing the key words "grocery shopping online" into the web browser, three retailers will be identified at the top of the first page: Maxi, Idea and Univerexport. A summarised overview is given in Table 1,

Table 1 Organic food available on-line from retailers

Retailer (by order of sites offered by the web browser)	Web site	Number of organic products on April 8, 2017	Delivery terms	Territorial coverage in AP Vojvodina
Maxi	https://shop.maxi.rs/	31	Delivery times on weekdays are: - 10 a.m. – 2 p.m. (for orders latest by 4 p.m. of the previous day, with the exception of time for Mondays, when the order must be placed latest by 4 p.m. the previous Friday; - 3-7 p.m. for orders placed latest by 11 a.m. the same day; Saturday delivery times: - 10 a.m. – 2 p.m. for orders placed latest by 4 p.m. the previous day - 3-7 p.m. for orders placed latest by 11 a.m. the same day	no

Idea	http://online.idea.rs/#!/home	88	Every weekday from 9 a.m. till 9 p.m. and Saturdays and Sundays from 9 a.m. till 3 p.m.	Futog, Novi Sad, Petrovaradin, Rumenka, Sremska Kamenica, Veternik
Univerexport	http://elakolije.univerexport.rs/online.php?get_p1=prijava	47	Private persons: mornings: 10 a.m. till 2 p.m. afternoons: 4 p.m. till 8 p.m. Sundays (except Vršac): 9 a.m. till 1 p.m.	Novi Sad, Čenej, Sremska Kamenica, Petrovaradin, Bukovac, Sremski Karlovci, Veternik, Rumenka, Vršac

Source: listed web sources

Typing key words “organic food on-line” into the web browser will produce several specialised organic food retailers. A summarised overview of suppliers from the first page is given in Table 2.

Table 2 Organic food available online from specialised retailers

Retailer (by order of sites offered by the web browser)	Web site	Offer on April 8, 2017	Delivery	Territorial coverage in AP Vojvodina
Organic Bg delivery	http://www.organicbgdelivery.com/	three “baskets” with different number of foods changed on a weekly basis	Saturdays	Not explicitly stated, but it is obvious from the supplier’s name that they only cover the territory of Belgrade
Ambrela organic	http://www.ambrelaorganic.com/index.php	three “crates” with different number of foods changed on a weekly basis	Wednesdays and Thursdays	no
Jovanjica	http://jovanjica.com/online	a wide assortment of organically produced fruit and vegetables, and a wide choice of seeds, seedlings and accompanying programmes for organic production	not stated	Most probably yes, because they provide e-mail for orders, and there are no stated limitations
Organico	http://organico.rs/	457	Free delivery on the territory of Belgrade for purchases more than 3000 dinars. Delivery on the entire territory of Serbia, sending parcels by courier.	yes
Beyond	http://www.prodavnicazdravehrane.rs/	a wide assortment	two days after order	yes

Source: listed web sources

With a changed search criterion, only one of the retailers from Table 1 appears, not before the end of the first page of the listed web sites.

4. Recommendations and conclusions

The use of on-line distribution channels in the domestic conditions is in the initial development stages, both in terms of distribution of food in general and distribution of organic food. Only a part of leading retailers offer this method of product ordering and organises delivery. Furthermore, delivery is available mostly on the territory of the city of Belgrade, or includes the territory of the city of Novi Sad. The above mentioned solutions acquire sense in the context of size of these two cities as markets and fierce competition in these places. Organic products can be ordered within the offer of the above mentioned retailers.

Organic products are also present in the offer of suppliers specialising in this food where the difference in terms of the width of product range is even more pronounced, and where the situation with the coverage of places in AP Vojvodina is somewhat more favourable. The business models of such suppliers are noticeably different, so that in addition to selling a certain combination of organic food on a weekly basis with clearly stated origin of this food, i.e. the farm where it was produced, there are also companies with a broader spectrum of activities, offering products not only to final consumers, but also to retailers, and moreover, play the role of suppliers to producers. Generally, with certain exceptions, the visual identity of sites through which organic food can be ordered, as well as their functionality and user-friendliness, should be raised to a higher level.

As a general conclusion, it can be pointed out that research results indicated that organic food sale is also partially present in on-line channels, but also that there are numerous opportunities for improving this type of sale.

Before defining the potential widening of on-line sale of organic food, in addition to considering costs, it would be necessary to examine consumers' opinions regarding this. On the one hand, as it has already been pointed out, among consumers who would like to consume organic food more frequently, insufficient availability of this food ranges among significant reasons for inability to meet such preferences. However, on the other hand, purchasing from producers on the farmers' market or directly in specialised organic food stores also provides buyers of organic food a special experience of talking to the producer and/or salesperson, enabling a further consolidation of trust for organic food, obtaining information about the experience of other consumers, and reaching more simply the intention of purchasing new organic products.

Profiling consumers inclined to on-line purchases of organic food, measuring the attractiveness of this segment and developing the positioning and marketing mix for such consumers can be a subject for further study. In this sense, one should also include the different determinants of on-line shopping and compare the potential differences regarding the different categories of organic foods, or even different brands. Moreover, it is necessary to investigate the intentions of actors on the supply side, not only in terms of further plans, but also difficulties that they face in current business operations. SM

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Graduate Career Tracking System Across the World - as Information Systems in higher Education Decision-making Process

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Abstract
All the higher education (HE) areas have faced significant changes in the last few decades. The traditional role of universities may become obsolete, and new tasks and strategic redefinition of the own position are necessary to fulfil the emerging needs. The 20th century shows evidence of aging societies in developed countries; decreasing capacity and willingness of state to participate in financing; the formulation and importance of knowledge-based society concept. While in developing countries a new expansion of HE participation is foreseen with increasing international mobility and appearance of IT based smart solutions like massive open online courses. These radical influences lead to a need for reform in HE. To develop new strategies, an emerging need for data-driven decisions arose, and we discuss whether it is due to the technological possibilities (push-based) or due to the decision making actors' requirements (pull-based).
The Graduate Career Tracking Systems (GCTS) and surveys offer an excellent source of objective data, but the practice varies widely from country to country. We analyze the empirical information regarding the GCTS solutions with the help of document analysis of different countries using research outputs, studies at the institutional level, at a network of institutions and nation-wide survey. Based on these, we created a possible categorization which contributes to understanding the role, structure and aims of GCTS within the countries, and the policy making process. Three different models were created by considering the following elements: the responsible institutions, the applied research methods, the surveyed basic population, the surveyed areas and the response rates. This in-depth analysis of the out of Europe models (short-term traditions or unstructured network of institutional surveys; long-term traditions of graduate tracking; compact student service package offered solutions) allows understanding better the possible ways to develop the European Graduate Career Tracking systems and formulate new policy making strategies regarding the higher education.

Keywords
Graduate Career Tracking System, Higher Education, labour-market, Student-services.

1. The changed framework of higher education

The higher education has undergone radical changes in the recent decades (Barakonyi, 2010), and certainly radical transformations will occur in the future because nowadays it has to react to every impact as integrated part of the society and the economy. To summarize the international trends affecting the higher education (Hrubos, 2014; Polónyi, 2014) we identified the following elements.

1. The traditional Humboldtian University concept was replaced by the approach of knowledge-based economy and society as supporting the value creation (Veroszta, 2010), and a rapidly growing demand appeared for let higher education accessible to broad masses. The number of training and institutions increased in a relatively short time (Kovács & Sipos, 2014), and the academic and administrative staff number kept pace with this. Basically, it is a demand pushed development.

2. As a result, the first signs of economic changes (oil crises of the '70s) forced the governments to realize that they have to play a significantly smaller financing role in the public services and the higher education, too. Private-funded institutions appeared in the market, which constitutes a significant competition to the state-financed ones regarding the student output quality. Then, the stabilization of the economic growth was accompanied by a greater expansion in higher education, until the former became questionable after the emerging crisis, mainly that of 2007. Consequently, the governments demanded a more direct control over the quality of the courses, and over the distribution of state-funded student places (Halász, 2012; Polónyi, 2012; Keresztes, 2014) This also means that market-orientation became a priority (fee-paying students) to finance the decreasing volumes of state-funds. The market expects that the processes and the operations be more transparent and responsible in the context of objective and subjective aspects of graduates' labor-market performance.
3. In addition to the introduction of the Bologna system and other international mobility programs, international student mobility is strengthened. (Duga & Szontágh, 2012; Komlódiné Pozsgai, 2014) HE institutions had to realize that the previously established competitive positions in the local markets are no longer sufficient to meet the challenges of the global market. New geographic areas can be reached, which is a great opportunity since most of the world's population does not live in developed countries and a greater need for HE expansion will happen. This also means that a cultural diversity and customer demand-side approach is required to assess these needs and to transform the training offer. (Hrubos, 2014).
4. In developed countries it is clearly evident, whilst in developing ones a delay is foreseen in facing a gradual but steady aging of society, and an excess in capacities. This problem is twofold: there is a shift in population age structure to a greater rate of inactivity, and also a part of HE institutions (staff included), has become obsolete. The potential closures face social resistance on the parts of intellectuals, local politicians, and economy actors. The HE institution is a prestige for the local administration and ensures a continuous presence of young people (Heindl, 2014; Kuráth & Sipos, 2013; Rechnitzer & Hardi, 2003), not to mention the multiplicative economic effect of their spending.
5. The general framework of education has changed, too. The appropriability of lecturers' knowledge declined in the classic sense, the direct lecturer-student relationship bonds loosened due to mass-education and to the decreasing need for personal presence. The online materials, the distance learning and Massive Open Online Courses shook the very foundations of the century-old ivory tower of higher education (Hrubos, 2012; 2014), creating new requirements for the institutions. It is further strengthened by the new generations of students using new technology and having different needs. (Balogh 2015; Törőcsik, 2011). The MOOCs has an enormous potential due to the million-student numbers, even considering the drop-outs and low-rate fee paying. In our view, the mass-based education in developing countries will not be engaged, but directly the MOOCs will have a significant impact on HE.
6. A further expansion of HE is foreseen, the major part of which will be realized in developing regions, thus the institutions must prepare for this.

All these factors have led to rethinking the institutional positions, which were previously representing and communicating absolute values and independence (and could be examined in itself), nowadays it is more likely that a loose network of service-offering points has to be considered, where quality is conceived in the context of the relative positions of the others. This is mainly caused by the greater extent of market-orientation which is a natural consequence of the above listed HE changes. HE transmits knowledge, culture, patterns, norms and values, which should be ensured on a high level of quality. (Deardoff, de Wit, Heyl, & Adams, 2012) It is clear that education is the basic task of HE; however, it is far uncertain what stands in the concept of quality. The average of the diploma can be a good measurement type for the quality, a summa cum laude means more knowledge than a rite one, but it is easy to see that on the labour market – if the participants are aware at all of their differences – the former one not necessarily will prevail. This is because the 'know what' instead of 'know how' approach came to the fore. Therefore, entirely different employee skill-set is needed. Then consider as a sign of HE performance the percentage of graduates having a job within a year after graduation. We are not sure about it neither because we have to analyze whether they have a match for their qualifications, nor only the crowding out effect prevailed. We think that a valid, consistent and objectively reasonable ranking cannot be formed, even if a great variety of national and international rankings have been created to determine the differences between the performance of the HE institutions. All of them are criticized on different elements by many researchers. (Altbach, 2006; Fábri, 2008; 2010; 2013; Margison & Van der Wende, 2007; Rauhvargers 2011; Van der Wende, 2008) The deeper analysis of the rankings is not part of our research, but important lessons drawn have to be taken into account when determining the factors indicating an HE institution's performance. These efforts also highlight that a strong international and national tendency exists regarding the quantification, comparison, data collection and data-based decision-making processes.

Thanks to the ICT infrastructure development, the administrative management of HE students has been changed, too. Simultaneously, an increasing demand of a proper structuring and handling of information can be observed in many countries, therefore in the context of education, too. Many IT solutions were developed; it is clear that they were not meant to create the best possible operating state, but to connect the existing software systems. A great need arose to treat uniformly the sporadically recorded electronic data linked together and converted into a usable form. The established databases can provide an objective benchmark to local, regional and national decision-making processes. It is quite obvious that better results can be achieved with larger amounts of data, it is easier to identify the current trends, the main influencing factors, such as the future direction of the entire system can be estimated. Big Data method goes well beyond the traditional statistical tools, does not focus on showing the classic relationships, the 'why' rather the present situation 'what'. We have to point out this new direction as it has been possible the global management of data, so it is worth considering other ways of possible analysis, too. (Mayer-Schönberger & Cukier, 2014) The aggregate information source repository can be manifold:

- inputs of the HE application process,
- internal institutional data systems,
- government repositories: tax administration bodies, pension bodies, national statistical offices, ministries related to education,
- feedbacks from the labour-market entities.

The data-based decision making is no guarantee that the optimal decision is achieved, nevertheless generally are more efficient than those built on subjective judgments, as objective indicators interpreted in the same intervals – even if not in absolute terms, but – can give a relevant benchmark. A multiple approach, processing several factors can certainly reduce the possibility of error. (Dinya, 2010) Also, the data-driven decision-making in HE management can be found at the European level. The Europe 2020, a strategy for smart, sustainable and inclusive growth document (European Commission, 2010), contains as a main target the consolidation and effective governance realized within international cooperation framework of various HE systems.

On this basis, it is worth examining what solutions we can find about graduate career tracking systems in other countries, and which elements can successfully be applied to create a more efficient information-based decision-making in HE.

2. Graduate career tracking systems in the world

Substantial and significant differences can be observed in career tracking systems across the single countries, as they were created based upon a different history, financial background, survey method and policy embeddedness. The extensive career tracking system literature is very poor, typically a continental, multiple country bases can provide a starting point in this context. Also, Usher and Marcucci in their study attempt to establish some broad categories. In our analysis we will rely on their approach. However, new variables will be considered to create a new structuring. (Usher & Marcucci, 2011) The following factors will be taken into account:

- The main goal of the survey: institutional or governmental orientation (information for policy-making decisions or training development within HE), applied for comparison of institutions or accreditation purposes.

- The timing: it is important to determine the first period when to carry out the survey (before graduation, at the time of graduation, 6 months, 1 year after graduation etc.), how often it repeats on the same cohort (2, 3, 5 or 10 years later), or how often a new base population is established (annually, every five or eight years etc.)
- Method: how the base population is selected (total population, representative sample), what kind of student groups to survey (all types or only along some certain specifications), by what means to carry out the surveys (online, by phone, in person), incentives used if any (financial or non-financial).
- The use of information: public reports are prepared, treated as business secret or autonomously searchable databases are created. The list of potential application forms is quite large; it is determined by the stakeholders' attitude toward the research.
- Survey topics: selected topics vary based upon the purpose of the survey and the use of the data. They are the most frequent: institution evaluation, current studies, the transition to labour-market, job-related information, and socio-demographic background factors.
- Responsible organization for the survey: non-profit organizations, academic institutions, government authorities, or a combination thereof. The question is largely influenced by the common practice, legislation, and how it is seen to give student-related information to third parties.

The study framework does not allow a comprehensive description of all systems around the world; basically we will present cases which are primarily situated in non-Europe context. The European level graduate career tracking systems are more united, more elaborate and comprehensive by international researches (REFLEX, TRACKIT, CHEERS, HEGESCO EURO-STUDENT etc., for more details see Veroszta, 2011) and the EU is in the pursuit of supporting these initiatives. Obviously, a good best practice can be provided by EU countries, but we intend to disclose the elements of the GCTS systems of the countries outside Europe.

By following the principles described above, we applied a profound literature review and document analysis country by country. In several cases we had the possibility to create an overview of the GCTS practices only by the search of homepages communicating the survey results. After the relevant international academic journals and portals, we managed to discover more relevant information sources by the Google search engine. In addition to English language resources, our given more in-depth knowledge of Spanish helped to apply a different language search, too. The following expressions were used (in English and Spanish):

- Graduate Career Tracking;
- Graduate Destination Survey;
- Graduate Employment Survey;
- Graduate Follow-Up Survey;
- Graduate Follow-Up System;
- Graduate Survey;
- Graduate Tracer Studies;
- Graduate Tracking Survey;
- Graduate Tracking System;
- Tracer Studies.

Typically, at least ten hits pages were observed, and also as long as we felt that the results were still connected at any level to GCTS within the given country. We provide a summary table (Table1) about the GCTS practices of selected countries.

Table 1 Graduate Career Tracking System practices in the selected countries outside Europe, 2014-2016 (Part 1)

Continent	Country	Survey name	Responsible for survey	Survey type	Targeted population
North America	Canada	National Graduate Survey	Statistics Canada, Department of Human Resources and Skills Development	national	stratified sampling in 2 and 5 years after graduation
	United States of America	Baccalaureate and Beyond Longitudinal Survey	National Center for Education Statistics Higher education institutions	national, institutional	last-year students, representative sample cohorts in 1, 4 and 5 years after graduation
Australia	Australia	Graduate Destination Survey and Beyond Graduation Survey	Australian Association of Career Counsellors, Ministry for Education, Science and Training, Australian Vice-Chancellors' Committee	national	4th months, 3 and 5 years after graduation
		Course Experience Questionnaire		national	
Australia	New Zealand	1973-1996 unified, then 1997-2007 University Graduate Destinations	Standing Committee on Graduate Employment	national	6 months after graduation
		since 2011 Graduate Longitudinal Study New Zealand		national	2, 5 and 10 years after graduation
	Oceania	Graduate Destination and Programme Experience	Planning and Quality Office	national	5 months after graduation
Africa	South Africa	Labour Force Survey	Development Policy Research Unit	national	graduates between 1995-2005, 2000-2007
South America	23 countries	Universia	Universia	international	from 6th month until 2nd year after graduation
	Chile	Mifuturo	Ministerio de Educación	national	n. a.
	Colombia	Encuesta a Graduados	Observatorio Laboral para la Educación	national	at graduation
				national	1, 3 and 5 years after graduation
Near-East	United Arab Emirates		Zayed University Office of Graduate Students	national	exit survey and 1 year after graduation
Asia	Philippines	Knowledge Community	Commission on Higher Education	national, institutional	5 year periods
	Malaysia	National Graduate Tracer Study	Ministry of Education	national	final year students and within 4-6 months after graduation
	Singapore	Graduate Employment Survey	Ministry of Education	national	6 months after graduation

Table 1 Graduate Career Tracking System practices in the selected countries outside Europe, 2014-2016 (Part 2)

Continent	Country	Survey name	Frequency of new cohorts	Survey method	Average response rate	Other information
North America	Canada	National Graduate Survey	5 years	CATI	49%	
	United States of America	Baccalaureate and Beyond Longitudinal Survey	5-7 years	phone, internet, in person	representative sample	reward: 30-50$
Australia	Australia	Graduate Destination Survey and Beyond Graduation Survey	yearly	phone	60-65%	minimum response rate of 50%, it is the limit to publish data about the institution
		Course Experience Questionnaire	yearly	phone	60-65%	
Australia	New Zealand	1973-1996 unified, then 1997-2007 University Graduate Destinations	yearly	e-mail	34-38%	
		since 2011 Graduate Longitudinal Study New Zealand	n. a.	online	57%	
	Oceania	Graduate Destination and Programme Experience	yearly	post, online, and at graduation ceremonies	60-65%	reward: 100 Philippine peso voucher
Africa	South-Africa	Labour Force Survey	n. a.	n. a.	n. a.	
South America	23 countries	Universia	yearly	online	n. a.	complex services for HE institutions, foreigner students and for abroad studies
	Chile	Mifuturo	non-regular	institutional data	n. a.	homepage provides information about HE, after the labour market
	Colombia	Encuesta a Graduados	yearly	institutional data	n. a.	
			yearly	online	22%	
Near-East	United Arab Emirates		n. a.	online, phone, in person	n. a.	
Asia	Philippines	Knowledge Community	1993-1997, 1998-2002, 2006-2010	online	n. a.	
	Malaysia	National Graduate Tracer Study	yearly	online	100% exit	
	Singapore	Graduate Employment Survey	yearly	online	72%	

Source: The author

Based on our research, very diverse GCTS practices can be identified, there are top-down government-policy driven, top-down education-policy driven and traditional solutions based on loosely managed interactions between institutional researches. This classification fully covers the selected countries, but we have to deal with the existing data from a broader view to distinguish the model types from one to each other.

In most cases, the system is financed by the government (even if a non-profit organization plays the executive role), so it is evident that these interests appear more obviously in the surveys. The majority of surveys build on online tools, as it is the cheapest, quickest and easiest solution, but simultaneously is accompanied by lower response rates (Singapore is an exception, because of the extremely short survey). Those using phone or in person interview are much more expensive, but more than 50% response rates contribute to more reliable and statistically proved conclusions. In general, we can confirm, that longitudinal studies based on representative cohorts conclude in a more complex and long-term approach in order to handle the training and service development strategically. Further, it is an essential question how to incentive the response of GCTS surveys, as more and more requests will reach the possible respondents every day to participate in this or in that type of research. In most cases, we do not see a direct money flow, still a relative higher response rate is achieved. On the one hand, this is mainly due to a good relationship with the former institution; the former students are willing to participate in the surveys, just to help them in this effort. On the other hand, the personal involvement also plays a significant role, that the graduates are pleased with the request for participation, that they finally can assess the educational institution. Thirdly, we see also good practices where direct money transfers are not offered to the respondents, some service package (e.g. integrated, searchable database) will be available as an added value instead.

In addition to the presentation of the several solutions of the selected countries along the predetermined factors, a complete questionnaire analysis was carried out within the framework of the manual data collection, which can help to understand the models better. (Table 2) Based on the available data we identified the 14 factors which occur most frequently, or in our opinion should appear in this type of surveys. Besides the socio-demographic background factor, 7 elements are related to the higher education, while 6 are linked to the word of labour. We firmly believe that these 14 factors completely cover the issues that could arise by the stakeholders. It is interesting to note that none of the surveys are likely to implement every one of them, a scarification; a trade-off is applied in most cases to reach the ultimate goal. These ultimate goals could be several: to make the survey easier or shorter to fill out, or simply a specific issue is not considered due to a political reason. It is important to consider whether the implemented system is built on a hierarchical or heterarchical decision system. The latter probably did not come to the fore, as the current mainstream in decision logic is considered to be linear, the implementation of a polycentric, mutually subordinated surveying system is difficult. We believe that it is worth to conduct a deeper and exploratory research in this area in the future.

Table 2 Graduate Career Tracking System topics in the selected countries outside Europe, 2014-2016

Country, survey	DEM	Evaluation of Higher Education							Labour-market position					
		ES	LS	AE	DU	HU	CR	CH	COM	EMS	GET	JQM	SA	JS
Australia Graduate Dest. Survey	✔	✔	-	-	-	-	-	✔	✔	✔	✔	-	✔	-
Canada National Graduate Survey	✔	-	✔	✔	✔	✔	-	✔	-	✔	✔	✔	✔	✔
Chile Mifuturo	✔	-	-	-	-	-	-	✔	-	✔	-	-	✔	-
Colombia Encuesta a Graduados	✔	✔	✔	✔	-	✔	-	✔	✔	✔	✔	✔	✔	-
Malaysia National Grad Tr. Study	✔	✔	-	-	✔	-	-	✔	✔	✔	✔	-	✔	✔
New-Zealand Graduate Long. Study	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	-	✔	✔	-
Oceania Graduate Destination and Programme Experience Survey	-	✔	-	-	-	-	-	✔	✔	✔	-	-	✔	-
Philippines Graduate Tracer Study	✔	✔	-	-	✔	-	-	✔	✔	✔	✔	✔	✔	-
Singapore Graduate Emp. Survey	-	-	-	-	-	-	-	-	-	✔	✔	-	✔	-
South African Republic Pathways from U. to Work	✔	-	-	✔	✔	✔	-	✔	-	✔	✔	-	-	-
South America Universia	✔	✔	-	✔	-	-	-	✔	-	✔	✔	-	✔	-
United States of America B&B Longitudinal Study	✔	-	-	-	-	-	✔	✔	-	✔	-	-	-	-

Source: The author

Legend:

DEM: Socio-demographic background
ES: Education related satisfaction
LS: Language skills
AE: Abroad experience
DU: Degree usefulness
HU: Higher education usefulness
CR: Returns on higher education costs
CH: Current higher education program
COM: Competencies, skills, knowledge
EMS: Employment status
GET: Time between graduation and employment
QM: Job and qualification match
SA: Salaries
JS: Job satisfaction

The three major identified groups will be described below.

1. Surveys based on short-term tradition or a loose connection of institutional arrangements (United Arab Emirates, South African Republic, Philippines, Malaysia, Oceania, Singapore)

We classify in this type those countries, where the surveys are conducted at national level, but still, we cannot find a deeper embeddedness or long-term tradition or strategy related to it, or just the existing institutional surveys are not considered within an integrated framework. Typically, there are a couple of decades of practice, but at the level of policy-making there is a significant need for useful, quantifiable data, so the governmental bodies strongly influence the GCTS.

The countries belonging to this category are mainly developing ones with little or no information in English, but the general goal is to create a high quality and reputation of the higher education system at an international level. This requires having an appropriate monitoring and a quality assurance system which give feedback to successfully identify the areas that require attention. The surveyed topics are quite heterogeneous, not even the socio-demographic background is measured, and particular attention is on the current employment situation. Singapore stands out from the other countries, in the sense that only the labour-market position is surveyed. This is due to the fact that in recent years a strong pressure came from the public to actively increase employment among fresh graduates. The situation is quite similar in Malaysia, namely the main goal of the government is to reduce the high unemployment rate. In South African Republic a special demand arises by the side of the medical training accompanied with one of the most heterogeneous survey topics, not to mention the Philippines.

2. Countries with long-term GCTS traditions (United States of America, Canada, New Zealand)

The North American countries and New Zealand typically have several decades of graduate career tracking system history, with strong central financial tools, typically using representative samples and cohorts based surveys. The data are available on the website of the responsible organizations, and institutions receive data for further analysis.

The American countries have a long tradition in the field of data collection, so it was not difficult to reconcile the interests of the institutional and governmental levels. In the USA the assessment of higher education is quite neglected, rather a return on the HE investment and the current employment situation is in the focus of the surveys. The alumni system and the relation with former students is a major source of finance for the HE institution, therefore GCTS is treated as confidential, but the data showing how successful are the graduates are open-access and available for everyone. In Canada more topics are covered both in relation to higher education and to labor-market, but the New Zealand covers the broadest range of stakeholders' information need. In New Zealand the experiences regarding the transition to longitudinal surveys are now being tested, creating a cohorts-based GCTS.

3. Complex service-package offering systems (Australia, Chile, South-America, Colombia)

The countries in this category have a radically different GCTS form the previous ones. The feedback and presentation of the results are totally and organically connected to higher education stakeholders' needed information. A lot of information is needed to decide wisely when choosing among the available HE trainings. On the one hand, administrative questions arise (how and where to apply, the type and level of training); on the other hand, the possible conditions and related data for long-term career and work are in focus. This comprehensive approach allows the stakeholders to search autonomously among the data, and perform a multi-criteria search.

Thanks to the data collection an indirect recruitment or head-hunting activity can be offered which:

- is good for the graduates, as they can switch jobs more easily,
- is good for the employers, as it costs less to find the proper employee,
- is suitable for the survey responsible organizations, as a higher response rate can be achieved, and the graduates are interested in updating their data,
- is good for HE institutions, as not big administrative staff is needed to maintain the system at institutional level, which also means a cost-efficiency,
- is useful for the governments, as private companies can bear some of the costs and all the data can be collected.

We believe that this approach is the one that makes the graduate career tracking system sustainable and successful.

Summary

The higher education has undergone significant changes in recent graduates. Already it has to respond to the ever-accelerating environmental effects, HE institutions have to shift from the centuries of isolation 'ivory tower' to a 'lighthouse' and to redefine and rethink their role and mission. The performance, the quality, and the competitiveness conceptual frameworks have been fully placed on new basis with the forthcoming of globalization; the institutional rankings are not able to make an objective difference between them. It can easily happen for a European HE institution to be a direct competitor of a Singapore's university, while 30 years ago this was unthinkable even at a theoretical level.

The HE changes and digitalization has also increased the demand for data-driven decision-making, and possibly a multi-criterion applicable integrated database search can contribute to better planning. For the higher education, one of the most useful information sources can be a uniform graduate career tracking system applied in an appropriate framework. It could seem simple and thinking it thoroughly it could be logical what to understand. However, there are many solutions based on the examination of the graduate career tracking system practices.

In this study we identified three different GCTS models based on a set of analyzing factors. The short-term tradition model fulfils specific needs; the long-term tradition model uses a systematic data collection, operating in predictable and stable frames; the complex service-package offering system reshapes the basis of the framework involving the graduates and rather considering them as consumers not as information sources to achieve a higher quality of services. SM

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Quick Response Logistics in Retailing as an Information Technology Based Concept

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Abstract
The concept of quick response logistics implies supply chain management strategy focused on increasing its efficiency. It is based on the implementation of modern information technologies, which should ensure a two-way flow of information between the participants. The concept of quick response logistics implies transformation of the traditional relationships, which were primarily based on individual interests to a partnership characterized by equality and cooperation of all the actors in supply chains. The aim of this paper is to point toward the benefits that the application of this concept provides, and which are reflected in the reduction of costs, inventory levels, number of errors, risk, order cycle, quicker flow of products, greater flexibility, better and faster response to consumer demand, etc. In accordance with this, the following research methodology was applied: a) The theoretical research identified the indicators of the quick response logistics concept, such as: implementation of modern information technology in logistics operations, electronic data and information exchange between the actors in supply chain, long-term and fair relations between the actors in supply chain; b) Empirical research was conducted on the market of the Republic of Serbia on a sample of 70 respondents from retail stores and logistics centres as the key participants in their supply chains. The basic hypothesis about the statistically significant impact of the identified indicators to the retailer's speed of response to consumers demand, reducing the time from order to delivery and accuracy of delivery in accordance with consumer's requests was tested. 3) On the basis of the conducted tests ways were identified to enhance and implement the concept of quick response logistics in retailing in the Republic of Serbia. The disadvantages of the research and recommendations for future research are given in the paper.

Keywords
Quick response, logistics, supply chain, information technology, retail.

Introduction

A modern customer has great expectations about the level of service received. Thanks to the information technology used, the customer is very well informed about the offered products, their characteristics, prices, supply chains, etc. Therefore, the customer is becoming increasingly demanding, picky, impatient, "spoiled". For this reason, participants in the supply chain must work together on providing a quick response to customers' changing demands. This issue is of particular importance in the economic segments where products rapidly become obsolete and where the product life cycle is short, such as the textile and apparel industry.

Logistics and logistics management, as an integral part of the supply chain management, include the processes of planning, implementation and control of the efficiency and effectiveness of transport and storage of goods (including services), as well as related information, from the point of origin to the point of consumption in order to meet customers' requirements (Council of Supply Chain Management Professionals, 2013). The significance of logistics is reflected in the additional values that it generates for the participants in the supply chain, which are expressed in usability of time and location, because products and services have little or no value if they are not owned by customers when (time) and where (place) they want to consume them.

This is why the goal of quick response logistics is to shorten the time from the idea and design of product to the moment when the product will be found on retailers' shelves. The application of information technologies within the quick response logistics enables continuous updating of the latest information on customers' requirements in order to properly plan and implement potential orders.

1. Literature review

According to Fisher and Raman (1996), who were among the first to study the effects of applying the quick response concept, the goal of the strategy is to shorten the time from order to delivery (including production and distribution), being based on known methods, but putting emphasis on information technologies in improving logistics operations.

The Council of Supply Chain Management Professionals (2013) defines the concept of quick response as a strategy widely accepted by traders and manufacturers in order to reduce and eliminate retail risks of running out of stock, forced price cuts and reduced operating costs. Retail can achieve these targets by proper deliveries and shortening the response time.

According to Lawson (as cited in Lipol, 2015), the quick response concept implies responsibility and flexibility in the company's efforts to provide a diversified range of products and services by quantity, quality and price, at the moment and at the place requested by customers and where there is demand.

The quick response concept (Quick Response – QR) was developed in 1985 by the consulting firm in the United States - Kurt Salmon Associates (KSA). This consulting company was hired by the textile industry to investigate the causes of insufficient competitiveness of the domestic textile and apparel industry in relation to those abroad. Having identified activities that create value in supply chains, it was determined that 66 weeks were required to carry out all production operations and for product to reach the retailer's shelves. The production process required 11 weeks, while the remaining 55 weeks were the result of oversized inventories, primarily their "delay" in warehouses. Inefficient management of activities within supply chains resulted in losses of $ 25 billion, or 20% of the total turnover of the industry.

Having identified high inventory costs as the main generator of losses, *Voluntary Interindustry Commerce Standards Association – VICS* was established by textile, apparel and retail industry in 1986 in the United States. These industries teamed up with the goal of simplifying supply chains and improving the supply of apparel items at the right time and at the right place, in a variety of products and lower prices. Particular attention was paid to the application of industrial standards in information technology (e.g.: barcodes, POS terminals, electronic data exchange, labelling of transport containers, rolls, etc.) and contract procedures.

It is very important to note that VICS and GS1 US, as two leading organizations in setting standards for supply chains in many industrial sectors, merged on 10th September 2012 (GS1 US, 2017). GS1 US, as a member of GS1, is an organization that delivers information standards and, in cooperation with industry, seeks to solve problems in supply chains through the establishment, adoption and implementation of GS1 standards. Benefits are achieved thanks to the GS1 global unique numerical and identification system, bar codes, electronic product coding, data synchronization and electronic information exchange.

GS1 US-VICS integration was created in order to provide, by joint forces, among other advantages, a platform for stimulation and implementation of innovations and new ideas in the segments of retail and logistics. Direct access to the standard-setting process and technical expertise needed for supporting responsible implementation and use of technologies in supply chains will in the long-term positively affect the retail financial results and the service package that it provides to customers.

Although introduced in apparel industry, the quick response concept has a wider application in different segments, as it allows the participants in the supply chain to have many advantages, such as: establishing long-term business relationships based on trust, reducing inventory, increasing product sales revenue, satisfying level of service, etc. (Jovanović, Vasiljević & Ilić, 2009).

1.1. Application of information technology in quick response logistics

The collection, flow and use of information about goods and its movement are one of the most important elements of successful business, both retail and other participants in supply chains. Timely and accurate information positively affects the speed, transparency and control of logistics operations. On the other hand, a large amount of information can cause difficulties in the decision-making and management processes if an appropriate information system has not been implemented.

Time management, being first in the marketplace and responding quickly to changing customer's demands, is a powerful weapon of competitiveness that affects the increase in profits and revenue. A quick response concept, as a strategy that basically involves focusing on a factor of time, includes all the activities of a company along the supply chain, from shortening development time (shorter and more frequent production cycles), more efficient transport and delivery (accelerating the flow of information and goods through the increased use of information technology) to retail (Birtwistle, Siddiqui, & Fiorito, 2003). It is therefore very important that the participants are equipped with information technology that will enable them to exchange accurate and timely information.

Quick response (Council of Supply Chain Management Professionals, 2013) is a partnership strategy where suppliers and retailers are looking for ways to respond quickly to customers' demands by sharing data from POS terminals to provide better forecasting of their needs for goods. The quick response concept can also refer to bar codes that are commonly used to transmit information and web links about products or services in promotional literature. With the development of information technology, the challenges and chances in applying the quick response concept are becoming increasingly complex nowadays; however, the benefits that the participants in the supply chain can achieve by implementing the quick response concept are significant.

Applying the quick response concept, retailers are committed to providing suppliers with data on sales, while suppliers commit themselves not to disclose confidential information and to use them solely in accordance with the needs of a particular retailer. Consequently, the concept of quick response implies changing the retailer's relation to suppliers, since retailers did not share such detailed and confidential information before (Fiorito, May, & Straughn, 1995). Relationships between retailers and other participants in the supply chain include an equal partnership and cooperation based on trust.

Table1 Technological and organizational phases of quick response development (Fernie & Sparks, 2014)

Phase 1	**Introduction of basic quick response technologies**
	Stock Keeping Unit (SKU) Level Scanning Japanese Article Number (JAN) Standard Barcode Use of Electronic Data Interchange (EDI) Use of Standard Electronic Data Interchange (EDI)
Phase 2	**Internal process reengineering via technological and organizational improvement**
	Electronic Communication for Replenishment Use of Cross-Docking Small Amounts of Inventory in the System Small Lot Size Order Processing Automatic Replenishment Program Just-in-time (JIT) Delivery Shipping Container Marking Advanced Shipping Notice
Phase 3	**Realization of collaborative supply chain and Win-Win relationship**
	Real-time Sales Data Sharing Stock-out Data Sharing Quick Response (QR) Team Meets with Partnerships Material Resource Planning

2. Methodology

Aim of the research

The aim of the research is to examine the contribution of indicators: implementation of modern information technologies in logistic operations, electronic exchange of data and information between participants in the supply chain, long-term and fair relations between the participants in the supply chain, to the application of the quick response of retail to customers' requirements, i.e. shortening the time in the supply chain from order to delivery of goods, as well as the timeliness of delivery in accordance with the customers' requirements.

Research hypotheses

In this research, it was assumed the indicators contribute to the effective implementation of the quick response concept in the retail sector in the entire territory of Serbian market. The main research hypothesis reads:

H_1 – Indicators: implementation of modern information technologies in logistics operations, electronic exchange of data and information between participants in the supply chain, long-term and fair relations between the participants in the supply chain, statistically significantly contribute to the implementation of the quick response concept in the retail sector of the Republic of Serbia.

Variables

Several variables have been included in the research, on the basis of which the hypothesis would be confirmed or rejected: a) independent grouping variable: region of the Republic of Serbia (Vojvodina, City of Belgrade, Central-South Serbia); b) independent variables of the interval type of measurement: Implementation of modern information technologies, Electronic exchange of data and information between market entities and long-term and fair relations between the participants in the supply chain, and c) dependent variable: the quick response concept and delivery timeliness in accordance with the customers' requirements.

Measuring instruments

A retailer belongs to a specific group or region on the Serbian market depending on the region in which the subject retailer operates: Vojvodina, City of Belgrade, and Central-South Serbia. The assessment of independent variables, i.e. indicators that influence the quick response concept in the delivery of consumer goods, was performed by a questionnaire containing 9 Likert-type items. Respondents were supposed to express their agreement with them on a five-step scale (*from 1 to 5 please assess how the mentioned indicator affects the application of the quick response concept and timeliness of delivery according to customers' requirements*). Based on the initial set of items, three dimensions are formed - implementation of modern information technologies, electronic exchange of data and information between market entities and long-term and fair relations between the participants in the supply chain.

Sample

The research involved 70 respondents who, on behalf of retailers and logistics centres in which they work, evaluated the indicators of application of the quick response concept in the Serbian retail sector. Retailers and logistics centres covered by the survey are operating in the territory of Serbia, such as: Idea, Dis, Gomex, Maxi, Delta Logistic Transport, etc. Out of the total number of respondents, 80% came from the Vojvodina and Belgrade regions, while 20% of the respondents were from Central-South Serbia. The representation of individual regions is given in Table 2.

Table 2 Participation of respondents by regions

Region	Number	Percentage
Vojvodina	30	42.8
City of Belgrade	26	37.2
Central-South Serbia	14	20.0
TOTAL	70	100.0

Procedure

The research involved people from the middle management level in the subject companies. The companies were contacted via e-mail explaining the purpose and nature of the research. After they confirmed their participation, they were provided with an on-line questionnaire. Filling in the questionnaire was anonymous.

Statistical data processing

The data collected in the research were processed with the SPSS 20 statistical package. The obtained dimensions and responses from the respondents were described by descriptive statistics. Average values, as well as deviations for each dimension, were presented. The contribution of independent variables to the description of the quick response concept in the retail sector was examined by a multiple regression analysis.

3. Results

Descriptive statistics describe to what extent respondents agree that these indicators influence the implementation of the quick response concept in the retail sector in the Serbian market. Score 1 expresses the least agreement, while the grade 5 expresses the highest agreement. Descriptive indicators are given in Table 3. It is obvious that the respondents show highest agreement with the indicator implementation of modern information technologies (M=4.85), and they least agree with the item long-term and fair relations between the participants in the supply chain (2.85). In addition to these descriptive indicators in Table 3, descriptive statistics for the variable are presented – the concept of quick response and delivery timeliness in accordance with the customers' requirements.

Table 3 Descriptive indicators of the examined indicators

	Min.	Max.	Arithmetic mean	Standard deviation
Implementation of IT	3.00	4.88	4.8455	.48500
Electronic exchange of data and information	2.00	4.67	3.9923	.53669
Long-term and fair relations of the participants	1.25	3.25	2.8512	.64179
Quick response concept			3.8343	1.13436

Multiple regression analysis was applied to examine the impact and correlation between the mentioned group of indicators and the quick response concept. First, the overall sample will be used for testing, and then the sub-samples (regions). Enter method was applied on the entire sample, in which all independent variables were included together in order to predict the dependent variable. The obtained results indicate that the regression model is statistically significant (F (70.3) =4.20, p<0.001). The set of examined indicators statistically significantly predicts the concept of quick response in the retail sector, as well as the timeliness of the delivery of goods in accordance with the customers' requirements. It describes 38.4% of the variance of the criteria. Besides the overall contribution of the set of predictors, the contribution of individual predictors was also examined. Their contribution is given in the Table 4 below.

Table 4 Contributions of individual predictors to the explanation of the criterion variable

Model	Non-standardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Significance
1 (constant)	4.253	1.258		3.614	.000
Implementation of IT	1.277	.304	.359	4.198	.000
Electronic exchange of data and information	.502	.369	.204	2.234	.027
Long-term and fair relations of the participants in the supply chain	.117	.192	.049	.608	.454

Based on the data given in the table, it can be concluded that the criterion variable is statistically significantly predicted by variables of implementation of modern information technologies (p=.000) and electronic exchange of data and information (p=.027). The variables predict the concept of quick response in a positive direction in the entire market of the Republic of Serbia. This means that their increase is accompanied by the increase in timeliness of delivery of goods according to the customers' requirements, i.e. the concept of quick response is applied more efficiently.

On the other hand, the variable long-term and fair relations between the participants in supply chains (p=.544) did not make a statistically significant contribution, i.e. according to the respondents, it moderately influences the examined criterion (p=.454). Testing conducted on sub-samples (regions) shows identical results as at the level of the entire market of the Republic of Serbia, such as: a) region of Vojvodina: the regression model is statistically significant (F (30,3) = 4.51 p<0.001) and the included indicators explain 27.1% of the variance of criterion variable; b) region of the City of Belgrade: the regression model is statistically significant (F (26,3) = 4.64, p<0.001) and the included indicators explain 34.9% of the variance of criterion variable; and c) the region of Central-South Serbia: the regression model is statistically significant (F (14,3) = 5.56, p<0.001) and the included indicators explain 16.3% of the variance of criterion variable.

Based on the conducted testing, it can be concluded that the observed indicators: implementation of modern information technologies in logistics operations, electronic exchange of data and information between participants in the supply chain, long-term and fair relations between participants in the supply chain, statistically significantly influence and contribute to the implementation of the quick response concept in the retail sector in the Serbian market. This conclusion confirms the basic research hypothesis H_1 in the paper.

4. Discussion

The confirmed basic research hypothesis on the statistically significant influence of mentioned indicators on the implementation and realization of the quick response concept in retail and supply chains suggests that it is necessary to define the quick response model based on the analysed indicators. Based on Table 4, using the fact that the regression model at the level of the Serbian entire market describes 38.4% of criteria variance, it is possible to define the following model (equation) of the quick response concept to customers' demands in the retail sector (1):

$$y = 4.25 + 1.28x_1 + 0.50x_2 + 0.12x_3 \quad (1)$$

In the given equation, ***y*** represents a dependent variable (the concept of quick response and delivery timeliness in accordance with the customers' requirements), while the variables ***x*** are independent variables, such as: x_1 –implementation of modern information technologies in logistics operations; x_2 – electronic exchange of data and information between participants in the supply chain, and x_3 – long-term and fair relations between participants in the supply chain.

Acting upon the presented equation should be a guide to the management of retailers and logistics centres on how to approach the improvement of their services in meeting the needs of potential and existing customers. Implementation of the quick response concept in retail and supply chains implies that a company should ensure timely delivery of goods to customers, and to respond quickly to all their extraordinary requirements and needs. The mentioned equation requires the supply chain management to work on the introduction of modern information technologies and IT support in all logistic operations (B=1.28), from the procurement of goods from the manufacturer, through continuous control and monitoring of inventory status, up to the delivery of goods to the end (final) customer in retailers.

The concept of quick response also implies electronic exchange of data and information between all participants in the supply chain (B=0.50), through the implementation of internal applications that will provide: a) two-way constructive communication between employees in the supply chain and customers, and accelerate the fulfilment of their requirements and flexibility in delivery, b) expert consulting services, c) support to customers in case of lost and delayed delivery (e.g. Timely notification of changes in quantity, time, location of delivery), etc. Last but not least, the long-term and fair relations between the participants in the supply chain (B=0.12) should be based on mutual assistance, understanding, respect, and professional training for work with modern IT technologies, working together on development of standards, etc.

Conclusion

The need for examining the implementation of the quick response concept in Serbian retail sector has arisen as a consequence of the fact that it is a segment of the service process increasingly emphasized as a key competitive advantage in the Serbian market. With this regard, the main aim of the research was to create a model of the quick response concept and to precisely define the impact of indicators such as the implementation of modern information technologies in logistic operations, electronic exchange of data and information between participants in the supply chain and the long-term and fair relationship between participants in the supply chain.

In this context, a survey was carried out among the employees in retail and supply chains in the Serbian market and a basic research hypothesis was tested on a statistically significant impact of the mentioned indicators on the implementation of the quick response concept. The application of multiple regression analysis confirmed the hypothesis on the statistically significant influence of the analysed indicators on the basis of which we defined the equation of the quick response concept at the level of the entire Serbian market. The most important indicator was the implementation of modern information technologies and electronic exchange of data and information among all participants in supply chains. Respondents gave a somewhat minor importance to the long-term and fair relations between the participants in supply chains.

The defined model of the quick response concept has a practical significance. It can help the supply chain management in defining and creating loyal customers by shortening the time in the supply chain from order to delivery. Furthermore, application of this model will ensure greater timeliness of delivery in accordance with the customers' requirements. These will directly affect the profitability of retail facilities and logistics centres through meeting the needs, wishes and interests of the customers better and faster than the competition.

Shortcoming of the conducted research is reflected in a small sample of respondents, as well as the fact that one market (Republic of Serbia) and only three indicators were analysed. Therefore, as guidelines for future research, we suggest the following: a) include a significantly larger sample of respondents (e.g. 300+), b) focus on defining subgroups within these indicators and how their impact reflects on the implementation of the quick response concept, and c) expand testing on the South East European market and make comparisons between EU member states and transition countries. SM

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Ljubojević, T.K. (2000a).
Ljubojević, T.K. (2000b).
Ljubojević, T.K., & Dimitrijević, N.N. (1994).

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Author, A. A., Author, B. B., & Author, C. C. (Year). Title of article. *Title of Periodical, volume number*(issue number), pages.

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Perić, O. (2006). Bridging the gap: Complex adaptive knowledge management. *Strategic Management, 14*, 654-668.

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Strakić, F., & Mirković, D. (2006). The role of the user in the software development life cycle. *Management Information Systems, 4* (2), 60-72.

➲ **Journal article, two authors, paginated by volume**

Ljubojević, K., & Dimitrijević, M. (2007). Choosing your CRM strategy. *Strategic Management, 15*, 333-349.

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Jovanov, N., Boškov, T., & Strakić, F. (2007). Data warehouse architecture. *Management Information Systems, 5* (2), 41-49.

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Ljubojević, K., Dimitrijević, M., Mirković, D., Tanasijević, V., Perić, O., Jovanov, N., et al. (2005). Putting the user at the center of software testing activity. *Management Information Systems, 3* (1), 99-106.

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Strakić, F., Mirković, D., Boškov, T., Ljubojević, K., Tanasijević, V., Dimitrijević, M., et al. (2003). Metadata in data warehouse. *Strategic Management, 11*, 122-132.

➲ **Magazine article**

Strakić, F. (2005, October 15). Remembering users with cookies. *IT Review*, *130*, 20-21.

➲ **Newsletter article with author**

Dimitrijević, M. (2009, September). MySql server, writing library files. *Computing News, 57,* 10-12.

➲ **Newsletter article without author**

VBScript with active server pages. (2009, September). *Computing News,57,* 21-22.

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Ljubojević, K., Dimitrijević, M. (2007). *The enterprise knowledge portal and its architecture*. Subotica: Faculty of Economics.

➲ **Book, three to six authors**

Ljubojević, K., Dimitrijević, M., Mirković, D., Tanasijević, V., & Perić, O. (2006). *Importance of software testing*. Subotica: Faculty of Economics.

➲ **Book, more than six authors**

Mirković, D., Tanasijević, V., Perić, O., Jovanov, N., Boškov, T., Strakić, F., et al. (2007). *Supply chain management*. Subotica: Faculty of Economics.

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Web user interface (10th ed.). (2003). Subotica: Faculty of Economics.

➲ **Group, corporate, or government author**

Statistical office of the Republic of Serbia. (1978). *Statistical abstract of the Republic of Serbia.* Belgrade: Ministry of community and social services.

➲ **Edited book**

Dimitrijević, M., & Tanasijević, V. (Eds.). (2004). *Data warehouse architecture*. Subotica: Faculty of Economics.

➲ **Chapter in an edited book**

Boškov, T., & Strakić. F. (2008). Bridging the gap: Complex adaptive knowledge management. In T. Boškov & V. Tanasijević (Eds.), *The enterprise knowledge portal and its architecture* (pp. 55-89). Subotica: Faculty of Economics.

➲ **Encyclopedia entry**

Mirković, D. (2006). History and the world of mathematicians. In *The new mathematics encyclopedia* (Vol. 56, pp. 23-45). Subotica: Faculty of Economics.

C. UNPUBLISHED WORKS

➲ **Paper presented at a meeting or a conference**

Ljubojević, K., Tanasijević, V., Dimitrijević, M. (2003). *Designing a web form without tables*. Paper presented at the annual meeting of the Serbian computer alliance, Beograd.

➲ **Paper or manuscript**

Boškov, T., Strakić, F., Ljubojević, K., Dimitrijević, M., & Perić, O. (2007. May). *First steps in visual basic for applications*. Unpublished paper, Faculty of Economics Subotica, Subotica.

➲ **Doctoral dissertation**

Strakić, F. (2000). *Managing network services: Managing DNS servers*. Unpublished doctoral dissertation, Faculty of Economics Subotica, Subotica.

➲ **Master's thesis**

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> Mirković (2001), found that “the use of data warehouses may be limited” (p. 201). What unexpected impact does this have on the range of availability?

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>
> Limitations on the use of databases can be external and software-based, or temporary and even discretion-based (Mirković, 1991, p. 201).

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>
> In an early study of access range (Boškov, 2005), it was found...

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>
> Further occurences of the phenomenon tend to receive a much wider media coverage (Jovanov et al., 2004).

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>
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(Hessenberg, n.d.)

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(Mirković & Boškov, 2006, p.12)

Mirković & Boškov (2006, p. 12) propose the approach by which "the initial viewpoint…

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(Theissen, 2004a, chap. 3)

(Keaton, 1997, pp. 85-94)

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