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# Strategic management

International Journal of  
Strategic Management and  
Decision Support Systems  
in Strategic Management

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International Journal of Strategic Management and  
Decision Support Systems in Strategic Management

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# Human Resource Management of Innovative Projects in the Context of Business Strategy

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## **Abstract**

The strategy of any enterprise involves the development and implementation of innovative ideas in the form of projects. A set of strategically important innovative projects to achieve their performance needs to be ensured by adequate quality of human resources. Consequently, the development of the human resource management system entails particular urgency within the strategy, taking into account the needs of planning innovative projects. The study conducted by the author on 47 enterprises in Russia, demonstrating the special role of human resources in the success of innovative strategic projects and proving that the classic approaches to the personnel management cease to operate under project conditions and the innovation environment. Transformation of technologies and methods of human resource management is required, which would have started to comply with project specifics and requirements of innovation. For example, innovative projects are beginning to be relevant to workforce competencies such as: flexibility, high adaptive capacity, the ability to work under stress and time constraints, and motivation for permanent change. The techniques of underlying the diagnosis and qualification of already developed competencies minimized in the technology of personnel selection; prognostic techniques are important in the selection of candidates, as well as methods of hidden potential diagnosis that can be developed in the course of the project. The innovative nature of the project dictates special forms of motivation and stimulation of human resources project. Approaches to team building are changing in innovative projects; agile technologies enter at the forefront of the techniques. We have proposed the new techniques of human resource management relevant to conditions of innovative projects with strategic focus. Novelty developed the by author is a system of human resource management in projects.

## **Keywords**

Strategy, project management, project team, key team competencies.

## **Introduction**

The experience of enterprises in different countries suggests that the development and implementation of strategies is carried out in the form of innovative projects. Strategy is usually associated with the development of business through the creation and use of innovations. Advantages of the project approach make it the most appropriate for strategic management of the enterprise.

Success of innovative projects requires the establishment of certain conditions. One of them is providing the project with qualitative human resources. Consequently, within the strategy, the development of the human resources management

system tailored to the needs of the planned innovative projects has particular urgency.

The practice of project management clearly proves the validity of the statement that there are features in the management of human resources, due to characteristic features of innovative projects. The point is that human resource management of innovative projects is different from managing people in organizations, not using the project form of activity. Therefore, the aim of this study was to identify and synthesize the peculiarities of human resource management of innovative projects.

### 1. Literature review

The goal made is determined on the basis of the analysis of scientific publications about the lack of in-depth research on the specifics of human resources management of innovative projects. Most publications in the field project management recognize the importance of human resources in achieving success of projects and programs. Many Russian authors dedicate sections of their publications to the project team, such as Bogdanov V., Dubovik, M. F., Mazur I. I., Olderogge N. G., Polkovnikov A. V., Tovb A. S., Shapiro, V. D., G. L. Tsipes, etc (Bogdanov, 2013, p. 248; Mazur, Shapiro, Olderogge & Polkovnikov, 2009, p. 960; Polkovnikov, 2015, p. 552; Tovb & Tsipes, 2005, p. 240). Foreign authors emphasize the importance of team building in the projects, for example, J. Meredith and S. Mantel, Erik W. Larson and Clifford F. Gray (Larson, 2013, p. 784; Meredith & Mantel, 2014, p. 640; Thompson, 2008, p. 544). However, the issues of personnel management with account of innovative project activity have not been studied enough at the moment. It makes this study relevant.

### 2. Results of the study

Before addressing the features of human resource management of the project we should refer to the results of our research conducted in 2012-2016 at the enterprises successfully using project management in Omsk. The sample amounted to 47 companies, which can all be recognized as experts in project management. The results of the survey showed that, along with the other functional areas of project management, personnel management is noted as a critical area (table 1). So, 85.1 % of enterprises used it at the time of the survey and 93.6% were planning to use it in the future.

**Table 1** Distribution of answers to the question: "What functional areas are implemented at your company, what would you like to enforce?"

Functional areas	Apply		Would like to apply	
	units (PCs)	%	units (PCs)	%
managing the content of project work	47	100.0	47	100
time management	45	95.7	47	100
cost management	44	93.6	47	100
quality management	31	65.9	44	93.6
personnel management	40	85.1	24	93.6

risk management	17	36.2	40	85.1
communication management	28	59.6	29	61.7
supply chain management	22	46.8	23	48.9
management of projects integration	14	29.8	23	48.9
change management in projects	16	34.1	21	44.7

Source: author

Thus, without exception, all the experts recognized that management has its own characteristics in the context of project human resources. Imagine these features, highlighted by the author, based on the analysis of the experience of leading enterprises who participated in the study.

First, the project involves time-limited activity. This feature of the projects provokes increased importance of some functions of human resource management and, conversely, casts doubt on other functions. In the project there is a growing urgency of adaptation, teambuilding, and creating favourable climate. The main task is to form quickly an effective project team. The temporality of the team, as well as acceleration throughout of evolutionary stages, makes it a comprehensive approach to the management of conflicts function at the stage of coordination of interests and development of team leadership. In non-project groups this stage is often blurred, lasts a long time and without the existence of a clear and compelling signs. In project form, by necessity of speedy and intensive group, the development the conflicts can be fairly sharp and require quick and skilled intervention.

Some directions of personnel work, the effect of which is manifested in greater degree in longer term, such as staff development and training, require careful decision about their appropriateness. If the project is short, simple and brings little profit, the training may be unnecessary technology; its cost will exceed the results obtained in this particular project. However, if the company is dominated by project activities, long-term investment in staff through training can be justified, as their effect will manifest itself in future projects. A feature of career management of staff is also formed in the projects. This is due to the fact that it is not possible to build career ladders in the framework of a single project; throughout the project the staff performed their assigned project roles. Often project staff feels insecure about their

future after the completion of the work in the project.

These feelings are sometimes justified, since the company disbands the team at the end of each project, and the question of what is the future of given employee is solved each time. If an employee has a permanent job in the structural division of the enterprise, this question is solved simply: the employee begins to perform only functions duties and if required may be included in new projects of the company. This situation is typical of functional and matrix organizational structures. But in project entities in which the company carries out its activities only in the project form, the task of career management acquires its own peculiarities. It becomes important to plan career moves, as part of different projects, providing staff with the opportunities of such career ladders that motivate work in terms of projects. Practice shows that the lack of a clear vision of career opportunities is a strong demotivator for many employees.

Secondly, the project team can be very heterogeneous in its structure; it may consist of personnel drawn from external sources of employees, collectives of other enterprises and organizations in situations of large-scale and long-term projects. The complexity and diversity of statuses of project team members also entails specific features of human resource management of the project. First of all, personnel policy in relation to different status of project participants must be different. In view of continuously operating workers in organizations, the staff temporarily engaged in the project must respect the principles of consistency, coherence and continuity of human activities. The work in this particular project for these participants is the only step in the career at the company. These employees have already undergone the adaptation to the enterprise, they may have already worked with the current team members, they need only to adapt to a new project and a new project role.

These employees are already in database of assessment of their competences, potential, and achievements, which can be used in the selection of this project team, and then add the results of the work in this project. These employees already have a career plan and the work in a specific project is planned as the level of the career movement in the organization. The training of such employees is more than justified because it enriches the organization's human capital. As a regard of employees that were recruited for the

project from external sources, the main tasks of the personnel policy is: recruitment and retention in a specific project by using the temporary system of motivation and stimulation, provision of intensive care in early adaptation to new conditions. In a situation when a project team includes the entire organization and often there are big companies, the main reference point of personnel policy is to harmonize the technology of work with the staff of the parent organization, i.e. initiating and implementing the project, and involved in the project of organization. In this case it is necessary to smooth out all possible contradictions and conflicts, to try to lead to unified principles of personnel policy of these organizations.

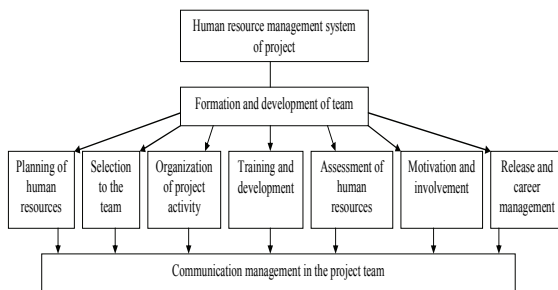
Thirdly, the project has its own management system, management team and governance arrangements that are created for each new project. It is also important that the project management team is not built into the organizational composition of the enterprise. This project feature affects the appearance of the need to create within the system of management of the specific project its own unique subsystem of human resource management just for this project. When planning individual projects each time questions need to be resolved: is there a need for the role of a specialist in personnel management in this project, who will fill that role, whether it is necessary to include in the composition of the project team of the HR Manager, is it advisable to outsource the HR functions for the project. And in every single project of the same company, the answers to these questions can vary greatly, depending on the features of the project, its objectives and build the management structure of this project.

Fourth, the project is aimed at complex problem that can be solved only by joint efforts rather than individual actions of individual team members. This greatly increases the relevance of a variety of human technologies aimed at team building. In particular, in the framework of human resource management of the project what comes at the forefront is the task of achieving role balance of the team, compatibility of team members, developing skills of cooperative discussion of problems and decision-making, the development dynamics of the project team and other tasks that may be missing in non-project groups.

Fifthly, in innovative projects it is difficult or impossible to copy and replicate the technologies of human resources management gained during implementation of other projects. As it is well

known, standardization of technologies and business processes can increase their effect, so that the replication of experience is often useful. However, the experience can be used only partly in innovative projects. The situation in each innovation project is new, so the human resources management is situational, there is a problem of permanent selection and approbation of new techniques of work with personnel, and project-specific technologies of human resource management often need to be developed. This does not contradict the aspiration of finding universal scheme of work with an innovative project team, but they need to be adapted to the unique conditions of a particular innovative project. In this regard the requirements for the skill of the actors involved in the human resources management of innovative projects are of key importance. Their jurisdiction should include flexibility, adaptability, creativity, intuition, involvement, receptivity, and learning new things, ability to become a “team player” in the collective subject of project management.

Study of the best enterprises experience in the field of project management has enabled to develop a model system of human resource management of projects (figure 1). It includes a set of related functional elements. Implementation of all these elements helps to bring human resources quality level to the needs of projects and company strategy.



**Figure 1** Elements of human resources management system of projects  
Source: author

## Conclusions

Human resource management system of innovative projects has specific features, which appear under the influence of project innovative activity. The success of innovative projects requires development and implementation of such human resource management system of projects, which include functions of forming the project team, managing internal and external communications in project, selection to the team and role assignment, assessment of project team members; motivation and involvement in project activity, managing of project career, development and training, organization of project activity, and release of personnel from the project. The author proposes a systemic model of human resources management of the project. It differs from the classical system of personnel management in non-project organizations, the set and maintenance of functions. For example, there are new functions of team building and project communication, release of personnel and management of project career. The author shows specific features of various functional elements of the human resource management system of projects. All this will allow ensuring the effectiveness of innovative projects that, in turn, will provide the basis for the enterprise strategy implementation. **SM**

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# Influence of Classification of Accounting Entities for Reporting in the Context of Legislative Changes<sup>1</sup>

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## Abstract

Constantly changing accounting legislation brings about the addition of new groups of entities in response to adopted amendment no. 352/2013 Coll. to the Accounting Act with effect from 1.1.2014 by a directive of the European Parliament and of the Council 2012/6/EU has allowed Member States of the European Union to reduce the bureaucratic burden of accounting and preparing financial statements. The largest change in the Accounting Act is introducing a new type of entity "micro entity". Classification of accounting entities for small entities and large entities was expanded with effect from 1.1.2015. Each of these accounting entities has special rules for preparing financial statements. To a certain extent the legislation allows the choice of entity classification by size criteria. The right choice has an impact on the processing demands of the financial statements of accounting period 2015 and for the economic decisions of managers and external users in 2016. The aim of the article is to provide overview of the new groups of entities and characterize these entities and the legislation under which the procedure for accounting and reporting is conducted.

## Keywords

Micro entity, small entity, large entity, accounting principles and methods, amendment, financial statements.

<sup>1</sup> This article was processed as one of the outputs of the project Scientific Grant Agency of the Slovak Academy of Sciences and MŠVVaŠ no. 1/0122/14 (2014-2016) The importance of pricing of transactions between related parties and their impact on the profit entity.

## Introduction

Amendments and additions, which have been adopted by amendment No. 352/2013 coll. to Act No. 431/2002 coll., On accounting as amended (the "Accounting Act"), with effect from 1.1.2014 were intended to reduce the bureaucratic burden associated with accounting and preparing financial statements. It introduced a new concept of "micro entity" in section 2 paragraph 5 and 6 of the Accounting Act, which characterizes micro entity and specifies the conditions which if the entity complies with the two immediately consecutive accounting periods, it can decide whether to be considered as a micro entity or not. (Ministry of Finance of the Slovak Republic, 2002a)

This amendment is followed by another governmental draft of Accounting Act from August 2014, which extends the distribution of entities on micro, small and large, as required by the directive of the European Parliament and Council di-

rective 2013/34 / EU of 26 June 2013 on the annual accounts, consolidated financial statements and related reports of certain types of enterprises ("the Directive on the Annual Accounts") with effect from 1.1.2015. The criteria under which entities are classified into size groups are appointed in the context with this draft.

## 1. Classification of accounting entities

The size criteria are decisive for the classification of an accounting entity to size groups. The tested elements are:

- total assets – amount calculated from the balance sheet after taking into account the revaluation adjustment and after less accumulated amortization (note: until 31 of December 2014 gross assessed value, from 1st of January 2015 there was a change in the legislation),

- net turnover – gains from sales of products, goods and services, after deduction of discounts, while the accounting entity whose business is earning other revenues such as revenues from sales of products, goods and services, to the net turnover include other revenues after deduction of discounts,
- average calculated number of employees – without specifying the calculation procedure.

Classification of accounting entities by size groups for the purpose of compiling the individual financial statements will be based on fulfilment of at least two of the three conditions defined size for companies and cooperatives and entrepreneur who accounts voluntarily in the double-entry book-keeping listed in Table 1, Classification of accounting entities by size groups from 2015.

**Table 1** Classification of accounting entities by size groups from 2015

Size groups	Total assets (A) Net in EUR	Net turnover (T) in EUR	Average calculated number of employees (E)
Micro accounting entity	$A \leq 350\,000$	$T \leq 700\,000$	$E \leq 10$
Small accounting entity	$350\,000 < A \leq 4\,000\,000$	$700\,000 < T \leq 8\,000\,000$	$10 < E \leq 50$
Large accounting entity	$A > 4\,000\,000$	$T > 8\,000\,000$	$E > 50$

Source: The authors

Accounting entities will need to change their status, if they exceed or do not fulfil the size criteria in two consecutive accounting periods (at least two). Reclassification to size category will always be performed from the next accounting period.

Only **newly formed accounting entity** has a choice of size classification at its own decision and remains in this size group in a consecutive accounting period as well.

When an accounting entity decides to use advantage of micro entity it is obliged to do so in all accounting periods if it satisfies the established criteria in order to ensure comparability of data in the financial statements. An entity that fulfils the criteria for micro entity may decide to be processed as a small entity. According to the Accounting Act, as in force until 31 December 2014, when an entity decided that it is not seen as a micro entity, from January 1, 2015 it will be considered automatically a small entity.

In assessing the size criteria for changing accounting period is examining the conditions for shorter periods incurred in:

- creation of an entity,
- a change in the accounting period from calendar year to business year, business year for another business year or the business year to the calendar year,
- discontinuation of the entity.

The entity shall proceed to the classification of the above mentioned size classes for the first time since January 1, 2015, based on the data compiled financial statements for the year 2014. If an entity applies the accounting period **calendar year**, the size criteria will be assessed as at 31 December 2014 and accounting period immediately preceding 31 December 2013.

If an entity has an accounting period of the **business year**, assesses compliance, respectively exceeding the size criteria for the accounting period beginning in the calendar year 2015. This means that if an entity has a year from 1.4.201x to 31.3.201x + 1, the size criteria will be considered when preparing financial statements for the period April 1, 2014 to March 31, 2015, and the period immediately preceding March 31, 2014.

## 2. Financial statements of accounting entities

### 2.1. Micro entity

A micro entity is considered to be an entity fulfilling the criteria set out in the Table 1 for two consecutive accounting periods, but also such entity that two of the criteria of size exceeded in only one of two consecutive accounting periods. Existing micro entity is not entitled to act as a micro entity, if specified criteria exceeded in two consecutive financial accounting periods, it means no longer fulfils the size criteria.

For micro entity could be not considered an entity that:

- does not satisfy the size criteria,
- was considered micro entity, but in two consecutive accounting periods exceeded the size criteria,
- prepare financial statements in accordance with International Financial Reporting Standards,
- is registered with the National Bank of Slovakia,
- is the public interest entity.

Benefit from the possibility to be a micro accounting entity is manifested at two levels - in the area of accounting and reporting.

In the field of **accounting** for the said benefits for micro entities are that securities and shares valued when initially recorded by acquisition cost and stay at this evaluation for the date of the financial statements as well. Assets and liabilities are not measured at fair value and assets are not valued by the equity method.

The basic legal norm which concerns the area of accounting for all entities is the Accounting Act. Accounting methods for all entities are enshrined in Measure of the Ministry of Finance of the Slovak Republic of 16 December 2002 No. 23054/2002-92, On stipulation of details of accounting procedures and framework chart of accounts for entrepreneurs keeping double-entry accounting ("accounting procedures"). (Ministry of Finance of the Slovak Republic, 2002b)

**Reporting** of individual items in the financial statements for new types of entities requires the need for approval of new measures for each group of accounting entities.

For **micro entity**, Measure of the Ministry of Finance of the Slovak Republic no. MF / 15464 / 2013-74 of 11 December 2013 approves defining details of the arrangement, marking, and content specification of items of an individual financial statement and extent of data determined for publication from an individual financial statement for micro entities ("measure of the financial statements for micro entities"). This measure was used for the first time for the preparation of financial statements of micro entities as of 31 December 2014. (Ministry of Finance of the Slovak Republic, 2013)

According to amendment no 352/2013 Coll. to the Accounting Act, it is allowed to compile financial statements in the so-called "**short form**" for micro entity (balance sheet, income statement and notes in short form). Details of their preparation determine the measure of the financial statements for micro entities. The specimen is Appendix no. 1 to measure of the financial statements for micro entities.

General requirements for the first page of this Appendix and its individual parts of financial statement of micro entity are labelled:

- Úč MUJ 1 - 01 for Balance sheet;
- Úč MUJ 2 - 01 for Profit and loss statement;
- Úč MUJ 3 - 01 for Notes.

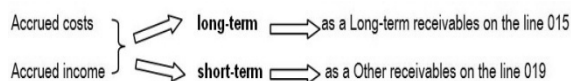
The first financial statements in simplified form were possible to compile for micro entity for the financial year beginning on 1 January 2014. The figures are reported in the financial statements of micro entity in euros in the whole.

Simplification of reporting data of micro entity covers the following areas:

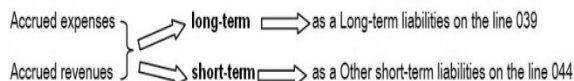
- assets are only recognized in net value (after taking into account accumulated depreciation and provisions)
- the balance sheets are not reported separately accruals, but reported within receivables and payables,
- the balance sheet and income statement are more aggregated,
- a significantly reduced extent of the information provided in the notes.

Accruals are not recognized in the **balance sheet** of micro entity separately, but are recognized concurrently with the following items of assets and liabilities as follows:

#### *Item on the asset side*



#### *Items on the liabilities side*



**Profit and loss statement** of micro entity has also an abbreviated range on two sides and is part of the Appendix 1 to measure the financial statements for micro entities. The individual items are aggregated to the level of some account groups. Profit and loss statement also contains an indicator – the added value which involves production, consumption and production margins. Although these indicators are not isolated as in the profit and loss for the small and large entities, it is not difficult to find them.

Information disclosures in the **notes** of micro entity usually have three A4 pages. The required elements include:

- general information (e.g. name, address, information about the consolidated group, the average number of employees),
- information on the procedures adopted (e.g. comply with the assumptions going con-

cern, the accounting principles and methods),

- information that explains and complements balance sheet and profit and loss (e.g. the information about liabilities, own shares, executive body of the company).

As the most significant changes in the financial statements have occurred the first in micro entities, therefore it is dedicated to the largest part of this contribution of the micro entity.

Other accounting entities (small and large) for compilation of financial statement to 31 of December 2014 followed the existing Measure of the Ministry of Finance of the Slovak Republic of 31 March 2003, No. 4455/2003-92 defining details of the arrangement, marking, and content specification of items of an individual financial statement and extent of data determined for publication from an individual financial statement for entrepreneurs using double entry bookkeeping ("measure of the financial statements"). (Ministry of Finance of the Slovak Republic, 2003)

## 2.2. Small entity and large entity

The amendment to the Accounting Act with effect from 1 January 2015 brought two new entities – small entity and large entity. Criteria for classification of accounting entities in the small accounting entity are presented in the second row of Table 1 and into large accounting entity are presented in the third row of Table 1.

Small and large entity process bookkeeping during the accounting period according to the current accounting procedures is applicable to all types of entities. **Small accounting entity** uses the **first time in 2015** for the preparation of financial statements new Measure of the Ministry of Finance of the Slovak Republic no. MF / 23378 / 2014-74 of 3 December 2014 defining details of an individual financial statement and extent of data determined for publication from an individual financial statement for small entities ("measure of the financial statements for small entities"). (Ministry of Finance of the Slovak Republic, 2014b)

**Large accounting entity** in preparing the financial statements for the **first time in 2015** according to the new Measure of the Ministry of Finance of the Slovak Republic no. MF / 23377 / 2014-74 of 3 December 2014 defining details of an individual financial statement and extent of data determined for publication from an individual financial statement for large entities ("measure

of the financial statements for large entities"). (Ministry of Finance of the Slovak Republic, 2014a)

Development of legislative changes for different types of entities in the financial statements is presented in Table 2, Overview of legislative changes for the preparation of financial statements.

**Table 2** Overview of legislative changes for the preparation of financial statements

Date of compilation Financial statement	Micro entity	Small entity	Large entity
31 December 2013	measure of the financial statements		
31 December 2014	measure of the financial statements for micro entities	measure of the financial statements	
31 December 2015	measure of the financial statements for micro entities	measure of the financial statements for small entities	measure of the financial statements for large entities

Source: The authors

Financial statements of small and large entities have the same basement of statements, as well as general requirements, where they can indicate whether they are large or small. Individual parts of financial statement for small and large entities are labelled:

- Úč POD 1 - 01 for Balance sheet;
- Úč POD 2 - 01 for Profit and loss statement;
- Úč POD 3 - 01 for Notes.

The most significant differences between small and large accounting entities are in the compilation of notes, especially in the range. For a complete overview of reporting differences for all three types of accounting entities see Table 3, Differences in reporting.

**Table 3** Differences in reporting

Description	Micro entity	Small entity	Large entity
Balance sheet	Simplified, 2 pages, 45 lines	8 pages, 145 lines	
Profit and loss statement	Simplified, 2 pages, 38 lines	4 pages, 61 lines	

Notes (contents for example):	Simplified, 3 pages or more	Simplified, 5 pages or more	Not simplified, 11 pages or more
▪ Name, address	Yes	yes	yes
▪ Description of activity performed	No	yes	yes
▪ Number of employees	yes (only some data)	yes (only some data)	yes
▪ Overview of long-term assets	No	no	yes
▪ Overview of reserve	No	no	yes
▪ Statement of changes of equity	No	no	yes
▪ Cash flow	No	no	yes
▪ Related party transactions	yes (only for other financial duties and contingent liabilities)	no	yes
▪ Events after the date on which financial statements are compiled	No	yes	yes
▪ Accounting principles and methods	Yes	yes	yes

Source: The authors

## Conclusion

The aim of this paper was to provide an overview of changes in financial legislation concerning classification of entities for the latest period. The legislation has passed significant changes in the

financial statements and reporting data relative to the introduction of new types of entities. Many changes in data reporting in the financial statements related to the interdependence of businesses and transfer pricing. As shown in Table 2, accountants and managers who are responsible for the financial statements must not only monitor changes, but also study the possibilities of each classification allows. With the right knowledge of the legislation so they can make decisions that allow either to simplify the financial statements in the case of micro entity, or on the other hand, provide more comprehensive information for potential investors and cooperation in the case of small and large entity. **SM**

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# Possible Avenue of Implementation of the XBRL Standard for Maximum Possible Efficiency of Financial Reporting in the Republic of Serbia

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## Abstract

One of the possible motives of implementation of XBRL financial reporting standards is based on the automatic production of high-quality data on company performance. Bearing in mind the fact that its application in many countries of Europe, Asia and America is compulsory, it becomes clear that the only feasible way for our companies is to accept the change as soon as possible and start working on the implementation of standards with the support of the state.

It is necessary to accept that XBRL is an ideal solution for achieving the desired quality of financial reporting, which is stated as an objective in all national accounting and auditing legislation. The aim of this paper is to point to the possibility of adaptation of XBRL standards in the Republic of Serbia, with particular reference to the standard implementation process in developed market economies and the neighbouring countries.

The motive for writing a paper on the topic of XBRL is more attractive than actuality, if we consider how far its use went in developed countries. However, the need for solving the problems of financial reporting in our country is an imperative and at the same time contains a scientific interest. The question is, whether the model of implementation of XBRL in Serbia would differ significantly from the model applied in other neighbouring countries.

## Keywords

XBRL, implementation, comparative overview, proposed implementation.

## 1. XBRL standard – definition

Bergeron argues that Extensible Business Reporting Language (XBRL) is a technological standard for transparent business and financial reporting that promises revolution in the finance industry. With XBRL, standard based on XML (Extensible Markup Language), companies can seamlessly exchange financial data in real time (Bergeron, 2003, p. xi).

As the conceptual creator of XBRL, Watson argues that its fundamental meaning is that it is a language facilitating efficient and effective bridg-

ing of the gap between different business systems. XBRL is the global standard for business reporting (Hoffman & Watson, 2009, p.1).

XBRL is an XML-based programming language, which was created in the so-called open standard. It is available free of charge, market oriented, open and global standard of exchange of business information and thus it significantly changes the way financial information is presented to internal and external users. XML is a simple, flexible textual format designed to meet the needs for electronic disclosure of large-scale

data. It plays a significant role in the exchange of different data on the network. (Stergiaki, Stavropoulos & Lalou, 2013, p. 15).

XBRL enables the reuse of financial information in an intelligent manner (Eierle, Ojala, & Penttinen, 2014, p. 160). It is important to note that XBRL is not a new accounting standard, and does not require any changes of the existing accounting standards. XBRL supports the existing standards, providing extended consistency of once entered data (SoftwareAG, 2002, p.5).

The technical specifications of XBRL were developed by a non-profit international consortium and their task forces, whereas the specific taxonomies of individual countries are developed by their accountants and experts. The reason for this is that accounting rules differ from one country to another, so that XBRL standard specification must be carried out in each individual country. Hannon defines XBRL as a “standard for simplifying exchange of financial statements, performance reports and other business information between software programs” (Hannon, 2005, p. 57).

The development of XBRL was first initiated by the American Institute of Certified Public Accountants (AICPA) in July 2000, with the aim to improve financial reporting in all its different procedures, processes, within and outside reporting companies (Arndt, Iseemann, Brosowski, Thiessen, & Marx Gomez, 2006, p.3).

## 2. Functioning of the XBRL business reporting standard

It is easy to notice that XBRL is an elegant solution and a part of a broader set of organizational and sociological relations within national and international solutions. The original design of XBRL sets the standard as a general solution of the need for business reporting. The specific areas of knowledge are represented in taxonomies rather than in specification. This brings about a necessary dose of flexibility of such a system (Debreceňy, 2007, p.6).

The taxonomies (nomenclatures) provide rules for defining XBRL tags. For instance, the Generally Accepted Accounting Principles represent taxonomy (Software AG, 2009, 9.p). We can also say that taxonomies are a set of defined elements used by computers to understand business data (Singerova, 2015, p. 136).

The initial development of XBRL taxonomy and specific coding for the purpose of financial reporting was carried out internationally by a non-

profit consortium of over 450 global financial service and accounting organizations, and the countries' exchanges and regulatory bodies (Gomaa, Markelevich, & Shaw, 2011, p. 155).

The XBRL standard should be accepted as an “informatic standard set to only tag discrete information. When these tags have been assigned, it is possible to extract only the desired information, instead of copying, or downloading or printing entire documents. As the standard enables approach to financial data of different industries as well, it is also possible for the obtained data to be easily and quickly comparable (Polić, 2011, p. 271-272).

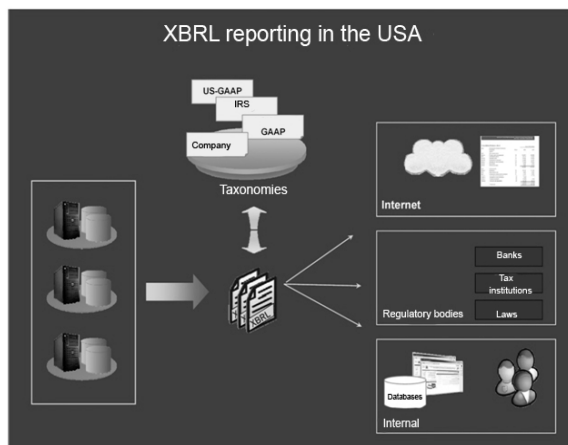
Taxonomy represents more than identifying the content of an entered number. It can evaluate and confirm that a piece of information related to a certain item such as revenue, amortization or lease expiry date, is structurally correct, that is, that the information is within a certain range of values (for instance, only positive numbers) or has a correct alphanumeric sequence (such as two letters followed by five numbers). The nomenclatures are extendable, which means that it is easy for users to create adjusted tags when necessary, and when the standard nomenclature does not describe or classify exactly certain items. In this, the tags do not have to be defined only for accounting data (Ventana Research, 2008, p.4).

XBRL works by tagging data with a standard description that enables other applications to understand the meaning and the context of specific information within a financial document. The result is data that is entered only once and understood constantly and correctly every time afterwards. There is no need for repeated entry and there is no dilemma about what a number once entered represents (SoftwareAG, 2002, p.4).

“In addition to the official, international parts of the taxonomy of standards required for the functioning of the reporting technology by the use of XBRL, all countries that opted to utilize this standard, and there are an increasing number of them, also add to the existing environment of the taxonomy certain elements of taxonomy appropriate to the specific features of national legislation. After verification, these parts become an integral part of the international standard. Thus individual parts of national taxonomies become transparent in the total worldwide environment.” (Polić, 2006, p.377)

In support of the previous statement of author Polić (2006) we show the process of XBRL

reporting in the US, where there is just noticeable the use of international taxonomy, as well as national, in this particular case US-GAAP (Figure 1).



**Figure 1** XBRL reporting process on the territory of the USA

Source: Pasmooij, 2010

The fundamental difference between financial statements created in .xls or .pdf format is that they can be read only by man, unlike XBRL, which is readable by a computer. Thus XBRL offers better and easier analyses (Singerova, 2015, p.136).

Several parts must be in place before and XBRL solution is implemented (SoftwareAG, 2002, p.7):

- Taxonomies must be developed and approved for specific industries and geopolitical areas. Countries must agree with the accounting principles that XBRL supports;
- Accounting experts must provide XBRL documents as a part of their auditing procedures;
- Accounting software sellers must have products that are in compliance with XBRL

It must be noted that there is a large number of commercial software using the principles of XBRL reporting. Some of them are sophisticated, must be purchased, require licenses and serious training to be used. Apart from these, there are cheaper, even free products enabling appropriate analyses. The Securities and Exchange Commission (SEC) itself provides a so-called XBRL reader that converts interactive data into those readable by man (Gomaa, Markelevich, & Shaw, 2011, p.155).

One of the simplest solutions perhaps is the use of integrated web services. They are ideal support to the use of XBRL standards as they are based on the XML standard. Web services are web based applications or software components achieving interaction with other web applications. In this way they communicate and share data. Thus web services feature as ideal architecture for the automation of business processes by using internet technologies. Furthermore, detecting possible errors, which is a part of XBRL specification, appears at the source of data rather than when information already reaches a third party (SoftwareAG, 2002, p.5).

### 3. The main factors of success of XBRL

A condition that must be met for any XBRL solution to be successful is its ability to convert and channel financial information from existing systems without influencing them. Information that are not suitable by XBRL rules must be converted into those that are XBRL supported so that they can be used (SoftwareAG, 2002, p.7).

XBRL is also called “bar code for reporting” and makes it as precise and efficient as possible. It enables linking unique tags with facts in reports, and allow (XBRL The Business Reporting Standard, N/D):

- presenting reports without fear that they are not correct,
- testing reports in relation to sets of set rules, before verifying the correctness of these reports,
- using information as it best suits users and their needs, regardless of the difference in language, currency, etc.,
- using information that are in accordance with a set of predefined sophisticated rules.

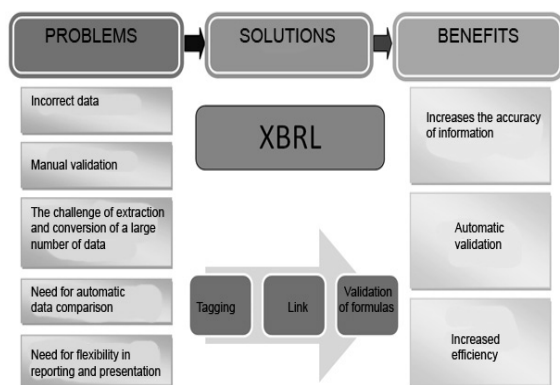
For the use of XBRL to be successful, some of the most serious mistakes in its use should be avoided:

- Mapping errors feature as the most serious of all errors. Mapping itself is a process where all accounting concepts are identified, as well as the related amounts of a company’s report with the adequate element from established taxonomies of each country. Errors that occur are the errors of creating unnecessary new elements or the choice of of inadequate elements from taxonomies;



- Errors in extensions: extensions represent a process of creating new XBRL elements in taxonomies that contain the information required for creating reports that are unique for a certain company. Due to its complexity, this process is in most cases entrusted to third parties. It includes the errors of inability to establish proper mathematical relations between elements and representing elements at the wrong location in reports;
- Tagging mistakes: data tagging is the process of approach to numeric and textual data for financial reporting including the expression of currency, time periods and measure units. It includes errors in data entry and ascribing incorrect expressions to values of individual elements;
- Creation and validation errors, which imply failure to validate an XBRL document manually or with software.

Under the supposition that we are able to avoid making these errors, we shall see numerous benefits from the use of XBRL financial reporting standard (overview in Figure 2).



**Figure 2** Benefits from the use of XBRL reporting standard (Vyas, 2015)

We can conclude that the XBRL standard provides the following benefits of use (Polić, 2011, p.278):

- lower preparation costs, timely reporting and greater flexibility of reporting,
- simplified approach to information, transparency of information,
- information in general format for distribution.

## 4. Implementation overview of XBRL in some developed market countries of Europe

The section below gives an overview of adoption of XBRL standards in the countries of the European Union, in developed market countries and neighbouring countries.

### 4.1. Implementation of XBRL standards in developed market countries of the world

After the American Institute of Certified Public Accountants (AICPA) decided to establish the XBRL international consortium, 2002 also saw the establishment of its national jurisdiction. Each of them has the duty to create their own XBRL applications and taxonomies, in compliance with their models of financial statements. They also have an educational role, explaining what are the essential benefits of XBRL and providing manners for its implementation (Escobar-Rodriguez & Gago-Rodriguez, 2012, p. 97).

The resolutions of the European Parliament dated 21 May 2008 and 18 December 2008 show an obvious concern that XBRL should be implemented at the EU level, with the aim to improve reporting. It was specified that new technologies, such as electronic reporting formats like XBRL, can enable fulfilment of demands for efficient, effective and rapid reporting.

The year 2012 saw the establishment of the non-profit organization XBRL Europe, with the objective of promoting a platform for creating and exchange of business information at the level of European countries, promoting and supporting the standardization of electronic business reporting by the use of XBRL standards, supporting European projects related to the XBRL standard, developing European taxonomies and contributing to the harmonization of national implementation processes, etc. It must be mentioned that the development of XBRL is strongly supported by software producers, and added that it is necessary to perform complex analyses of these to make the choice appropriate. (Enachi & Andone, 2015, p.187).

The European Central Bank plays the leading role as the supervising bank to all other national central banks in establishing a flexible, cost-effective reporting system that does not produce errors. Although the European Union has 28 member countries, plus 32 more outside the European Union, with over 200 languages in use, XBRL can be a unique tool for enhancing the

competitiveness of European companies. The Central Bank of Belgium has prescribed compulsory reporting by the use of XBRL since 2007, and this obligation has been in force in Denmark since 2012, in Spain since 2009, in Great Britain since 2008, in Italy since 2011 (Singerova, 2015, p. 134).

Researching the acceptance and use of XBRL in 100 companies from the European Union, Stergiaki, Stavropoulos, & Lalou reached a conclusion that most of them are satisfied with its output and perspective, and that they strongly support the use of the XBRL standard (Stergiaki, Stavropoulos, & Lalou, 2013, p.14).

Although the XBRL is not the only reporting standard, German financial authorities have chosen XBRL as the compulsory standard for transfer of tax information since December 31, 2011. It is noticeable, however, that XBRL enthusiasts have difficulties in persuading decision makers in companies to accept it. By all means, successful XBRL projects support their introduction and exert pressure on competing companies that still have not accepted it as a solution (Felden, 2011, p. 162).

Two more XBRL projects are worth mentioning, the Common Reporting (COREP) framework and the Financial Reporting (FINREP) framework, proscribed by the European Banking Authority (EBA), the official supervisory body, which represent the new European reporting frameworks for harmonizing supervision and reporting for regulated institutions (Accenture, 2015, p.3).

**Table 1** Member countries of XBRL Europe and XBRL International

<i>XBRL Europe</i>	<i>XBRL International - jurisdictions</i>	
<b>XBRL Interantional</b>	IFRS	XBRL Korea
<b>XBRL Luxembourg</b>	XBRL Belgium	XBRL Luxembourg
<b>XBRL Netherlands</b>	XBRL Canada	XBRL Netherlands
<b>XBRL Spain</b>	XBRL China	XBRL Russia
<b>XBRL Germany</b>	XBRL Denmark	XBRL South Africa
<b>XBRL France</b>	XBRL Europe – as an affiliation	XBRL Spain
<b>XBRL Italy</b>	XBRL Finland	XBRL Sweden
<b>XBRL Belgium</b>	XBRL France	XBRL Switzerland
<b>XBRL Denmark</b>	XBRL Germany	XBRL Turkey
<b>XBRL United Kingdom</b>	XBRL France	XBRL UAE
<b>XBRL Sweden</b>	XBRL India	XBRL US
<b>XBRL Finland</b>	XBRL Italy	XBRL UK
	XBRL Ireland	XBRL Japan

Source: Authors

Table 1 shows an overview of all members of XBRL International and XBRL Europe in 2016. The members of XBRL International are, in fact, established jurisdictions that are representatives of their own countries, and their task is to work on the adaptation of standards in companies, on the development of taxonomies, to provide training and supply any other help. Each of the established jurisdictions has some special tasks which are in accordance with rues in force in certain countries (XBRL International, 2016).

#### **4.2. A comparative overview of implementation of XBRL in the neighbouring countries**

Based on available data, the following section gives an overview of the implementation process in the Republic of Croatia, Republic of Montenegro and Republic of Slovenia.

##### **Implementation of XBRL in the Republic of Croatia**

The current use of XBRL standards in Croatia is at a very high level, as, like in Serbia, there is no obligation to apply the standard, nor are there current projects that would present its functioning in real life. Only the Central Bank of Croatia uses COREP and XBRL in reporting to EBA. COREP is used quarterly for supervision of credit institutions, which functions so that they forward reports to the Central Bank in XML standard with the use of Excel, and the latter extracts the required data and converts them to XBRL format.

The Croatian Agency for Supervision of Financial Services (HANFA) is also considering the use of the XBRL standard, although in accordance with the same principle as the above mentioned example, because resources and time are saved in this way. Apart from these two examples, no use of the standard is recorded, apart from a few companies that are trying to promote it, mostly by organizing courses on this subject (Gostimir, 2015, p.37)

##### **Implementation of XBRL in the Republic of Montenegro**

Having reviewed the relevant accounting legislation of Montenegro, we obtain the information that, although there is an obligation to submit reports in hard copy or electronic format to appropriate institutions, the legislation does not recognize the importance of standardization of financial reporting for the needs of information exchange. This means that companies are forced to forward

these reports to a large number of different bodies, which definitely requires additional resources.

A key role in the implementation should be played by professional organizations and the state, which should implement all accounting legislation. Also, it is not clearly determined who has the right and obligation to implement international professional regulations, which consequently means lack of supervision and control of professional accounts.

It is necessary for professional accounting organizations and regulatory bodies to initiate a large number of activities for electronic book-keeping and submitting financial statements. The state must take over the greatest responsibility in the entire process, including raising awareness of the importance of XBRL (Martić, 2015, p. 289).

### Implementation of XBRL in the Republic of Slovenia

Although both Slovenia and Croatia are members of the EU, it seems that not much is being done in these countries when it comes to XBRL. Slovenia uses the Common Reporting (COREP) and the Financial Reporting (FINREP) frameworks for financial reporting.

Although the professional literature in this area is extremely scarce for all neighbouring countries, it is noticeable that reports are submitted in electronic format as .pdf documents, Excel or Word documents, whereas reporting in accordance with the XBRL standard is not used although there is a potential for its implementation in the future. If some of the documents are compiled in accordance with the standard, they are not publically available (IFRS, 2015, p.1)

Slovenia definitely lags behind other EU member countries in the application of the standards. The first step was made in 2004, when Slovenia signed a letter of intent with XBRL Europe, but nothing has been done yet in this area apart from a few well-intentioned proposals. It would be necessary to establish national jurisdiction at the state level first, and then form XBRL taxonomies and support everything with an appropriate software solution which is in compliance with the XBRL standard (Dolinšek, 2015, p. 63)

### Implementation of XBRL in the Republic of Macedonia

The Republic of Macedonia is a neighbouring country that started preparatory activities for the application of XBRL standard. Although jurisdiction has not been established, it is planned for

XBRL to be implemented by regulatory bodies, and the Government of Macedonia is the carrier of this project (XBRL The Business Reporting Standard, N/D).

**Table 2** Comparative overview of implementation of XBRL (the authors' presentation)

Criteria	Countries				
	Republic of Serbia	Republic of Croatia	Republic of Montenegro	Republic of Slovenia	Republic of Macedonia
Awareness of the need for implementation	There is awareness about the need for standardization of financial reporting particularly by professional organizations	There is awareness about the need for standardization of financial reporting using XBRL	Legislation does not recognize the importance of standardization	There is awareness about the need for standardization of financial reporting using XBRL	There is awareness about the need for standardization of financial reporting using XBRL
Preparatory activities	There are no preparatory activities	There is no obligation to apply the standard even though there are a few examples of its use	There is no preparatory activities	Preparatory activities in plan from 2004.	Preparatory activities has started
In projects taken by XBRL Europe	Republic of Serbia is not a part of any project recommended by XBRL Europe	Not part of any project (according to available literature)	Not part of any project (according to available literature)	In project from 2004.	Not part of any project (according to available literature)
Legal support for XBRL implementation	There is no legal support	There is no legal support	There is no legal support	There is no legal support	Government of Macedonia is the carrier of the project of XBRL implementation by regulatory bodies
Support of professional organizations	There is a support of professional organizations for standardization and change/improvement of accounting acts	There is a support of professional organizations for standardization	There is a support of professional organizations for standardization	There is a support of professional organizations for standardization	There is a support of professional organizations for standardization

Source: Authors

Based on a comparative overview given in the table, we can conclude that the situation regarding the implementation of the XBRL standard in all listed countries, except not as significant differences, is very similar. Also, the steps in the implementation of the XBRL in the world have similarities and mandatory elements. With that in mind, we consider that the steps in the implementation of standards in our country would not be significantly different from those in neighbouring countries, especially as starting points of each are very similar. Some of the unavoidable steps of implementation are legislative, support of professional organizations, the development of taxonomy, mandatory application for a particular circle of companies, creation of software support etc.

## **5. Proposal for implementation of XBRL in Serbia – how to choose the appropriate XBRL solution?**

“Financial statements should contain comprehensible, relevant, reliable and objective information. This information has multiple benefits for the existing and potential investors, creditors, business partners and other economic and public actors, and represents a basis for competent decision making. Also, comparability of financial statements of companies, which participate on financial markets, presents a key prerequisite for establishing and maintaining fair competition. Enhancing the quality of financial statement through adopting best international practices is a process occurring in the most developed market economies and financial systems as well, and, at the same time, presents a challenge which is set before regulatory bodies and the accounting profession.” (Draft National Strategy for Improving the Quality of Corporate Financial Reporting and Auditing, 2011, p.1).

This quotation is a part of the Draft National Strategy for Improving the Quality of Corporate Financial Reporting and Auditing for the period from 2011 till 2020. If we read it closely, we will notice that the demands are set before all entities under obligation to submit financial statements in accordance with all benefits provided by reporting in accordance with the XBRL standard. The XBRL standard is mentioned in the Draft only in the section on harmonization and incorporating in the subordinate legislation in the domain of supervision of banks and external financial reporting, that is, in the article on banks’ financial reporting.

Neither the Draft nor the Accounting Law (published in Issue 62/2013 of the Official Gazette of the Republic of Serbia), when mentioning that the quality enhancement processes are also conducted in the most developed market economies and economic systems, is it mentioned that the majority thereof must use the XBRL standard for financial reporting (America, Asia, all EU countries, Japan etc.).

COREP and FINREP frameworks for financial statements, as XBRL projects, are mentioned in the Draft also only in the section on banks’ financial reporting in terms of analysis and accepting EU recommendations for their use.

Reading both the Draft National Strategy for Improving the Quality of Corporate Financial Reporting and Auditing and the Accounting Law, one gets the impression that the state of Serbia, i.e. its official bodies, still have more other problems to resolve in relation to accounting and auditing, and always new demands and new rules occur, preventing the legislator from devoting attention both to the XBRL standard and the possibility of its implementation.

Our country also has the National Accounting Software Standard – RSS 33, revised in 2008, whose objective is to “set the guidelines on procedures to be conducted when introducing and operating the accounting software in the enterprise/organisation during both internal and external audit, so that bookkeeping records and financial reports meet the requirements of the Accounting Law, adopted International Accounting Standards and International Auditing Standards in the Republic of Serbia”. (National Accounting Software Standard, 2008, p.2).

Reading this document, one gets the impression that reporting in compliance with the XBRL standard can be fitted with all the points regarding the requirements that users and producers of accounting software should meet. This is another argument in favour of implementation of XBRL in Serbia.

If this should possibly happen, the following mistakes should be avoided when choosing appropriate software (VentanaResearch, 2008, p.3):

1. Internal software development, unless a company has a good informatics sector which is also very successful. In the opposite case, this job should be delegated to a third party because it almost always turns out to be more cost-effective.
2. The producer’s claim that their product is “integrated” should be analysed carefully.

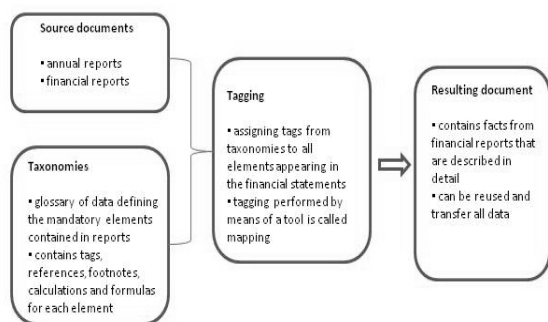
A system that is really integrated must have several compulsory components, including a central database, integration with source data etc.

3. The assessment of the available option should not be delayed. This will protect you from unnecessary delays or bringing inadequate information.

Furthermore, an integrated solution has the following characteristics (VentanaResearch, 2008, p.9):

- central data repository,
- tight integration with the source data,
- ability to gather data from the repository into appropriate files in all the necessary output format, such as Microsoft Word, Adobe .pdf and XBRL,
- defined manner of work for process management,
- security and possibility of revision.

Figure 4 gives the answer to the question how companies can submit their financial statements using the XBRL reporting standard.



**Figure 4** How companies create documents in accordance with the XBRL financial reporting mode  
Source: Ying Mei, 2013

The following is of key importance for an appropriate beginning of the introduction of XBRL (Martić, 2013, p.117):

1. Never lose focus of the basic aim of introducing XBRL, which is efficient presentation of reports to investors and stakeholders. Although the tagging process is mechanical, the company must invest great effort into the way it performs tagging. This process is best done internally, by the financial department.
2. From the beginning, the financial department must be ready for the fact that tagging

is a process rather than a quarterly or annual project. It is considered to give the best results, and that value grows in the forthcoming years, as the number of tagged data grows.

3. When it comes to the tagging process, there are two basic approaches to implementation. The first, which represents some kind of superstructure of the tagging process on prepared reports (“bolt-on” approach), and the other, which is integrating the tagging process into the report creation process. Experience has shown that the integrated approach is more appropriate primarily because it reduces the possibility of errors, and also enables greater control of the entire process (VentanaResearch, 2008, p.4)

As for economic entities that adopt XBRL first, it is noticeable that the XBRL standard was first adopted by regulatory agencies, predominantly financial institutions (stock exchanges, commissions for securities, tax authorities etc.), which is understandable in view of the large amount of financial statements that they process. Later on, the standard is adopted by various business organizations, software producers, investors and analysts. It is prominent that there are various agencies at the state level encouraging the implementation of XBRL, and after that supervisory and regulatory agencies take over a significant role in introducing XBRL because they control a large number of business entities.

Figure 5 shows a possible way of implementing the XBRL standard in Serbia.

I stage	II stage	III stage
<ul style="list-style-type: none"> <li>• analysis of the current reporting environment and the form of submitting financial reports</li> <li>• formation of a national XBRL jurisdiction</li> <li>• Active role of the Central Bank of Serbia</li> <li>• impose the compulsory use of XBRL standard on a certain circle of companies</li> </ul>	<ul style="list-style-type: none"> <li>• development of pilot projects that will test the chosen companies</li> <li>• inclusion of XBRL into national legislation</li> <li>• support of professional organizations for accounting</li> <li>• defining all the important milestones in the stages of development and application of XBRL</li> </ul>	<ul style="list-style-type: none"> <li>• development of national taxonomies</li> <li>• defining deadlines for presenting taxonomies</li> <li>• defining the manner of application of taxonomies</li> <li>• decisions on deadlines for compulsory application of XBRL taxonomies for individual types of economic entities</li> <li>• development of software solutions supporting XBRL</li> </ul>

**Figure 5** Possible stages of implementing XBRL in Serbia  
Source: adapted – Gostimir, 2015, p. 39

It must be pointed out that the road from the recognition of the importance of introducing the XBRL standard, through its compulsory character and development of taxonomies, to implementa-

tion is extremely long and bumpy, which can by no means be an excuse for giving up, bearing in mind that reporting in compliance with XBRL standard is becoming a standard which will soon be unavoidable.

## Conclusion

The answer to the questions why countries and companies should start with the application of XBRL reporting standard on a voluntary basis could be that it is becoming fairly certain that there will come a time when the application of standards will become compulsory, so that it is much easier to be ready for such a scenario if we have initiated this process.

It is a fact that state support is required on this pathway, which is very difficult if it still has not realised the benefits of implementation or simply because due to the complexity of this task and many other unresolved questions related to accounting and auditing it is unable to devote efforts to this task.

Analysing the processes of implementation in the neighbouring countries, which all started from the same basis, we reach a conclusion that the situation in none of the countries is much better, and that we share a large number of common problems. The importance of the state is prominent in all research to date as the key to initiating the implementation process, so that the national legislation points out that the work on a higher quality of financial reporting is, in the broadest sense of the word, responsibility of the state.

So, we can conclude that the answer to the question posed in the introductory part of the paper could be that models for XBRL implementation do not differ significantly in less developed countries, and that further research into this topic could bring a unique model applicable to all the less developed countries of the region.

It must be noted that the conclusion was based on the reading of the available literature, which is scarce in this area. **SM**

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# Marketing Strategy of the Territory in the Investment Policy of the City

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## Abstract

The administration of the territory of the city involves multi-vector directions of socio-economic forces with the view to creating a competitive investment-attractive environment. The territory of the city becomes a market object, requiring the use of specialized economic instruments to enable increase of competitiveness of the territory. In our opinion, such is the marketing territory.

Marketing of the territory within urban investment policy is directed to improving the territory's investment image in the eyes of potential investors, ensuring the expansion of influence of the territory in the external environment; to creating a favourable and comfortable environment of vital activity of the urban population.

The development of marketing strategies for the territory entails the need to conduct regular monitoring of the socio-economic situation in the territory, on the basis of which should be formed the program to improve the competitiveness of the city. In fact, supporting these activities is based on the current actual practice of strategic territorial management of the city, the search of formation and development of its competitive advantages in the conditions of instability and uncertainty of its own territorial factors and factors of the external environment.

The result of the development and execution of the marketing strategies of the territory can become the marketing passport of the city, which will provide answers to a series of questions:

- What is the socio-economic situation of the city and what is the prospect of its further development?
- What are the specific conditions and factors for the promotion or curbing the development of the territory?
- What should be the structure, content, volume of supply of territorial product(s) taking into account the target consumer groups and opportunities of the city?
- It is possible to generate a unique offer in the conditions of the economy of a particular city?

## Keywords

Marketing of territory, marketing strategy, territory development, investment policy, competitive advantage, strategy management, the competitiveness of the territory, investment passport, marketing passport of the city.

## 1. The city territory as an object of the market

In the large-scale cities, big challenge becomes the mismatch between the rhythm and the speed of current of the different socio-economic processes, which leads to instability of territory development and growth of social tension. For optimum functioning of the urban space in such conditions, the factor that should be ensured is the possibility of implementation of a qualitative approach to the management of the territory with a competent definition of social and economic priorities, allocation and retaining competitive ad-

vantage, proper placement of the institutional forces and organizational incentives. The administration of the territory of the city involves multi-vector directions of the application of socio-economic forces with the purpose of formation of a competitive investment-attractive environment. This corresponds to the demands of market economy requiring compliance with the rules and conditions of functioning of the market by all actors, including city authorities.

The territory of the city itself becomes a market object requiring the application of specialized economic tools to increase the territorial competi-



tiveness. This instrument must necessarily focus on the key quantitative parameters of the city, such as population size, the scale of the urban space, the volume and value of the urban economy, the number of business entities and a number of others, to interpret them in practice in a real mechanism considering the influence of urban quality indicators. Such is the marketing of the territories, which included elements of traditional marketing: the price and the product itself, its promotion and positioning. This direction of activity of local authorities is not common, but due to the need to solve the problems of increasing investment attractiveness of the territory and the understanding of the role of cities in the existing regional and national territorial division of labour.

## 2. The marketing of the territory

Local authorities and management should determine for itself the marketing of the territories as an instrument of urban economic development, which integrates the management of specific sectors and industries of vital activity of the city. At the same time, the city is the economic entity, which should attract potential investors, offering them the resources, having existing positive recommendations for the support and implementation of past projects and effective advertising itself in the current period. In considering the essence of the marketing of the territory questions are raised: what is the marketing product and how can it be positioned? On the one hand, such a product can be a package of proposals of the industrial and consumer market, aimed at ensuring the urban economy and the satisfaction of needs of the urban community. It is defined as the internal marketing. On the other hand, the city can have a complex of city-forming enterprises and generate the unique offers for external investors. This is the external marketing. Questions of pricing and promotion of urban space and the processes of the strategic marketing development follow this.

At the same time, the marketing of the territory can be determined, as an ideology that promotes changes in all spheres of vital activity of the city and makes them work on its tasks by expanding urban influence and creating a positive reputation, and as a complex of actions of the urban community, which is aimed at identifying and promoting their interests to carry out certain tasks of the socio-economic development (Vizgalov, 2008, pp. 11-12). The local authorities carry out the professionally controlled activation on the life of the city, perceiving in feedback mode the sig-

nals that are come from different spheres of the urban economy and the urban community. These signals are generated on the basis of urgent problems and needs, interests and growth points of the territory. In its turn, the response finds its embodiment in the necessity of taking the management decisions of investment character.

Within the development of the investment policy by local authorities attention is increasingly given to the preliminary marketing research and identifying the pool of potential investors. The marketing of the territory within urban investment policy becomes a tool that is directed to improving the territory's investment image in the eyes of potential investors, ensuring the expansion of influence of the territory in the external environment; to creating a favourable and comfortable environment of vital activity of the urban population. From this point of view, the conditions of investment activity of the city authorities are defined by the elements of attractiveness of the territory, such as its economic and geographical location, favourable natural and climatic features, architectural appearance and rational zoning, transport and leisure infrastructure, products of local enterprises, etc.

A competitive investment environment makes the process of comparison and competition of the territories with each other for creation of the most favourable conditions for of vital activity of own population, the economic conditions of economic agents, the investment climate, for the formation of a favourable image of the territory and the maintenance of a stable interest on the part of the various social communities, the authorities, the international organizations and the governments of foreign states.

In particular, when considering one of the marketing directions – the marketing of tourism, it is possible to highlight the most unified requirements, which affect the development of the tourism industry, namely (Geography recreational areas, 2015):

1. Natural and climatic attractiveness;
2. Cultural and historical resources;
3. Quality standard of hotels and accommodation facilities of the tourists, catering services and all service industry, accordance of the world standards available in the area of tourism infrastructure, the availability of excursion and cultural and entertaining programs;
4. Operational transport and information accessibility;

5. Political stability in the region and a guarantee of the personal safety;
6. International fame and prestige of the place (the image of the territory).

According to experts Strategy Partners Group, leaders among the Russian regions in the competitiveness in the tourism industry are the following regions: 27 Russian regions have favourable conditions for the development of the entertainment tourism, among which Moscow, St. Petersburg, Krasnodar Kray, Stavropol Kray and Moscow, Kaliningrad, Leningrad, Nizhny Novgorod, Samara, Rostov regions; 20 Russian regions have favourable conditions for the development of the business tourism, including Moscow, St. Petersburg and Moscow, Nizhny Novgorod, Novosibirsk, Kemerovo, Omsk and Sverdlovsk Regions, Krasnoyarsk Kray, Krasnodar Kray. The most important factors of the development of tourism were considered in assessing the competitiveness of the regions. In particular, as such for the entertainment tourism were the natural conditions, security, a distance from key customer markets, the level of the development of transport infrastructure and others. For the business tourism were taken into account the business activity in the region, the level of development of the hotel infrastructure, business environment, etc. A sufficiently large number of Russian regions have a high potential for tourism development. According to the forecast in the year 2028, the number of tourist arrivals in the regions of Russia under the worst scenario of raw material development of the Russian economy will grow up by three times, with innovative development – almost five times. (Stimulating tourism development in Russian regions – new opportunities, 2015).

Development gets a direction of the industrial tourism that is new for Russia. For example, excursions to the brewery of the company SUN In-Bev in Russian, tours of the Museum and the factories of OJSC Siberian Chemical Combine, Sever-sk-city, visit the Museum of History and Technology OJSC Kirovsk Zavod, St. Petersburg, the factory tour FOREMA-KITCHENS, Moscow and others. It has a wider practice of the industrial tourism events abroad: excursions to the Royal porcelain factory in Delft, the Netherlands; seen JAGUAR factory in Castle Bromwich, Birmingham, United Kingdom; excursions to the AIRBUS factories in Hamburg and Bremen, Germany, etc. (Industrial tourism, 2016).

### 3. The marketing strategy of the cities

Integrated marketing strategies that rely on high-quality investment policy, in relation to residence of the urban community are one of the directions of strategic territorial management, as they allow to answer the questions “how to develop and promote the territory?” and “how is more profitable to present its territory regarding others (neighbours, similar) the territories?”. Situations of competition between the cities did not arise in conditions of the planned economy in the Soviet Union: there was the task of an alignment of territories by the level of socio-economic development. Modern competitive practice of cities set new forms of the strategic management of territories, taking into account the factors of success of business entities, the mobility of capital and the working population, improving the quality of vital activity of the territory and its population. Various resources of the development are becoming the objects of urban competition. In the presence, reasonableness, effective and rational using of its resources the city can achieve its strategic goals and objectives of the management.

In the cities, a competitive investment environment also creates a set of conditions that determine the possibility of economic entities to carry out a successful business activity. The competitive investment environment can be characterized by the annual increase of the number of economic entities and number of people employed in various sectors of the economy; heterogeneity of the development of competition in the different markets of goods and services; presence of local monopolists in certain segments, etc.

In fact, the development of marketing strategies of the territory entails the necessity of carrying of regular monitoring of its socio-economic status and monitoring of the territorial resources. Providing these events is based on the current real practice of the strategic territorial management of the city, the marketing research of formation and development of its competitive advantages in conditions of instability and uncertainty of its own territorial factors and environmental factors. Marketing research objects become the capacity and the level of monopolization of the market its conjuncture, variety territorial and resource specific features, economic territorial trends, qualitative and quantitative indicators of the competitive environment, novelty and the competitiveness of products, quality of the products and additional advantages, the duration of life cycle, consumers and their needs, pricing processes, elements of

promotion and marketing communication channels, systems of sales, etc. The result of marketing researches is a forecast of the market development, segmentation and positioning of products.

Marketing strategy of the city is also in the choice of variants to work with target segments. Segmentation process consists of two stages – macrosegmentation and microsegmentation that enable us to prove the choice of the appropriate variant. Macrosegmentation is a three-stage structure, which takes into account the function of needs – the “what“ is satisfied; technology – the “how“ needs are being met; consumer groups – the “who“ gets satisfaction. This is the answer to the question: “Why have consumers implemented their choice of a concrete territory, what needs and desires consumers do they hope thereby to satisfy? “The territory may be of interest as a place of permanent residence, place of temporary residence, permanent place of activity, temporary place of activity. Depending on the specific needs of clients it is specified which areas are most significant characteristics for a particular group of customers. In reply to the second question - the “how” needs are being met – it is important to assess in what image the potential customer will be performing. He will be the user of the territorial product or the buyer, namely a potential customer will be to receive public services, resources, goods of the territory on a free or paid basis. Individuals, commercial organizations and public (non-profit) organization are selected as consumers of the territory product (Sachuk, 2009, p. 105).

Microsegmentation contributes to a clearer representation of segments, homogeneous in terms of the expected merits of the products, and different from other segments, allows to designate the special characteristics and needs of each segment of the market as well as identify common needs, expectations, the needs of all groups of consumers, for example, the safety on the streets or the convenience of transportation. This allows for territorial management in the interests of the entire urban community, and on the other hand, implements the targeted programs to support specific groups of the population and businesses, taking into account the specificity of each microsegment (Sachuk, 2009, p. 107).

Types of marketing strategies according to the method of implementation are presented differently, which allows each city depending on its geographical, extensive, social, managerial characteristics, choose the kind corresponding to its socio-economic status and resource endowments.

Vizgalov (2008, p. 27) identifies the following species pairs:

- the external (the target audiences outside the city limits) and the internal (the target audiences inside the city) marketing,
- the hierarchical (the single management centre) and the network (the several independent management centres) marketing,
- the integrated (focus on changing the entire city environment) and the object (base – the individual objects of the city) marketing,
- the evolutionary (continuity of the urban environment, filling-in of the image) and the revolutionary (forming of new image from scratch on the basis of new ideas) marketing,
- marketing “the good life“ (consolidation of the city's reputation, advertising success) and marketing survival (a method of self-preservation of the urban community),
- marketing stimulation of the growth points (stimulation of the strengths of the city) and marketing solving problems (pulling up the weaknesses),
- marketing attraction (stimulation of investment inflows, tourists attention to the city) and marketing limitation (deliberate restriction, control excessive attention to the city),
- marketing “correction model“ (short-term effects) and marketing “correcting reality“ (long-term effect),
- the differentiated marketing (targeting of the marketing company at once on some segments of the target audience with the development of a separate proposal for each of them) and the undifferentiated marketing (targeting of the marketing company the entire market at once with one and the same sentence),
- focusing on the process of segmentation, Ivanov (2006, p. 123) allocates species such as:
- the undifferentiated marketing which encompasses quite a wide range of consumers of the limited nomenclature of products with a range of prices and a unified marketing program without taking into account the different consumers,
- the differentiated marketing, which is developing the programs to one or two segments,

- the concentrated marketing, which covers one segment using a single product and a single program of the marketing in that case, if this segment is quite large and is characterized by special requirements.

In the United States, a result of application of the revolutionary strategy of the marketing the town Halfway with a population of 350 people, located in the state of Oregon, in January 2000 was renamed the Half.com. The combination of the undifferentiated marketing strategy and the marketing of attraction of a powerful administrative resource allowed Sochi city (Russia) to become the first federal marketing project. The object strategy is implemented, for example, in the cities, where the whole spectrum of the city's attractions is associated with the famous person: Chekhov City and Pyatigorsk City (Russia). Integrated marketing strategy has been implemented in preparation for the celebration of the Millennium of Kazan city (Russia), which affected the interests of all citizens and changed the urban space.

#### 4. Investment and marketing passports of the cities

As a rule the investment passport became widespread in practice, which enables giving a presentation about the competitive advantage of the territory, about products (the investment projects) that the city offers, and their pricing. So, for example, the competitive advantages of Omsk city include a middle position between the European territory of Russia and the Far East, a proximity to the Asian markets, which is the winning factor for the establishing and maintaining of external economic relations with Kazakhstan, China, Uzbekistan, Mongolia, and Republic of Korea. There operates a progressive legislative and regulatory framework of the state and municipal support of investors, including tax incentives and budgetary subsidies. There exists the infrastructure to support small and medium-sized enterprises and the high concentration of network commerce, indicating a well-developed consumer market. The city is a major educational centre of Siberia with extensive experience of training specialists with higher and secondary special education. In the Investment passport of Omsk city are presented investment destinations such as integrated development of the central part of the city, the development and manufacture of equipment of integrated provide natural gas, the serial production of

amphibious hovercraft, superconducting technologies, screening for cancer diseases using saliva, organization of production of the forming articulating spacers (prosthesis) of the joints, a construction of the hotel Marriott (Investment passport of Omsk city, 2016). In Novosibirsk, the investment proposals are presented in the form of the project for the construction of a bridge across the Ob River, a reconstruction of the social facilities, the project for the development of built-up territories, construction parking areas, a transfer to concession of municipal baths, a selection of plots for various construction purposes (Investment passport of Novosibirsk city, 2016).

However, the issues of positioning and promotion, taking into account existing and subsequently changing market circumstances and conditions are not reflected in this document. In the long-term temporal dimension, it requires a more deployed display of the current and projected situation in each market segment. The city should be represented as a unified formed socio-economic complex capable of adapting to external influences, finding adequate circumstances for this, able to survive in unstable economic conditions. The result of the development and execution of the marketing strategies of the territory can become a city marketing passport, which will allow answering a number of questions:

- How is the socio-economic situation of the city?
- What is the prospect of its further development?
- What are the specific conditions and factors for the promotion or containment of development of the territory?
- What should be the structure, content, volume of proposals of territorial product (products) into account the interests of the target groups of consumers and the opportunities for the territory?
- Is it possible to form the unique proposals on the territory of a particular city?

For answers to such questions in a marketing passport should be a number of sections, such as

- Information about the city, which determines the urban community context and the extent of its activity;
- The prevailing culture and its individuality;
- The business and functional theming of the city;

- The investment projects and the possibilities of the formation of unique proposals decorated in an investment passport of the territory;
- The results of the diagnosis and regular monitoring of city-forming territory foundations, infrastructure serving the city;
- Entrepreneurial activity;
- Prevailing communicative practices of the authorities, the business sector and the public sector.

Urban culture that has developed historically and has received the development under the influence of different social, religious, national, organizational and other trends affects the socio-economic condition of the territory and introduces adjustments to the content of the investment policy of the city. Because the so-called economy of cultural events (permanent and occasional) becomes profitable industry especially in cities that are famous for their historical and cultural heritage and traditions (the cinema festivals in Cannes and Moscow; the international air shows in Farnborro, Le Bourget, the carnivals in Rio de Janeiro and the city of Venice, the celebration of the Millennium of the city of Kazan, holding the Summer Olympics in Sochi city).

The contribution to the investment activity make the territorial branch trends caused a mono-functional or multi-functional economy. For example, the young northern cities, orientated only on the oil and gas extraction, contribute little to perception by the general public as the territories for permanent residence (Megion city, Gubkinsky, Muravlenko, Nefteyugansk City). This is followed by the urban community's unwillingness to participate in the investment processes of development of these cities. Multifunctional economy implies support for sectors that match the competitive advantages of the city and contribute to its current and future development. To understand, with which objects of the urban economy will have to deal, needed the procedures of sectoral diagnostic, ensuring systematization and cataloguing of information about companies, organizations, institutions. City-forming enterprises as the basis of a multifunctional urban economy can be distinguished separately, since the authorities and potential investors are oriented on them in the first place, and it is these enterprises form the economic realities in cities with a monofunctional economy. Some examples of city-forming enterprises are presented in the table.

**Table** Examples of the main city-forming enterprises in Russia

City	City-forming enterprises	Kind of activity
Yekaterinburg	Uraltransmash	Production of vehicles
	Ural Optical and Mechanical plant	Production of optical equipment
Chelyabinsk	OJSC Chelyabinsk Metallurgical plant	Production of steel long products
	OJSC Chelyabinsk Tube Rolling plant	Production of steel pipes
Kurgan	OJSC Kurganmashzavod	Manufacture of machinery and equipment
Tyumen	Tyumen branch of Sverdlovsk Railways	Transport
	OJSC Tyumen Accumulator plant	Manufacture of electrical equipment
Salekhard	OJSC Yamalzoloto	Mining
	OJSC Salekhard Fish Canning plant	Manufacture of food products
Novy Urengoy	LLC Gasprom Mining Urengoy	Mining
Khanty-Mansiysk	OJSC Ugra Territorial Energy Company	Production and distribution of energy
	OJSC Khantymaniyskgeofizika	Geology
Nizhnevartovsk	CJSC Nizhnevartovskburneft	Drilling operations
Perm	OJSC Perm Engine Company	Manufacture of machinery and equipment
	CJSC Perm Pulp and Paper Mill	Pulp and paper industry

Source: Turgel, 2010

Since the 2000s, in European and American cities have seen the spread of theming of cities and their respective marketing strategies, which includes accounting for target audiences, their interests and territorial issues, needs and challenges that the cities put before the authorities. The basis of an urban theme are pawned manufacturing and sectoral specification, individual characteristics of the territory, feature of the historical path of development, which should contribute to the formation of the city's competitive advantages. For example, the city of Omsk is represented by enterprises of oil refining, chemical and petrochemical, food industry, machine-building and innovative enterprises, and enterprises producing radio-electronic products. (Industry of Omsk City, 2016). To become successful in the market, the city also should be able to develop a unique pro-

posal, which defines a standard format of positioning of the city indicating the specific urban investment platforms; the advantages that the investor can obtain in the case of financing; recommended for the investor profitable forms of investment; a suggested timeframe for implementation of the project, etc. When all the investors as the representatives of the target audience get exactly the same standardized information about the city and a necessary representation about it, its desired image is formed faster (Vizgalov, 2008, p. 42). As a rule, the investment platforms are presented in the form of specific plots of land and a view of their permitted use or certain enterprises that provide their vacant spaces and manufacturing capabilities under a lease or sale. At the present time the authorities estimate the investment attractiveness of the city only by the number of investment platforms, without taking into account their cost and quality characteristics, economic and social potential of their use both for the city, so for the potential investors.

A well-developed city marketing strategy implies active involvement of urban community to the strategic management of the territory, the development of public-private partnerships, and achievement of consensus between all the members of the urban community in the search process of the balance of territory interests. This means that the authorities should give particular attention to the formulation of communication with the representatives of the urban community as the main subjects of the formation and implementation of the strategic directions of development of the territories, customers and consumers of marketing territorial developments. It is necessary to pay special attention to such lobbying resources of the city, as the electoral and protests resources that can disrupt the delicate balance of the existing socio-political forces in the territory or can form a powerful support of the interests of particular social groups or enterprise structures.

The degree of activity of the citizens is possible to estimate through their participation in various urban projects, support of the different activities of the authorities etc., so as the direction of the process of involvement of urban community in formulation of the marketing strategy of the territories should highlight the following.


1. Carrying out social monitoring of the territory in order to identify of key territorial issues, setting priorities according to directions of activity of the local administration, obtaining an array of high-quality informa-

tion with the address list of the specific problems. Social monitoring allows studying the public opinion systematically through the organization of sociological research and population surveys to provide feedback to the authorities with the urban community (citizens, heads of the small and medium enterprises). Social monitoring consists of a comprehensive assessment of the quality of life of the population allowing forming the priorities and directions of social and economic development of the territory based on a system of objective and subjective indicators.

2. Public hearings and discussions of key directions of the marketing of the city, programs of socio-economic development of the territory, projects of popularization of the historical, industrial and cultural heritage of the city. In order to expand the possibilities of strategic management, the local authorities should allow participation in the hearings, discussions and decision making those active groups and sections of the population who detect and pose in front of them problems.
3. Support program initiatives of the urban community by the local authorities in matters of development of the territory. Foreign experience demonstrates the practice of the program-target management of the development of urban communities, initially meaning direct participation of the communities themselves in this process. The management capabilities of the local community are still not used in full due to lack of well lined up mutual relations with the local administration.

Assessment of the degree of monopolization of the local market enterprise structures will allow a potential investor to make a conclusion about his possibilities for entering the relevant market and access to municipal orders and specific projects, the availability of administrative barriers. Considerable importance is the willingness of local authorities to go on contact with the already existing in the territory investors and with potential investors. From this point of view, not only attracting, but also retention of an investor, not only retention, but also the expansion of investment contacts and increasing the number of joint investment projects with them on a long term basis become the main challenges for the local authorities.

Therefore, in its complete form the marketing city passport can serve as the basis for the development of a unified program for improving the competitiveness of the territory, where all the investment efforts of local authorities for effective social and economic development of the city are concentrated and improve the quality of life of the urban community.

In this way, the current economic reality, the complexity and precipitancy of social and economic processes require the introduction of new investment instruments that will contribute to a systemic approach to solving the territorial problems. It should also be emphasized that it is not necessary to focus on the development and implementation of one marketing strategy of the city in the same quality of its presentation during several years. It is advisable to carry out a consistent policy of implementation of the complex marketing strategies, taking into account the existing and potential problems, a real and prospective potential of the city attractiveness, financial and other opportunities with respect to the implementation of the strategy. The authorities should be interested in the reality of arrangements to ensure implementation of the marketing strategies of development of the city, because the city growth leads to an increase of resources, and, consequently, a strong and effective socio-economic program of actions for the future. 

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# Intergenerational Succession (Generational Change) = Strategic Renewal? The Emergence of Familiness in the Business Life of Dudits Hotels

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## Abstract

According to Lea (1998) one definition of a family business says that the family business is a venture which is undertaken for family needs; it builds on the family's abilities; it is a family hand and mind work; it is guided by ethical and spiritual values of the family; it is characterized by a family's long-term commitment, and the succession of family business depends on the heritage of the children as the value of family name. According to these criteria and the quantifiable conditions of family businesses the authors regard the Dudits Hotels Ltd as a typical family business and the authors show this hotel's case as a case study. As a theoretical starting point they referred to the system theory and resource-based approaches of a family business, to the literature milestones of familiness and to the domestic and international empirical preceding topics of family businesses succession.

Based on this theoretical background, this study analyses the manifestations of the unique resources coming from the family involvement, so-called familiness, and the effects on management, organizational and controlling functions and the corporate strategy of the intergenerational succession (generational change) presenting it and taking it under the microscope with the help of the active West Pannonian second-generation family company. During the research the used case study method allows two approaches (both the qualitative and the quantitative point of view), and the result opens the door to make a complex, using good and bad practices, emphasizing a success and failure holistic evaluation on the family business succession. It gives a starting point of the quantitative research which will focus on the domestic medium-sized enterprises.

## Keywords

Familiness, family business, intergenerational succession, family involvement, strategic renewal.

## Introduction

Family businesses have a strong economic significance in terms of the contribution to GDP and the number of employments on macro level, which has been shown in several international studies (Astrachan-Shanker, 2003; Mandl, 2008; Zahra, Neubaum & Larraneta, 2007). A significant proportion of the family business within a domestic relations system is now forced to rein-

terpret the past, proven business model, their business strategy due to the generation change, the professionalization and internationalization dilemmas. These enterprises have started the business for the regime change or for their internal personal driving force.

In the present study a second-generation family business in western Hungary is presented to show the differences between the family and non-



family businesses features, and the resources of family business for the family present existence, the so-called. invisible, or “intangible” resources for the symbiosis of family and corporate subsystems, and finally the determinant factors of successful change of generations and generational change in approach from the perspective of a successor ways.

## 1. Literature review

### 1.1. The specific characteristics of family businesses

For our own research design development one has to understand this diversified inescapable conceptual system to review the qualitative and quantitative characteristics which are the bases to separate and define family and non-family businesses (Klein, 2000). The research studies on family businesses usually using one or more specific criteria (ownership, management, family involvement dimension, generational change – succession intentions within the family, etc.) to distinguish a family-owned and non-family businesses (Chrisman, Chua & Sharma, 2005; Shanker & Astrachan, 1996; Kowalewski, Talavera & Stetsyuk, 2010; Lee, 2006; Martinez, Stohr & Quiroga, 2007; Maury, 2006; McConaughy, Walker, Henderson & Mishra, 2001).

Among the main characteristics of family businesses, the following are mentioned most often: nepotism, paternalism, resistance to external managers, too personal investment decisions, long-term orientation, preserving the family influence through the generations, market niches mapping, rigid and closed culture of risk aversion. According to Stewart & Faith (2012) the main differences between family and non-family businesses are shown in Table 1, which uses eight viewpoints to provide an overview of the main differences between family and non-family businesses (ownership, governance, remuneration (motivation), along with the eight aspects of career, achievements, leadership, networking, and management).

**Table 1** The main differences between family and non-family businesses

Viewpoints	Non family business	Family business
Ownership	Scattered, non-kinship based, well diversified	Concentrated, kinship-based, Non-diversified
Governance	Control and ownership are separated, External influence,	Control and ownership are in relation,

	Transparent	Internal dominance, Impenetrable
Results	Mostly economic type, Private profit is not typical, Protection of minority shareholders	Non-business type, Family's private profit, Minority shareholders vulnerability
Motivation	Based on the results and performance according to uniform criteria	Linked to property, family members are pampered, particularistic considerations
Networking	External business type relations, Non-personalized social responsibility, Business and family sphere are separated	Based on a relationship of kinship relations, Personalized social responsibility, Diffuse roles
Leadership	Leaders perception depends on the results, Formal training, Many variations of successions	Long-term employment of the leaders, Informal learning (“practice makes perfect”), Transfer within the family
Career	Career of “paid” managers, Short-term career plans	Career of family members, Long-term career plans
Management	Delegating tasks, Formalized management and control, Innovative	Autocratic management, Organic, mutual accommodation, Rent-seeking, innovation suppression

Source: Based on Stewart & Hitt, 2012

Based on the systems theory approach of the family business the family business is the set of interactions of the entrepreneurship where the interaction of family subsystem and the business subsystem can be characterized by positive and negative mechanisms. The result of the interaction between the two subsystems is a family business, which is in connection with the characteristics of (somewhere competing, somewhere cooperating) quasi subsystems. The theoretical approaches to roots of family business systems date back to the 1960’s and 1970’s. The traditional system, which is now regarded as a classic model, is the so-called double-loop approach that a family business is the aggregation of two overlapping subsystems, that is, the family subsystem and the business system are in one consisting subsystems. In connection with the double-loop approach the publishing activity in 1980 was geared to how this simplistic approach converges to reality, that is,

what other circles can be expanded into a model for example, the ownership and management issues (Tagiuri & Davis, 1982). The result is a triple-loop model, which a combination of family, the business (and management), as well as of the owners subsystem. The constructive approach based on three subsystems distinguishes seven actors in the family business, as follows:

1. Family members (excluding property and corporate role)
2. Non-family shareholders
3. Non-family member employees without shares
4. Family members who have shares, but do not work in the company
5. Employees holding shares who are not family members
6. Family members without shares and they are working for the family business
7. Family members having shares and they are working for the family business.

Based on the above list we can conclude that family businesses have a quite complicated internal relations system which can become a source of conflicts of interest within the company. The most sensitive point of the operation of the family business is the relationship and the balance between the family and the business. If one enjoys an advantage over the other, it leads to lower performance. In connection with the conventional double-loop model we can say “primary family“ and “prime the enterprise“ distortions, and in relation to the triple-loop model we can say “the first is the family“, “primary management“ and “primary property“ type of balance disturbances. Poza (2007) formulates these problems as follows:

- “Primary families“: the family business was born in quasi privilege, nepotism and that the problems arising from a sense of release.
- “Primary management“: the younger generations hesitate and that the participating in family business requires such experiences gained from other businesses.
- “Primary property“: the dominance of family business policy for short-term return on investment.

The following section describes the intangible resources which may pose a long-term competitive advantage of family businesses based on international literature.

## 1.2. Specific resources coming from family business’s participation

One of the strongest features of the resource-based point of view of family business was written by Habberson & Williams (1999). Their work covered the concept and critique of familiness, and the results of rethinking it. According to Habberson & Williams the “familiness“ is the unique combination of resources which come from the family, from the interaction of family and the business system, and it provides a long-term competitive advantage of family businesses. Chrisman et al. (2003) believe that the familiness is an interaction between competence and resources arising out of family ownership. Pearson, Carr and Shaw (2008) describe it as a phenomenon that generates a competitive advantage and a source of family wealth.

The research found that familiness has a positive impact on business, the business viability, the short and long term performance, but it may have negative consequences in some cases. According to Klein (2008) and Milton (2008) if the family business is based on confidence, on the direct communication line, on the selfless devotion of family members and on the long-term interests (such as improving the organization’s identity), the familiness becomes a positive characteristic. If the family business is driven by short-term personal interests the familiness has rather negative impact through apathy, inflexibility, nepotism, (Bruch & Gros Fish, 2003; Feit & Ruiz, 2010; Menéndez & Requejo, 2010) because it reduces the energy levels of the organization. Habberson and Pistrui (2002) also warn that the familiness related with the family business resources and capabilities simultaneously can help and restrict the operation of the family business. Vought, Baker and Smith (2008) also mentioned the positive and negative effects regarding the interpretation of the familiness. According to Lampe (2002) familiness has the so-called negative side, which is the cultural darkness. It means that familiness covers the moral and ethical problems.

The family business is a challenge, how to identify, how to develop their unique capabilities, how to transfer these things to the new leaders, and finally how to apply them into new structures and how they are able to renew the turbulent changing circumstances. According to the resource theory approach, a company is an aggregation of specific, complex, dynamic, elusive and unique resources. According to Filep (2012) the family business is special, since it combines the

love and solidarity-driven and profit oriented family business interests. The five unique resources of family business which are the capital of companies are:

- 1) the human capital of family members,
- 2) social capital,
- 3) surviving ability,
- 4) patience and
- 5) leadership structures.

Poza (2007) underlines that in case of family businesses the following specific resources include competitive advantages:

- 1) Overlapping responsibility of owners and managers, small firm size, which is a kind of organizational flexibility;
- 2) Concentrated ownership structure resulting in productivity gains and long-term orientation;
- 3) Customer focus and the search for market niches which increases profitability;
- 4) Protection of the family name and reputation which appears on commitment to quality;
- 5) So-called patience capital coming from the harmony of family – property – management. This capital means savings in administrative costs, and furthermore facilitates the transfer of knowledge between generations and shorter reaction time resulting in a turbulent environment variable.

Dyer (2010) work determines only three factors, so he distinguishes the following:

- 1) Human capital which involved the motivation, time management, and loyalty of family members;
- 2) Social capital, which means such connections when family members build and maintain in long-term with the employees, with the customers, with the suppliers, with the companies which may give foreign sources, and with the members of the local society;
- 3) Financial capital, which means available financial funds for the family members.

According to Joseph, Ming Jian and Yin-Hua Yeh (2007) family businesses as a source of competitive advantage for the enterprise mention the ideology, the family business reputation and stakeholders' relationship.

The interpretation of the familiness as the concept of psychological capital (Seligman, 2002) developed the so-called familiness capital (Rutherford, Kuratko & Holt, 2008), which distinguishes a negative synergies familiness as a negative impact on business performance, and a positive familiness which is efficient organizational synergies to ensure a sustainable organizational synergies.

According to Van Wyk (2012) familiness capital can be described by 11 factors as follows:

- *Legacy foundation*

Over the long term trans-generational effects which appear in the vision of the family business, in the operational goals and strategy of the company.

- *Personalized philosophy*

The so-called personality or soul of the business carried by family business (Hübler, 2009; Hughes, 2007), which is shared by the family's values, morals and ethical behaviour and supporting the implementation of the vision and avoid conflicts and improve performance.

- *Culture and values*

The energy of the specific organization of family businesses ensures that the values, principles and preferences for which are very important for the family, and they become worldwide body and the operation as metaphorical basis of the operation (Jones, 2006).

- *Long-term orientation*

The operation of family business over generations that is a kind of long-term orientation is present in target system of family business. To do so, the leader of the family business makes often his or her necessary personal sacrifices, such as a lower financial compensation comparing the external one or the time commitment which is not effective collaboration (Levie & Lerner, 2009).

- *Entrepreneurship*

The main factor of family firm's viability, competitiveness and prosperity, which is the ability of family business owners to maintain new and successful businesses (Aronoff & Baskin, 2005).

- *Reputation*

The reputation of family business means a great value for family members, which is maintaining a firm identified family members to be able to do anything (Block, 2010).

- *Agency Costs*

In the family businesses the ownership and management are typically combined, so in many family businesses based on the principal-agent theory, the costs are lower than non-family companies.

- *“Quasi kinship”*

Caring, paternalistic family business employees often see themselves as quasi-members of the family, and these fictional family relationships contribute to the company achieving more success (Jones, 2006).

- *Loyalty to employees*

Family businesses insist on employees, enabling business difficulties during the recession do not give up occupational ethical conduct related to the ideals of long-term employment and employees; they reduce other costs (Cater & Schwab, 2008; Lee, 2006). In good economic conditions the priority among family businesses is to increase the number of employees (Kellermanns, Eddleston, Barnett & Pearson, 2008).

- *Flexibility*

The family business has specific capabilities, which substantially helps to handle the difficulties using strategic decisions, constant monitoring external factors threatening their competitiveness, using long-term social relationships maintain stable operation both in favourable and unfavourable conditions (Cater & Schwab, 2008; Kellermanns & Barnett, 2008)

- *Corporate Social Responsibility*

One feature of the operation of the family business is a strong social consciousness, which is embodied in the form of sincere participation in the life of the community they serve (Ward, 2004).

## 2. Description of the research methodology – interviews

The research conducted in developing the case study aims to present a family home generational change. The single case study is a research method in which a particular group (company) or event is observed at a particular time. (Pervez & Kjell, 2011, p. 79) As Mitev (2015a, p. 129) defines “[...] the case study method is an art for efficient information retrieval and compression, which allows a higher level of understanding of the phenomena. So the researchers therefore

*should work like a good detective, who was able to collect creatively and generate diffuse information.”* The use of this case study methodology is suitable for a limited number of events analysing where its circumstances and the relationships systems between them are also presented. According to Yin (1994) however, the case studies can be used in both theory building, as well as the theory test. Of course, during the analysis the researchers can’t just rely on a single case study, it may be necessary to present several case studies to interpret the phenomena (Mitev, 2015a). In this case, of course, the “case” is only observation rather than analytical unit (Pervez & Kjell, 2011, p. 79).

The data collection methods used in the research was in-depth interview, which represents a qualitative methodology is inherently small sample study with open questions (Sántha, 2013, p. 123). With regard to the qualitative research the following general findings have to be highlighted: starting points; general research questions; the direction of conclusions is inductive or adductive; the role of measurement is not important; sampling is not random; the goal of sampling and research is in-depth knowledge and understanding; the sample size is small; the research is value-driven, biased; the research process is flexible; the standardization of research is low; the essence of the analysis is to describe and to understand the phenomena; presentation takes place stories with quotes; the quality is based on perception of credibility. (Mitev, 2015b, p. 35)

## 3. The familiness enforcement is in domestic operation of a family business - case study of family business of Dudits Ltd and Dudits H & R Ltd

In the present study, a second-generation family target group is focused on in our overview for the presence of the Family Capital factors in the interaction of family-business dimensions as in living organisation. We highlight the role in the long-term conscious succession planning in business expectations intergenerational successful operation, and four years after a generation, the succession performance, and the impact on the strategic orientations. This further goal of the case study is also to highlight such paradoxes and dilemmas that are identified in the family business as presented in triple-loop model. The main characteristics of family group are summarized in the following table:

**Table 2** The main features of case study

The name of business	Dudits H&R Ltd.	Dudits Ltd.
Organizational form	Brothers alliance	
Interviewee	Gábor Dudits Dr (Managing Director, Owner)	Gergely Leó Dudits (Manager, Owner)
Main activity	Hospitality services	
Foundation	2009	1991
Location	Győr	Sobor
Family ownership	100 %	100%
Type of family business	Clan type	
Owners	2 brothers and 1 sister with equal ownership	
Management	2 brothers	2 brothers
Number of employees (2015)	28 employees	1 employee
Supporting family members	Among the founding members of generations: mother (consultant) The two brothers' wives (accounting, finance, marketing tasks) The older brother's mother in law (restaurant and hotel affairs) The godparents (purchasing tasks, business consulting)	
Contributor generations	2nd generation	
The interviewee's age	35 years	34 years
The interviewee's education	university – lawyer	college – catering
Does the interviewee have any work experience outside the company?	no	yes
Generational change (Leadership and ownership transfer)	2012	

Source: the authors

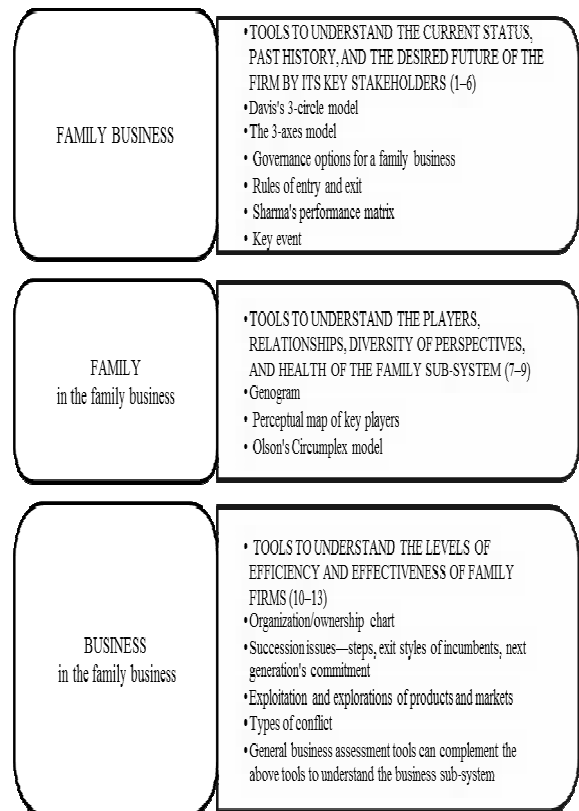
The Dudits Hotels' founder is Gabor Dudits – whose original education is gardener technician with academic relatives – who opened a wine bar in his own house in 1987, which over the past 29 years became the largest family hotel in Győr (Revesz Hotel and Rosa Spa). Based on his attitude the founder, the owner is continuously searching for new possibilities (Révfülp - Martha Villa, Rajka – Rajka Hotel, Szany – La Mamma Pizzeria, Sobor – Szent Hubertus Castle Hotel, which currently is Dudits Castle) and he has expanded the family firm. The family of Dudits currently has three western Hungarian hotels, main characteristics of which are reviewed in the following table:

**Table 3** Dudits Hotels

Features	Révész Hotel és Rosa Spa ****	Dudits Castle Hotel ****	Rajka Hotel **
Location	Győr	Sobor	Rajka
Starting date	1987	1994	2004
Service	À la carte and menu restaurant 54 rooms 5 conference rooms Billiard salon Spa	3 conference rooms 25 rooms Spa	24 rooms À la carte and menu restaurant for 80 persons
Operation	own operation	own operation	non own operation

Source: the authors

For the analysis of the Dudits family business the analytic tools were chosen from the analytical framework system by the Sharma, Blunden, Labaki, Michael-Tsabari and Algarin (2013). The overall analytical framework system that enables the use of a holistic approach to develop case studies for family businesses is shown in Figure 1, which highlighted the tools that we use.



**Figure 1** The family company case studies, analytical tools

Source: Sharma et al., 2013, p. 3

### 3.1. Davis's 3-circle model and the 3-axis model

In 1982 Davis published the basic model with a simple, elegant and versatile model that is extremely valuable to understand the current situation of the family business, the role of the internal stakeholders / key actors in roles clairvoyance. Davis (1999) emphasized that the first step in the analysis of a family business is to set up the location of the business in the model. Among the actors the model distinguishes family members, owners and staff, but it may be worth further consideration as to take into account that between family members' relatives or spouses or it should be better to deal separately with the senior and junior generations of members (Santiago in 2011). The model also separates within the owner's family members with shares and non-family members with shares, owner-managers, but it is advisable to distinguish between the majority and minority owners, since their influences on the decisions and strategic management are different. In connection with the employees it may be useful to define junior, middle and senior management categories separately. Thus, the following steps should be followed within the framework of analysis based on the triple-loop model:

1. The current placement of actors in the seven categories of model
2. Show this quasi map relevant to the desired status in relation to five or ten years (Hoy & Sharma, 2010).

However, family businesses are in constant motion, and the moments of their development can be recorded only with special dimensions. Among the family business life cycle models the most frequently cited and therefore the most popular model is the model developed by Gersick, Davis, Hampton and Lansberg (1997) which uses three dimensions (entrepreneurship, ownership and changes in the family) to determine the overall life cycle of family firms. Separation of the various categories of family business of the subsystems determined in the Gersick's three-dimensional model of family businesses (the ownership structure, the family subsystem, and the business / management subsystem) can be defined by the different sections of life cycle of family businesses. In case of the family businesses the life-cycle model distinguishes three types:

- Family businesses managed and owned by the first-generation founder;

- A fast-growing, family businesses owned by brothers and
- Characteristics of complex and mature family businesses operating as a consortium of cousins.

In line of family-specific life cycle models it can be highlighted on the Dodero (2010) model, which identifies four development stages of a family business (foundation, founder growth due to owner, recovery related to the second generation entering, professional business management). This model highlights on the challenges and the crises factors between the typical transition stages. So using this theory we would like to describe the development of Dudits family's history. The first phase of the model is a foundation phase. In the given company's life it occurred in the transition period of Hungary. The founder sensed his confident and heavy duty skill, he recognized the business opportunity and he was willing to invest all the effort to implement his business ideas. His children remember the following: *"Dad got up early, worked hard, loved people, as a person; his life was an example for us and his work is an example for us."*

According to the model the first crisis situation occurs when the company has reached the level of growth by the help of the founder, when it has been necessary to transfer some of the tasks, so that the need for delegation appears in order to increase sales and productivity. However, Gabor Dudits, the founder of company, became a good leader. He was able to mobilize the workers for the company's vision of a family using his effective communication, and in the early 2000s he was able to set up his business onto a new growth path with further acquisition.

According to the Dodero-model the founder aged 50 years has to face the next crisis when his children enter the family business, who are either not prepared enough or they are ambitious young entrepreneurs with diplomas and they criticize the parent's managerial style and entrepreneurial activities.

In the case of Dudits family the Christian roots, the strong family relationship and the strict moral values helped to solve the generational differences dissolution, the effective communication between children and parents, and to clarify the roles helped to evaluate the successfully the next life cycle, where the increase of was ensured by the feeling of the children's entrepreneur skills.

Following the tragic death of the founder there was no variances between the brothers, the founders of the company informally recorded the way of leadership transfer. Sons remember as follows: *"The generational change and our education were absolutely conscious. Our parents continuously told us that we have to follow their business. We have been working for the business at very beginning. Until youthful life we were working for this enterprise in several now-existing jobs. We helped as waiters, with housekeeping, with front desk tasks, we were working for marketing, then, for getting acquaintance in management of what was especially appropriate for treatment for people, and we have learned, two languages, which were very important [...] They were taught by good example, with which they went to the front, not the way to do this so you will need to do so, but they did so, and we have seen the consequences."*

In connection with the transfer the executive manager said the following as the eldest son: *"The primogeniture prevailed here, that is the birth-right things played a main role. It has stood the test in our history, we must prevent this from becoming nepotism. A family death warrant is signed by the employee who fails to make the best possible people to work in the enterprise. We are three brothers in the company, and everyone has a given role in the business. Our activities and the business are in quite wide range, so everyone can find what he or she does the best. The most important thing is the harmony of the business and the family."*

The second generation manage the family business which is currently running on the fourth stage of the model's life cycle. One of challenges is to move the firm to the professional corporate governance direction, even to employ a professional hotel manager. According to the model at the last crisis stage there is a conflict between the family members and the management, so a conflict arises (principal-agent problem) in case of inadequate communication and control practices. The solution of it is a challenge for the affected people.

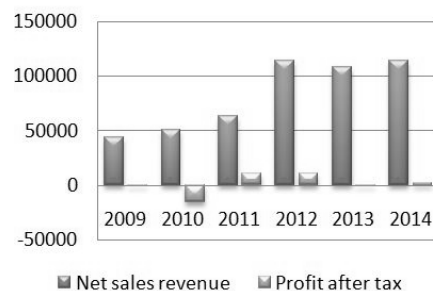
In 1987 the Dudits family business began operations, in 2002 children joined the company. Since 2012 when the founder tragically died, it has been running as a so-called fraternal alliance-type. In respect of both in sales and property gain the family the firm operates as a family business in which the three brothers have the same ownership. The founding generation, their mother, is participating in the business as a consultant in the

daily operation and the eldest son is responsible for the company's management.

The succession process is disrupted, and according to the financial information in Figure 2 the success of the business is coming from the parents' awareness and targeted business training, the children's early involvement in the catering activities, the parents' declared family succession intention, and the children's full acceptance of parental intention. Although a formal succession plan was not made, the role of business was clear for everyone. The legal career of the eldest son, the catering and business education of the two other sons reflect a conscious founders / transmitters of behaviour and to avoid future conflicts among brothers.

In 2001 the founder said the following: *"I want my children to continue this work. I want to be less here and I want to deal less with the daily things."*

### Changes in net sales revenue and profit after tax of Dudits H & R Ltd. (thHUF)



### The wealth of Dudits Ltd. (thHUF)

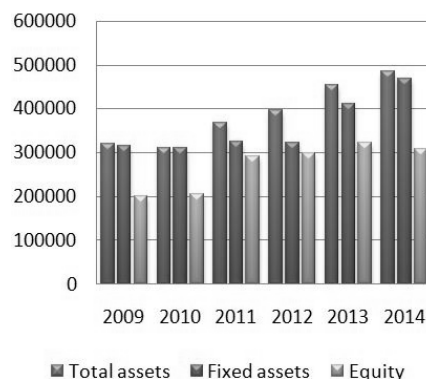


Figure 2 The group's growth of Dudits Ltd.  
Source: the authors

### 3.2. Governance options for a family business

*“The management of the family business is much more complex issue than non-family businesses. In the case of family businesses the “governance” plays a kind of steward role in the multi-generation family organization's life (...) and it creates boundary conditions to define processes to determine strategic goals, to reserve the decisive relations which serve, to protect the family well-being, and also accountability as well as the results and performance to ensure a realistic assessment.”* (Goldbart & DiFuria, 2009, p. 7). The progressive family business applies a combination of governance structures, for instance, beside the periodic meetings of the family council there are legal or social agreements (e.g. Family constitution). Hoy and Sharma (2010) have linked the currently used governance tools and institutions with triple-loop, and determine governance tools of family business as follows.

The second generation – the three brothers – despite not using conscious and special corporate governance techniques, beside the “Sunday lunch” they are able to make business decisions, however, for the firm’s long-term viability and the next generation change after a few decades there is requirement to create family Constitution to help the succession of family business without conflicts. In this case the possible manager could be among at least eight family members, since the unexplained common dilemma of entries and exits the uncertainties could arise in the case of family businesses and it impacts on all subsystems of the family business. It is relevant to emotional and economic terms, too. Hoy and Sharma (2010) formulate some critics question for the clear entry and exit rules focused on the owners and employees on the following:

- In case of owners it has to clarify:

(1) What size of ownership could be transferred for descendants, spouses and in case of divorces? (2) What are the regulatory elements of ownership transfer: time plan, necessary investments? (3) How is dividend payment regulated? (4) What are the policies relating to the ownership stake (shares) purchase and sale?

- Criteria applying to family members:

(1) Who can participate in the business operation and management? (Only blood relatives, spouses, adopted persons, etc.). (2) What are the

general expectations regarding qualifications for family members? (3) What are the age requirements in case of entries and exits? (4) Which and what type of outside enterprise experiences have to be in case of family members? (5) What is the role of business experience within the family in the timing of entry? (6) What are the conditions for the employment of family members? (7) How often is the performance of family members evaluated?

### 3.3. Sharma's performance matrix

Regarding the double-loop approach of family businesses the most controversial issue relates to how the family subsystem positively or negatively affects the business subsystem (Lansberg, 1988). Furthermore what happens when the individual subsystems balance disappears, and one becomes dominant?

If the balance of two subsystems can be maintained in case of family business, it ensures the long term trust, commitment, family harmony, and on the other hand, the resources of business efficiency.

During the interview the Dudits family owner/managers were asked to evaluate the relevance of the following family and business goals and results of the family/business dimension.

The responses are summarized in the following table:

**Table 4** Goals / Results of family versus business dimensions

Dimen- sions	Importance of goals			Performances		
	Low	Medium	High	Low	Medium	High
BUSINESS	Increase revenue		X		X	
	Increase market share		X		X	
	Improve profitability		X		X	
	ROE		X		X	
	ROA		X		X	
	ROS			X	X	
	Capital accumulation			X		X
	Increase number of employees	X				X
	Increase manpower productivity			X		X
	Reduce staff turnover			X		X



FAMILY	Family harmony			X			X
	Ensure well-being of families			X			X
	Increase the family's human capital (experience, education)			X		X	
	Prepare the next generation			X			X
	Increase family-strengthening reputation			X			X

Source: the authors

In connection with the family and business-related objectives, the following main objectives were mentioned by the owners during the interview:

*"The key issue is to pay back the loan, which is a very important goal. Another important thing of the family is the welfare, but not primarily financial well-being, but the importance is harmony within the family, the satisfaction of the conditions for everyone feels good in your body, they are satisfied with the status that it can ensure that this company we can provide this, working conditions, wages and other benefits. Week after week we must think that a company builds on, which is approaching a generational change we can get. The aim is that we can bring up our children and if they want to choose this business. Of course, not only for us, but for all three of them the aim that the children (8 children at present) could find their appropriate tasks, which they can do gladly. And we are able to retire on time."*

Based on an assessment of the goals and accomplishments we called to Sharma (2004) performance-matrix which was interpreted as an improved version of Carlock-Ward (2001) model. This provides an opportunity for family business owners and managers to consider the significance of the family and business performance targets, and to evaluate the results of two subsystems (family and business), and through all these it gives a sense of evaluation of the existing situation. The following figure shows the main features of the Sharma's power matrix and its four quarters. During the in-depth interview we asked the manager/owner to place the family business

into the 2 × 2 matrix. He placed it into the third quarter, with a note that they would like to position the family business into the first quarter.

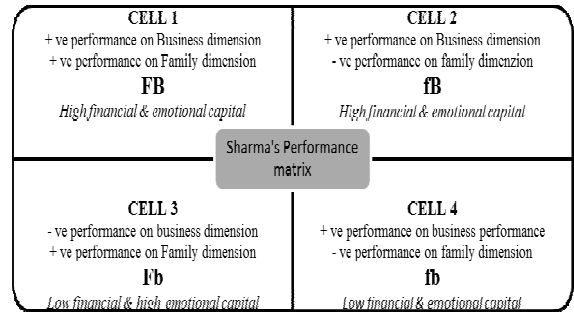


Figure 3 The Sharma's performance matrix  
Source: Sharma, 2004, p. 7

### 3.4. Olson's "Circumplex model"

The so-called Circumplex model (Olson et al., 1989) is one of the works where the researchers try to search for an explanation of the reasons of heterogeneity and dynamic diversity of the family systems. Among the many familiar behaviour factors the model focuses on two main factors: the adaptability and cohesion, also known as cohesion/solidarity, that is, such emotional attachment with which the family members are related to each other.

The original authors distinguish the following four levels in the dimension of cohesion: Commitment-free family – an extreme get off, Separating family, Interconnecting family, Networked family – extreme dependency.

From the point of view of the adaptability and flexible attitude in relation to changes in management the family can work with the following dimensions:

- Rigid family and extreme stability judge authoritarian leadership;
- Structured family and corporate subsystem,
- Flexible management;
- Chaotic families - lack of leadership, a dramatic role change, unpredictability.

The Circumplex model defines 16 family business phases based on the two-dimensional and they are arranged into 4 × 4 matrix as follows (Michael-Tsabar & Lavee, 2012; Olson & Gorall, 2003):

- The four centre cells maps some cases of optimal operation of the balanced families, those that are successful in crisis management and in the change management.

- We can find in the four different corners of the model such dysfunctional family businesses where the management changes and crises management is unthinkable.
- The remaining eight cells represent the so called mid-category family businesses which can manage the changes, but the family business needs some kind of intervention, which helps the survival of the firm.

Each family would benefit if they know where they are currently located in the family "Circumplex" model. If the family is not in the reliable position, they have to want to draw up proposals on how to move the family businesses to a more successful position. A given family business is classified in Flexible leadership / Interconnected dimension. The classification is based on the following statements made during the interview:

*“Conversations with my father who was the founder of the company gave the direction for me, and as a founder he told me that one day I would be the leader. It would be a very big disappointment if I was a failed leader who couldn't manage the company well, who threatened operation by his activities, and who couldn't be removed. If I can't understand the wrong situation there is a need for someone who can do it, who can manage the business, who is coming from within the family or from outside. [...]*

*The aspect of business my favourite phrases linked to Darwin, that it is not the strongest, not the smartest person that survives, but someone who can be adapted the best. For us the challenge is to find the best way in the changed conditions, to continue the family business, to capture our kids, who can decide whether they want to pursue and how they would like to drive the business.*

*The extended family involved in the business as a supporter, whether the task is survey, insurance matters, compilation. The extended family and the business are in good mutual cooperation with mutual support.”*

### 3.5. Exploitation and explorations of products and markets

Bergfeld and Weber (2011) defined the following innovative activity levels during the analysis of innovation activities of family businesses:

- Incremental innovation - concentrating to increase the market share of the current markets perfecting the characteristics of

products and services, improving the efficiency of existing markets and taking advantage of the expertise acquired there. The advantage is the low level of uncertainty.

- Progressive innovations – expanded to other industries or modified the existing range with minor changes, using new technologies opening new markets and launching a related product lines. It can be represented as being new products or new markets. In case of three generation dynastic firms this type can be found the most popular innovation.
- Radical innovation - opening new technologies, and new markets. Such innovations are characterized by high technical and market uncertainty. It appears in case of such family businesses which are pioneering, they have a high risky willingness. Their goal is to settle in at long-term value creation when the incremental and progressive technological advantages are already dried up.

Since the generational change of 2012 the operation of the Dudits family business is also significant; it has changed in strategic meaning. The new generation decided to review the activities, to make major developments, to change multi-element of marketing strategy (e.g. branding, communication strategy, product and service matrix).

**Table 5** Generational change means strategic renewal?

<b>Hotel Révész</b>	<ul style="list-style-type: none"> <li>▪ Renovation (building-modernization, new interior design, renovation of rooms, air conditioning)</li> <li>▪ Enlargement (Spa Rosa)</li> </ul>
<b>Chateau Dudits in Sobor</b>	<ul style="list-style-type: none"> <li>▪ Exterior and interior remodelling, expansion</li> <li>▪ Interrupt the 90s style in the business</li> </ul>
<b>Reduction and concentration of the activities</b>	<ul style="list-style-type: none"> <li>▪ Selling Marta Villa (Révfűlöp)</li> <li>▪ Selling La Mamma Pizzeria (Szany)</li> </ul>
<b>Determine brand(s)</b>	<ul style="list-style-type: none"> <li>▪ Strengthening our slogan: We offer you good!</li> <li>▪ Create Dudits brand</li> </ul>
<b>New strategic directions</b>	<ul style="list-style-type: none"> <li>▪ Hunting / Shooting Training - Develop shooting room</li> <li>▪ "Sobor Dudits estate" - the establishment of model farms</li> <li>▪ Strong quality orientation, instead of earlier quantitative</li> <li>▪ Professional management (hotel manager)</li> </ul>

Source: the authors

#### 4. Beyond the analytical framework – or summary – family capital as a success factor in the strength of the Dudits Hotels' operation

One of the main important parts of the in-depth interview of 4<sup>th</sup> March 2016 in Győr was to emphasize advantages and disadvantages affecting the family's existence. The researchers asked the second generation owners about the Dudits family business related to the 11 dimensions of Family Capital model.

The representatives of family business have a strong standpoint about the importance of presence, as well as family involvement versus lower agent cost:


*“Such thing can work well, over which we have personal reasonable control, where our personal work and magic can influence them. They can very well work with lower labour effort, since our family members work devotedly and more efficiently than majority of workers. That makes this company a family. Such business is not a family where the family has no decisive role in everyday things.”*

The manager said the following about the flexible, entrepreneurial approach of management, strengthening the family brand and reputation:

*“The task of our generation is quality improvement in line with today's expectations and current market demands and customer needs. To fulfil the needs of today's requirements we have to create an estate where is a castle building and the associated agricultural infrastructure. It means that we have to continue a pattern management; we can strengthen our brand because we now have the task to build a brand. Our goal is to be able to sell a mug, hat, T-shirt, at other value-added products in the same way that today customers want healthy like food, jams, herbs that are attached to both a brand, which is fixed in people's minds. That they want to go to Sobor Dudits Estate, because they have a good feeling, impression, and experience associated with our brand.”*

During the interview, the Christian roots and hunting were repeatedly mentioned as a family tradition. Based on press the researchers found the followings to emphasize their social responsibility and the entrepreneurial activity:

- *Renovation and restoration of the church iconostasis of Rác-church located in Győr-Újváros (Duditshotels, 2000)*
- *Organising charity events, keeping Africa tour for County Hunting Association for (Duditshotels, 2003)*
- *Establishing the Győr-Újváros's mother and child-home, organisation of charity ball in the city as funding St. Cyril and Methodius Foundation, (Kisalföld, 2006)*

*Helping orphans of Déva with food distribution in the framework of the Love Days (Kisalföld, 2010).* 

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# SWOT – AHP Model for Prioritization of Strategies for Development of Viticulture in Jablanica District – Serbia

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## Abstract

The paper presents the results of the SWOT - AHP model for prioritization of strategies for the development of viticulture in Jablanica District. On the basis of SWOT analysis, TOWS matrix was generated in which four possible strategies were defined based on the importance of sub-criteria under each SWOT criteria: SO1, WO1, ST1 and WT1 which enable the growth and development of viticulture in the region. Prioritization of the defined strategies was performed using multi-criteria Analytical Hierarchy Process (AHP) model based on the results of the SWOT analysis. The resulting prioritization WO1 → SO1 → WT1 → ST1 provides continuous performance improvement and growth of viticulture in the Jablanica District in the future.

## Keywords

Viticulture, strategy, SWOT, AHP, prioritization.

## Introduction

Under the conditions of economic crisis, which has been present in recent years in many regions, consumption is being reduced in comparison to normal conditions, which also includes food consumption (Casini, Contini, Romano, & Scozzafava, 2015). In this scenario, food sales are declining both in terms of quantity and quality, premium priced products are being increasingly discounted which leads to decline in food quality, and consequently quality standards of food.

In this framework, the wine sector presents a particularly interesting research focus which may facilitate understanding of the market dynamics in times of economic crisis. Due to the fact that wine is not an essential good, its demand in fact reacts

to changes in price and income. Furthermore, it embraces a much wider range of products both in terms of quality and price (Casini, Marone, & Scozzafava, 2014).

In the wine sector, two opposite phenomena occur: quantity of produced wine increases and it is being directed toward the narrow segments of the market, while being characterized by high quality of products marked with the name and geographical origin (Hammervoll, Mora, & Tofte, 2014). These trends lead to an increase in exports, mostly from Spain and Italy, to the EU market, which primarily include high quality and premium priced products (Contini, Romano, Scozzafava, Boncinelli, & Casini, 2015), and finally with placement in supermarkets this creates

a better perception of wine (Szolnoki & Hoffman, 2014).

The production of high quality wines in recent times has included application of modern technologies in order to create high-quality products, protect human health, and expand the assortment of wines with different fruit flavors and dessert wines, especially in the Mediterranean area (Covarelli, Beccari, Marini, & Tosi, 2012). In addition, special attention is devoted to the protection of grapevines with the controlled use of insecticides (Covarelli et al., 2012), while increasingly organized organic production of high quality wines, which are very popular in the EU market, attracts special attention. In order to make better utilization of grapes in the wine industry, by-products such as grape seed oil are being produced, which increases the productivity of the wine industry (Zhan, Lin, Shen, Zhou, & Zhao, 2013; Shen et al., 2015).

In rural grapevine growing areas, as a rule, tourist sites can be found, thus organization of the so-called wine tours is very attractive in terms of increasing socio-economic status of the region, living standard in those areas, consumption of characteristic food from those areas, manufacturing of domestic products and promotion of the cultural values of the area. These activities are attractive for tourists and increase the value of viticulture through the wine tourism business (Plowden, Uhi, & Oliveira, 2003; Carra, Maraini, Radić, & Peri, 2016).

In Serbia, the conditions for the development of viticulture are very favorable, which is being reflected in the favorable climatic conditions, quality of soil, tradition, technology and human resources. Viticulture and wine production is developed over nearly the entire territory of Serbia, namely in Vojvodina (northern Serbia), while well-known vineyards are located in the central, eastern, as well as in southern Serbia.

In Serbia, the real total arable surface covered with vineyards is between 15 000 and 20 000 hectares, while the statistical area is approximately 60 000 hectares. Annual production, which is not even big enough to satisfy domestic needs, is approximately 200 000 liters of wine (Ivanišević & Jakšić, 2015). Serbia exports some of its wine mainly to the Russian market, while the market needs are mostly being covered with imported wines (Jakšić, 2016).

Jablanica District, with city of Leskovac as its administrative and cultural center, is a registered area with a large vineyard plantation of more than

400 hectares which is being renewed in recent years with new plantings. Grapes from this plantation are being processed in the winery Navip in Jagodina. Small private vineyards are being developed, which are primarily oriented towards satisfying their own consumption and on small market placements. Opportunities for viticulture development in the region, despite the numerous benefits, are only partially utilized, therefore only 5.56% of total volume of arable land is covered with grapevines.

The possibilities of defining a strategy for further development of viticulture in the Jablanica district, as a sector which can potentially drive the overall development of agriculture in this region, are discussed in this paper.

## 1. Description of the region

Jablanica District, with its administrative center in the city of Leskovac, has only 5.56% of the total farmland area covered with grapevines. In this area there are four registered vine regions including: Babičko, Pustorečko, Vinaračko and Vlasotinačko. The largest vineyard plantation, in which grapevine is being cultivated using modern methods, covers the area of approximately 400 ha, and belongs to the company Navip and it is located near the city of Leskovac.

The total area planted with grapevines in the Jablanica District is 1459 hectares with 88% of grape varieties. A large proportion of 43% belongs to extensive vineyards. In this region, 10 863 households own vineyards which makes 33.6% of the total number of agricultural households. Average vineyard size, handled by a single farm household, is 13.4 hectares (Ivanišević & Jakšić, 2015).

Climatic conditions for production of quality grapes in the Jablanica District are favorable. Mild moderate-continental climate, with an average temperature of 11.4 °C, mean annual rainfall of 628 mm, 210-240 m altitude and favorable terrain (distribution of hilly and plain areas), makes this area suitable for agricultural activities and development of horticulture and viticulture.

The territory of Jablanica District has the most dissected population structure in Serbia with 144 settlements, of which three are of urban type, among which the city of Leskovac is the socio-political, cultural and immigration center of the entire area. It currently has about 40% of the total population of Jablanica District.

Highway corridor 10 runs through Jablanica District, as well as railway Belgrade-Athens,

while the airport in Nis is only 45 km from Leskovac. These facts suggest that the geographic position of the Jablanica District and the city of Leskovac is extremely favorable for any economic activities and international cooperation.

Bearing in mind the increase in wine exports to the EU market (Contini et al., 2015), the geographical position of the region as well as the possibility of organizing organic production of grapevine in it, this represents a good basis for defining the strategy for the development of viticulture as a foundation for wine production and its placement on the EU market.

## 2. Situational - SWOT analysis

In order to define the possible strategies of development of viticulture in the Jablanica district the situational SWOT analysis of the area was carried out in terms of possibilities for further development of viticulture.

**Strengths.** Jablanica District has a good road infrastructure and is connected with major commercial and administrative centers by highway, railway and air transportation. Such favorable geographic position of Jablanica District provides an opportunity for development of many areas of economic activity, especially for the development of agriculture, due to the possibilities of short delivery time of products to the market. Favorable climatic conditions allow for the successful development of agriculture in general and especially growing of vegetables, fruit and grapes. The land in this region is unpolluted and allows farming of healthy food, which is what Leskovac region is famous for in the Serbian market. In the past period it has been shown that natural resources are particularly suitable for growing top-quality grape varieties, which allows further development of the manufacturing industry, in this case particularly wine industry. Faculty of Technology and the Higher Education School of Professional Studies in the field of economics and management are located in the city of Leskovac, while University Center in Nis is located only 45 km away from it. These facts indicate that all conditions are met for the education of future personnel for many sectors of the economy. At the same time many years of experience in the production of grapes and wines, in the public and private sector, presents a good starting point for further development of agricultural production of grapevines, high quality grapes and the wine industry as a logical upgrade.

**Weaknesses.** Under transitional conditions in which Serbia has been for a number of years, with

many social and political changes that have taken place, economic and particularly agricultural development mostly had the extensive character. Despite the favorable geographical position of the Jablanica District and the city of Leskovac, internal infrastructure within the district is at a low level of development. Agricultural holdings and viticulture, in private as well as in state-owned companies (larger plantations), are not adequately developed, both regarding the assortment of grapevines and the current state of vineyard surfaces and protection from natural disasters. Unfavorable economic structure does not allow for the development of agricultural holdings and planting of new of grapevine plantings using modern technological solutions. There is no institutional cooperation between small and medium-sized producers, and despite the existence of government incentives for the development of viticulture and winemaking industry, there are no new investments in the development of agricultural activities, particularly in the development of viticulture as a starting point for the development of the wine industry. Although the incentives for the development of viticulture are significant, defined procedures in the process of obtaining these funds, as well as the uncertainty of product placement on the market, does not stimulate the private sector to use these funds.

**Opportunities.** The fact that Serbia is in the process of joining the EU provides great opportunities for the development of regional cooperation in the field of viticulture and winemaking industry, primarily with developed wine-growing regions in Bulgaria and Macedonia. A stable monetary policy and harmonization of legislation with the EU provides a starting point and an opportunity to obtain investments, via the access to various EU investment funds, as well as to develop international cooperation, thus creating conditions for foreign investments and opens new possibilities to gain access to many segments of the EU market.

**Threats.** In the future, despite the adoption of certain EU norms of behavior, centralized management and the excessive influence of politics everywhere and anywhere, constitute a serious obstacle to further development in general, which is also the case for the development of viticulture and winemaking industry in Jablanica. The current political situation in Serbia still contains some destabilizing elements that cause the crisis, which slows down the progress of Serbia towards the EU, especially in building a functional legal



framework with the EU legislation. Serbia's hindered progress towards EU presents a serious threat to the intensive development of the Serbian economy as a whole, especially in rural areas where the existing development in all areas is at a low level.

Based on the derived situational analysis and considered S (strengths), W (weaknesses), O (opportunities) and T (threats), the SWOT matrix is defined with characteristic sub-criteria under each SWOT criteria. By comparing the sub-criteria under each SWOT criteria, TOWS matrix is generated with defined strategies (Wehrich, 1993; Živković, Nikolić, Djordjević, Mihajlović, & Savić, 2016):

1. **SO strategies (maxi - maxi strategies)** are defined by putting in comparative relationship defined sub-factors, within the strengths and opportunities, which are defined in the SWOT matrix. These strategies generally rely on inner strengths while utilizing the identified opportunities in the environment. SO strategies are the most desirable type of strategic situations, in which all the opportunities that come from the market and external environment are being utilized to the maximum by maximizing the internal strengths.
2. **WO strategies (mini-maxi strategies)** include actions to reduce and minimize the defined weaknesses along with the utilization of identified opportunities in the environment, which are defined with sub-factors of the SWOT matrix. WO strategies imply minimization of internal weaknesses and maximization of the opportunities provided by the external environment.
3. **ST strategies (maxi-mini strategies)** imply defining the possible strategies which rely on inner strengths while minimizing the impact of the threats that come from the environment. This is a situation when an organization has strengths and seeks to maximize its internal strengths and at the same time minimize the threats that come from the environment.
4. **WT strategies (mini-mini strategies)** imply defining those activities that should reduce and minimize the perceived weaknesses and to simultaneously reduce and minimize defined threats that come from the environment.

Considered sub-criteria in SWOT matrix represent the full picture of the organization in relation to the internal analysis of the organization and analysis of the external environment, in which certain events that have an impact on the organization should be predicted. Wehrich developed in 1993 the so-called TOWS matrix (Wehrich, 1993), in which the priority is given to threats (T - Threats) and opportunities (O - Opportunities) as factors of the future - factors that determine future events in relation to the strengths (Strengths - S) and weaknesses (W - Weaknesses) as factors of the past.

### 3. Prioritization of strategies

One of the major constraints in prioritization of strategies generated based on the TOWS matrix is the fact that the importance of each factor in the decision making cannot be quantitatively measured, which makes it difficult to assess which factor has the greatest impact on individual strategies. With the development of methods of group and multi-criteria decision-making, techniques are defined for weighted assessment of the impact of SWOT criteria, as well as sub-criteria under each criterion, on the definition and prioritization of strategies. In addition, this approach has extended the lifecycle and expanded the application of the SWOT matrix for multi-criteria optimization used in the process of making a number of managerial decisions (Kurttila, Pesonen, Kangas, & Kajanus 2000).

In contemporary literature, in the first and the second decade of the 21<sup>st</sup> century, defined SWOT and TOWS matrices serve as the initial framework for defining possible strategies and their prioritization in the considered time horizon spanning at least ten years (Dyson, 2004; Yuksel & Dagdeviren, 2007; Hamidi & Delbahari, 2011; Sevkli et al., 2012; Gorener, Toker, & Ulucay, 2012; Sharifi, 2012; Nikolić et al. 2015; Živković et al., 2016).

The combination of SWOT and TOWS matrices, while using the *Multiple Criteria Decision Making* methods (MCDM) including: *Analytical Hierarchy Process* (AHP), *Analytical Network Process* (ANP), *Preference Ranking Organization Method for Enrichment Evaluation* (PROMETHEE), *Technique for Order Preference by Similarity to an Ideal Solution* (TOPSIS) and others, as well as implementation of integrated models such as: AHP + TOPSIS; ANP + TOPSIS and others, represents a convenient method to determine prioritization of defined strategies. In

the prioritization of alternative strategies, based on the TOWS matrix, a key role is designated to elements of group decision-making - *Group Decision Support Systems* (GDSS), as well as elements of Fuzzy Logic (Sevкли et al., 2012, Živković et al., 2016).

Development of SWOT – AHP hybrid model for prioritization of strategies for development of viticulture in the Jablanica District, which was implemented in this study through six steps, is described in the literature dealing with this topic (Kurttila et al., 2000; Kangas, Pesonen, Kurttila, & Kajanus, 2001; Nikolić et al., 2015).

**Step 1.** Based on the results of SWOT analysis conducted for the case of viticulture in the Jablanica district and by comparing the SWOT factors: strengths, weaknesses, opportunities and threats, as well as sub-criteria under each criterion, the possible strategies for future development of viticulture in the region were defined.

Based on considered objective strengths, weaknesses, opportunities and threats, SWOT sub-criteria were defined within each of these determinants and the results are presented in the form of a TOWS matrix in Table 1.

**Table 1** SWOT analysis and TOWS matrix for the development of viticulture in the Jablanica district. Defined criteria and sub-criteria in the model, as well as generated strategies.

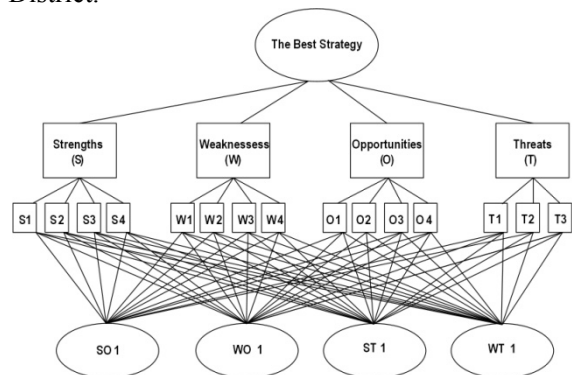
	Internal factors	
External factors	<b>Strengths (S)</b> S <sub>1</sub> - Favorable geographical position S <sub>2</sub> - Human resources S <sub>3</sub> - Natural resources S <sub>4</sub> - Viticulture tradition	<b>Weaknesses (W)</b> W <sub>1</sub> - Low level of constructed internal infrastructure W <sub>2</sub> - Lack of institutional cooperation W <sub>3</sub> - Unfavorable economic structure W <sub>4</sub> - Lack of new investments
<b>Opportunities (O)</b>	<b>SO – Strategy</b> SO <sub>1</sub> – Strategy of developing new products	<b>WO – Strategy</b> WO <sub>1</sub> – Development of the market and international cooperation
O <sub>1</sub> - Regional cooperation O <sub>2</sub> - Stable monetary policy O <sub>3</sub> - Access to various EU funds O <sub>4</sub> - Modified legislation		

Threats (T)	ST – Strategy	WT – Strategy
T <sub>1</sub> - Centralized management	ST <sub>1</sub> – Education of personnel	WT <sub>1</sub> – Establishment of strategic alliances
T <sub>2</sub> - Political instability and slow EU accession		
T <sub>3</sub> - Excessive influence of politics		

Source: The authors

Comparative expert analysis of the SWOT factors shown in Table 1 enabled defining the possible strategy SO<sub>1</sub> which enables the utilization of potentials of strengths in order to take advantage of the opportunities that have been observed in the environment. Strategy WO<sub>1</sub> was defined to overcome internal weaknesses using the opportunities in the environment. Utilization of internal strengths in order to avoid threats is allowed by strategy ST<sub>1</sub>. Finally, strategy WT<sub>1</sub> enables reduction of the weaknesses to avoid the threats. In principle, in the context of each of the binary relations of SWOT factors, a number of strategies can be defined (Živković et al., 2016), however in this case, just one strategy is defined per binary relation.

Based on the SWOT – AHP hybrid model for prioritization of the development strategy, on the basis of the results of the SWOT factors, sub-factors, defined strategies and established goal of determining the best strategy, the AHP working model is presented in Figure 1 which is used for defining mutual relations of SWOT factors and sub-factors in order to prioritize defined strategies for the development of viticulture in Jablanica District.



**Figure 1** AHP model for the selection of the best strategy  
Source: The authors

**Step 2.** Based on the assessments of the expert team using Saaty's scale, shown in Table 2, the importance of each of the SWOT factors (criteria)

in the model is determined, where their internal interdependence was not taken into consideration but only importance in relation to the set objective within the level 1 – SWOT criteria Strengths - S, Weaknesses - W, Opportunities - O and Threats - T (see Figure 2). The resulting importance of each SWOT factor is shown in Table 3, where it can be noticed that the greatest importance, based on the assessment of the expert team, is given to the SWOT factor Strengths (52% of importance).

**Table 2** Saaty's scale 1 + 9 used for pairwise comparison of decision-making elements (criteria, sub-criteria and alternatives) (Saaty, 1990)

Saaty's score	Definition	Description
1	Equal dominance	Two elements are of equal importance in regard to the higher level objective
3	Weak dominance	Experience or judgment slightly favor one element over other
5	Strong dominance	Experience or judgment considerably favor one element over other
7	Very strong dominance	Very strong dominance of one element over the other
9	Absolute dominance	Dominance of the highest degree
2,4,6,8	Intermediate values	They are used to demonstrate compromise intermediate values of priorities between the above listed scores 1, 3, 5, 7 and 9

Source: The authors

**Table 3** Pairwise comparison of SWOT groups without interdependences between them

SWOT group	S	W	O	T	Importance of the SWOT groups
Strengths (S)	1	4	3	5	0.520
Weaknesses (W)		1	1/3	3	0.141
Opportunities (O)			1	4	0.268
Threats (T)				1	0.071
Consistency ratio relative to the goal: CR=0.067					

Source: The authors

From the Table 3, it follows that:

$$w_1 = \begin{bmatrix} S \\ W \\ O \\ T \end{bmatrix} = \begin{bmatrix} 0.520 \\ 0.141 \\ 0.268 \\ 0.071 \end{bmatrix}$$

**Step 3.** In this step, local importance of SWOT sub-criteria was determined by the expert team,

while the scores of comparative pairs of SWOT sub-criteria, defined in Table 3, are given in tables 4 - 7:

**Table 4** Pairwise comparisons of the SWOT sub-criterion – Strengths

Strengths (S)	S <sub>1</sub>	S <sub>2</sub>	S <sub>3</sub>	S <sub>4</sub>	Local weights
S <sub>1</sub> - Favorable geographical position	1	5	3	4	0.520
S <sub>2</sub> - Human resources		1	¼	1/3	0.071
S <sub>3</sub> - Natural resources			1	3	0.268
S <sub>4</sub> - Viticulture tradition				1	0.141
The consistency ratio in relation to the group Strengths: CR=0.067					

Source: The authors

**Table 5** Pairwise comparisons of the SWOT sub-criterion – Weaknesses

Weaknesses (W)	W <sub>1</sub>	W <sub>2</sub>	W <sub>3</sub>	W <sub>4</sub>	Local weights
W <sub>1</sub> - Low level of constructed internal infrastructure	1	5	4	3	0.520
W <sub>2</sub> - Lack of institutional cooperation		1	1/3	1/4	0.071
W <sub>3</sub> - Unfavorable economic structure			1	1/3	0.141
W <sub>4</sub> - Lack of new investments				1	0.268
The consistency ratio in relation to the group Weaknesses: CR=0.067					

Source: The authors

**Table 6** Pairwise comparisons of the SWOT sub-criterion – Opportunities

Opportunities (O)	O <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>	O <sub>4</sub>	Local weights
O <sub>1</sub> - Regional cooperation	1	4	3	5	0.520
O <sub>2</sub> - Stable monetary policy		1	1/3	3	0.141
O <sub>3</sub> - Access to various EU funds			1	4	0.268
O <sub>4</sub> - Modified legislation				1	0.071
The degree of consistency in relation to the group Opportunities: CR=0.067					

Source: The authors

**Table 7** Pairwise comparisons of the SWOT sub-criterion – Threats

Threats (T)	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	Local weights
T <sub>1</sub> - Centralized management	1	¼	1/2	0.137
T <sub>2</sub> - Political instability and slow EU accession		1	3	0.623
T <sub>3</sub> - Excessive influence of politics			1	0.239
The degree of consistency in relation to the group Threats: CR=0.018				

Source: The authors

**Step 4.** Through mutual multiplying of obtained weight factors from Step 2 and Step 3, global importance of SWOT sub-criteria is derived, as presented in Table 8.

**Table 8** The importance of the criteria and sub-criteria of the SWOT analysis, determined using AHP methodology

SWOT groups - criteria	Importance of the SWOT criteria	SWOT sub-criteria	Degree of consistency within the SWOT group (CR)	Importance of SWOT criteria within the group	The overall importance of SWOT factors
Strengths - S	0.520	S <sub>1</sub> - Favorable geographical position	0.067	<u>0.520</u>	<u>0.270</u>
		S <sub>2</sub> - Human resources		0.071	0.037
		S <sub>3</sub> - Natural resources		0.268	0.139
		S <sub>4</sub> - Viticulture tradition		0.141	0.073
Weaknesses - W	0.141	W <sub>1</sub> - Low level of constructed internal infrastructure	0.067	<u>0.520</u>	<u>0.073</u>
		W <sub>2</sub> - Lack of institutional cooperation		0.071	0.010
		W <sub>3</sub> - Unfavorable economic structure		0.141	0.020
		W <sub>4</sub> - Lack of new investments		0.268	0.038
Opportunities - O	0.268	O <sub>1</sub> - Regional cooperation	0.067	<u>0.520</u>	<u>0.139</u>
		O <sub>2</sub> - Stable monetary policy		0.141	0.038
		O <sub>3</sub> - Access to various EU funds		0.268	0.072
		O <sub>4</sub> - Modified legislation		0.071	0.019

Threats - T	0.071	T <sub>1</sub> - Centralized management T <sub>2</sub> - Political instability and slow EU accession T <sub>3</sub> - Excessive influence of politics	0.018	0.137 <u>0.623</u> 0.239	0.010 <u>0.044</u> 0.017
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Source: The authors

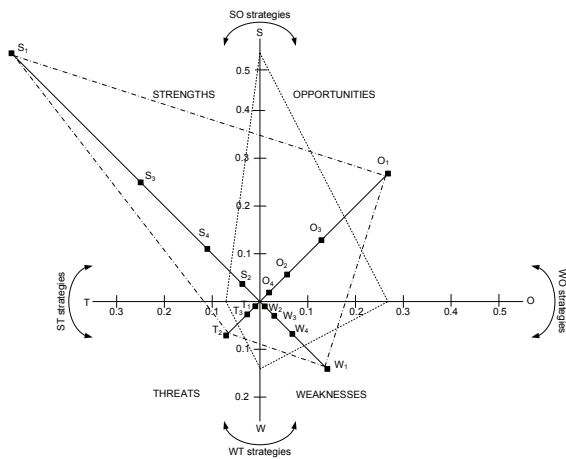
The results of the overall significance of the SWOT sub-criteria suggest the dominant influence of the following sub-criteria: S<sub>1</sub> - favorable geographical position (0.270) within the Strengths, as well as O<sub>1</sub> - regional cooperation (0.139) under Opportunities, as positive sub-criteria. Furthermore, W<sub>1</sub> - low level of constructed internal infrastructure (0.073) and T<sub>2</sub> - political instability and slow EU accession (0.044) were singled out as the most important negative sub-criteria. It is obvious that the strength of the positive sub-criteria is greater than the strength of impact of the negative sub-criteria which is of crucial importance for choosing the best strategy in the considered case.

It follows that:

$$W_2 = W_{SWOTsub-factors(global)} = \begin{matrix} 0.270 \\ 0.037 \\ 0.139 \\ 0.073 \\ 0.073 \\ 0.010 \\ 0.020 \\ 0.038 \\ 0.139 \\ 0.038 \\ 0.072 \\ 0.019 \\ 0.010 \\ 0.044 \\ 0.017 \end{matrix}$$

Situational analysis of the SWOT results, based on the data from Table 8, is graphically presented in Figure 2. The results indicate the size of the impact of SWOT criteria in following descending order: S → O → W → T. The values of the overall importance of SWOT sub-criteria, with the greatest importance in the context of one factor, also descend in the following order: S<sub>1</sub> → O<sub>1</sub> → W<sub>1</sub> → T<sub>2</sub>. In the next steps of this analysis, by

evaluating the weighted impact of SWOT sub-criteria on the alternative strategies defined in the TOWS matrix (Table 1), the final prioritization of proposed alternative strategies in the framework of all binary relationships of SWOT criteria, will be determined.



**Figure 2** Situation analysis of compared values of weighted SWOT criteria and overall importance of SWOT sub-criteria based on the AHP procedure. **Source:** The authors

**Step 5.** In this step, by expert scoring, importance weights of each alternative strategy (SO<sub>1</sub>, WO<sub>1</sub>, ST<sub>1</sub>, WT<sub>1</sub>) were determined relative to the defined SWOT sub-criteria, and the resultant matrix W<sub>3</sub> was obtained:

$$W_3 = \begin{bmatrix} 0.2270 & 0.1670 & 0.4240 & 0.4240 & 0.1220 & 0.2860 & 0.1410 & 0.2000 & 0.1670 & 0.3330 & 0.2860 & 0.2000 & 0.2270 & 0.4240 & 0.1220 \\ 0.1220 & 0.5000 & 0.1220 & 0.2270 & 0.4240 & 0.2860 & 0.4550 & 0.4000 & 0.1670 & 0.1670 & 0.1430 & 0.2000 & 0.4240 & 0.2270 & 0.42 \\ 0.4240 & 0.1670 & 0.2270 & 0.1220 & 0.2270 & 0.2860 & 0.1410 & 0.2000 & 0.3330 & 0.3330 & 0.2860 & 0.4000 & 0.2270 & 0.1220 & 0.22 \\ 0.2270 & 0.1670 & 0.2270 & 0.2270 & 0.2270 & 0.1430 & 0.2630 & 0.2000 & 0.3330 & 0.1670 & 0.2860 & 0.2000 & 0.1220 & 0.2270 & 0.22 \end{bmatrix}$$

**Step 6.** Finally, the overall priority of the considered strategies was calculated as:

$$W_{\text{alternatives}} = \begin{bmatrix} \text{SO1} \\ \text{ST1} \\ \text{WO1} \\ \text{WT1} \end{bmatrix} = W_3 \times W_{\text{SWOTsub-factors(global)}} = \begin{bmatrix} 0.263 \\ 0.208 \\ 0.290 \\ 0.239 \end{bmatrix}$$

This implies that the final order of the considered strategies is as follows:

$$\text{WO1} \rightarrow \text{SO1} \rightarrow \text{WT1} \rightarrow \text{ST1}$$

#### 4. Discussion of results

Given the size of normalized values (step 6), the conclusion regarding the order of implementation of defined strategies is that the first priority is the implementation of WO<sub>1</sub> - strategy of development of the market and international cooperation, with

the weight factor of 0.290. It is obvious that the Serbian wine market is small and underdeveloped, therefore market development, together with regional cooperation with its closest environment, can be the basis for the development of viticulture in this region, because this strategy ensures product placement which is now hindered.

Shortly after implementation of WO<sub>1</sub> strategy, it is necessary to start implementing the strategy SO<sub>1</sub> – strategy of developing new products that logically arises as a result of the implementation of the previous strategy of market development, which provides information about demanded assortments required by new markets.

In order to realize the strategy of growth and development of viticulture in Jablanica District, through the development strategies of market development and new product development, it is necessary to develop a strategy WT<sub>1</sub> – establishment of strategic alliances and association with large manufacturers which are already positioned on the EU market, by creating conditions for foreign investments and the arrival of branded companies in the field of viticulture and winemaking industry.

In order to fulfill these growth strategies and to introduce new types of grapevines, create new products, align operations with foreign partners in strategic alliances and to become desirable partners in international cooperation, it is essential to acquire new knowledge and to continuously improve the existing one in accordance with the requirements of the new era. Therefore, the application of ST<sub>1</sub> strategy of education of personnel is being imposed as a logical sequence of events in the long term strategic plan of development of viticulture in Jablanica district.

#### Conclusion

Conducted research regarding the possibility of further development of viticulture in Jablanica District indicates, based on the situational SWOT analysis, that the potential for development of this agricultural segment is obvious. The opportunities that are recognized in terms of Serbian accession to the EU are also apparent and should be taken advantage of in future.

Through a hybrid SWOT – AHP model the prioritization of defined development strategies for viticulture in Jablanica District was conducted, which shows that there are realistic opportunities to achieve significant growth and development of viticulture in this region, compared to the present situation of stagnation and slight decline, by using

the defined order of implementation of the identified strategies. **SM**

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# Management of Public Enterprises in Serbia – Cases of EPS, Telekom, and Srbijagas

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## Abstract

Public enterprises feature as an important field in Serbian economy. The aim of this paper is to point out the relevance of public enterprises and how their business can greatly influence the economic trends of the Republic of Serbia. The paper analyzes the operation of public enterprises Elektroprivreda Srbije, Srbijagas and Telekom in the period from 2011 to 2015. The paper is structured in four segments, with the first one focused on a theoretical and legislative approach to the explanation of the role and importance of public enterprises. Further, there are the key issues of these enterprises and a potential solution through the analysis of Fiscal Council. Finally, an empirical part is presented through the use of indicators of profitability, liquidity, indebtedness and solvency for the time horizon of 2011-2015.

## Keywords

Public enterprises, analysis, profitability, liquidity, debt, solvency.

## Introduction

In every economy, public enterprises have a particular role which is more or less significant depending on the level of development of the economy. Namely, in the market-developed countries, there is a proper and adequate approach to public enterprises, where it introduced a corporate principle and clearly defined state support. Observing Serbia in the last few decades, public enterprises present an important segment of the economy and their role should not be ignored. The reason lies in the fact that public enterprises employ large numbers of people, and their destiny is directly linked to the success of their business. In this connection, negligent management of public enterprises can directly affect the living standard of a certain number of people which is not small. Serbia has experienced the transition from a socialist to a capitalist system and there has been a change in the functioning of this enterprises as well as the

entire economy. In recent decades there is a significant shift from state socialism to capitalism which has led to major changes in the ownership structures of companies around the world. One of the visible aspects of this trend is the willingness of governments to sell state enterprises to private investors, and the reason is found in the fact that private property and the market can significantly improve the poor performance of public enterprises (Souza et al. 2014).

## 1. The role and importance of public enterprises - theoretical framework

Christiansen (2001) noticed that despite a decade of liberalization and privatization in many countries, public enterprises and state share still remain widespread. The government often uses public enterprises to promote local development and investment in sectors where private investment is strapped (Mussachio and Lazzarini, 2014). Also,

Rondinelli (2008) points out that public enterprises are established with the aim to contribute to economic and social development. After World War II, governments in Europe and North America have used public enterprises to develop economically backward regions and provide the necessary resources while protecting industries which are considered essential for future economic growth. Fall of the Berlin Wall marked the end of the functioning of centrally planned economy. Ahrend and Martins (2003) give an example in Romania that the survival of the loss-making public enterprises was financed by the state through a variety of subsidies, which in the late 1990s led to huge debts and negative impact on the state budget which is reflected in the economic efficiency on the state level. The significant expansion was seen in the countries of Western Europe and the former USSR where the socialist government nationalized industrial and service enterprises with the collectivization of agriculture based on a centralized plan to reduce or eliminate the impact of the market (Rondinelli, 2008, p. 23). Similarly, Dong and Putterman (2003) cite the example of public enterprises in the countries of Eastern Europe and Asia, where they were used to cover a large number of redundant workers to reduce social discontent. Nkechi (2013) concluded that public enterprises, particularly in developing countries, become more active in key sectors such as manufacturing, construction, financial services, utilities and transport (Heath 1999). Public ownership in industries of iron and steel, and chemicals and petrochemicals are of strategic importance in terms of providing the necessary inputs. However, the inability of the state to manage public enterprises imposes the need for their privatization, i.e. the application of corporate management. Kecman and Šušnjar (2012) highlight several reasons for the privatization of large system and public enterprises:

- a) large losses and debts of public enterprises,
- b) reduce expenditures from the budget to finance their survival and functioning,
- c) increase the economic efficiency of enterprises through market competition,
- d) realization of privatization revenues from their sales.

On the other hand, Aivazian et al. (2005) argue that public enterprises can adequately work without privatization. Their research was conducted in the case of China and concluded that corporatization has a significantly positive impact on the per-

formance of public enterprises. Madžar (2015) argues that there are several restrictions that hamper Serbian economy, as is the case with public companies while Arsić (2015) notices that public enterprises are used for the realization of fiscal and social objectives to a significantly greater extent than in the developed market economies. Most public enterprises recorded poor operating results, do not have sufficient incentives to increase the level of efficiency and are faced with pressure to keep prices of services at a socially acceptable level, which implies a low level of investment that threatens the long-term sustainability of their business. Arsić (2015) highlights the problem of EPS and the fact that more than 50% of the manufacturing plants are over 30 years old and less than a quarter of transmission lines and substations are in proper condition. Veselinović (2014) lists the biggest problems of public enterprises in Serbia:

1. expressed political influence on the election of members of management and supervisory boards, which implies poor corporate governance and weak operating results;
2. cumulative losses which narrow space for investment and development opportunities;
3. low effectiveness and efficiency of management that affect the quality of products and services of these enterprises;
4. large potential for corruption;
5. overstaffing and inadequate qualification and age structure of employees.

## 2. The legislative framework for public enterprises in Serbia

According to the Law on Public Enterprises, a public enterprise carries out activities of general interest, which is established by the Republic of Serbia, autonomous province or local government. In terms of this law, activities of public interest are activities in the field of mining and energy, transport, electronic communications, issuing the official gazette of the Republic of Serbia and the issuing of textbooks, nuclear facilities, weapons and military equipment, utilization, management, protection, editing and promotion of goods in general use. Public enterprises are established to provide permanent performing activities of general interest and satisfying the needs of regular users of products and services; development and improvement of the performance of activities of general interest; providing technological and eco-



conomic unity of the system and compatibility of its development; making profits and achieving other legally established interests. In addition to public enterprises, the activity of general interest can be performed by (Law on Public enterprises): a) limited liability and joint-stock companies whose owner is a public enterprise; b) capital company whose owner is the Republic of Serbia, autonomous province, local government, as well as the subsidiary whose owner is capital enterprise; c) other capital company and the entrepreneur to whom the competent authority entrusted to carry out activity. The issue of profit allocation is defined by the obligation of public enterprises to pay part of the profit to the budget of the Republic of Serbia, autonomous province or local government in the final account for the previous year. For each calendar year, a public enterprise makes annual program business that includes the following elements (Law on Public enterprises, 2016):

- planned sources of revenues and expenditures,
- planned procurements,
- investment plan;
- planned way of profit allocation or loss coverage,
- elements for a comprehensive overview of the prices of products and services,
- plan of earnings and employment,
- criteria for the use of funds for assistance, sports activities, promotion, and entertainment.

### 3. Corporate management in public enterprises in Serbia?

The government should refrain from intervention in the management of public enterprises and it is necessary to enable their full operational autonomy to realize the defined goals. In addition, it is important to establish a responsible and transparent business professional management and thus achieve a high level of public enterprises efficiency (OECD, 2015, p. 20).

Public enterprises	Regulated, non-market prices below the level of eligible costs	Generation of insolvency and consequences on economic activity and public revenues	Professionalization of the management and reduction of irrationality and corruption
		Tolerating delays and debts which become state obligations	
Srbijagas	Many years of low sales prices (adjusted) Assume losses Gas supplies to non-paying customers	Issue state guarantee and an increase in public debt Payment obligations from the budget	Interruption of gas supplies to non-paying customers Sale of subsidiaries Negotiation of import volumes and prices
Elektroprivreda Srbije	Inefficient decentralized organization (autonomy of subsidiaries)	The spread of insolvency on the economy	Business and financially restructuring accompanied by increased efficiency in all segments Reducing the number of employees and earnings
Telekom	Non-performing receivables for sold electricity Surplus of employees and earnings	Possible issuance of state guarantee for additional debt to cover the overdue financial obligations	The increase in electricity prices for households A turning point in the politics of collection receivables and the initiation of financial discipline
	Inefficient state governance Surplus of employees Financing various state projects which do not contribute to business success	Fewer dividends and other revenues which are paid to the budget A smaller contribution to economic growth	Privatization Reducing the number of employees, earnings, and irrational costs

Source: Fiscal Council (2014)

Table 1 Review of main public enterprises in Serbia

	Cause of problems	Impact on public finance	Solutions
	Internal inefficiency Illiquidity and growing indebtedness	The annual costs of 3% of GDP (subsidies, activated guarantees, unpaid taxes and contributions)	Regulation of employment and wages in terms of reducing

In the analysis, the Fiscal Council pointed out that the problems are not simple and the changes are inevitable in public enterprises as well as in the whole economic system. Large losses are covered by providing state guarantees which are manifested on the budget. Likewise, constant subsidization of inefficient enterprises is an obstacle

to their reform, because management relies on this ‘state support’ and it is not ready or willing to carry out corporatization of public enterprises.

On the other hand, the government has to take into account the social factor, because there are huge systems which employ a large number of people. Privatization is one of the directions of solving this problem, while many enterprises cannot survive in terms of ownership and organizational structure. Then, liberalization of market trends and the creation of prices on market principles and economic criteria should direct the enterprises toward greater efficiency and effectiveness. This can be realized with the help of corporate and professional management. Also, it is necessary to reduce the level of non-performing receivables so public enterprises could have a regular inflow of funds and provide a permanent fulfilment of liabilities from current operations. Rationalization of expenditures through lower spending on salaries of employees is an important part of this reform package while the efforts of public enterprises should be directed towards productive investment in order to improve their efficiency. On 27 November 2014, the government of the Republic of Serbia adopted a corporate restructuring plan focused on simplifying the organizational structure and management of EPS. The task is to achieve financial viability and competitiveness in the long run, and stop further deterioration of the financial situation of this enterprise as well as the elimination or reduction of the need for state help. Furthermore, as part of fiscal consolidation measures during 2016-2018, it is planned to improve the collection of receivables, reducing electricity losses, rationalization of employees, as well as the optimization of production facilities in order to improve operational and organizational efficiency. The basis for the restructuring plan of Srbijagas is determination of financial position and emphasis on the collection of receivables from main debtors (Azotara, MSK, and Petrohemija). Also, it is necessary to establish a fair principle of gas delivery fee. In fact, one possible scenario is the disruption of gas delivery to non-payers which can force them to fulfil their obligations from current operations. However, the full implementation of this principle could lead to difficulties in the functioning of many public institutions.

#### 4. Analysis of public enterprises in Serbia

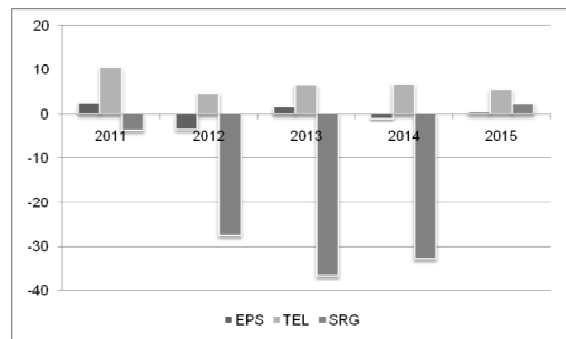
To reflect the financial condition of public enterprises in Serbia, we analyzed the key indicators of profitability, liquidity, debt and solvency in the case of Elektroprivreda Srbija, Telekom, and Srbijagas. Calculation of chosen indicators is measured by:

$$\text{Profitability} = \text{net income/equity capital} \quad (1)$$

$$\text{Liquidity} = \text{current assets/short-term liabilities} \quad (2)$$

$$\text{Debt} = \text{long-term liabilities/total capital} \quad (3)$$

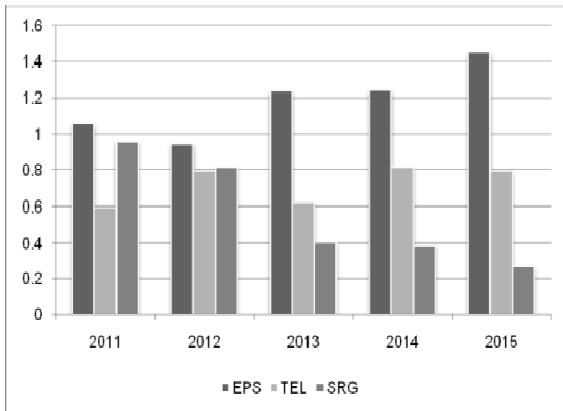
$$\text{Solvency} = \text{operating assets/long-term liabilities} \quad (4)$$



**Figure 1** Profitability in public enterprises - EPS, Telekom, and Srbijagas

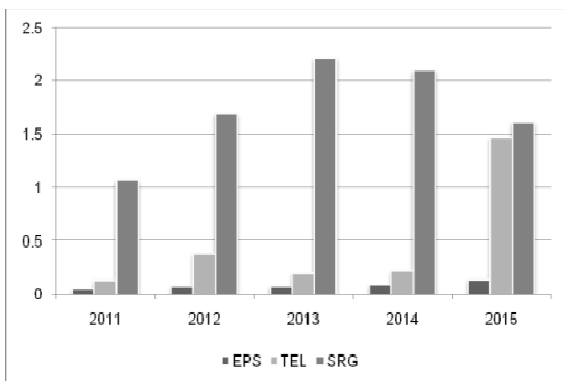
Source: Authors based on Elektroprivreda Srbije, 2016; Srbijagas 2016 & MTS, 2016

Figure 1 shows the movement of the profitability indicator of observed enterprises in the period 2011-2015, where it used return on equity (ROE). First, EPS recorded the highest value in 2011 from 2.49%, to the following year, recording a negative rate of 3.54%. Second, return on equity had a declining trend over the years, where it was especially pronounced between 2011 and 2012 when there was a double decrease of 5.78%. After that, there was a slight increase of 1.98% and in 2015, a decline of 1.18%, i.e. the level of profitability amounted to 5.61%. Third, Srbijagas recorded negative rates of profitability, where it is notable that enterprise had large losses in the three-year period 2012-2014, where the rate of return on equity was negative for over 30%. Specifically, in 2013 there was a maximum of 36.66% which can be attributed to the resulting loss of over 50 billion RSD. Only in 2015, Srbijagas had a positive rate of profitability of 2.29% which is much better than previous years.



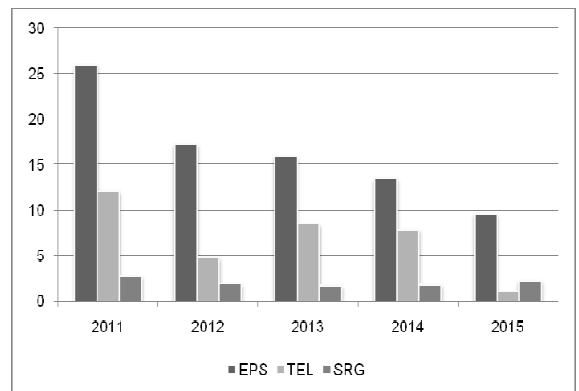
**Figure 2** Liquidity in public enterprises - EPS, Telekom, and Srbijagas  
 Source: Authors based on Elektroprivreda Srbije, 2016; Srbijagas 2016 & MTS, 2016

Liquidity indicators reflect the enterprise's ability to perform financial obligations on time where it is measured by the ratio of current assets and short-term liabilities. Taking into account a reference value of 1, it is evident that EPS realized the criteria, except in 2012 when the liquidity indicator was below 1 or 0.94. On the other hand, the liquidity of public enterprise Telekom was low and value of observed indicator was less than 1 throughout the whole period. In analyzed period, this enterprise is faced with higher short-term liabilities, and the inability to be covered by the funds completely. The encouraging fact is a slightly growing trend of the indicator and achieving a maximum of 0.81 in 2014. Also, Srbijagas had a declining trend in the level of liquidity in the observed period where it is pronounced in 2013 when there was a fall by 50%. In the next two years, there is a slight decrease of the indicator, where the value was 0.28 at the end of 2015.



**Figure 3** Debt in public enterprises - EPS, Telekom, and Srbijagas  
 Source: Authors based on Elektroprivreda Srbije, 2016; Srbijagas 2016 & MTS, 2016


Figure 3 reflects the trend of debt indicator in public enterprises in Serbia from 2011 to 2015, observing the ratio of long-term liabilities and equity. There is a growing tendency in EPS which can especially be seen in the last two years when the value of observed indicator increased by 45.7%. A similar situation is in Telekom, where indicator recorded a maximum value of 1.47% in 2015 as a result of the faster growth of long-term liabilities compared to capital. When it comes to Srbijagas, it presented a growing trend of long-term obligations and their pressure on equity, where this particularly applies to 2013 and 2014 when the indicator was above 2. Based on the calculation of this indicator, at the end of 2015, the level of debt has increased by 50.24% compared to the beginning of the period.



**Figure 4** Solvency in public enterprises in Serbia - EPS, Telekom, and Srbijagas  
 Source: Authors based on Elektroprivreda Srbije, 2016; Srbijagas 2016 & MTS, 2016

Figure 4 shows the level of solvency in public enterprises in Serbia in the period 2011-2015. Solvency can be seen as liquidity in the long term where it is analyzed as a ratio of assets and debt. EPS had a declining trend of this indicator of 37.04% over a period of five years. Also, Telekom recorded a lower value, especially in 2012 and 2015, when it reached the lowest level of 1.07. In two last years, there is a deterioration in the financial situation of this enterprise which is showed in terms of solvency and debt in the previous Figure. Looking at the value of debt in Srbijagas, the maximum value was reached at the beginning and end of the period. Specifically, in 2011 the indicator was at a level of 2.82 to the end of 2015 stood at 2.23. In 2013 the financial situation was worsened as a result of reduced profitability and liquidity, as well as increased debt and it was affected by a lower level of solvency and less ability to cover the debts.

## Conclusion

Based on the analysis of public enterprises in Serbia, it can be concluded that EPS had variable results in terms of profitability, while the level of liquidity had a growing trend. Also, the growing indebtedness of this enterprise directly affects to slowing and reducing the solvency indicator which has a declining tendency. Public enterprise Telekom operated with positive financial results, but the level of profitability is decreasing every year. The same situation is with liquidity, while the growth of debt is especially prevalent in 2015, which implied the enterprise's smaller ability to cover debts. This can be seen through the movement of the solvency indicator in 2015. Finally, Srbijagas had the weakest results in terms of profitability, as well as lower liquidity. In terms of debt and solvency, the encouraging data is their improvement compared to 2013, when this enterprise achieved very poor results. The question is what to do with these enterprises. One solution is privatization and functioning on market principles. However, due to bad experiences in the past, it is important to determine the level of readiness of the government to realize this. Also, there are opinions that certain enterprises, as well as the sectors of general importance, should remain in state ownership. It is necessary to establish a corporate management and adequate organizational structure with the rationalization of operating costs in public enterprises, how they could be more efficient. 

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# Space Management in Category Management – A Comparative Analysis of Retailers in the Subcategory of Pickled and Preserved Vegetables

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## Abstract

With raising number of products offered by manufacturers, and the same or smaller sales space, retailers are in constant quest for optimal model of allocating limited shelf space to list of products in assortment that will insure highest possible profit of a certain category but also of the whole retailer's product assortment. Category management's space management is offering some old approaches and new models for additional optimization of shelf space management on category level. This study aspires to investigate the state of shelf space management in retailing in Croatia and to clearly elaborate retailers' category management and other principles in space management activity on category, segment and brand level. The paper aims to help food manufacturers, as well as small and family owned retailers in Croatia and in other developing countries to ease and facilitate navigation through the category management imposed by retailers. By using the method of observation and analysis of the share of shelf space and market share (sales) data, authors attempt to deductively draw conclusions on the implementation of space management principles at the level of category Pickled and canned vegetables. Observations and analysis are done through the case study of four retail companies. Research has shown that retailers in Croatia in sub-category of Pickled and canned vegetables use contemporary category management principles in extensive way, especially in shelf space management part. Although they have their own specificities, contemporary retailers give most credit to giving equal share of shelf space to product's segment as its share of sale (or market share). Additional criteria were identified on brand level, namely private label's management, relationships aspects, and assortment dynamics limitations. Findings should enable manufacturers to capture better position in the category, and possibly influence the category itself through better satisfaction of both retailers', their own and consumers' interests.

## Keywords

Category management, shelf space management, planogram, subcategory of pickled and preserved vegetables.

## Introduction

Contemporary retail faces continuous challenges of managing space and assortment in various retail formats. Assisted by information and communication technologies, retail sectors are increasingly turning to e-retailing (and its derivatives

such as retail through social networks and mobile retail), which enables significantly overcoming the limitations of space and assortment. Nevertheless, the large majority of retail sales are still taking place in stationary retail formats in which they strive to resolve the ongoing problems of a trade-off between the limited space for the presenta-

tion/sale of products and a wide array of products by suppliers (manufacturers and distributors/wholesalers). The next problem that retailers are facing is related to the sales space allocation (place on the shelf, on the display, in the refrigerator or on the floor/pallet of the store) for each segment in a category, as well for each stock keeping unit – SKU.

Throughout the history of retailing these problems were approached in various ways (Segetlija & Dujak, 2013), and the problem is becoming more complex with the increasing number of different retail formats and changing the depth and breadth of the assortment. Nowadays different retail formats can be found in the retail market – hard discount stores that offer only 500 - 600 stock keeping units – SKUs (e.g. Aldi), hypermarkets with over 100,000 SKUs, or department stores which, under one roof, have more than one million items (e.g. Macy's in New York). These figures do not represent a static category, since in most retail formats assortment changes on a weekly or monthly basis: large number of new entries and exits of existing SKUs or changes of category structure expressed in changes of dedicated space for each SKU in category. All this leads to constant challenges in the area of assigning space to individual SKU's, i.e. in the area of space management. In order to respond to these challenges successful retailers are turning to the category management business concept. Category management divides the assortment in product categories, which are formed on the basis of consumer behavior when buying in order to meet their needs. Through categories' structure and dynamics, category management seeks for optimal category in the system of optimal assortment for the whole store at a given time. Optimally in this case refers to the best ratio of retailer's profit from operations of certain category and whole store, as well as satisfaction of the end customer purchase in the same category (by meeting their own needs). Initiated by retail, category management has expanded upstream in the supply chain – today category management is more and more implemented by wholesalers (distributors) and especially manufacturers. Moreover, a common application and implementation is one of the prerequisites of full capacity utilization of category management.

The aim of this study was to examine shelf space management as category management tactic. Target category in this paper is category or subcategory (depending on retailer's category

structure) Pickled and canned vegetables. The paper aims to help food manufacturers in Croatia and in other developing countries to ease and facilitate navigation through the category management imposed by retailers. Due to the inferior position of manufacturers in the food supply chain in relation to large food retailers (this is especially true in case of food manufacturers from smaller and less developed countries), the paper clarifies the principles and objectives of space management in retailing.

There are two main research questions in this study:

1. What are the main criteria for shelf space allocation in contemporary retailing?
2. Are there different criteria for shelf space allocation on different levels of category?

Given the limited information on the criteria that retailers use to determine the amount of space and the position of each item, the paper will analyze the final result of category management, which is a retailers' shelf of subcategory Pickled and canned vegetables. By using the method of observation and internal data from Croatian manufacturer in this category, combined with data about market share of selected segment in Croatia, the authors analyzed the share of shelf space for different segments of subcategory, and attempt to deductively draw conclusions on the implementation of space management at the level of that category. Observations and analysis are done through the case study of four retail companies operating in Croatia with overall retail market share higher than 50%. Although the research is indicative, survey results clearly reflect the principles of space management practice in Croatian retailing, as well as generally in contemporary retailing of predominantly food products (aka. the FMCG or Fast Moving Consumer Goods sector).

## 1. Space management in category management

By strengthening the position of retailers through their concentration, category management is just one of many ways of doing business that are implemented by retailers, in order to achieve higher revenues and better serve customers. Since the retailers are just one link in the supply chain, each of their innovation affects other members of the supply chain. In addition to customers, category management primarily affects manufacturers who have to change their marketing strategy mostly

based on their brand management, to marketing approach based on category management. In category management main focus is on category – a distinct, manageable group of products/services that consumers perceive to be interrelated and/or substitutable in meeting a consumer need (ECR community, n.d.). Therefore, customers are those who decide which SKU will constitute certain category through behavior during the purchase of products that meet the specific need or desire. All products that are similar in that they similarly or equally satisfy the consumer's need, or those that meet the secondary need to be linked to the primary (toothbrush and toothpaste, ketchup and spaghetti, coffee and sweetener) constitute a specific category (Segetlija, Mesarić, & Dujak, 2013). Product category is further broken down into subcategories, subsubcategories, segments and microsegments, and can go up to individual products, i.e., SKU (Segetlija & Dujak, 2013). Example of a category structure is given in Figure 2.

According to Steiner (2001), category management is a new form of the vertical agreement, which is not integration, franchise or limit, but vertical partnership that awards the until then confidential information between manufacturers and retailers in order to reduce distribution costs and increase margins for both sides. Partners jointly think and work towards meeting the needs of customers based on analysis of whole category of products in which is the manufacturer's product (Segetlija & Dujak, 2013). Verra (1997) states that category management is actually an umbrella concept that covers a number of development concepts that occur in the retail business.

Category management is carried out as a cyclic process. Although there are many different versions of category management process (Segetlija & Dujak, 2013), almost all of them stem from original process established by TPG consultant house that has 8 phases at the beginning of implementation (ACNielsen, 2006): definition of category, role of category, category assessment, category scorecard, category strategies, category tactics, implementation, category review. Tactics are especially important phase category for this paper where all operational activities are designed and planned for implementation (Figure 1). It consists of four main groups of tactics for operational/marketing areas: assortment management, space management, pricing and promotion. The novelty that came with category management is giving considerable more attention to assortment

management and space management on the category level. Exhaustive analyses result in category management output – namely planogram. Planogram can be defined as a diagram that illustrates how and where specific merchandise should be placed on shelves or displays to increase customers purchases (Levy & Weitz, 2012). Planogram is retailers' (or retailers' and manufacturers') main tool in category management, and at the same time retailer is impacting consumer demand through planogram (Figure 1).

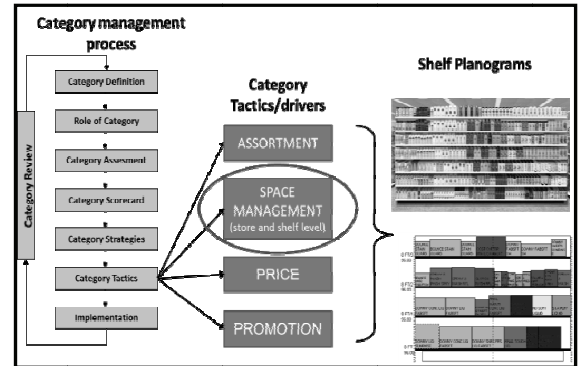


Figure 1 Space management in category management process  
Source: Authors

Although space management is inseparable activity from assortment management (one of the key restrictions of category assortment is space defined by certain type of store, and category itself), this research is primarily based on an analysis of space management in category management. It can be said that space management is a continuation of location management policy in the so called “brick and mortar” retailing that can be observed on four levels:

- 1) *Macro location* – represents selection of a region or city/village where the store will be open;
- 2) *Micro location* – represents selection of an exact address where to build/rent a store;
- 3) *Store layout* – location of shelves or other displays with product categories in the store (**space management on the store level**);
- 4) *Planogram* – location of each SKU on the shelf of certain category (**space management on the category/shelf level**).

<sup>1</sup> Brick and mortar - refers to retail shops that are located in a building as opposed to an online shopping destination, door-to-door sales, kiosk or other similar site not housed within a structure. (Retail About, 2015)



Category management's space management covers location problems of layout and planogram, i.e. space management on store level and space management on category/shelf level. According to American Marketing Association (2013) store layout or arrangement of departments or groupings of merchandise, has to be organized to provide for ease of customer movement through the store and to provide for maximum exposure and attractive display of merchandise. The peculiarity of layout in category management is reflected in the allocation of retail space according to product categories (usually 50 or more categories), as opposed to the earlier classification by departments (4-7 departments).

The main focus of this paper is on space management issues on category level – both segment and SK level.

### 1.1. Space management on category level

Space management on category level (space on shelf, display, floor or in the fridge) is also called shelf space management (Chung, Schmit, Dong, & Kaiser, 2007). Retail space is often the retailers' scarcest resource (Fernandez Nogalez & Gomez Suarez, 2005), important for attracting more customers to retail store (Hariga, Al-Ahmari, & Mohamed, 2007), and accounts for a significant element of retailers' costs (Ramaseshan, Achuthan, & Collinson, 2009).

Space management on category level is usually analyzed on segment level, on brand level and on individual SKU level. Segment is part of product category structure on a level between whole category and individual SKU (or brand level) usually determined by consumer decision tree method, which points out structure and hierarchy of consumer buying behavior.

Therefore space management on category level requires more demanding complex operations that consist of two main activities:

- a) Positioning of segment/brand/SKU on the shelf (or display, floor, fridge);
- b) Allocating of space to a certain segment/brand/SKU.

Each of these activities has its own principles and/or rules.

*Product positioning* is an activity of deciding where to put SKU on the shelf according to its market share, target customer's segment, retailers' promotion plans, logistical requirements (volume, temperature, shape, secondary or RRP packag-

ing), influence on other products in category and/or in the rest of the assortment (other categories in store). Segetlija & Dujak (2013) summarized most important principles for successful positioning on category level, as well as basic rules regarding direction of customer moving in the store and price increase (prices always increase in customer moving direction, respectively from left to right). The most commonly stores have exposure on four levels, and in rare cases can have exposure on three levels. Exposure at the level of four shelves, from the lowest to the highest, can be categorized on the "floor" level, the "height of the hand" level, the "eye" level and "above the eyes" level. Different levels of shelves are appropriate for different products (products with different market share and inventory turnover, different logistical characteristics, different volume) and for different target segments of consumers (Segetlija & Dujak, 2013). Product positioning (or placement) can be changed either horizontally or vertically. According to Chung et al. (2007), vertical change of shelf position is much more effective than horizontal relocation. According to many studies (Chung et al, 2007; Segetlija & Dujak, 2013) eye-level location was the most desirable location, i.e. highest sale location. Horizontal movements are not so important, but some rules have been noticed – centrally located products were preferred in the smaller retail formats like convenience stores, while an edge location was preferred in the larger formats – e.g. supermarkets, hypermarkets (Chung et al. 2007). Furthermore, the products on the level of categories and subcategories can be divided based on their price into A, B and C brands, with the most expensive A brands, while the lowest-level is C price (Segetlija & Dujak, 2013).

*Allocating amount of space to each SKU* in product assortment is actually activity of deciding how many facings<sup>2</sup> each SKU will have on a shelf. *Facing* is probably the most important activity in shelf space management (Table 1), but it must be considered integrally with other important tasks of category management like assortment management (which products will enter in category - *listing*), inventory planning (*replenishing* policy) and price planning for each product (Hübner, 2011). Facings directly influence consumer demand – more facing leads to higher consumer demand, but because of limited shelf space the

<sup>2</sup> Facing is the physical (linear) space that a single product occupies (IGD, 2013).

number of facings for one product limits the space available to other products, and may require delisting other products (Hübner, 2011).

**Table 1** Shelf space demand effects and supply considerations

Decision problem	Decision area	Effects
Assortment planning	Assortment size and listing of products	Substitution demand
Shelf space planning	Shelf space allocation (positioning) and number of facings	Space-elastic demand
Inventory planning	Restocking frequency	Supply constraint and costs
Price planning	Pricing of products	Price-elastic demand

Source: adapted from Hübner, 2011

Basic principle and current practice of many retailers regarding shelf space management is to allocate shelf space for a SKU approximately equal to its market share. In their study Ramaseshan et al. (2009) have found that the main rule for retailers is share-of-sales-equals-share-of-space, or that they just implement planograms designed by high market share manufacturers or franchisers. This approach is suboptimal as it does not use other important factors, but this kind of passive category management is still used by many successful retailers (mainly by retailers that operate in discount and convenience store formats).

Basic factors for allocating (shelf) space to certain products should be (Levy & Weitz, 2012): the productivity of the allocated space, the merchandise's inventory turnover, the impact on overall store sales, and the display needs for the merchandise. Productivity is mostly calculated as gross margin units per 1 cm length of shelf, or per one m<sup>2</sup> of sales floor, or per 1 m<sup>3</sup> of sales fridge. Very often retailers use a metric that is combination of productivity and retail turnover – gross margin return on investment (GMROI) is calculated by dividing gross margin with average inventory value. GMROI indicates how many units of currency of gross margin, retailer will earn on one currency unit invested in inventories. Retailers also compare inventory turnovers, GMROI or other metric of different SKU's in category as well as with average metric of the whole category. Sometimes SKU does not have satisfactory values, but its existence on the shelf influence positively sales of other connected SKU's with highly

desirable GMROI. Finally, physical and other logistical limitations of SKU's will also affect number of facings on the shelf. In addition to these factors, many other principles and methods have to be taken into consideration in space planning and management (Segetlija & Dujak, 2013). Retailers also consider factors like image building, shelf space for private labels and possibility of increasing bargaining power towards manufacturers (Zameer, Waheed, & Mahasin, 2012). Taking into account all (or majority) of these factors requires comprehensive and integral shelf space management models. While looking for optimal shelf space management most of authors in their models take into consideration assortment management, cost of inventory management<sup>3</sup> (Hariga, et al., 2007; Ramaseshan et al., 2009; Chung et al., 2007; Kurtulus & Toktay, 2010), and some even pricing decision (Hübner, 2011). Due to huge data sets, these activities are usually conducted through specialized software. In this phase, experience from all previous phases of category management process comes to the fore.

Here is good place to elaborate private labels<sup>4</sup> share increase on retailers' shelves that is happening in contemporary retailing. Although private labels have considerably smaller market share than manufacturers' brands (or so called national brands), they often get even more shelf space than manufacturers' brands. Gomez & Rubio (2008) as well as Zameer et al. (2012) are just two studies that confirmed how private labels occupy more shelf space disproportioned to their market share, and that retailers are favouring unequal competition terms between manufacturer brands and private labels through better positioning and facing for their own brands. As private labels usually have lower prices than manufacturers' brands (price is the main motive for their buying), they are usually positioned to the right of the leading manufacturer brand – to ease the comparison between them (Gomez & Rubio, 2008). Retailers' behaviour in case of private labels is clear and obvious deviation from category management and space management main rule, as well as obvious evidence of retailers' power in supply chain. Although retailers usually have higher margins on private labels GMROI is not always higher than GMROI of manufacturers' brands (due to relatively low inventory turnover). Retailers are actu-

<sup>3</sup> Mostly inventory replenishment problems regarding replenishment frequency and lot sizing

<sup>4</sup> private labels or retail brands or store brands

ally giving more shelf space to private labels to increase their turnover, but also to increase consumer loyalty (as “our” private label can be bought only in “our” stores) and retailers’ image (Gomez & Rubio, 2008; Zameer et al., 2012). Manufacturers are very well aware of their inferior position, and if they still want to increase their share of shelf space they have two options: decrease their wholesale prices (Martinez-de-Albinez & Roels, 2007) or insist on and promote category management principles (Gomez & Rubio, 2008).

## 2. The analysis of pickled and canned vegetable subcategory

The concept of conservation includes various processes and procedures which aim to extend the sustainability of agricultural and food products. Preserved foods stay longer usable, even in areas distant from the site of obtaining (harvesting, processing, etc.) (Lovrić, 1994). Although fresh food is highly available nowadays, consumers maintain the habit of buying pickled and canned food, mostly because of the fast life-style, but also because of the tradition in Croatia and region. It is also the case in fast markets such as United Kingdom where in 2012 the market of canned food grew by 4,6% and in the same time the whole grocery retail market grew by 3,6% (Fortune, 2013). In favour of this is also the fact that canned food is present in 99,2% households of UK population (Fortune, 2013), which can be related with economic crisis and buying cheaper products, but also fast life-style. Furthermore, the awareness of food waste is increasing, among other things, due to weaker financial situation, and when it comes to canned food, the food is much less throwing away than in the case of fresh ingredients.

The convenience of this type of products is suitable for all ages and it is very important that consumers recognize the advantages of using them considering their own lifestyle (Fortune, 2013). From that point of view, consumers in this sub-category can be divided in two main *market segments* (Marinada d.o.o., 2015):

- “Young” consumers – employed, have a little free time, consume this type of product because they are simple and quick to use.
- “Elder” consumers – tradition of consuming these types of products (in the past, the limited availability of fresh vegetables).

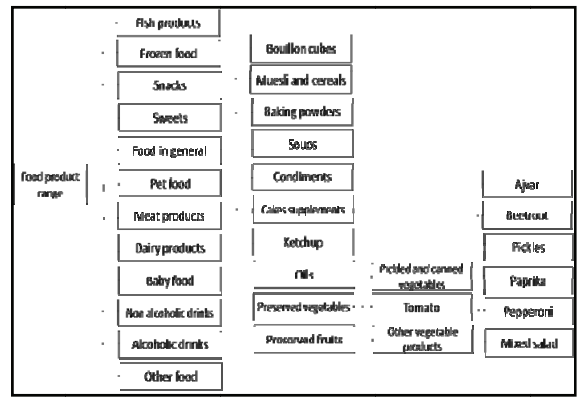
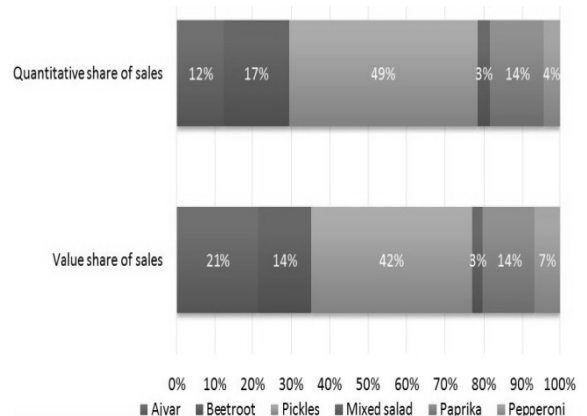


Figure 2 Classification of food product range in retail  
Source: authors according to AC Nielsen (2006) classification

Figure 2 shows how food product range in retail is classified by AC Nielsen. In this paper will be analysed subcategory of Pickled and canned vegetable, which includes six segments: Ajvar, Beetroot, Pickles, Paprika, Pepperoni and Mixed salad.

Estimated *consumption* of pasteurized vegetables in Croatia is about 16.000 tons or 180 million kuna (Marinada d.o.o., 2015, based on Croatian Bureau of Statistics, 2012) per year. According to available data from the Croatian Bureau of Statistics (2012), annual average consumption of pasteurized vegetables per household is 6.8 kg.

To have starting point for analysis of Croatian retail market in category Pickled and canned vegetable share of main segments in category is given on Graph 1. Segment Pickles has the largest, both quantitative (49%) and value (42%) share, followed by Beetroot segment in quantitative share (17%) and by Ajvar in value share (21%).



Graph 1 Value and quantitative share of segments in Croatia

Source: authors according to AC Nielsen (2006) data for Croatia, February/March 2015

For the purpose of this paper, emphasis will be on quantitative share of segments, given the limited data on value shares from the retail chains.

## 2.1. Space management analysis of sub-category of Pickled and canned vegetables

In order to better analyse subcategory of Pickled and canned vegetables, the space management analysis of store shelves of several largest retail chains in Croatia has been made. For the purposes of this study, the following retail chains will be discussed in more detail: Konzum d.d., Spar Hrvatska d.o.o., Kaufland Hrvatska k.d. and Lidl Hrvatska d.o.o.k.d. Their overall market share in Croatian retailing is higher than 50% (AZTN, 2013).

### 2.1.1. Space management analysis of store shelves in Konzum d.d.

Konzum d.d. is the largest retail chain in Croatia, with more than 700 stores (Konzum, 2015) and market share between 25 and 30% (AZTN, 2013). Konzum has three store formats, Konzum, Maxi Konzum and Super Konzum. In this paper format Super Konzum (hypermarket) will be analyzed. In Pickled and canned vegetables subcategory it has 444 facings on the retail shelves.

Figure 3 shows that the same SKUs are arranged in vertical blocks. How each segment is arranged will be explained using the segment of Pickles. The largest number of facings is taken up by the segment Pickles, 222 of 444, which makes its share of shelf 50%. Almost equal share of shelf is taken up by Paprika (16%) and Ajvar (15%), then Beetroot has 10%, Pepperoni 7% and Mixed Salad has only 1% share of shelf.

First block are private label Konzum's products K-plus and Standard. On the top-shelves are the smallest packages of 370ml; on the middle shelves, at the level of eyes, are 720 ml packages; and on the bottom shelves are large packages of 1700 and 2500 ml. The block of private label is followed by national branded products arranged in the same way – Zvijezda, Podravka and DoOra. Other segments are also arranged in the same way, first private label and after national branded products. Prices are increasing in the direction of consumers' movement, i.e. from left to the right side. Considering that the shelf is arranged according to the principle of vertical blocks, all brands, private and national, have the same shelf position. They are all positioned at the level of eyes, within reach, above the eyes, etc.



**Figure 3** Shelves of Pickled and canned vegetables in Super Konzum

Source: Internal data of Marinada d.o.o. (2015) company

What differentiates them is the number of facings, where private label K Plus has the most. Private labels are predominant in almost all segments taking up around 50% of the shelves. This is not surprising considering that in the first half of 2013 the share of private labels in the retail market was 22%, while in 2004 was only 5% (Sedlar, 2014). As a leader on the Croatian retail market, Konzum significantly impacts this growth due to the strong development of its own private labels, to which it gives considerable space on the shelf in most product categories, including this one. The other four national brands take up the rest of the shelves. One can also see that on the shelves there is small number of brands and almost all are domestic brands, except Vitaminka which tends to disappear from the shelves. One of the main reasons for this is that recipes for this product group are specific (specific for the region of former Yugoslavia). Manufacturers from e.g. Germany, have a different, sweeter recipe that is not in accordance with the wishes and needs of Croatian consumers, who are not used to their tastes so there is no significant competition from other countries (Marinada d.o.o., 2015).

At the moment of analysing this sub-category, all products on the shelf are without shelf ready packaging (SRP), i.e. retail ready packaging (RRP). In the beginning of the next season (September 2015), RRP will be applied for private label K-plus (Marinada d.o.o., 2015) and it is expected that very soon other products will apply this kind of secondary packaging as well.

### 2.1.2. Space management analysis of store shelves in Spar Hrvatska d.o.o.

Spar Hrvatska d.o.o. has opened 52 stores (Spar, 2015) and has less than 5% share of total retail

<sup>5</sup> Retail ready packaging (RRP) is a form of transit packaging designed not only for transportation purposes, but also to ease and facilitate the process of in-store replenishment (Dujak, Ferenčić, & Franjković, 2014)

sales in Croatia (AZTN, 2013). On the shelves in Spar there are 475 facings in the analyzed subcategory.

The shelves are arranged in a pattern that on the middle shelf (the level of the eyes) are national brands, while at the secondary positions (above the eyes, the height of the hand) is Spar's private label named S Budget (Figure 4). That suggest that private label is not in the main focus of the shelf, the focus is on national brands.

Products are individually placed in a large number of facings, e.g. in Beetroot segment, the whole level of shelf is one brand (DoOra, Podravka), and shelf is arranged in horizontal blocks. Smaller packages are on the highest shelf, while the largest packagings are at floor level.

When it comes to share of shelf by segments, once again, segment Pickles have the largest share of 32%. and Ajvar is the second largest segment with 21%. Segment Paprika has 17%, Beetroot 14% and Mixed salad has significant 10%. The smallest segment in Spar is Pepperoni with 7% share of shelf.



**Figure 4** Shelves of Pickled and canned vegetables in Spar

Source: Internal data of Marinada d.o.o. (2015) company

There are small number of national brands on the shelves, only four of them and private label. Private label is the leading brand in the shelf share, although very close in percentage are national brands Podravka and DoOra. The focus of this retail chain in this sub-category is on national brands or more expensive products. In accordance with Spar's strategy, there is no retail ready packaging on the shelves and for now there is no requirement for the coming season for RRP (Marinada d.o.o., 2015).

### 2.1.3. Space management analysis of store shelves in Kaufland Hrvatska k.d.

Kaufland Hrvatska k.d. is the retail chain owned by Schwarz Group, with 34 stores in Croatia (JaTrgovac, 2015a). In 2012 it was on the 4th place with a market share in Croatia between 5 and 10% (AZTN, 2013). It is interesting that in the category of retail format hypermarkets, Kaufland is stronger even than the market leader Konzum (Sedlar, 2014). Considering analysed retailers from this paper, Kaufland has a significantly higher number of facings in this subcategory - 1,821 facings.

The specific feature of shelves in Kaufland is that there are a large number of facings in all segments. Considering the shares of shelf for each segment, the situation is similar as in previous two retail chains. Going from the smallest to the segment with the largest number of facings, the order is following: Mixed salad (4%), Pepperoni (7%), Beetroot (12%), Ajvar (22%), Paprika (23%) and Pickles (32%).



**Figure 4** Shelves of Pickled and canned vegetables in Kaufland

Source: Internal data of Marinada d.o.o. (2015) company

In addition to standard position, products from the analysed subcategory were set in places that are not common – e.g., private label pickles were positioned with dried fruit (Figure 4). Almost the whole sub-category is arranged in a way that national brands are on the shelves at the level of hand, eyes and above the eyes, while private label products are placed on the floor, but in a significant number of facings. The shelf is mostly arranged in horizontal blocks.

It should be noted that the smallest share of private label is at segment of Ajvar where the predominant is national brand Podravka. The latter is interesting because Kaufland offers its consumers products at lower prices, and in this segment the largest share on the shelf is taken up by a national brand that is more expensive, but most likely due to its high turnover.

Majority of facings in Kaufland are private label, followed by Podravka and DoOra. One can notice slightly higher number of brands in relation to Spar and Konzum. Significant share of 12% is taken up by a manufacturer from Macedonia Dentina, which is not the case with the previous two retail chains. The price of Macedonian products is lower than the domestic products and Croatian consumers are less familiar with them. However, due to the strategy of Kaufland, these less familiar and less expensive products certainly have multiple roles on the shelf – to increase consumer's choice of cheaper products, while at the same time influence price reduction of national brands that are more expensive. This price reduction especially refers to higher prices in other retail chains of the same national brand products.

Unlike the previous two described retail chains, on these shelves in Kaufland, partial use of retail ready packaging is present.

#### 2.1.4. Space management analysis of store shelves in Lidl Hrvatska d.o.o.k.d.o.

With previously analysed retail chain Kaufland, Lidl Hrvatska d.o.o.k.d. is the second retail chain within the Schwarz Group and the only grocery discounter on the Croatian retail market. There are currently 86 stores in Croatia (JaTrgovac, 2015b), and its market share in the first half of 2013 was 8% (Sedlar, 2014). The essential characteristics of this type of retailer are a relatively small number of products in the range, varying from 600 to 1200, and private label is predominant on the shelves. Also, there is the presence of retail ready packaging on the shelves, and Lidl was the leader of the introduction of this type of secondary packaging on Croatian retail shelves. In this subcategory Lidl has 188 facings on the shelf, which is half the facings Konzum and Spar have.



**Figure 5** Shelves of Pickled and canned vegetables in Lidl  
Source: Internal data of Marinada d.o.o. (2015) company

As already mentioned, Lidl has significantly lower number of products, and thus number of facings compared to other retail chains, what can be seen on the shelves (Figure 5). What also is not the common case with other retail chains are different (sub)categories of products on the same shelf, e.g. tomato concentrate and ketchup on the same shelf as ajvar.

The leading segment in share of shelf in previous retail chains, Pickles, has the largest share in Lidl as well, but quite lower – 25%. Beetroot is the second largest with 22%, Ajvar has 21%, Paprika 19% and Pepperoni 13%. Segment Mixed salad is not present on the shelf.

The products are arranged in vertical blocks by brands, i.e. private labels. Lidl uses a specific type of presentation – all segments are in retail ready packaging and there are only three shelf levels (floor, middle shelf and the top shelf), but each level fits several commercial transport packages on each other, which resembles a warehouse.

Private label is almost entirely dominant in this sub-category of products. The only exception is segment of Ajvar where is present national brand Podravka, as the most famous in Croatia. Also, specifically for this subcategory is that when Lidl entered on the Croatian market, most private label products were from manufacturers from Germany and Hungary (contracting at central level), which has caused poor performance in sales (specific recipe in the Croatian market) and in recent years Lidl has turned to domestic manufacturers (Marinada d.o.o., 2015).

Like in all discount store retail formats, share of private label on the shelves is very high, 94%. The reason for this is the focus on the cheaper products, and generally such a strategy of discount retailers.

### 3. Discussion – comparison of analysed retail chains

In all analysed retail chains one can see that subcategory of Pickled and canned vegetables is managed according to the wishes and needs of their consumers and according to the company's strategy. Further will be summarized characteristics of space management of shelf in analysed sub-category in each retail chain.

In **Konzum** shelf is arranged in a way that the share of shelf is very similar to the share of sales in Croatia. When it comes to prices, it offers consumers A (Podravka, Zvijezda), B (Vitaminska,

Door) and C products (PL), and the shelf is arranged in a way of Opening Price Point<sup>6</sup> (OPP), starting with the lowest price in the left lower corner.

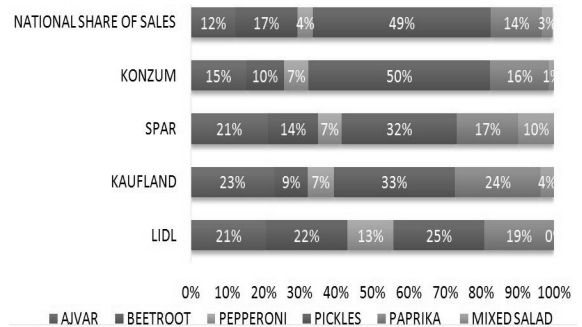
In **Spar**, unlike **Konzum**, products are not arranged vertically, but horizontally, and private label is placed on one shelf below eye level, while national brands are at the eye level. Private label is not in such a focus as it is in **Konzum**. Also, **Spar** offers consumers A (Podravka, Zvijezda), B (Droga, DoOra) and C products (PL), and in each segment starts with the lowest price, OPP.

**Kaufland** is specific because of the large number of facings in this sub-category, and the products are exposed in places that are not common, e.g., as in Figure 3 private labels pickles are on the shelf with dried fruit. A visible trend is exposure in retail ready packaging. The number of facings is created on the basis of data on total sales of sub-category. ABC principle is also used, although unlike the other retailers, there is slightly larger number of suppliers, especially suppliers of C products. Private label is mostly positioned below the eye level, but in a large number, and the shelf is arranged by the OPP principle.

**Lidl** is specific because of the small number of facings, and the products in this sub-category are mixed with other categories on the shelf. The prevailing share of shelf is taken up by private label, i.e. C products. On one hand, one can conclude that there is the largest mismatch with the needs of consumers, shares of shelf do not follow the shares of sales in Croatia. On the other hand, consumers who prefer **Lidl** are ready to have less choice, but lower prices.

To answer first research question, share of shelf space for each main segment in category Pickled and canned vegetables of selected retailers was analyzed, and then compared with sales shares on national level, Croatian market Graph 2. Analysed segments in chosen four retail chains mostly get the share of shelf which is in accordance to their share in sales in Croatia. Segment Pickles is the largest segment in all retail chains, although it gets lower share on shelf, even lower than its value share in sales (42 %, see Graph 1). Segment Mixed salad is the smallest segment everywhere, although it gets substantial shelf space in **Spar** and segment Pepperoni gets larger shelf space in **Lidl**, while other retail chains follow its national share of sales. Other segments, Beetroot, Ajvar and Paprika, exchange their shares, depend-

ing on the retail chain and somewhere they are above or below the share of sales in Croatia.



**Graph 2** Comparison of the share of shelf for segments by retail chain to the share of sales in Croatia

Source: Internal data of Marinada d.o.o. (2015) company and AC Nielsen (2006) data for Croatia, February/March 2015

It can be concluded that market share expressed in retail sales or retail turnover, is main criteria (although not only) for shelf space allocation on the segment level. And to implement this principle on the shelf, retailers usually use market share data for each segment – both from internal (POS data) and external sources (market research agency, manufacturers, etc.).

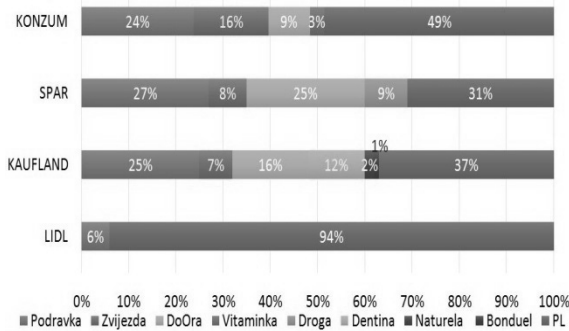
For the purpose of the second research question, shelf space allocation on brand level was examined to check if there are different criteria than in case of shelf space allocation on segment level.

From Graph 3 it can be seen that different retailers have different share of space for brands. Certainly, on brand level market share is also one of the most important criteria (as they usually have largest space on shelf for brands with highest market share – Podravka, Zvijezda and DoOra). But very high share is also given to their own private labels (from 31% to almost 94% of shelf space). As private labels are products with usually higher margin and other benefits for retailers, we can say that they have special treatment and constitute additional criteria on brand level.

Likewise, private labels for many consumers represent a better choice, i.e. a better price-quality ratio and bring greater value and a greater possibility of savings. Therefore, retail chains adapt consumers' wishes and needs, among other benefits for themselves. That private labels are becoming increasingly known among consumers, and even real competition to national brands, confirms the fact that almost half of the consumers buy private labels, 43% (Ban, 2013). It is estimated that in this category the percentage is even higher,

<sup>6</sup> The least costly line of a particular item (KamCity, 2015)

because it is impossible to make a significant differentiation in quality between private label and national brands (Marinada d.o.o., 2015).



**Graph 3** Comparison of the share of shelf by retail chain and brand  
Source: author's research

Different share of space for brands in selected retailers is also caused by different relations between retailer and manufacturer. Examples of improved relations that affects retailer's shelf space management are:

- manufacturer is provider of manufacturing services for retailer's private label, and therefore it also has privileged status for its own brand on retailers shelf (more space than it is its realistic market share),
- manufacturer and retailer are vertically connected (either based on ownership – same corporation, or based different contract relations – like franchising contracts),
- manufacturer offers additional promotional activities for its brands (both in-store and out-store activities) with aim of increase of sell out turnover (advantages for both retailers and manufacturer),
- favourable agreements affecting retailers margin also benefits positive shelf space management.

Overall larger space for category (more shelf space) could also be a reason for introducing additional brands and different structure of category regarding brands. With more brands retailer meets the needs and expectations of broader groups of consumers (example of Kaufland). But still, prevailing trend is a reduction in the number of suppliers, brands and products, and increased turnover. Turnover is increasing because only those who meet the criteria of the role categories are involved, while others would occupy the shelf space and lower efficiency, i.e. sales (Pavlek,

2011). This confirms the example of the retail chain Konzum which in 2012 had 16 different brands on its shelf in the analysed sub-category, while in 2015, there are 5 different brands. The number of suppliers has been reduced, but the turnover remains the same, or has a slight increase (Marinada d.o.o., 2015). Retailers have recognized that too many products create unnecessary additional costs, create unnecessary supply on products with poor sales, while also interfere the psychological process of buying at the point of sale. To keep assortment up to date with new consumer's needs and trend of decreasing supply chain costs, modern retailers use much more dynamic assortment – high rotation of SKU in assortment without changing the overall number of it.

## Conclusion

Based on the space management analysis of Croatian retailing, contemporary trends in the retail are evident, as well the impact of category management, which has led to the optimization of the required categories and products within it – especially in terms of shelf space management. This indicative study has shown that retailers in Croatia in sub-category of Pickled and canned vegetables use contemporary category management principles in extensive way, especially in shelf space management part. Although, they have their own specificities that arise from their own strategy of attracting consumers, retail format or their traditional approach (connected to their country or origin), contemporary retailers allocate shelf space to product segments and brands primarily according to their share of sales (or market share).

In the same time, they are aware of their horizontal position (their market share) and their vertical domination (highest power in food supply chain) and they adapt space management activities to their own interest especially in case of allocation of shelf space to brands, where their private label has privileged position, regardless of its much lower market share.

Additionally, relations between retailer and manufacturer could also significantly influence retailer's decisions regarding shelf space allocation – both in positive (increasing of shelf space) and negative way (decreasing of shelf space).

Some specific implications could be derived from research results:

- Retailers should primarily decide on shelf space allocation on segment level based on



market shares of certain segment that are recognized by consumers (through consumer decision tree method) to maximize sales and minimize consumer confusion in category;

- Manufacturers should recognize that in shelf space allocation on brand level, market share is not only criteria, and recognize development of relationships with retailers as opportunity for increasing its space on retailer's shelf;
- Manufacturers should be aware of dynamic aspects of retail assortment – decreasing of overall number of SKU, and high change rate in assortment. Therefore, they should base their growth strategies not only on adding new products in their assortment, but also on assortment reduction with the goal of optimization according to market and retail trends.

Understanding of principles and operations carried out by retailers will enable to the manufacturers and its brands to capture better position in the category, and possibly influence the category itself through better satisfaction of both retailers' and their own interests. At the same time, considerable benefits could be withdrawn for small and family owned retailers who could use some of basic category and space management principles – both for their merchandise presentation and for improving their bargaining power with their suppliers.

The main limitations of this research arise from limited number of observed retail chains. The second limitation is a lack of data about retailers' margins that could help us recognized some other factors influencing retailers' shelf space decisions.

Further research should be carried out in combination of in-depth interviews with retailers' category managers and data analysis through above mentioned retail shelf space management models and their calculations, with additional emphasis on individual SKU level of category **SM**

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Faculty of Economics. (2008, March 5). *A new approach to CRM*. Retrieved July 25, 2008, from <http://www.ef.uns.ac.rs/papers/acrm.html>

### ➔ **Article from an online periodical with DOI assigned**

Jovanov, N., & Boškov, T. A PHP project test-driven end to end. *Management Information Systems, 2* (2), 45-54. doi: 10.1108/06070565717821898.

### ➔ **Article from an online periodical without DOI assigned**

Online journal articles without a DOI require a URL.

Author, A. A., & Author, B. B. (Publication date). Title of article. *Title of Journal, volume number*. Retrieved from <http://www.anyaddress.com/full/url/>

Jovanov, N., & Boškov, T. A PHP project test-driven end to end. *Management Information Systems, 2* (2), 45-54. Retrieved from <http://www.ef.uns.ac.rs/mis/TestDriven.html>.

## **REFERENCE QUOTATIONS IN THE TEXT**

### ➔ **Quotations**

If a work is directly quoted from, then the author, year of publication and the page reference (preceded by “p.”) must be included. The quotation is introduced with an introductory phrase including the author's last name followed by publication date in parentheses.

According to Mirković (2001), “The use of data warehouses may be limited, especially if they contain confidential data” (p. 201).

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?

If the author is not named in the introductory phrase, the author's last name, publication year, and the page number in parentheses must be placed at the end of the quotation, e.g.

He stated, “The use of data warehouses may be limited,” but he did not fully explain the possible impact (Mirković, 2001, p. 201).

### ➔ Summary or paraphrase

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

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

### ➔ One author

Boškov (2005) compared the access range...

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

### ➔ When there are **two authors**, both names are always cited:

Another study (Mirković & Boškov, 2006) concluded that...

### ➔ If there are **three to five authors**, all authors must be cited the first time. For subsequent references, the first author's name will be cited, followed by “et al.”.

(Jovanov, Boškov, Perić, Boškov, & Strakić, 2004).

In subsequent citations, only the first author's name is used, followed by “et al.” in the introductory phrase or in parentheses:

According to Jovanov et al. (2004), further occurrences of the phenomenon tend to receive a much wider media coverage.

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

In “et al.”, “et” is not followed by a full stop.

### ➔ Six or more authors

The first author's last name followed by "et al." is used in the introductory phrase or in parentheses:

Yossarian et al. (2004) argued that...

... not relevant (Yossarian et al., 2001).



### ➔ **Unknown author**

If the work does not have an author, the source is cited by its title in the introductory phrase, or the first 1-2 words are placed in the parentheses. Book and report titles must be italicized or underlined, while titles of articles and chapters are placed in quotation marks:

A similar survey was conducted on a number of organizations employing database managers ("Limiting database access", 2005).

If work (such as a newspaper editorial) has no author, the first few words of the title are cited, followed by the year:

("The Objectives of Access Delegation," 2007)

**Note:** In the rare cases when the word "Anonymous" is used for the author, it is treated as the author's name (Anonymous, 2008). The name Anonymous must then be used as the author in the reference list.

### ➔ **Organization as an Author**

If the author is an organization or a government agency, the organization must be mentioned in the introductory phrase or in the parenthetical citation the first time the source is cited:

According to the Statistical Office of the Republic of Serbia (1978), ...

Also, the full name of corporate authors must be listed in the first reference, with an abbreviation in brackets. The abbreviated name will then be used for subsequent references:

The overview is limited to towns with 10,000 inhabitants and up (Statistical Office of the Republic of Serbia [SORS], 1978).

The list does not include schools that were listed as closed down in the previous statistical overview (SORS, 1978).

### ➔ **When citing more than one reference from the same author:**

(Bezjak, 1999, 2002)

➔ When several **used works by the same author were published in the same year**, they must be cited adding a, b, c, and so on, to the publication date:

(Griffith, 2002a, 2002b, 2004)

### ➔ **Two or more works in the same parentheses**

When two or more works are cited parenthetically, they must be cited in the same order as they appear in the reference list, separated by a semicolon.

(Bezjak, 1999; Griffith, 2004)

### ➔ **Two or more works by the same author in the same year**

If two or more sources used in the submission were published by the same author in the same year, the entries in the reference list must be ordered using lower-case letters (a, b, c...) with the year. Lower-case letters will also be used with the year in the in-text citation as well:

Survey results published in Theissen (2004a) show that...

➔ To **credit an author for discovering a work**, when you have not read the original:

Bergson's research (as cited in Mirković & Boškov, 2006)...

Here, Mirković & Boškov (2006) will appear in the reference list, while Bergson will not.

➔ When **citing more than one author**, the authors must be listed alphabetically:

(Britten, 2001; Sturlasson, 2002; Wasserwandt, 1997)

➔ When there is **no publication date**:

(Hessenberg, n.d.)

➔ **Page numbers must always be given for quotations:**

(Mirković & Boškov, 2006, p.12)

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

➔ **Referring to a specific part of a work:**

(Theissen, 2004a, chap. 3)

(Keaton, 1997, pp. 85-94)

➔ **Personal communications, including interviews, letters, memos, e-mails, and telephone conversations**, are cited as below. (These are *not* included in the reference list.)

(K. Ljubojević, personal communication, May 5, 2008).

## FOOTNOTES AND ENDNOTES

A few footnotes may be necessary when elaborating on an issue raised in the text, adding something that is in indirect connection, or providing supplementary technical information. Footnotes and endnotes are numbered with superscript Arabic numerals at the end of the sentence, like this.<sup>1</sup> Endnotes begin on a separate page, after the end of the text. However, Strategic Management journal **does not recommend the use of footnotes or endnotes.**

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