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## CONTENTS

### **5 Effective cost management and customer profitability measurement**

*Vesna Milićević, Bojan Ilić*

### **13 How the Australian government assists the building and construction industry to be socially responsible**

*Sonja Petrović-Lazarević, Violet Lazarević*

### **21 Application of multivariate analysis methods in ranking on the example of western Balkan countries**

*Milica Bulajić, Dragana Kragulj*

### **27 Communication methods in the city government G2C service**

*Djordje Mazunjanin, Zorica Bogdanović, Mirjana Despotović*

### **35 Organizational development of higher education and the competent model in the Bologna reform of studies**

*Tatjana Devjak, Srećko Devjak*

### **43 Effects of fiscal policy the maintenance of macroeconomic stability in Serbia in the period 2001 - 2007**

*Mihajlo Babin*

### **47 E-commerce, Slovenian attorneys and social responsibility – in search of a link**

*Dolores Modič, Malči Grivec*

### **57 Implementation of the adaptive system in electronic learning**

*Svetlana Jevremović*

### **63 Survive - to - Thrive**

*Jan Snoelj*

# Effective Cost Management and Customer Profitability Measurement

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*The paper shows the relationship between the effective cost management and the profitability measurements per customer (customer profitability), which is a more recent perception from the point of view of the company cost management, as well as, in the long run, from the point of view of the marketing management too, in the context of long-term customer relations management. We started from the complexity of the cost management and the role it plays in modern business. We also analysed the value-based management. The result of the research is the analysis and the presentation of the consequences of customer/user of services-based cost accounting and management.*

## 1. Introduction

An effective cost management is of great importance for modern organizations. It starts from the measurements and reporting on the company's products and services costs and helps the company use its resources efficiently to provide the products and services the customers or the consumers of services find valuable. Furthermore, cost management is observed in a broader sense – as a philosophy, as an attitude, and as a set of techniques that help create more value at lower costs.

In a nutshell, cost management is a philosophy of improvement, as it promotes the idea of a perpetual search for the ways to aid organizations to make right decisions the realization of which will result in more value for customers, at lower costs. The value for customers is measured by the price they are willing to pay, as well as by the extent to which they are satisfied with the company's products and services [1]. Efficient companies tend to use a minimum of scarce resources in order that their outputs satisfy the needs of their customers, with continual tendencies towards improvement. The constituents of non-profit organizations, among them those with a developed management practice, who manage costs successfully, do the evaluations by supporting the organizations that prefer monetary donations, dedicating their time and other resources to this job.

In order that the cost management be effective, it is necessary that it should promote a proactive attitude that, basically, the product and services costs largely depend on the managerial teams' decisions. The cost managers take an active part in decision making on the development and improvement of the product and on the costs reduction. Especially important here is the collaboration with the product/service managers responsible for the concrete products/services, and also

with the brand managers, due to the increasing importance of branding.

## 2. Cost management and modern business operations

Modern business operations start from the fact that cost management today incorporates a host of reliable management techniques whose implementation can successfully support the goals and the activities of the organization. These techniques can be implemented independently or jointly, as a support to managerial decision-making. In order that the new needs of management be satisfied, special care must be taken of the economy of their implementation and the simplicity of their modification. In the last years cost management is characterised by an increasing implementation of benchmarking.

Information on costs is important from the point of view of the business performance measurement, in making managerial decisions on the production portfolio, on the services structure, on the processes, on brands, on prices [2]. Management focuses upon three phases.

The initial phase of costs planning starts from the company goals, (in case of large corporations of the goals of business units, too) and identifies the means to achieve these goals. The plan orientations are summed up in the budgets expressed in money in terms of measurements. The budget is also important because of the managerial control, when the actual costs and the budget-planned costs have to be compared.

The cost control establishes the already set standards (such as standard costs and budgets) used to assess the performance. Next, the cost control reports on the discrepancies between the planned and real operations in order to highlight the discrepancy. It helps ascertain

the responsibility for any departures from the plan, which is then to be followed by a corrective activities. Thus, for example, the cause of significantly higher production costs per output unit may be related to inefficient work, excess material failure, defective equipment or inadequate production methods.

The cost management in making business decisions requires accurate and relevant data on costs and an analysis of timely information on costs in order that business decisions should be made. Especially important here is the role of cost accounting on the basis of more recent accounting methods. It is in this way that managers solve the problems, making their choices among the alternative courses of action. In practice, it means making a decision on whether the company will launch a new product or service, whether it will abandon some current products, whether it will accept some special order, whether it will outsource parts of the products so far manufactured in the company, whether it will replace the equipment, purchase the equipment or lease it, whether it will expand the production capacities, what marketing mix will be most appropriate, which methods of pricing will be implemented [3].

The research has shown that, in terms of cost control, the significant critical zones are the capital expenditures, material acquisition costs, manufacturing costs, costs of professional services (legal, accounting, auditing, banking services), of compensation, costs of supplies, advertizing costs, control and assessment costs, outsourcing costs (frequently the software development and maintenance, employee training, internal audit, property management), sales and marketing costs, insurance costs, research and developmet costs, downsizing costs.

From the point of view of management as a scientific discipline it is worthwhile pointing to the strategic importance of continual cost reduction programmes, instead of instantaneous reactions on unfavourable events. The top managers in the companies worldwide increasingly accept this attitude and decide that the cost discipline, in terms of the programmes of permanent cost reduction, should be the programme that may even become the core of the company competence. Practice has shown that businesses with successful programmes of permanent cost reduction may achieve as much as half of their increase in annual profit directly due to the cost reduction. Furthermore, and very important in the conditions of economic crisis, these businesses take less time to stabilize in the event of economic failure, or unfavourable conditions of business. The companies observing a strict cost discipline tend to adjust more

easily both in case of introducing new technologies in the area of production or services and in case of competition being suddenly sharper than before.

We distinguish among the four basic and well defined categories of cost reduction:

1. Elimination of waste, i.e., of unreasonable spending and redundance;
2. Implementation of the "best practices";
3. Introducing new technology when it is effective;
4. Creating virtual business operations via the Internet [3].

The companies that develop the programmes of permanent cost reductions have proved to first focus upon waste elimination and the best practice implementation as on the "two facets of the medal", which is normally achieved through technological changes that do not require high technologies.

The top management has to get an insight into how the efforts in cost reduction are brought into harmony with the corporate strategy, especially with the strategy of competitiveness. This is especially important from the standpoint of the employee motivation to work efficiently and to conduct a programme of permanent cost reduction.

In the field of cost management it is very important to manage the costs of services that usually have a large share in the overall cost structure. The modern economy of services is characterised by especially high costs of financial services, accounting services, administration services, then costs of advertizing, designing costs, construction costs, engineering consulting costs, costs of services on the basis of infromational technologies, costs of services related to legal counsel, logistics services costs, costs of marketing services, photocopying costs, printing costs, costs of services related to human resources, costs of services on the basis of the projects, costs of services related with property, costs of telecommunication services, travelling charges, storage services costs. It is necessary that a complete picture of total costs related to services be developed, but we should also find out which business units within a large corporation spend most on certain services. It is also important that the managers know the ratio between products costs and services costs for their company.

Also relevant is the *survivor analysis*. The survival principle was introduced by *G. Stigler* who maintained that efficient companies with relatively lower average costs would survive and prosper in time [4]. On the other

hand, inefficient firms with relatively higher average costs tend to break under the competition pressure and fail. This is the basis of the survivor analysis as a systematic study of output patterns in order to define classes of the company size or the factories that are relatively efficient in terms of sustaining their existing share in the industry output or increasing this share over time. Concretely, companies in one industry are classified by size and then the share of each size class in the overall production or the capacities of respective industry is calculated. In case the market share of one class decreases over time, it can be assumed that such a size of company or production capacity is relatively inefficient. In case the market share increases, it is assumed that that is the size of the company that results in relative efficiency and lower average costs. The survivor analysis can be used in the study of the characteristics of the economies of scope of the industries under consideration, what has already been successfully applied in the fields of the production of steel, the cement industry, in banking and in other industries. These studies dealing with surveying the "output/cost" ratio are especially useful from the point of view of competitiveness.

The survivor approach means a competitive market structure. Practice has shown that many a small manufacturing or service delivering firm adopted and implemented the strategy of product/service differentiation successfully and, with higher average costs (due to the production customization or personalized services) survived and became successful in business.

The prospects resulting from the engineering analysis of costs can be very important in managerial planning. It includes the calculation of the expected production costs on the basis of the production relations and the expected costs of necessary inputs. The engineering method of cost analysis is based on physical relations expressed in the production function for a certain product or company. An optimal combination of production inputs for any given output quantity is determined on the basis of knowledge of the manufacturing technology to be implemented.

The cost management is multidisciplinary; it includes both quantitative and qualitative aspects. It develops further both from the theoretical aspect and from the prospects of better solutions for the practice. The cost management is characterized by the challenges related to the company achieving better business results in the 21st century, which is also relevant for the organizations

in this country. This is especially important when it comes to the need for the increase in the efficiency of organizations and their stronger orientation towards placement their products and services on export markets.

The *cost-effectiveness analysis* compares alternative courses of action in achieving certain specific organizational goals, from the aspect of their costs and effectiveness. It aids managers to make an adequate choice among the alternatives, ensures that the selected activity course will earn good value for the money – higher than any other activity course and generally contributes to a more reasonable allocation and use of resources. Of specific importance is an adequate estimate of costs that must include both the real and the opportunity costs for each option. An adequate model is necessary to be designed that will anticipate the costs resulting from each of the alternatives, as well as the extent to which each option could aid the achievement of the goals. It is also necessary that the criteria, or the ranking rules be decided upon, so as to measure the costs and the effectivity and then make a choice. Strategically, this analysis is successfully applied in answering the crucial question from the cost management domain: "On condition the goal is given, which is the lowest cost of achieving the goal?"

### **3. Integrated approach to information**

The cost management is based on an integrated approach to business information. It normally recognizes the importance of basic economic information related to the costs, sales prices, the company income, profit, but also the information which is not essentially financial, such as information on quality, time of delivery, market share, customer satisfaction, where especially important from the aspect of management is the information on the critical factors of success. This is so because of the orientation towards achieving concrete long-term organizational advantages and business success, especially having in mind the need to introduce new technologies, innovate the current technologies and develop new products and services, to retain the present customers/users of services, or attract new ones in the context of *customer relationship management (CRM)*.

The managerial practice may allow that taking into account only the financial criteria in the process of cost management results in a strong tendency towards reducing all categories of costs, which may have a negative impact upon a future demand for the products/services, and result into both a decrease in

competitiveness due to inadequate non-price competitiveness factors, the smaller market share, and lower earnings from sales and profit. All these help us get an insight into the complexity of cost management in the conditions of turbulent environment and increased competition [5].

The managers of prosperous companies must understand the key concepts and terms of cost management and implement its methods and techniques in an affective manner. It is primarily necessary that they understand the complexity of the company business operations – the number and the diversity of the company's products/services, production processes/service delivery processes as well as the location, the distribution network, customer types. The complexity of any of these dimensions will affect the costs.

An important aspect of modern management is certainly its proactivity, orientation towards the future and respect for the necessity of change. Here cost management is linked to change management.

The firm generates costs when using a resource for some purpose. Costs are usually classed in groups of costs. Individual costs may be grouped in a number of different ways, therefore a group of costs can be defined, for example, according to the cost type (labour costs in one group, costs of material in another), according to the site they are incurred at (department 1, department 2), or according to the responsibility (manager 1, manager 2). Thus, for example, the costs of the assembly department or the costs of the product engineering department can be treated as separate groups of costs.

Accurate information on the product and service costs is important in strategic management, in planning and decision making. It is also indispensable in managerial operative control and in financial reports preparation.

Cost management also respects the specific features of service companies. Service firms usually have either little supplies or no supplies at all. This results in their cost system in this area being relatively simple, which is reflected on the information on costs.

The modern business prefers an integrative approach in the implementation of management tools in tracking and analysing the information important for the cost control. These tools may be classed into four groups: planning and budgeting tools, such as standard budgeting, capital budgeting, operational budgeting; tools for decision-making support, including

implementation of spreadsheets programmes, the turning point analysis, supply chain costs calculation, value chain analysis; tools for analysis on the basis of product cost accounting, such as traditional cost accounting, general cost allocation; more recent tools for business performance estimate, primarily the value based management, benchmarking, performance balanced scorecard.

#### **4. Strategic cost management**

A more recent approach in modern management, strategic management deals with the orientation towards permanent cost reduction simultaneously with the strengthening of the organizational strategic position. It especially respects the contribution of cost management to a successful definition the strategic goals, formulation and effective realization of the company strategy and increase in profitability. In the conditions of economic crisis or of economic recovery there is a need for a more accurate cost accounting and an expanded visibility of various cost categories of a concrete company. This is closely linked with a tendency to reduce total costs, improve the processes by a possible automation, standard setting and risk reduction.

Managers also wish to improve the reporting process. Interestingly, a large number of large and small companies, both manufacturing and service ones, make efforts to improve internal reporting on the issue of costs, to increase the reporting speed and develop more useful and more worthwhile reports.

The strategic system of cost management in the company develops strategic information, both financial and non-financial. It is aware of the importance of performance measures such as the income growth from sales and stocks, share price flow, dividend value growth, credit rating. The strategic measure of success include the market share, the product/service quality, development opportunities. The financial measures show the impact of the company's policies and procedures upon the current financial standing of the company, and, consequently, upon the current revenues for the shareholders.

Following the financial measures, the non-financial factors mirror the current and the prospective standing of the company measured from three additional views of the performance balanced scorecard [6]:

(1) customer's view – market share and market share growth, customer service, timely delivery, customer satisfaction, brand recognition, market position;

(2) of internal business processes view – high quality product, product innovations, growth in productivity, life cycle, waste reduction; and

(3) innovation and learning view – human resources development, manager's competence and integrity, ethics and corporate culture, education and training, innovation, new products, new methods of production.

Without strategic information the company would probably "stray" from the competition course, making strategically wrong production and marketing decisions, deciding in favour of wrong products and customers. Some consequences of the absence of strategic information are the following: decision making mainly based on intuition, ambiguities as regards the direction and goals of development, absence of a clear and favourable perception of the firm from the part of customers and suppliers, incorrect investment decisions, inadequate range of products, markets or production processes inconsistent with strategic goals, inability to conduct a correct benchmarking of competition, which results in the lack of knowledge on the more effective competition strategies, omission to identify the most profitable products, customers and markets.

Companies use cost management to support their strategic goals. The aim of cost management is to make it easier for the managers to make decisions offering them information on costs and other information on the process of strategic goals achievement. In the conditions of change in the business environment, the company's cost management system must be more dynamic in order to cope with both the fast-changing environment and the growing diversity of products and production processes for the purpose of facilitating the strategy implementation [5].

New challenges, from both the theoretical and practical aspects, confront cost management in the strategic sense, in terms of implementation of new technologies, especially high technologies, numerically controlled machines and robots, the consequences of which are a considerable reduction of labour share in the product costs structure. Similar is the case of electronic business costs.

## 5. Value based management

*Value-Based Management (VBM)* is an integrated managerial approach directed towards maximizing value for the shareholders. According to *M. Porter*, the competitive advantages can be understood only if the company is observed as a whole. The company performs a chain of activities in order to deliver value to

customers/users of services. A competitive advantage or disadvantage may result from any of the five primary activities (input logistics, business operations, output logistics, marketing and sales, servicing), or four secondary, or supporting activities (firm infrastructure, human resources management, development of technology, supplies) [7]. Together, these activities make up the generic value chain.

Observed from the macro aspect, the value chain of the company is part of a larger structure that includes the supplier value chain, the distribution channel value chain and the customer/user of services value chain. This points to a specific networking and important relationships stemming from the actual position of the organizational value chain in this context, which managers must take into consideration, especially in case of highly intensive interactions, for example in JIT (*just in time*) systems, which allow for the achievement of a lower level of stocks and supply costs, with the necessary high level of cooperation between the suppliers and customers and making use of vertical integration with the simultaneous independence of the company on the market.

Elimination of the activities that add little or no value for the customers reduces the resources consumption and allows for the focusing upon the activities that increase the customer satisfaction. Thus it is possible to see which activities may have little value for the end customers/users of services and which should be eliminated or reduced. A high value activity significantly increases the value of the product/service for the customers/users. Hence the product and service deliveries are high value adding activities. According to cost management, high value adding activities are those necessary to satisfy the customers' needs or expectations, to improve the product components, the activities that contribute to customer satisfaction, which are the critical steps in the business process and which are performed in order to solve or eliminate the quality related problems or the activities performed upon the request of the customer/user of service. On the other hand, low value adding activities waste time, resources or space in the company, while contributing little to meeting the customer/user of services needs. If these are eliminated, value for customers or customer satisfaction is reduced negligibly or remain unchanged. Moving parts in between the processes, waiting time, inefficient processes are the examples of low added value activities. This means that they can be eliminated by the manager without affecting the product or service form, convenience, or function. Such activities frequently result in waste and can be a consequence of inefficiency or errors in the course of the

process; they can be duplicated in another department, or be the activities adding unnecessary steps in the business process, or they may be responsible for producing an unnecessary or undesirable output [5].

## 6. Importance of customer based cost accounting

Modern cost management largely relies on the activity based costing. Contrary to traditional models, activity-based costing (ABC) calculates what in modern business makes up the "real" costs of products/services, as well as costs per customers, by allocating general costs not on the basis of scope, but on the basis of the required or accomplished activities. Traditional methods of cost accounting often tend to overestimate the high-scope products and underestimate the low-scope products [8].

In order that the activity-based cost management system be developed it is necessary that managers understand the interrelations among the resources, activities, and products or services in their company. Resources are consumed in the course of activities, while products and services are the results of the activities. Many of the resources used in business operations may be defined for certain products or services and identified as direct costs of materials or labour. The majority of indirect costs are indirectly related to the end products or services.

Since certain products require various activities, each of which consumes different quantities of resources, cost allocation should be pondered accordingly. The ABC has been in use since 1980's and today, at the beginning of the 21st century, it is the current system of costing/cost accounting.

In making business decisions, knowledge of real costs may help identify "profit makers" and "losers", highlight chances for improvement and compare investment alternatives.

It is important that the ABC "allocates" the costs of activities to the products and services via the activities conducted in order to finalize these products/services. Here we have a number of basic principles in the ABC system, from the point of view of the cost accounting itself.

In cost accounting per activities, indirect costs are allocated to activities via the cost activators, then the activities are factually linked to the cost objects, which supplies the managers with reliable information on costs.

With the increasing importance of customer satisfaction and with the strategies oriented towards capturing the market, the costs of marketing, sales, and distribution become significantly higher. Many of them are not related to certain products or production lines, but to individual customers/users of services, market segments and distribution channels [9].

The ABC allows for a more accurate allocation of indirect costs to the cost objects. Cost objects may be products, services, customers, users of services. The ABC allows for a segmentation to be made on the basis of real profitability and helps identify the value per customer more precisely. This is the first step towards the *activity-based management (ABM)*. The ABC does not assess the efficiency or productivity of the activities, although this is very important for the improvements in the organization to be made.

The abovementioned shows that focusing upon the essence of costing per activities, as a modern managerial approach to cost accounting, means allocating the costs of resources to the cost objects, such as, for example, products or services, based on activities performed in favour of the cost objects. It is important to say that the principal presumption of this approach to costs is that the company products or services are the results of the activities, and that the activities consume resources which in turn generate costs. The resource costs are allocated to the activities on the basis of the activities that use or consume resources or the costs of activities are allocated to cost objects, on the basis of the activities performed for the objects of costs. In allocating costs to the activities and later to cost objects, the ABC identifies the cause-effect or direct relations between the resource costs, the cost activators, activities, and objects of costs. It distributes the company indirect costs on cost objects identifying the resources and the activities, as well as their costs required for the output production.

The ABC and the ABM are from both the theoretical and the practical aspects primarily important in the field of calculating costs of the product, however, managers in numerous companies also find them very useful in determining the customer servicing costs as well as the basis for estimating the profitability of a particular customer or a chosen group of customers/users of services.

The initial information on the basis of activities used in the analysis of products/services of the company can be used to measure the contribution to the profitability of principal customers. Customer-based cost accounting



is an analysis of activity costs on each level directed to particular customer services. Combining the customer-based cost account with the income earned from these customers we come to the analysis of profitability per customer. Empirical research have shown that, in case of many companies, 10-20% their customers/users of services generate 80-90% of their total profit. On the other hand, some customers cause losses, often through numerous small-volume orders, therefore the costs of resources in servicing these customers: processing the orders, dispatching the goods etc. are higher than the income earned from them. A clear example are some retail chains oriented, after they have compared the prices, to discounts or promotions, or, in case of business customers, smaller firms. The analysis of profitability per customer identifies the activities of customer/user of services service and the cost activators. It determines the profitability of each customer or customer group. Here, the services for customers/users of services includes all the activities performed in order to sell the goods and satisfy the customers, including advertizing, invitation to buy, delivery, invoicing, after sales service.

It is essential that the customer profitability analysis identify the most profitable customers so that on the basis of this the managers can take steps to ensure that these customers remain loyal to the company in the future. On the other hand, the knowledge about the unprofitable customers allows for us to communicate with them in terms of reducing costs they cause, or the managers may decide to discontinue servicing these customers [8].

## **7. Customer based profitability management**

The customer based profitability analysis has proved to enable the managers to identify the most profitable customers, reduce costs for the customers for which the servicing costs are high, introduce new profitable products and services, abandon unprofitable products, services and customers, improve the customer service process, redirect the purchasing mix of customers towards the product/service lines with a higher profit margin, select the customer mix to which they will be oriented and select the type(s) of postsales services they will offer. A better understanding of the profitability of the present and the prospective customers may help the company increase the overall profit and become more competitive. This begins with the customer service cost analysis.

Not all customers request the same activities either prior to or after the sales. Frequent specific customer-related activities include, for example, the costs of processing the offer, the invoicing and collection costs, receivables costs, customer service costs, discount processing costs, storage of returned products costs, marketing and sales costs. The customer based cost analysis helps identify the activities and causes of customer serving costs prior to and upon the transaction, the costs of products excluded. Traditionally, these costs are hidden in customer support, marketing and sales functions.

Various activities often have different activators. Based on the activities and activators related to services in order that the transaction be concluded, the customer costs can be classed into several categories: costs per unit sold to customers (e.g., forwarding costs), costs per sales transaction (e.g., invoicing costs), costs of customer support regardless of the quantity of products sold (e.g., seller's travelling charges to visit the buyers), distribution channel costs for each channel the company uses to serve the customers (e.g., costs of regional storehouse to serve principal customers) and the costs of sales support that cannot be identified for one individual unit, customer or distribution channel.

It is important that the customer profitability analysis provide adequate information for an estimate of value per customer. The managers must further estimate the other relevant factors prior to defining the adequate activities for each customer. These facts refer to the customer's development potential, industry the customer operates in, a possible response to the changes in sales or service conditions, the importance to retain the company as a customer because of future sales references. It is also possible to quantify the *customer life-time value*. It is the current net value of all the anticipated profits earned from that particular customer.

The measurement of profitability and profitability per customer management on the basis of an activity-based profitability analysis is presented in Figure 1. The vertical axis shows the net margin achieved on the basis of sales to the customers as the difference between the net sales price (even after discounts) and production costs (measured by the ABC product cost accounting model) [modified according to 9, p.180]. The horizontal axis presents the costs of serving the customers, including the costs related to the offer, as well as to marketing, technical aspects, sales administration, related to services delivered to each individual customer, measured by the ABC customer cost accounting model.

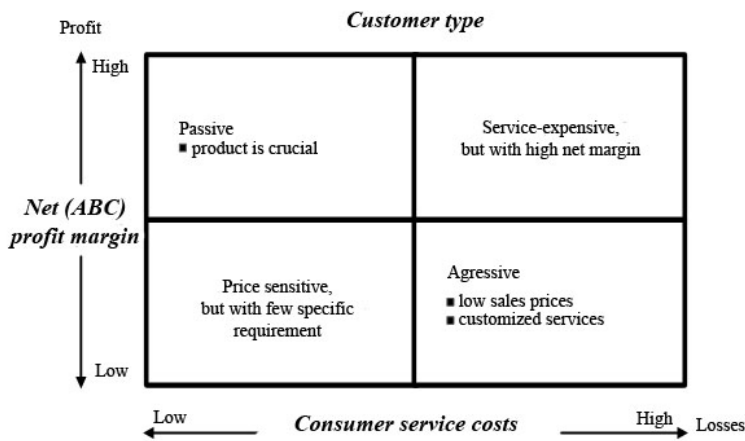


Figure 1. Customer-based profitability measurement and management

From the point of view of customer-based profitability management, it is important that the Figure presents four types of customers. In the bottom left square are the customers sensitive to prices, asking primarily low prices of products and discounts, therefore the net margins are low, the service costs are also low, therefore they can be profitable customers. Next, the upper right square shows the customers that count on the high costs of service (often due to considerable technical and sales support), however, they can also be profitable, if the net margin achieved by the sales to these customers compensates in excess the costs of all the necessary resources. The company especially values the customers in the upper left square, bringing high margins at low servicing costs. Managers must think about how to retain them despite competition threats. In the bottom right square are the customers bringing low margins and requiring high servicing costs, which is usually the result of ordering small quantities of customized products, with frequent non-standard requirements as regards the logistics and distribution. They prove to be a challenge to managers who have to take steps to increase their profitability.

## 8. Conclusion

The analysed relationship between the cost management and the customer/user of services profitability measurement means an integrated approach to business information, that is, incorporating the basic economic information referring to costs, sales prices, company income, profit, but also the information that is not expressed in terms of money, such as information on quality, time of delivery, market share, consumer satisfaction, where, from the management point of view, the information on critical success factors is most important.

It is essential that a customer profitability analysis be conducted, that should provide the managers with adequate information for customer value assessment. Next, they should evaluate other relevant factors prior to defining concrete activities, appropriate to each customer/user of services. These factors reflect the customer's development potential, a possible response to changes in terms of sales or service delivery; in case of corporate customers, the industry in which the customer operates and the importance that he remains the customer for the purpose of future sales references. It is also desirable that the current net value of all the estimated future profits from this customer be quantified.

On the basis of the above presented a conclusion can be drawn that the customer profitability measurement and management, as a more recent concept and practice, is complex and requires additional expert knowledge. It is important that it opens new prospects for managers in this country towards increasing the long-term business achievements and company competitiveness in both national and international settings.

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# How the Australian Government Assists the Building and Construction Industry to be Socially Responsible

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*At present every country in the world is trying to minimise the negative effects of the economic crisis. Australia seems to be suffering least. This may be because the Australian Government supports the building and construction industry (BCI), which plays a key role in economic growth. This paper highlights what activities the Australian Government has undertaken to maintain high performance of BCI by supporting sustainable development and corporate social responsibility (CSR). Supporting these may lead to greater benefits for organisations. These activities provide a framework for industry organisations and other governments to guide their CSR initiatives.*

## Introduction

At present, every country in the world is trying to find ways how to minimise negative effects of a recent global economic crisis. Many governments are undertaking the actions to help the banking system and industries relevant to the economic growth in order to begin the process of getting out of the economic predicament. Although the developing countries more than developed countries are suffering the effects of the economic crisis, it seems that of all developed countries the Australian economy is least suffering. One of the reasons may be that the Australian Government supports the industries that mostly contribute to the overall country economic growth. The support can have different forms from introducing and imposing legal actions, to financial package. The Australian Government supports the building and construction industry.

Building and construction industry influences the economic growth of every country for three reasons. Firstly, this industry significantly contributes to a growth of gross domestic product (Hillebrandt, 1985). Secondly, it is interacted with other industries while creating its products and services in a way that when there is a need to accelerate an economic growth, governments usually undertake measures that directly improve a BCI competitive advantage and through the BCI indirectly efficiency and effectiveness of other industries. Thirdly, the BCI mainly employs unskilled and semi-skilled workers influencing a rate of employment (Petrovic-Lazarevic, 2002).

One of the sources of competitive advantage today is corporate social responsibility (Rex and Baumann, 2007). It allows the organizations to attract more cus-

tomers than the other organisations (Luo and Bhattacharya, 2006) by acting ethically and taking care of the environment (Podnar and Golob, 2007).

This paper highlights what activities the Australian Government has undertaken to maintain high performance of building and construction industry from the point of view of supporting the corporate social responsibility. In this respect, the paper is divided as follows: after the literature review, an analysis of actions undertaken by the Australian federal government support the corporate social responsibility is presented. The paper ends with concluding remarks and future research directions.

The research findings are useful to the academics, practitioners and governments.

## 2. Literature review

### 2.1. Corporate social responsibility

Corporate Social Responsibility is becoming important to research because of its growing importance in influencing socially responsible behaviour (Blumenthal and Bergstrom, 2002). Organizations are increasingly implementing corporate social responsibility strategies and activities in order to obtain more value for the organization and in an effort to become more sustainable (Nalewaik and Venters, 2008; Orlitzky *et al.*, 2003; Walsh *et al.*, 2003).

Crowther (2000) defines corporations as a nexus of contracts, which means that organisations to survive should have dealings and relationships with many groups of people – different stakeholders. Organizations cater to and work with these stakeholders and their increasing awareness of the negative effects some firms have on

society has made corporate social responsibility more critical.

Globalisation is making competing for customers more challenging for organizations, therefore, they are constantly looking for ways to make their businesses stand out and differentiate themselves from competitors' (Middlemiss, 2002). Corporate social responsibility and how well it is managed can be a way to achieve this distinction in the eyes of the customers. Increasingly customers are looking for cues from organizational reputation, organizational transparency and environmental assets to determine the value of the organization.

Traditionally the social environment that an organization operated in was largely discarded from research (Hart, 1995). Now it is accepted that the social environment can have significant effects on the selection of business strategy and should be considered (Langerak, 1998). Organizations rely on their environments to be able to do business so they should invest in that relationship with the environment and corporate social responsibility can be a means for achieving that (Kitchin, 2003). Corporate social responsibility signals to the organizations' operating environment that the organization is committed to pursuing issues that their stakeholders care about. This is important because it indicates to stakeholders and society, which make up the social environment, that the organization wants to work with them and is beneficial to them.

Corporate social responsibility is often implemented because of the belief that it is in the firm's best interests (Waddock and Smith, 2000). Corporate social responsibility has been shown to lead to positive outcomes such as competitive advantage and better performance in the share market (Waddock and Smith, 2000). Increasingly corporate social responsibility is being seen as a significant strategic tool for competing in the global marketplace (Oyewole, 2001). Johri and Sahasakmontri (1998) argue that corporate social responsibility involves implementing approaches at all stages of the value chain that are aiming to decrease resource use, maximize efficiency and minimize negative impacts on the environment. Therefore, corporate social responsibility impacts on strategic considerations and should be integrated with the strategic decisions of an organization.

Undertaking socially responsible actions can be a source of competitive advantage for firms, particularly if their competition is not engaging in corporate social responsibility or is not doing it well (Rex and Baumann, 2007). This allows the organization to dif-

ferentiate itself from competitors by engaging in corporate social responsibility (Morris, 1997; Russo and Fouts, 1997). Podnar and Golob (2007) found that acting ethically and engaging in corporate social responsibility can lead to competitive advantage because of the way customers respond to these initiatives. Customers assess companies that engage in corporate social responsibility in a more positive light and tend to choose these companies over others who do not engage in corporate social responsibility (Podnar and Golob, 2007). In addition, customers experience more satisfaction from their experiences with firms that employ corporate social responsibility initiatives (Luo and Bhattacharya, 2006).

Corporate social responsibility activities implemented by an organization are seen as contributing to the future by ensuring that there is an environment within which to operate in the future (Middlemiss, 2002). This communicates to stakeholders the organizations' commitment to their business is enduring and that they are prepared to invest in creating long-term value for stakeholders which will benefit them both now and in the future. Therefore, practicing corporate social responsibility can indicate to the customers that the organization is committed to addressing issues that they are concerned with.

Bowen (1953) defines corporate social responsibility as a firm's duty to society to act in a way that was congruent with the goals and ideals of society at large. This can include any actions undertaken by the firm in order to lead to minimizing adverse effects on society or leading to socially favourable outcomes (Maignan, 2001). Corporate social responsibility activities usually do not lead to profits in the short-term for the organization, and because potential long-term benefits are difficult to predict and measure, many organizations are sceptical about the benefits of corporate social responsibility (Kitchin, 2003). Corporate social responsibility is about preventing harm from happening to organizational stakeholders as a result of the organizations' actions and trying to increase stakeholders' wellbeing (Mohr, Webb and Harris, 2001).

For Carrol (1991) corporate social responsibility relates to the responsibility of corporations along four dimensions: economic, legal, ethical and discretionary. The economic dimension describes the organizations responsibility to be profitable, and generate returns for their stakeholders. The legal dimension illustrates organisational responsibility to abide by legal standards and regulations. The ethical dimension refers to developing codes of ethics, ethical norms, and values such as

honesty particularly in relationships with customers and employees. The discretionary responsibility includes any voluntary or philanthropic deeds carried out by the organization to contribute to the good of society.

1. According to Petrovic-Lazarevic (2008), corporate social responsibility is a set of principles established by an organisation to meet societal expectations of appropriate business behaviour and achieve best practice through social benefits and sustainable competitive advantage. Accordingly, an organisation's corporate social responsibility may be estimated by analysing the following activities:
2. Company's moral obligation to be *good citizen* and to do *the right thing*
3. Sustainability or meeting the needs of the present without compromising the ability of future generations to meet their own needs
4. Reputation to justify corporate social responsibility initiatives to improving company's image
5. External aspects that relate to relationship with suppliers and commitment to local community protection and engagement
6. Internal aspects that cover relationship with employees and unions
7. Accountability and transparency that include commitment to reporting on corporate social responsibility.

The corporate social responsibility literature has revolved for many years around whether or not the organizations has a duty to society in terms of their impact on it or whether their only duty is to make money for their shareholders (Capaldi, 2005). This debate seems to be less important in current times because of the pressure in the market to take up corporate social responsibility and the societal-backlash towards companies like Enron and others (Capaldi, 2005; Middlemiss, 2002). Societal tolerance for companies who do everything possible for profit, no matter how detrimental it might be for the collective good of society, is waning (Kitchin, 2003).

During the last several decades of research in this area, corporate social responsibility has also undergone a lot of criticism as a concept (Quazi and O'Brien, 2000). It has been accused of being ill-defined (Preston and Post, 1975), lacking empirical support and theoretical integration (DeFillipi, 1982), and difficult to study objectively (Aupperle *et al.*, 1985).

Despite of criticism, corporate social responsibility has been widely accepted and applied by organisations. It has also been supported by the Government.

Since the building and construction industry differs from the other industries, in order to understand how the Government's support to this industry helps to overcome the negative effects of the global economic crisis, the characteristics of the industry are below explained in more details.

## 2.2. Building and construction industry

Building and construction industry has a reputation of the one of the oldest industries which can significantly contribute to the economic recovery of the country destroyed by political, economic and natural disaster (Petrovic-Lazarevic, 2005).

Building and construction industry has specific physical nature of the product, the structure of the industry and the organization of the building and construction process (Petrovic-Lazarevic, 2003).

The product of building and construction industry is mostly large and expensive and since it is located in a specific geographic area not generally transportable. Buildings and other structures are usually made to meet the requirements of each customer.

Three separate groups of people: client, designer and contractor are involved in a building process based on projects. Each project consists of several organizations subcontractors that operate with its own objectives and pressures. Project manager is in charge of overall costs, time and quality of actions undertaken. Building and construction industry firms consist of large organizations with usually over 20 employees and small to medium enterprises (with less than 20 employees). Large organisations take form of corporation indicating that corporate governance is an applied management style (Petrovic-Lazarevic, 2004).

Because of the influence of the building and construction industry to the Australian economy, the Australian Government is paying specific attention to support its wellbeing. This paper highlights what the Government has undertaken so far.

### What is done in Australia?

Following Petrovic-Lazarevic (2008) definition of corporate social responsibility, the Australian Government should influence the organisational sustainability and relationship between employers and unions; while the organisations themselves should take care of their reputation to justify corporate social responsibility initiatives to improving their image, relationship with suppliers and commitment to local

community protection and engagement, and accountability and transparency that include commitment to reporting on corporate social responsibility.

The influence on relationship between employers and unions pursues through the regulations. However, the governmental influence on the organisational sustainability is specifically applied. This is in particular related to the preservation of a healthy environment.

The United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 is understood as a key activity globally undertaken to support sustainability (International Environmental Law and Policy Series, 1993). The Conference pointed to the relevance of governments participants of the Conference, to establish a national strategy for sustainable development. It further required to integrate “environment and development at the policy, planning and management levels; provide an effective legal and regulatory framework; make effective use of economic instruments and market and other instruments; and establish systems for integrated environmental and economic accounting” (International Environmental Law and Policy Series, 1993, Agenda 21:199).

Australia is an example of a few countries whose Government has taken activities to introduce more systematic consideration of the environment prior to the Rio Conference. In 1989 the Australian Government has initiated a National Strategy for Ecologically Sustainable Development (Houghton, 1998). The aim of the Strategy was to *ensure that sustainable economic, social and environmental developments were achieved by satisfying the needs of the present, without compromising the ability of future generations to meet their needs* (Houghton, 1998:1).

The ISO 9001 New Quality Standards has been applied in Australia. The Certification to an ISO 9001 standard confirms that formalized business processes are being applied, thus are used as a marketing tool. However, the Standards do not cover the issues relevant to the sustainability or maintenance and preservation of a healthy environment.

Australia is made of two national territories and six states. For the purpose of this paper we have drew attention to what has been done for the building and construction industry mostly in Queensland. The reason to choose Queensland was that we have had an immediate access to the real source of actions undertaken, and have interviewed the person

who seemed to be the most eligible to providing the right information not only for Queensland, but Australia as well.

Queensland has established *the* Integrated Planning Act (1999) to protect environment. As a result, every development approval has to be in accordance with the Integrated Planning Act. Before the Integrated Planning Act, development approval was subject to different building related acts. For example, Standard Building Law existed for building work to be designed and constructed in accordance with the structural and other standards; the Environmental Protection Act ensured for environmentally relevant activities were established to minimise *the risk of environmental harm occurring* (Integrated Planning Act, 1999: 81). With the Integrated Planning Act the common rules were introduced and demarcations between building control matter, planning matter or an environmental authority matter was made clear.

Now the development approval goes through the local governments. Thus, builder’s tender must be in accordance with the Integrated Planning Act. For a small business, it is a common knowledge that developers transfer environment regulations to builders to fulfil. In big companies, however, environmental divisions usually exist to ensure activities are undertaken on current environmental topics and relevant information about it is provided.

When it comes to public work greater than \$250,000.00, building contractors from Queensland, Victoria and New South Wales must satisfy criteria for environmental performance. This is done through the PQC Certificate of Registration (Prequalification PQC, 2003). PQC Certificate of Registration (P=pretender; Q=qualification; C=criteria) includes various systems in place such as Environmental Management Standard and quality management related systems. The Environmental Management Standard (ISO 14001 EMS) indicates the environmental responsibility. It covers financial, technical, safety and environment criteria that have to be satisfied and submitted with a tender. It also implies the application of sustainability practices in an effort to help future generations meet their needs (Petrovic-Lazarevic, 2009). Further, the environment criteria are related to health and safety.

Australian standards AS/NZS 4804:2001, occupational, health and safety management systems and AS/NZS/ISO 14001:2004 EMS, are closely related; both are government endorsed standards designed to

guide organizations in establishing healthy working environments, and subsequently providing a framework for the application of metrics to measures, evaluate and improve performance. However, they are not equally applied all over Australia. Hence, state and federal regulations of occupational, health and safety measures differ. They need to be rectified in order to improve the industry's occupational, health and safety performance (Petrovic-Lazarevic et al, 2007). There is also a need to improve sub-contractors safety and have intensified on-going government, building and construction industry and union communication and collaboration, at both state and federal levels (Cole, 2003). At present a significant difference in legislature between the states exists; there is no national cohesiveness concerning occupational, health and safety; and the trust between industry management and the builders' unions is low (Petrovic-Lazarevic, 2009).

Further, it has been researched and found that the tripartite communication (government, industry, union) needs to be implemented in the Australian building and construction industry (Petrovic-Lazarevic, 2009). The federal government should take actions by setting unified national occupational, health and safety policy guidelines for the states. The industry should pursue occupational, health and safety measures with clear responsibility and accountability for both managers and workers, and implementation of on-going occupational, health and safety training and education. The role of the union would be to lead dialogue with government and industry in the development of detailed occupational, health and safety strategies.

In accordance with the Rio Conference 1992, the Sydney Olympic Games 2002 were proclaimed as *green games*. That is, building companies that were involved with building Olympic Games objects had to satisfy criteria relevant to Environmental Management. The Green Building Council Australia was established in 2002, for *encouraging the adoption of green building practices... by promoting green building programs, technologies, design practices and operations as well as the integration of green building initiatives into mainstream design, construction and operation of building* (Green Building Council Australia, 2002: 1).

Additional effort that the Australian Government has done in order to raise national awareness of sustainability was the proclamation of 2004 as the Year of the Built Environment across Australia (Built Environment - Curriculum Context, 2004). It was along with the request of Rio Conference 1992 to establish a national strategy for sustainable development.

Finally, to maintain and improve the quality of life by protection of natural resources, fostering resource-efficiency (General Environment, 2008), and to avoid preventable illnesses which are directly caused by environmental factors (World Health Organization, 2009) such as exposures to physical, chemical and biological risk factors – The National Association of Testing Authorities (NATA, 2005) has been established. NATA is Australia's national laboratory accreditation authority *that recognizes and promotes facilities competent in specific types of testing, measurement, inspection and calibration* (NATA, 2005: 1). It operates through the Environmental Management Standard, quality management, occupational, health and safety measures. It prevents use of material dangerous both for humans and environment. For example, soil sulphate does not directly influence human but through environment it does.

## Conclusions

After the United Nations Conference held in Rio in 1999, the Australian government is paying a significant attention to provide framework for the Australian building and construction industry organisations to be socially responsible. Apart of introduction of Integrated Planning Act in 1999, declaration of Sydney Green Games in 2003, proclamation of year as 2004 as a Year of the Built Environment across Australia, the PQC Certificate of Registration for public work, and NATA - it seems the Government still has some additional work to do in terms of occupational, health and safety regulations. All of that points to the Australian Government determination to support corporate social responsibility of organisations in the building and construction industry.

It remains to the organisations to further invest in their relationship with the environment through corporate social responsibility as being indicated by Kitchin (2003). By undertaking socially responsible actions corporations have higher chances to gain competitive advantage; thus supporting Rex and Baumann's (2007) statement.

With the Australian building and construction industry corporations maintaining and further developing their business, it seems there is more chance to minimise negative effects of the global economic crisis.

Further research should concentrate to measure the influence of corporate social responsibility on business performance of building and construction industry corporations.

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# Application of Multivariate Analysis Methods in Ranking of the Example of Western Balkan Countries

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*The aim of the paper is to analyze the regional integration processes in Western Balkan Countries (CEFTA) and their economical and political objectives and results. The European Union association processes for the countries of Western Balkan means the performance of numerous economical and political reforms in these countries, as well as the acceptance of the principles embraced in the European Union countries. Western Balkan countries have a lot of predefined goals in front of them to be achieved, with more or less success and with great support from different European Union agencies and institutions. On the basis of the estimate of the extent to which the predefined standards are adopted, the countries are progressing on their path towards „Europe“.*

*The data on economic flows in Western Balkan countries will be observed and analyzed in this paper. The data on achieved macroeconomic goals in observed countries, for the five year time period (from the year 2001 to 2005) will be used as the basis for their ranking. Multivariate statistical analysis method used in the ranking will be the I-distance. As the analysis will be based on a great number of variables, the step preceding I-distance determination will be the principal component analysis. The obtained I-distance value can be considered as the measure of the achieved degree in the transition process.*

*The data obtained in this analysis will be compared to those obtained in a similar analysis conducted for these same countries, however, for the period from 2000 to 2003. The changes in the ranks for the countries in the two analyses can be observed as the indicator of dynamics changes in economies of the Western Balkan countries.*

## 1. Introduction

The integration into the European Union is the major objective for the Western Balkan countries, and in order that this be achieved, it is necessary that these countries conduct economic and political reforms and adopt the basic economic principles embraced by the European Union. The preparations for the accession of these countries into the European structure is becoming the major priority of the European Union. The path the Western Balkan countries follow in creating and joining other democratic market economies leads via the closer regional integration and the membership in the CEFTA Agreement – the integrated multilateral agreement on free trade in Southeastern Europe, the so-called CEFTA 2006. Originally, the CEFTA (the Central European Free Trade agreement) defined the agreement among the Central European countries, however today, it is the agreement that defines the integrated zone of free trade in South-East Europe. Today, the CEFTA is the trade agreement concluded among Albania, Bosnia and Herzegovina, Macedonia, Moldova, Serbia, UNMIK on behalf of Kosovo and Metohija, Croatia and Montenegro.

## 2. The integrated free trade zone agreement

The CEFTA was concluded by Poland, Hungary and Czechoslovakia, and at one time the CEFTA members

were also Slovenia, Romania and Bulgaria. The expansion of the European Union in 2004 and 2007 resulted in Poland, Hungary, the Czech Republic, Slovakia, Slovenia, Romania and Bulgaria abandoning this form of trade integration. The creation of the regional zone of free trade should aid the Western Balkan countries accomplish their political and economic objectives in a much easier way. The political objectives are reflected, primarily, in the possibility to fasten the process of integration into the European Union as well as integration into the international trade system. The economic goals are likewise numerous, the outstanding among them being: improving the regional cooperation, further liberalization and facilitation of trade in the region, raising the level of harmonization and improving transparency in business operations, reducing regional differences in the economic development of some economies in the region, attracting foreign direct investments into the Western European countries, etc. Regardless of the resistance to a closer regional cooperation evident among the Western Balkan countries, the majority agree that the implementation of a multilateral agreement on free trade in South-Eastern Europe will foster the economic growth of the region and accelerate the process of integration of these countries into the European Union. The CEFTA 2006 Agreement offers vast opportunities and advantages to the countries in the region. The common

market that has so far operated on the basis of 31 bilateral free trade agreements the countries in the region concluded between each other in the past years, turns into an integrated Agreement characterised by [4]:

- Further liberalization and cancellation of any quantitative limitations (with the exemption of armament and military equipment);
- The non-discrimination principle (which means that all the products are entitled to equal treatment);
- The principle of origin (which provides that the CEFTA product is treated as domestic when exported to export markets);
- Introduction of diagonal cummulation (meaning that the products manufactured in one member country of the Agreement are taken as domestic products, regardless of whether they are partially or fully manufactured in that respective country);
- The protection and compensation measures are defined in accordance with the World Trade Organization and national legislative regulations.

### 3. Economic features of the south-eastern Europe region

It is for quite a long time, the past fifteen years, that the SEC have been subjected to transitional changes in the European integration process. In this sense, they have created a market structure in their economies, they conduct structural and institutional reforms and strive for a macroeconomic stability. Four macroeconomic indicators are most frequently stressed in both the positive and the normative economies as most important in the assessment of the national economy progress:

1. A steady growth of the national scope of production;
2. A low inflation rate;
3. A high employment rate; and
4. A balanced balance of payment.

In order that the above quoted objectives be achieved a number of macroeconomic instruments is implemented. They offer the economic policy creators the opportunity to guide the economic trends in a desired direction. The basic macroeconomic instruments are: an active budget and tax policy, the crediting-monetary policy, the policy of income and prices and the international economic policy.

Each national economy, especially in the transition countries is faced with the problems of defining the economic policy and goals prioritizing. The Western Balkan countries are very similar in their features. These are small scope economies, insufficiently competitive due to an inadequate adjustment to the European and international standards and norms, with the trade balance and budget deficits and a certain, somewhere high, inflation rate, and especially high unemployment rate. They are characterized by an unsatisfactory infrastructure, the working capital is scarce, the grey economy share is high, the standard of living is rather poor.

The SEC macroeconomic indicators are presented in Table 1. The data are shown for the CEFTA member countries (Kosovo not included) for a five-year period, from 2001 to 2005, and on the following macroeconomic indicators:

	Albania	B&H	Croatia	Macedonia	Moldova	Montenegro	Serbia
<b>GNP01</b>	6.50	4.50	3.80	-4.10	6.10	-0.20	4.80
<b>GNP02</b>	4.70	3.80	5.20	0.90	7.80	1.70	4.20
<b>GNP03</b>	6.00	3.30	4.50	2.80	6.60	2.30	2.40
<b>GNP04</b>	6.00	6.00	3.80	4.10	7.30	3.70	8.40
<b>GNP05</b>	5.50	5.50	4.30	4.00	7.10	4.10	6.20
<b>IRC01</b>	3.50	1.90	4.90	5.50	9.80	28.00	91.80
<b>IRC02</b>	2.10	-0.20	2.20	2.30	5.30	9.50	19.50
<b>IRC03</b>	3.30	1.00	1.50	1.10	11.70	6.70	11.70
<b>IRC04</b>	2.20	0.70	2.10	-0.40	12.50	4.30	10.10
<b>IRC05</b>	2.00	3.60	3.30	0.50	13.50	1.80	16.50
<b>URC01</b>	14.60	42.70	22.30	30.50	1.70	19.50	12.20
<b>URC02</b>	15.88	42.00	22.50	31.90	6.80	21.60	13.20
<b>URC03</b>	15.00	42.00	19.50	36.70	7.90	22.90	14.60
<b>URC04</b>	14.60	43.10	13.80	37.00	8.10	22.40	18.50
<b>URC05</b>	14.20	44.10	12.70	37.30	7.30	17.00	20.80
<b>BUDBAL01</b>	-7.90	-5.80	-6.50	-7.20	-0.50	.	-1.40
<b>BUDBAL02</b>	-6.60	-4.00	-5.20	-5.70	-2.00	1.93	-4.00
<b>BUDBAL03</b>	-4.90	-2.20	-4.60	-1.10	0.20	3.16	-2.70
<b>BUDBAL04</b>	-4.90	-0.60	-4.90	0.00	0.40	2.10	-0.30
<b>BUDBAL05</b>	-3.80	0.90	-4.10	.	-0.70	3.10	2.00

**GNP** – the gross national product (the rate of change compared to the previous year);

**URC** – the unemployment rate (percentage of working age population);

**BUDBAL** – the budget balance (the gross national income percentage).

Table 1. *Macroeconomic indicators for the CEFTA member countries*

Although rather similar to one another, the economies of the observed countries do reveal some differences. In order that these be observed and presented and in order that the joint impact of the observed indicators upon the transition processes and economic growth be highlighted, a ranking of the countries was conducted using the square I-distance [1]. This statistical method is based on the need to establish a relation between/among the entities compared and for which the values of a number of indicators are given, all in the easiest possible way. In order to avoid a redundancy in the data and eliminate a mutual correlation of the characteristics observed, the first step in the analysis was the data reduction.

The technique implemented to examine the correlation between the variables and to eliminate the redundancy, besides the factor analysis, is the principal components analysis (PCA) [2]. The original data matrix is reduced in that the number of variables describing the unit for observation is reduced. The new variables are the principal components (PC), each PC representing the entire group of (highly intercorrelated) variables. Each unit of observation is then assigned its value for each principal component (factor scores). The new matrix still contains nearly all non-redundant information included in the original matrix. The principal components are distinguished as linear combinations of the original variables and are not mutually correlated. As many principal components can be distinguished as there are original variables, however, the analysis most frequently retains a smaller number in which a majority of original variance is contained. The principal components are arranged according to the falling percentage of variance they contain.

### 5. I-distance application in SEC countries ranking

In the analysis presented in this paper, and on the basis of 18 indicators from Table 1 (the budget balance data for the years 2001 and 2005 were not complete, therefore these variables were not included in the analysis), 4 main components are distinguished and retained, thus including the total of 96 percent of the original variance. The impact of each of the variables included in the analysis upon an individual specified principal component may be observed in the matrix of rotated factor

loading. The elements of this matrix are the coefficients of correlation between the original variables and the principal components retained in the analysis. The values of the matrix elements, higher in absolute values, signify a higher extent of the variable's impact upon the principal component.

On the basis of matrix of rotated factor loading for the data described and analysed in this paper, presented in Table 2, a conclusion can be drawn that in the first principal component, **PC1**, the unemployment rate indicator impact is predominant. The second main component **PC2** is dominantly affected by the indicators on the gross national product data, while the **PC3** is predominantly affected by the inflation indicators. The predominant impact upon the fourth principal component **PC4** is the one of the budget balance indicators (**BUDGBAL**).

	Component			
	1	2	3	4
<b>BDP01</b>	-.355	<b>.733</b>	-.096	-.361
<b>BDP02</b>	-.526	<b>.745</b>	-.262	-.183
<b>BDP03</b>	-.547	.461	<b>-.621</b>	-.269
<b>BDP04</b>	-.070	<b>.882</b>	.420	-.098
<b>BDP05</b>	-.235	<b>.964</b>	.075	.024
<b>KSI01</b>	-.116	.191	<b>.967</b>	.076
<b>KSI02</b>	-.271	.147	<b>.922</b>	.220
<b>KSI03</b>	-.523	<b>.543</b>	.502	.419
<b>KSI04</b>	-.557	<b>.653</b>	.357	.344
<b>KSI05</b>	-.299	<b>.744</b>	.543	.108
<b>KSN01</b>	<b>.895</b>	-.321	-.193	-.126
<b>KSN02</b>	<b>.903</b>	-.309	-.239	-.057
<b>KSN03</b>	<b>.931</b>	-.314	-.173	.041
<b>KSN04</b>	<b>.973</b>	-.194	-.038	.098
<b>KSN05</b>	<b>.991</b>	-.086	.019	-.010
<b>BUDBIL02</b>	-.193	-.079	.088	<b>.902</b>
<b>BUDBIL03</b>	-.011	-.138	.035	<b>.988</b>
<b>BUDBIL04</b>	.244	.076	.277	<b>.917</b>

Table 2. The factor loading matrix

The values of linear combinations (scores) for the countries subject to this analysis are calculated for each principal component. The values of the scores are presented in Table 3.

	<b>Albania</b>	<b>B&amp;H</b>	<b>Croatia</b>	<b>Macedonia</b>	<b>Moldova</b>	<b>Montenegro</b>	<b>Serbia</b>
<b>PC 1.</b>	-0.62391	1.8154	-0.64151	0.87862	-0.99295	-0.37706	-0.0586
<b>PC 2.</b>	-0.00443	0.77483	-0.75765	-0.98362	1.43525	-1.15152	0.68713
<b>PC 3.</b>	-0.53567	-0.62875	-0.40962	-0.00204	-0.74846	0.19068	2.13387
<b>PC 4.</b>	-1.21536	0.00713	-1.03228	0.0618	0.91542	1.58492	-0.32163

Table 3. Scores for the principal components

The scores obtained in this step of the analysis served as basis for determining the value of the square I-distance for each country observed. The final result of this step is the ranking list presented in Table 4. The appropriate values of the I-distance are given in this same table. Both steps of the analysis described are conducted within the statistics package SPSS [6].

The obtained I-distance values represent the “measure” of similarities and differences between the countries observed, on the basis of the economic indicators presented in Table 1. The I-distance can also be viewed as an indicator of the transition level achieved. On the basis of the occasional sharp rise of the distance it is clear that the countries are classed into three groups. The lowest value of the distance is in the case of Croatia, followed by Albania. These two countries reveal a significantly lower value of I-distance compared to the other countries included in the analysis. Macedonia and Montenegro are characterized by the average I-distance values, whereas Moldovaa, Bosnia and Herzegovina and Serbia bottom the list, which indicates their lagging in the transitional processes.

Rank	Country	I-distance
1.	Croatia	0.42
2.	Albania	1.42
3.	Macedonia	5.69
4.	Montenegro	8.52
5.	Moldova	10.44
6.	Bosnia and Herzegovina	12.91
7.	Serbia	13.59

Table 4. *The ranking of the countries (2001-2005)*

An analysis similar to the one presented in this paper and based on the analogue indicators for the same region and the four-year period, from 200 to 2003 is described in [5]. The table with the ranks and I-distance values for the countries observed in that analysis is shown in Table 5. The comparison of the data from Table 4 with those from the Table 5 allows for an insight into the dynamics of the political and economic changes, expressed in the values of the observed macroeconomic indicators in the observed countries of the region.

Rank	Country	I-distance
1.	Bulgaria	1.13
2.	Romania	2.91
3.	Albania	3.49
4.	Serbia and Montenegro	4.74
5.	Croatia	5.16
6.	Bosnia & Hercegovina	5.25
7.	Macedonia	5.33

Tabela 5. [5] *Rang lista zemalja (2000-2003)*

Bulgaria and Romania have been the members of the EU since 2007, Serbia and Montenegro became two separate independent countries (2006), and the sequence in the ranking lists based on the square I-distance is changed. Macedonia, the last in the 2004 ranking, is now positioned immediately following Croatia and Albania, while Serbia is at the bottom of the list in 2007. On the basis of the above quoted changes we can draw the conclusion that Croatia and Macedonia had an “accelerated” transition path; Montenegro followed the pace it had while it was one country with Serbia, whereas Serbia slowed down its processes and, together with Bosnia and Herzegovina, came bottom of the list of the observed countries of the region.

The leading position of Bulgaria and Romania in the list in Table 5 and the fact that in the meantime these two countries became members of the European Union, as well as the high position of Croatia on the list in Table 4 may only highlight the importance of a successful conduct of economic reforms in the transition countries, accessing candidates for the European union.

## 6. The development prospects of the SECs region

With the establishment of the macroeconomic stability and the market economy, the SEC region that is a vast market of 55 million people is becoming all the more interesting for foreign investors, which will improve the economic structure of those countries as well as their economic growth. The new, integrated multilateral agreement helps create a common legal framework for investing into this region. The comparative advantages of this region are tourism and major lines of communication (transport). The largest foreign direct investments are realized in the industries of telecommunications, textile and leather, beer, tobacco, soft beverages, food and in the banking sectors. The region is expected to become an investment area for industries specialized in the production of machinery, equipment and automobile parts. Similarly, an increase in foreign direct investments is anticipated in the industries of food processing, tourism, construction works (infrastructure, communications, roads, railways, ...), public companies acquisition (electric power supply, oil, ...) and in building new towns. The evident problems are the FDI revenues being generally concentrated within the most attractive sectors as well as the scarcity of greenfield investments. The inflow of foreign direct investments in this region is mainly the consequence of the privatization process.

The free trade zone of the Western Balkans is expected to earn numerous favourable economic and political ef-

fects upon the economies of the countries of the region. The outstanding among them are the following: the free flow of goods, people, capital, and services among the countries of the region; the increase in the scope of exchange among the countries of the region and improved exports and imports; the increase in the productivity and efficiency of their economies due to higher competition; the improvement of production cooperation among the countries in the region towards the larger placements on the third markets; taking all the advantages of the extended scope of economy; attracting foreign direct investments, especially greenfield investments; fostering investments among the countries in the region and also joint investments of these countries in third countries; a considerably easier and less expensive customers' access to a higher quality products; harmonization of legislation in these countries; a prompter accession to the EU and the WTO (for the non-member countries – Bosnia and Herzegovina, Serbia and Montenegro); the political stability in the region and positive results concerning the safety of the Balkans, etc. [9]

## 7. Conclusion

Similar in characteristics as well as in goals, the transition processes under way in the CEFTA member countries, however, do reveal differences. The analysis described in this paper was meant to highlight these. It is important to get a deep insight into the political processes going on in these countries, in addition to the economic ones, as their impact can by no means be neglected. The European Union strongly supports the countries of the region, both in their individual efforts on the transition path and in the regional relations.

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# Communication Methods in the City Government G2C Service

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*The subject of work is the analysis of the communication between the government and the citizens in the e-service of the local government. Special attention is paid to the specific definition of the city e-government as a set of interactive services adjusted to the citizens' needs. The basic features of this concept are shown and the levels of service from the quality aspect of the service are identified. Special attention, too, is devoted to the interaction of varied communication methods into a unique, efficient e-government system of the City of Belgrade.*

## I. Introduction

The reform and the modernization of the state administration based on a widespread implementation of information-communication technology (ICT) is one of key elements of the overall transition of Serbia into a modern information society. The ICT prove to be broadly resourceful as regards the modernization of the state administration and the improvement of the services it offers to the public. The introduction of modern information systems improves the quality of the services as well as the efficiency, transparency, responsibility and effectiveness of the administration's service. The modern communication infrastructure allows for the free flow of information among the government agencies as well as ensure the citizens and the economy a higher quality access to services at lower costs.

The modernization of state administration means a radical change of the traditional manner in which administrative processes within the state are conducted. This change in turn means that the citizens need not be physically present, but may receive information or do transactions via the Internet. The e-government concept assumes interactive electronic services adjusted to the citizens' and economy's needs, integrated on all the public sector levels.

The e-government (electronic government) means the use of the Internet or other electronic systems in order that the communication with the government services should be simplified and facilitated [1]. It is a global reform approach with the purpose of promoting the use of the Internet by both the government agencies and the entities these agencies cooperate with.

All the available e-government solutions make use of the opportunities and possibilities at disposal in the software solutions to the customer relations management. The services that the government agencies deliv-

er are integrated in contact centres that ensure a successful processing of any transactions among the government, the citizens, and the institutions participating in the transaction. In the model of state administration activities based on the "integrated desk" (a physical desk/counter in the building, a telephone call centre, a free standing electronic stand, the Internet) is not part of a certain agency or organization, not even of a certain vertical jurisdiction; it is a place where the entire business that the clients may have to do with any services or organization within the state administration are accomplished.

## II. E-government in Serbia

In the context of local or municipal government the e-government may be defined as a "local government's capability to make information and services available via the web, via the "touch" kiosks or on the basis of interactive voice recognition. Such services are at the disposal of citizens and business partners, and they are available on 24/7 basis, 365 days a year [3].

The research conducted by the Statistical Office of the Republic of Serbia [11] shows that the Internet is used by a relatively small number of Serbian citizens (33.1%). Approximately 260,000 citizens of Serbia make use of the public government services (Figure 1). The citizens most often use these services for the purpose of obtaining certificates (birth certificates, for example), personal identification documents and for automobile registration. The most rarely used services are those related to health care, social insurance benefit and tax payment. The largest number of e-government electronic services users (92.4%) use the Internet to get information from the web-sites of public institutions; a slightly smaller number of users (71.1%) download various forms, while 57.4% of users send filled-in forms via the Internet.

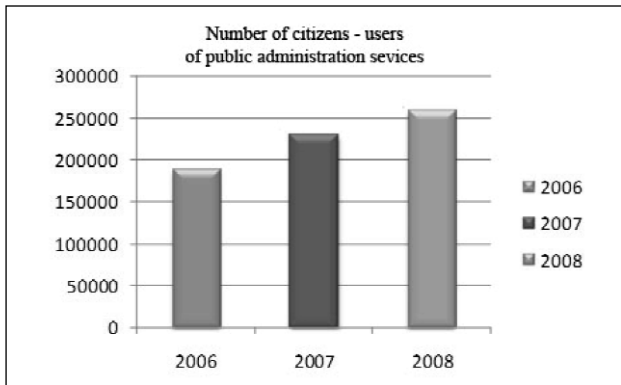


Figure 1. Number of citizens using the e-government services.

The citizens' interest in using the e-government services is shown in Figure 2.

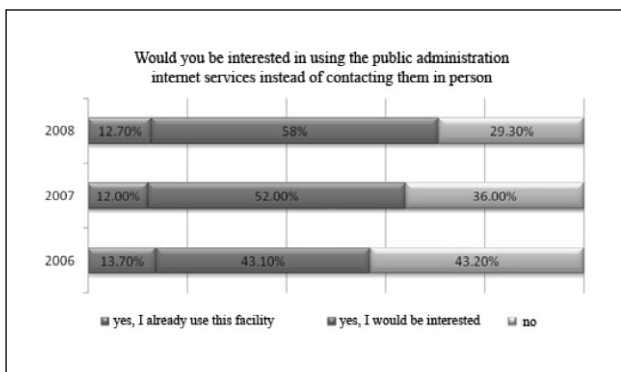


Figure 2. Citizen's interest in using e-government services

The preconditions for the use of e-government services in Belgrade are more favourable in comparison to the rest of Serbia. The percentage of Belgrade households with a personal computer amounts to 53.1%, with 45.5% of Internet connections, and 27.1% broadband connections. On the basis of these indicators a conclusion can be drawn that there is a large number of prospective users of e-government services, therefore the efficiency of the public administration system can be improved by expanding the offer of e-services.

### III. Communication in G2C service

The government – citizen (G2C) scenarios focus upon rendering services to citizens. They are based upon the forms that should be replaced by more sophisticated transactions in the future.

The traditional G2C applications mean simple forms that the citizens can fill in within their own browser. The system may indicate that certain data are already present in the system, or it may offer a certain kind of help in the completion of the forms. Such a level of e-service of the public administration belongs to the third level of electronic administration.

The more advanced levels of electronic administration mean conducting the entire transaction in an electronic manner and integrating the system into an integrated desk model. The citizens can conduct an administrative procedure with a certain agency or organization autonomously, without the intervention from the part of a state officer. This phase of e-government development is characterised by reduced costs, as well as by increased efficiency, to the user's ultimate satisfaction. The unique starting point of all the services is the end objective of all the e-administration initiatives. Such solutions mean a new quality in the communication with citizens as well as transparency that can be gained if these solutions are implemented. The e-government integrated desk model is shown in Figure 3.

The ports that are part of these software solutions offer a large number of benefits to government agencies in their communication with citizens. The ports are personalized according to their role, as well as according to the circumstances in which citizens actually use the services offered by the state (such as tax payments, enrollment into schools, etc.). The port offers the citizen a structured approach to different services that he may deem important in various circumstances, given by different service providers [3].

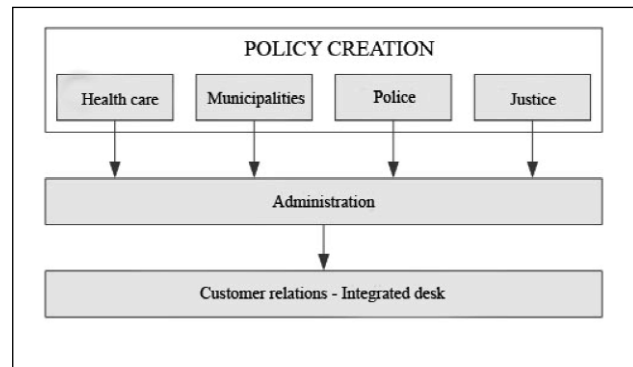


Figure 3. The integrated desk model

### A review of the citizen – government communication in e-business

In order that a favourable image of the e-government and citizen cooperation should be created it is necessary that special attention be paid that the services via all distribution channels are good and efficient regardless of the channel the client used to access the service. The Internet is only one possibility for the users to communicate with their government. In addition to this one, there are the telephone (GPRS), fax, e-mail and personal services.

To gain the citizens' confidence in all the offered technologies of citizen-to-government communication, the accessibility and the reliability of the given technologies must be of high technical and safety quality.



The citizen – government communication can be made via the intranet, the extranet, the Internet, by mobile phones (GPRS), fax or by call centre. Hereinafter we present the review of these communication methods and of their essential characteristics [2].

**Intranet.** The intranet is a joint network of republic agencies and a unified data base of citizens, business entities and space units which are supposed to jointly ensure the exchange of data among all the state agencies. The implementation of the intranet allows for the reduction of the quantity of paper documents, the relief of the budget as well as for the savings in the business operations. The introduction of this system enables the citizens to satisfy all their needs at one desk.

**Extranet.** The extranet makes it possible for the citizens to submit certain claims and receive certain information via the Internet or via the free-standing kiosk which would be located at busy sites (banks, post offices, supermarkets, department stores, bus stations, etc.). The citizens can get various information without having to wait in front of counters and regardless of the working hours of the respective public administration agencies. The use of such systems of public administration results in the reduction of crowds in front of counters, the reduction in the number of desks, the reduction in the number of the desks required, and finally in savings in the business operations.

**Internet.** The Internet enables the state administration employees to access an enormous treasury of knowledge. Similarly, it allows for the public administration to present itself and its work to the citizens, as well as to allow the citizens the access to a host of information that can be used in a prompt and simple way.

**Mobile technologies.** The mobile technologies allow for the communication between the citizens and the e-government via mobile phones. Such a way of communication has not yet gained grounds in a majority of countries, however, an increasing use of mobile telephones in everyday life will require that the e-government be accessible via mobile technologies in the nearest future. The most frequently stressed basic advantage of the mobile technologies implementation in the electronic communication between the government and citizens is the high extent of accessibility of the e-government services (anywhere and any place), since the mobile devices are always at their owners' hand.

**Call centre.** The development of technology and the integration of the Internet into the call-centre activities has given a special emphasis to the meaning of the word "call", hence these centres are increasingly called the Internet call centres. Sometimes the terms contact or communication centres may be found in literature. The call centre development itself is directly meant to meet the needs of

the market, as the call centre services are created by the very users, with their requests and needs [5].

The integration of web technology and the call centre created technical conditions for the IP telephony implementation. It is in this way that the web service users, in case that in searching through the web pages they need additional information, are in a position to contact the agents in the Internet call centre via the IP telephony. They can also benefit from the opportunity to receive a higher quality service at a lower call cost. The Internet call centre services cannot be specifically classified and accurately classed into definite categories. Which services will be offered to the clients will be determined by the very needs of these clients, the development level of the market, that is, the economic growth, the telecommunication development (the development of technical infrastructure), the informatization level of the environment in which the Internet call centre operates, etc. [5].

#### IV. The city government web port

The port is an application or a device that ensures a personalized and adaptive interface which helps users identify, track and communicate with other important entities of the system. The port is the application that collects (subject) matter important for the end user. Ports lead towards different Internet contents, organized from a set of integrated services designed for the purpose of enabling the user to find his way around the Internet more easily. Nowadays the ports are becoming a standard work environment for the integration of applications and the business logics.

The port is a technology that allows for a company or an organization to open up internally or towards the external world and offer its clients a unique access to personalized information necessary for making important decisions. The port is an aggregate of different software applications that edit, analyse and distribute information both within and without the organization. It primarily means one possibility of modernizing the information.

The user's view of the contents that can be available via the e-government port is shown in Figure 4.

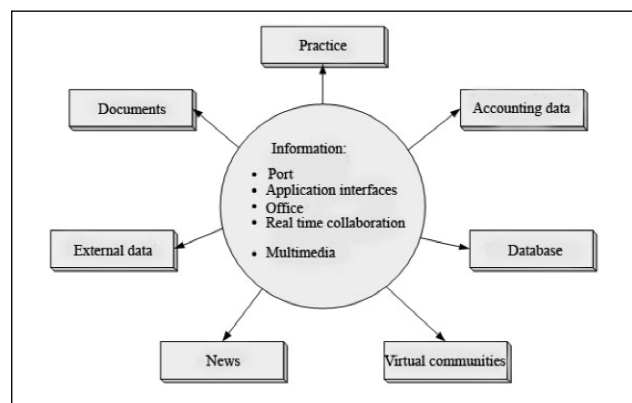


Figure 4. Data sources in the port

The web port of the city government of the city of Belgrade is created for the purpose of providing the citizens with a prompt and simple access to any information regarding the city government or the public utilities' operations [9]. The address of the city government web port is [www.beograd.org.rs](http://www.beograd.org.rs). The conceptual layout of the home page is shown in figure 5.

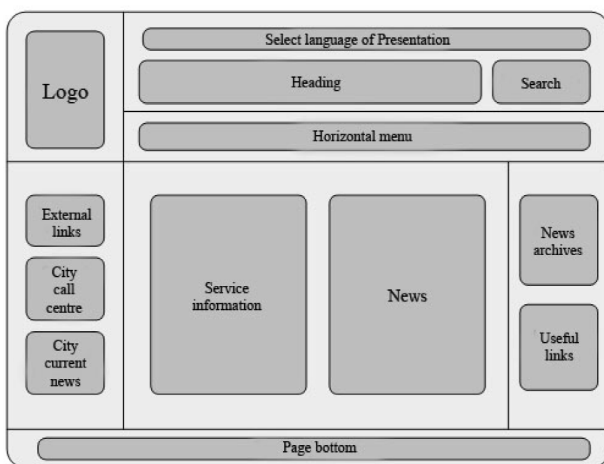


Figure 5. The conceptual layout of the city government home page

The municipal government home page is divided into several modules arranged in such a manner that functionality, simplicity of use and clear view of contents are achieved. The basic elements of the port page are as follows:

1. The heading, divided into the following units:
  - a) The city's logo, simultaneously a link to the home page;
  - b) Selection of the language of presentation; in addition to Serbian, the port is designed in the English and the German languages too;
  - c) A module for searching through the site contents;
  - d) The horizontal menu, containing links to the basic contents of the presentation;
2. The left side vertical menu, including:
  - a) Appropriate links to pages containing elementary information and projects realised in the municipal government, as well as the major acts related to the government operations;
  - b) The city call centre; this module will be explained in detail hereinafter;
  - c) Municipal current news, the module containing current information related to the municipal government activities;
3. The right side vertical menu contains:
  - a) News files;
  - b) Useful links to the contents of the site and outside the site;

4. The central space of the page, contains two major modules:
  - a) Service information;
  - b) News;
5. The page bottom.

Figure 6 shows the lay out of the city of Belgrade web port. The first impression on accessing the port is that the links are easily accessible and that the principle that the information is achieved at a maximum three clicks is observed to the utmost. The menu points are logical and functional. Systematized and clear service information and news are easily searched for by the user.



Figure 6. The City of Belgrade port ([www.beograd.org.yu](http://www.beograd.org.yu))

## V. Citu government call centre

The functionality principle of the city government call centre provides that the main entity of all the business processes should be the end user ("caller") [6]. The possible layout of the general model of functioning of the city government call centre is easy to recognize if we have in mind a large number of services the caller has to interact with. The caller is free to use any available communication channel in order that he/she should be in a position to resolve his/her problem.

It is important that the general model of the call centre (figure 7) succeeds in integrating the information system that provides the functionality of classification, deciding on priorities, conversion, communication in any direction required, as well as in automation of standard processes (that can be entirely or partially automated). All the functionalities mentioned are necessary to be supported by the transparent generating of documents (logs), which can later be reused in any future processes of resolving users' claims as well as in the analysis of current state affairs by the supervisory bodies. All the quoted functionalities should be implemented in accordance with the laws and safety requirements.

In order that the operations of the Belgrade call centre be explained, two major types of functions are shown:

1. Answering the citizens' enquiries by providing information on certain functions and services of city Services (agencies), in such a manner that they are fully resolved within the call centre head office;
2. Responding to the citizens' claims by directing orders to the Services (agencies) to service the citizens' claims following their procedures and the accepted service standards, and inform the call centre head office of the results upon the completion of the job.

These two functions are core functions (CORE). The other modules act towards accomplishing these functions and these are the modules of claim receipt and acknowledgement, the module of communication with citizens (shown by the response module), the module of call centre management.

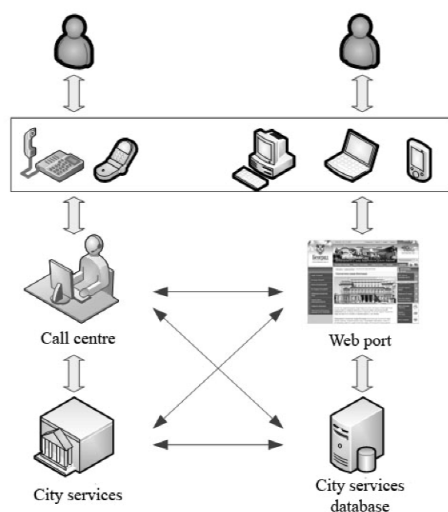


Figure 7. General model of e-government call centre functionality

Any claims the caller sends may be classed into four categories: "Application" (C1), "Claim" (C2), "Proposition" (C3) and "Information", on the basis of which the caller is forwarded the appropriate information as to the further course of dealing with his/her enquiry, however, not necessarily via the same channel the caller has used to make the enquiry [7].

One way of forwarding information is the internal one. "Notifications" (N) are automatically generated by all the services supposed to participate in an integrated call centre, upon the completion of a certain internal activity and they are forwarded to the central knowledge base. The central knowledge base can be consulted by any call centre information system user directly or indirectly, regardless of whether it is an internal or external user (caller, call centre operator, distributed operative centre operator, controller, analyst, manager, etc.). The knowledge

base module is responsible for three functions:

- Organization of the base of information required to provide a reply to the claim;
- Organization of the knowledge base containing information on city services and the city in general;
- Organization of issue base that contains and updates information on all the issues resolved in the past and on the basis of which a solution is offered (e.g. by the script method) to the operator in order that he can resolve the repeated claims.

It is essential that the complete records and information are forwarded from one site – the call centre, therefore it is the task and interest of all the services to file the information of services accomplished in the offline regime in the knowledge base so that they should be available and possible to use in further operations. It is in this manner that the city receives a uniform information and an insight into all the aspects of public utilities' operations, which can be used for the purpose of accomplishing their control, management and planning function(s) [6].

### Communication methods integration within the call centre

In order that the communication between the citizens and the public administration in Belgrade be improved the Belgrade Call Centre – the BCC has been designed. The mission of the Belgrade Call Centre is the improvement of the communication between the citizens and the city services, including the public utilities. Using the call centre the citizens can obtain all the essential information at one place.

The Belgrade Call Centre (BCC) is designed as a modern contact centre through which the citizens (consumers of services) have an opportunity to satisfy all their municipal needs as well as the needs from the field of legal procedures with the city and municipal bodies. The citizen applies to the centre by composing a respective claim – the claim, in terms of the BCC, is a telephone or any other mode of communication (multimedia: web, e-mail, fax, mail, telephone, teletext, desk, ...) enquiries, requests, propositions, information and notifications from the citizen to a city service and vice versa. (The services here means the city public utilities, secretariats, institutes, municipalities or any other companies in charge of any public concerns).

The Belgrade call centre is designed to operate 24 hours, seven days a week; it is centralized and organized with all its major technical and personnel resources on a central location and with a distributive operational function (claim servicing concentrated on respective services). The citizen contacts the centre on the basis of one call system, and, in case of a telephone contact, uses an easily memorable and free of charge number. All claims are automatically registered and

filed and make up the basis for the analyses, statistics and devising the investment and development plan(s). With such a quality the BCC assumes the function of controlling and monitoring the operations of all the competent city services (CityStat function).

Technologically, the BCC should have been organized on the basis of modern conceptual and technical solutions. Thus the concept of voice transmission is replaced by the concept of data transmission (an entirely digital system). The specific solution here can be a system with a communication server as the principal control of the system with the implementation of software telephones (softphone applications on the data station or the hardware VoIP telephones). The entire information network infrastructure is to be constructed in accordance with the general design of the Belgrade Information Centre, making the widest possible use of the available public resources (access to the Internet, VPN channels, ...). The BCC is to be located in the new (adapted) building close to major external resources (post and IS of the city). The premises are planned to be equipped according to the highest standards of the interior design of modern call centres, with special attention paid to the ergonomics of work places. The project is designed for the end phase, but will be equipped according to the dynamics of introducing respective services (public utilities in the first phase, city government in the second, and municipalities in the third phase).

Figure 8 presents the basic architecture of the Belgrade Call Centre [1]. Using different communication channels, including the direct access, the citizens and the companies can contact the Belgrade Call Centre. The virtual private network connects the Belgrade Call Centre with the operation services of the public utilities, thus allowing for a prompt processing of the citizens' and the companies' claims.

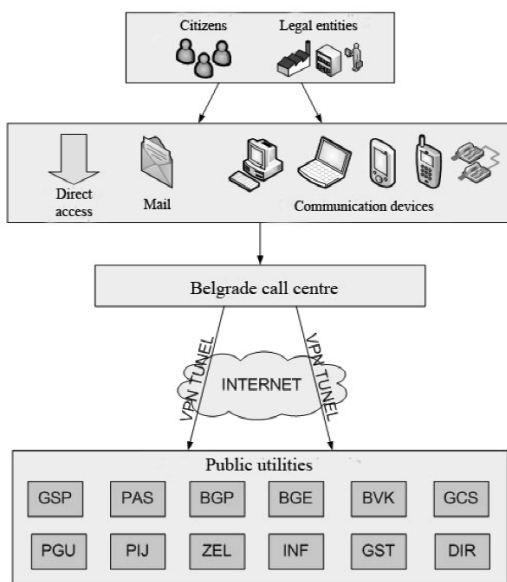


Figure 8. The Belgrade Call Centre architecture

Figure 9 shows the internal structure and infrastructure of the Belgrade Call Centre [1]. The BCC architecture is designed in such a way that it should allow for a prompt and efficient communication with clients, as well as an efficient processing of their claims. Similarly, the role of the call centre is to integrate various ways of communication between the citizens and the city government, such as direct access, mail, electronic mail, the Internet.

Figure 10 presents the integrated flow of the communication process between the citizens and the city government via the call centre [1]. The citizen applies with his claim, the claim is analysed to decide whether it can be resolved within the call centre or it has to be forwarded to the operational service of a public utility. In any case, the reply is sent to the citizen via the call centre. The call center can be understood as the framework for an integrated communication between the citizens and the city government, allowing for a high level of interactivity.

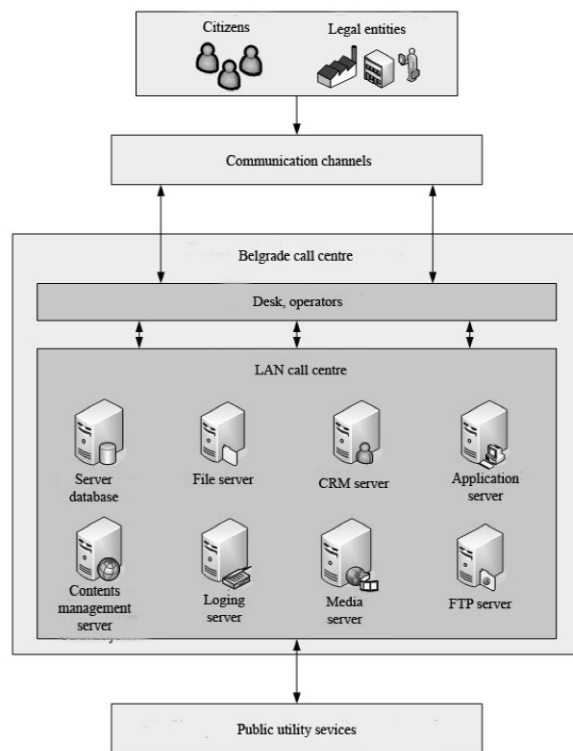


Figure 9. Belgrade call centre architecture

## VI. Conclusion

A modern technology of business doing, the electronic business is becoming increasingly important in the world of business, services, and information. The public administration, as the pillar of the state and the indicator of the governmental bodies' work, has to implement new technologies in its work if its goals are the prosper-

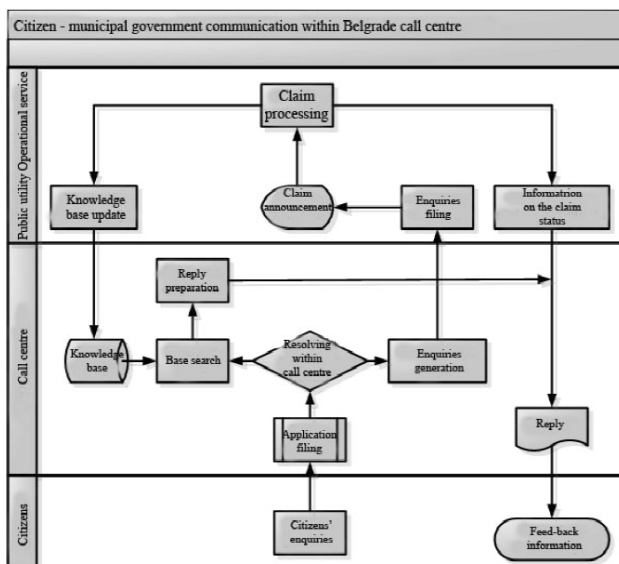


Figure 10. Communication process flow within call centre

ity of the government, the progress of the country, and the satisfaction of its citizens. The communication between the state and its citizens should be carried out in as simple a way as possible, and the time required for it should also be as short as possible. The government agencies are said to work satisfactorily if their work is subject to the public assessment as well as if the citizens are in a position to suggest the ways in which this work can be improved. The motives underlying the e-government project have to be closely related to the broad, clearly defined goals of the public policy – increasing the government efficiency, or improving the quality of the services rendered. The introduction of e-government is assumed to result in the change of the government's work methods, which means an adequate political will and leadership, as well as unavoidable vast expenses.

The paper is an attempt to systematize the methods of communication between the citizens and the government in the conditions of electronic business of the public administration. It offers a review of the implementation of these methods of communication in the City of Belgrade government, as well as a proposition regarding the improvement of the G2C communication in the City of Belgrade public administration. We hope that in the future the majority of citizens will be in a position to benefit from the e-government facilities. This, however, shall certainly have to be accompanied by the overall technological and economic development. It is only then that we will become aware of all the potentials and opportunities the e-government brings.

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# Organizational Development of Higher Education and the Competent Model in the Bologna Reform of Studies

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*Ever since 1988 the European countries have implemented the Bologna reform, based on the declarations submitted by the EU member countries ministers of higher education. The objectives of the Bologna reform are to create an integrated European higher education area by way of achieving high quality, transparency and measurability of the scope of studies relying on the ECTS system of integrated grading of the students' academic obligations. The adopted objectives of the reform guide the development of the higher education towards an integral personal development of the student population with a broad knowledge of the the European requirements as regards higher education and employment. Including the students into the management, the possibility of choice and the mobility of studies will certainly have an effect upon their integral development and their understanding of the European dimension of higher education. The development of universities will be based on an ever richer knowledge of the European higher education area, which will enhance the mobility of pedagogic as well as non-pedagogic personnel. The partnership within the academic community with the academic institutions and the employers will allow for the designing of such degree programmes developed on the sufficiently clearly defined competent models of the employment area. The higher education institutions will be in a position to meet the employers' needs on condition they ensure the development of research and consulting activities, which will, in addition to the degree programmes of formal education, allow for the implementation of various forms of life-long study. Some members of the Ljubljana university were among the first Slovenian higher education institutions that in 2005 implemented the degree programmes on the basis of the Bologna reform (among them the Faculty of Administration). The reform models are based on the competent models that were not always clearly defined; besides, the faculties and the universities are faced with a large number of highly demanding organizational and economic problems in the execution of the Bologna directed activities. This paper defines the form of the competent model used as a platform for the degree programmes reforms. It brings the experiences and organizational solutions in the implementation of the elements of the Bologna reform, such as: quality, the ECTS crediting system, options, mobility, partnership.*

## 1. Background facts

The higher education area in Europe has been undergoing the process of transformation initiated by the Sorbonne Declaration, followed by the Bologna Declaration in 1999. The latter is responsible for an avalanche of reactions all over Europe. The central idea of the "Bologna process" is actually rather simple. If we wish to be more closely connected in Europe, if we wish to increase the mobility among the qualifications, if our objectives are the higher quality education, we must establish a new trust, claims Gassner (2007). The trust, however, does not develop by itself, but has to be improved and advanced by implementing adequate measures. There is a need for the national interests to be adjusted (not at any cost) and the comparative degree programmes (curricula) and diplomas to be prepared.

The adjustment project in Europe was conducted within the Tuning project<sup>1</sup> which was highly successful, since, in addition to the work load to the students, it introduced a component of learning results (outcomes) which jointly define the ECTS in a most com-

plex and a most efficient way. The motto of the Tuning project is: *Compatibility of educational frameworks and programmes on the bases of diversity and autonomy*. The trend established shows that the European countries and institutions are willing to learn one from another and that the mobility of both students and teachers increasingly contributes to a growing understanding of a real European identity.

In order that the curricula be better understood and compared within the Tuning project a specific methodology was created that defines five key sets of approaches in the subject/disciplinary areas: (1) general competences or transferable skills; (2) subject-specific competences, (3) the role of ECTS as a credit accumulating system; (4) approaches to studying, teaching and assessment; (5) the role of improving

<sup>1</sup> The Tuning project includes over one hundred European universities and is directed towards designing concrete suggestions in the execution of the Bologna process on the level of higher education institutions and certain subject areas. The Tuning method incorporates the (re)designing, development, introducing and evaluation of curricula for each of the three Bologna cycles. The project has recently spread from Europe to Latin America and central Asia (gonzales and Wagenaar, 2007)

quality in the education process, with an emphasis on the systems based on national institutional quality culture (Gonzales and Wagenaar, 2007). All these five sets of approaches allow for the universities to “tune” their curricula without giving up their autonomy and simultaneously enhance their competence and innovation. The issue to solve is how to implement the competent model to improve the opportunities of the graduate students to find employment.

## 2. Competent model as objective of curricula modernisation

The basic competences/skills the need for which is nowadays considerably greater – the man is expected to actively participate in the knowledge society and economy, on the labour market and in work – and which should be incorporated into the curricula, include some new skills, e.g., digital literacy, knowledge of foreign languages, social skills, etc. The individual is expected to be prepared to learn and make sense of a host of information. The individual will have to be able to act autonomously, but patiently, to collaborate to a higher degree than it was done in the past and simultaneously be ready and capable of acquiring new skills promptly as well as of adapting to new challenges and situations.

The ultimate objective of curricula is enhancing the development of competences crucial for a certain area; namely, a significant novelty is the “focus upon the curricula outcomes<sup>2</sup>, expressed in competences” (Tancig, 2007:25). Tancig (2006) understands the competences as accomplished capacities that include both discursive and practical knowledge and are a dynamic combination of knowledge, understanding, skills, competences and values. According to Medveš (2006), competences are the global objective of education, on one hand, the synthesis of knowledge, in terms of mastering the contents, perceptions and information using more elaborate cognitive processes, i.e., essential knowledge, while, on the other hand, competences are a synthesis of skills, capabilities and methods of an individual qualification or expert field, the so-called procedural knowledge; finally, competences are a synthesis of the development of interests, motivation, personal reaction, integrity and social implementation. Competences can therefore be understood as “an individual’s ability to activate, implement and corre-

<sup>2</sup> The teaching, curricula outcomes /results are what the student will be capable of knowing, understanding or producing upon completing his studies. The results may relate to an individual course unit, or module or to a period of study, e.g., to the curricula of the first, the second or the third cycles of higher education. The learning outcomes set the criteria for credit accumulation. (Gonzales and Wagenaar, 2007:53).

late acquired knowledge in complex, varied and unpredictable situations” (Parrenoud, after Svetlik, 2006:4). Or, as Gonzales and Wagenaar (2007:54) maintain, competences are a “dynamic combination of knowledge, understanding, skill, and abilities, therefore the development of competences is the objective of the programmes of education”.

The Tuning project developed a model according to which the role of the higher education institutions in the curricula reform, i.e., in the curricula (national or international – *joint degree*) designing process is to create the curricula to be conducted within one or more institutions on the “eight step model”. (Gonzales and Wagenaar, 2007).

According to Gonzales and Wagenaar, the first step (Prav tam/Straight towards) is the “provision of elementary conditions” for all the degree programmes. This is achieved by finding answers to such questions as: is the social need for the programme recognized on the regional/ national/ European levels? Is it identified on the basis of consulting activities and research, i.e., by all the interested parties: employers, experts, institutions, expert bodies? Is the programme interesting from an academic aspect? And, finally, are there available funds for the programme? In case of international degree programmes offered by a number of institutions, it is of crucial importance to know whether there is some agreement or a strategic partnership among them. Is there a guarantee that the programme will be legally recognized in different countries?... And, is there an agreement about the programme duration as regards the ECTS? The second step contains the definition of the qualification, the third offers a description of the programme objectives and the results to be achieved, the fourth defines the generic and subject-specific competences to be achieved within the programme, while the fifth is about the transfer of contents and topics, modules and credits into the curriculum... then follows the transfer into the course units and the activities used to achieve the desired learning outcomes (the sixth step) and make decisions as to the approaches to teaching and learning processes (types of methods, techniques and formats), as well as an agreement as regards assessment and when it is necessary – provision/preparation of teaching materials (the seventh step). The last, eighth step includes the development of assessment system meant for a permanent quality improvement (Prav tam: 50:53).

Thus, in the higher education curricula reform we encounter certain new elements that we have to observe as logically interrelated, which is shown in the following chart:

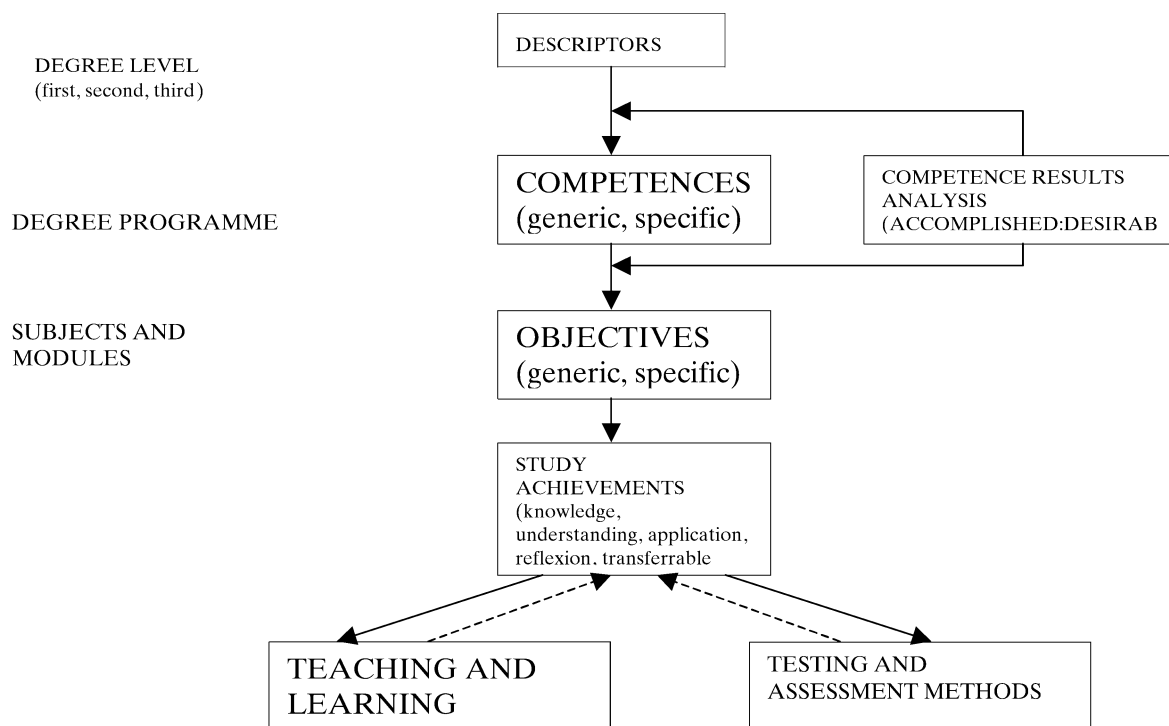


Chart 1: Degree programmes reform planning and development

Source: Tancig, S. (2007). *Generičke in predmetno specifične kompetence v izobraževanju*. V: Tancig, S. i Devjak, T. (ed.): *Prispevki k posodobitvi pedagoških študijskih programov*. Ljubljana: Faculty of Pedagogy UL, 24.

The choice of the degree programme competences has to be adjusted to the descriptors of each study level, whether undergraduate or postgraduate. The descriptors are broad, wide-range, but significant study indicators at each of the three cycles/levels of study. Their role is not to offer a precise or complete description of studies on a particular level, but to facilitate a general comprehension of each of these. The next characteristic of the descriptor is to highlight an increased complexity of the study level as regards the complexity and the sophistication of knowledge and the autonomy of the individual in an academic or professional area. Descriptors make it possible to compare the degree programmes in terms of the study level, however, programmes may differ as regards their objectives, contents and structure. Thus descriptors act as a significant guide in designing the degree programme competences and objectives, as well as the study achievements. (Tancig, 2007:26).

The competence design has to be in accord with a particular study level, i.e., its descriptor; in other words, the descriptors must be “translated” to degree programmes competences, whereas these in turn are to be translated to objectives, and finally to achievements. The degree programmes competencies precondition

the setting of objectives and study achievements of the programme course units that in turn define the teaching methods and the methods of testing knowledge. Competences are classed as general, or generic and subject-specific. The Tuning (according to Gonzales and Wagenaar, 2007) differentiates among three forms of generic competences:

1. Instrumental, or applicable competences: cognitive, methodological, technological and linguistic competences;
2. Interpersonal, or mutual competences: an individual’s abilities, such as behaviour in the society and capability of collaboration;
3. Systemic competences: abilities and skills that require entire systems (a combination of understanding, cleverness, knowledge with an overall acquisition of applicable knowledge and interpersonal competences).

The identification of generic and subject-specific competences is a process that requires an “agreement” among the graduate students, employers and academics as regards each academic area. Although the selection of the most adequate generic competences differs to some extent due to the specific nature of a particu-



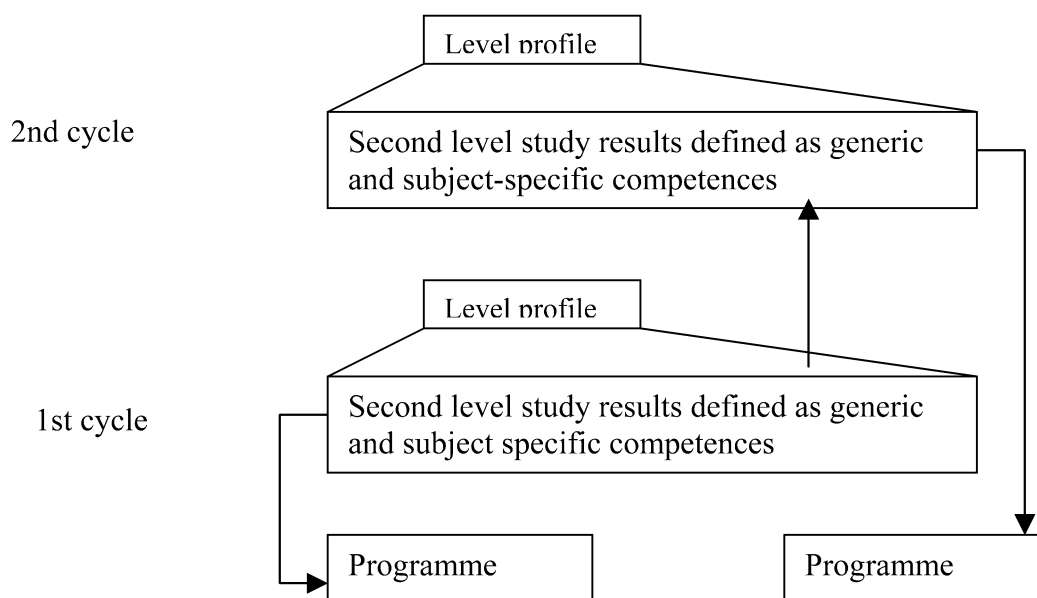


Chart 2: Study results and competences in degree programmes

Izvor: Gonzales, J. and Wagenaar, R. (2007). Metodologija projekta Tuning. V: Devjak, T. i Zgaga, P. (ed.). Prispevki k posodobitvi študijskih programov II. Ljubljana: Faculty of Pedagogy, 57.

lar area, the authors (Prav tam) claim that the typical academic competences, such as analytical and synthesis skills, as well as the learning and problem solving skills, are identified as most important in each of the areas. Other generic competences, such as the skill of applying the knowledge in practice, the skill of adapting to new situations, concern about quality, ability to control information, autonomous acting, team work, organization, work planning, oral and written communication in mother tongue as well as individual skills were assessed by both the graduates and the employers as primarily important for finding employment. The research conducted by these authors shows that more attention should be paid to a specific number of generic competences in order that the students preparations for future work should be as good as possible<sup>3</sup>. The subject-specific competences as part of the project were already defined for nine areas and the European countries reached the agreement about what comprises the essence of each area. As said above, competences are referent points in creating curricula and assessment methods. The curricula creation allows for flexibility and autonomy, however,

they simultaneously offer a common language in describing the curricular objectives.

The implementation of the learning outcomes and competences achieved is necessary if the degree programmes, the modules, or the course units are to be student oriented. This approach requires that the elementary knowledge and the competences the students must acquire in the course of his studies should be defined. The study results and competences as regards the student training for an active participation in the civil society and employment are profession and society conditioned. In an "output", result based degree programme, the main stress is on a graduate, professional profile defined by academic staff and approved of by a competent authority. The profile, however, should be based on defined and identified needs of both the society and the academic sphere, the practice, the employers, organizations, associations and the graduates. In other words, what the programme does so that, e.g., entrepreneurship should be what entrepreneurship is, is of utmost importance. (Prav tam:57.). The programme groups within the Tuning project have already defined a number of characteristics of their own profession that we can find in the so-called templates or summaries of results. In the level or cycle system each cycle is expected to achieve a number of study results based upon competences, these being gradually developed throughout the study process. The chart below shows one approach to competence allocation into the study units, or modules.

<sup>3</sup> A detailed research was conducted on the Faculty of pedagogy at the University of Ljubljana, in 2004. The findings made it possible for the authors of curricula to find out how the graduate students themselves perceive their competence after studies, what the employers say and what the opinion of the degree programmes promoters is. They concluded that more attention would have to be paid to those competences that train the pedagogical faculty graduates for the innovations introduced into school by the inclusion of children with special needs, by interdisciplinary approaches, by team work and by any aspects of communication, which complies with the findings revealed in European measures by Euridyce, 2003. Razdevšek Pužko and Rugej, 2007:43).

In a student and result oriented degree programme all study units are networked in some way, regardless of whether it is the units or modules of the major, the minor or the optional modules. In a well planned programme, the minors and the optional subjects may intensify the profile of the degree programme. Or, in other words, and as regards the learning outcomes achieved in other parts of studies, the learning outcomes of certain course units or modules contribute to the end results and the development of a certain level of competences.

One of the major aims of the Bologna process is a greater comparability and compatibility of the degree programmes and the length of studying/learning periods. The implementation of the concept of steps, learning outcomes, competences and credits certainly supports the objective.

### **3. Lessons learned from recognizing the need to develop organizational environment for a successful implementation of the Bologna reform**

The Faculty of Administration was among the first at the University of Ljubljana and in Slovenia to introduce and develop the Bologna programme. All the degree programmes were reformed, the I and II level degree programmes underwent the accreditation process. The Faculty decided upon the 3+2+3 scheme. The programmes that represent the basics of the study process at the faculty are grouped and named ADMINISTRATION. On the 1st level, they are taught as university and higher education programmes at two departments (public and business), whereas on the 2nd level they are taught as one programme at three departments (administration, economics, information). The programmes have been implemented and pursued for three years now, which allows for some evaluations to be made.

At the time the programme was being introduced and in its course so far, the faculty found out that in order that the programme be implemented successfully, numerous activities were necessary to perform that were outside the execution of the process itself, however, were crucial in achieving the learning objectives. Let us mention only a number of examples that may be of interest for anyone who is faced with the problems of the Bologna reform implementation.

The affirmation of the quality standards is a rather broad concept that has frequently been the topic of study both at the faculty and in the public sector. The faculty has long been working on the development of the quality model, this being one of the research areas within the discipline it develops. The development of the quality mod-

el to be used in evaluating the Bologna reform orientation outcomes saw the rise of numerous problems in defining the standards supposed to be the basis for the faculty work results and progress assessment. A valuable aid in setting the criteria and objectives is provided by the standards promoted by the following institutions:

- A broad national association, e.g., University of Ljubljana, by developing and observing their own standards;
- International institutions, e.g., EAPAA (European Association for Public Administration Accreditation), where the Faculty accredited the second level ADMINISTRATION programme (DRAKULIĆ, M., DEVJAK, S., BRAČEK, A., Upravna misel, 2007);
- Partner-educational institutions with which the Faculty of administration jointly conducts the degree programmes and issues joint diplomas: Program Management in administration with the Faculty of Organizational Sciences in Belgrade (DRAKULIĆ, M., DEVJAK, S., BRAČEK, A., Pravni život, 2007a); the FINAC program (accounting and public finances) with partner faculties at the universities in Rotterdam, Prague and Banska Bistrica (DRAKULIĆ, M., DEVJAK, S., BRAČEK, A., Upravna misel, 2007b)
- Institutions that employ graduate students.

The standards promoted by the faculty are as a rule difficult to attain which is rather due to organizational and financial restrictions than to the pedagogic staff being undertrained.

Monitoring and evaluating the ECTS system implementation is one of the key elements of the Bologna reform. The ECTS is awarded upon the student's completion of studies. It is certainly difficult if not impossible to measure the work. The measuring (evidence) itself of the student's attendance to lectures and practice causes numerous problems. Despite the doubts as to the appropriateness of such measurement, this element certainly greatly affects both the workload (too much study obligations for students) and the length of studies. The latter is one of the relevant quality criteria that can reveal poor outcomes of the education process that can be the consequences of the excess study obligations or the students' lack of interest for cooperation in fulfilling the study obligations.

The optional choice is an important advantage of the Bologna reform which, however, causes to the faculties numerous organizational difficulties and often insolvable problems. Due to limited capacities (premises, staff, equipment), the faculties offering the option-

al choice are obliged to grant the priority of choice to more successful students. The solution here is the students' direct, computerized enrollment into the next study year, immediately upon completing the due programmes. The student may, of course, be offered the timetable on the basis of which he/she can choose subjects that will not overlap. A practical solution here was the offer of optional subjects in an e-form. The mobility as a method of knowledge and experience transfer as well as the optional choice and the interest component of education is linked with organizational and financial limitations. Problems often appear in teaching subjects in foreign languages (most often due to smaller groups and financial problems) as well as in case of replacement of teaching staff in times they are absent. These problems are easier to solve if similar faculties jointly organize lectures on some course units, subjects or parts of programmes in foreign languages. The acceptance of foreign students and sending our own students abroad is frequently a hard job due to the accommodation problems and a new study environment they enter. Student tutorship can prove to be of great help here.

The partnership in the Bologna reform objectives is broadly defined and offers the universities different ways of implementation. The Faculty of administration implements the idea of partnership in various areas:

- In the academic community where partnership is understood in a similar way by both pedagogic, non-pedagogic staff and by the students who decide upon mutual objectives and values;
- With the partner educational and research institutions when they jointly carry out the degree programmes and research work;
- Employers who employ the graduate students that take an active part in the educational (e.g., student practice, seminars and diploma works) and research processes (e.g., joint and individual research, European projects) in order that they should approximate the competent model to their human resources needs;
- The graduate students that make the link between the faculty and the profession, inform the faculty on the adequacy of the competent models of degree programmes and take the problems of profession to the academic milieu, or enhance the development of educational work or research activities.

Partnership is also a transparent method of financing both degree programmes and research activities. Providing services to external customers (e.g., optional subjects, foreign students, life-long degree programmes, research ordered by national customers or

European trusts) is related to the transparent system of tracking costs via their bearers, introducing the "full cost" system. All these, however, require that the system of costs planning and tracking via the performers and the costs and revenues related to these be introduced. It is thus designed economic parameters that could be a quality basis in setting the relations between the service consumers and the service deliverers, in this case, the faculty. The Faculty of administration commences the implementation of such a system, however, prior to this, they had to introduce a computer measurement of the education process performance and develop adequate accounting applications for that purpose. The Faculty of administration introduces the "full cost" system into the university of Ljubljana as a whole, because of financiers, especially because of the requirements of the European projects financiers.

#### 4. In place of conclusion

In a majority of higher education institutions the Bologna reform is directed primarily towards the development of degree programmes that the faculties developed on more or less well defined competent models. The Bologna process requires a continual cooperation between the higher education institution and its partners, where primarily the competent models of degree programmes are created and upgraded. The Bologna reform implementation, whether appropriately or poorly conducted by the ministries in charge, as a rule lacked well defined economic and organizational conditions. The Bologna reform represents a significant step forward in the educational process, the opening of the institution to the employers, the introduction of business behaviour and the adoption of different measures of assessing the learning processes outcomes. All these changes called for a simultaneous economic and organizational development of higher-education institutions in order that they should be in a position to meet the obligations set by the objectives of the Bologna reform of higher education.

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# Effects of Fiscal Policy on the Maintenance of Macroeconomic Stability in Serbia in the 2001-2007. Period

UDC: 338.23:336.22(497.11)"2001/2007"

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*This paper presents the research conducted to find out the effects of fiscal policy in Serbia over the 2001-2007 period. A dominantly procyclical fiscal policy had an unfavourable impact upon both external and internal balances. Larger budgetary revenues were followed by equally increased budgetary expenditures, which in terms of inadequately flexible aggregate supply created adverse pressures on the macroeconomic stability maintenance.*

## 1. Introduction

The key effect upon the maintenance of macroeconomic stability during the observed 2001-2007 transition period in Serbia was that of the fiscal policy measures. This research will describe the analysis of the effects of fiscal policy upon the internal and the external balances. The analysis of the level of budgetary balance, the amount of public debt and the fiscal policy effects upon inflation and the foreign exchange rate allows for the identification of the Serbian fiscal policy transmission channels as well as of its impact on the macroeconomic stability.

## 2. Effects of fiscal policy in the 2001-2007 period

The budgetary deficit was continually reduced during the 2001-2006 period, which had a favourable effect upon the reduction of the level of public debt, of the balance of payments current account<sup>1</sup> deficit reduction and of the inflation rate. We will examine here the effects of fiscal policy upon macroeconomic stability via the analysis of the effects of fiscal policy upon the change in the economic liquidity. A particular problem in identifying the effects of fiscal policy was the result of the different levels of budgetary balance calculated on the basis of different methodologies (the National Bank of Serbia – NBS – methodology, the International Monetary

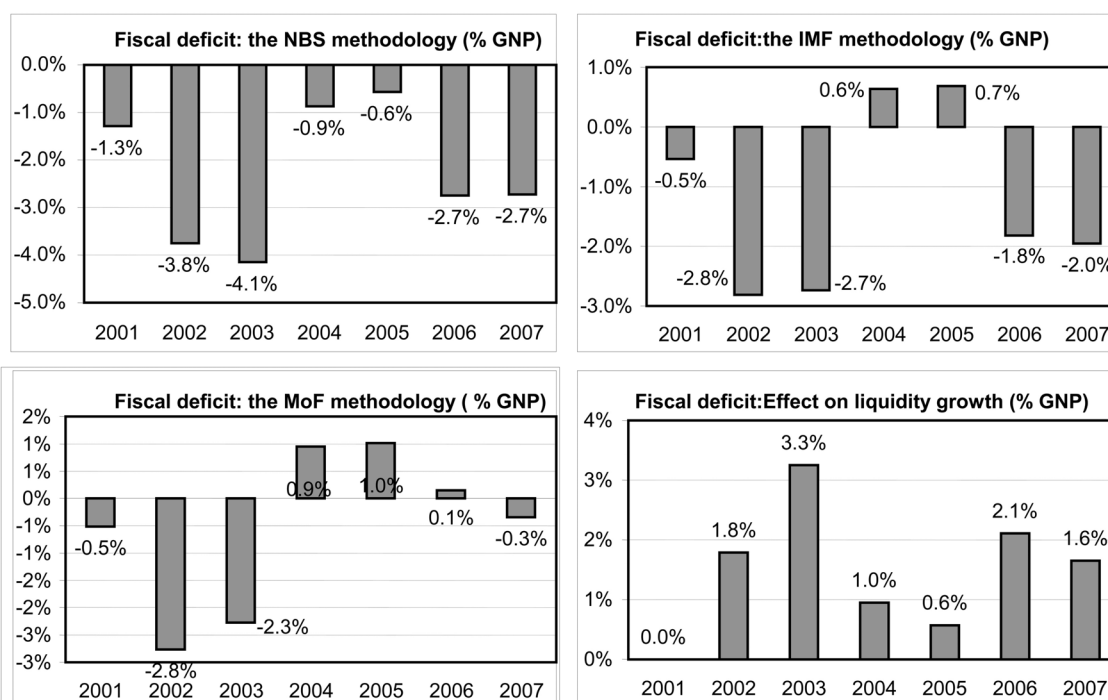


Chart 1. (Dragutinović, 2007)

<sup>1</sup> The balance of payments current account deteriorated in 2004, however the reduction trend continued in 2005.

Fund – IMF – methodology, the Ministry of Finance – MoF – methodology) – chart 1<sup>2</sup>

Therefore it is quite possible that, according to one methodology, the budgetary balance may be balanced and even in surplus, whereas according to another, it may show a deficit of 2-3% GNP. The effect of fiscal policy upon the liquidity growth was expansive since 2002; however, the chart shows that the restrictive fiscal policy in 2004 and 2005 resulted in the fall in liquidity, which further resulted into a lower pressure upon aggregate demand. It is for this reason that the measures of fiscal policy produced countercyclical effects.

Since the 2006<sup>3</sup> budget revision the fiscal policy measures have been expansive and procyclic. The expansive quality of the fiscal policy measures is based on the increase in the wages in the public sector and the commencement of the National Investment Plan implementation.

The 2006 budgetary balance (-1.5% GNP) in Serbia is comparable to the average balance in the European Union member countries (EU 27) ([www.ec.europa.eu/eurostat](http://www.ec.europa.eu/eurostat)) which was -1.6% GNP in 2006. Among the transition countries now the member countries of the EU, the budget surplus was accumulated only in Bulgaria (3.2% GNP) and in Estonia (3.6% GNP). In the majority of countries the budgetary balance showed a deficit: the Czech Republic (-2.9% GNP), Hungary (-9.3% GNP), Romania (-1.8% GNP), Slovenia (-1.2% GNP), Slovakia (-3.8% GNP), Latvia (-0.2% GNP), Lithuania (-0.6% GNP), Poland (-3.8% GNP). It is also important to identify the share of both public revenues and public expenditures in the countries that became members of the EU upon the completion of their transition processes.

The share of public expenditures in the GNP of the three observed countries is 35% GNP or lower, which makes the lowest level of public expenditure in the EU: Romania (35% GNP), Lithuania (34% GNP) and Estonia (33% GNP) compared to all the other EU member countries. In as many as 5 EU countries the share of public expenditure exceeds 50% GNP: Sweden (57.9% GNP), France (53.4% GNP), Hungary (51.9% GNP), Denmark (51.5% GNP), Italy (50.1% GNP). It is only Ireland, one of the EU member countries that did not undergo the transition process, that is comparable with the abovequoted countries, with the public expenditure level of 34% GNP.

<sup>2</sup> The Ministry of Finance did not apply the internationally comparable GFS methodology used by the IMF.

<sup>3</sup> The fiscal policy measures in Serbia will, due to their effects upon the trends of macroeconomic variables in 2007 and 2008, be based on the data for 2006, which will be supplemented by a comparative analysis of fiscal policies in other countries.

The public revenues share in Romania (33.2% GNP), Lithuania (33.4% GNP) and Slovakia (33.9% GNP) is considerably lower compared to the countries with the highest share levels: Sweden (57.9% GNP), Denmark (56.2% GNP) and Finland (52.5% GNP).

The 2006 public revenues in Serbia rose by 0.9% percentage points compared to the year 2005 (from 41.3% GNP to 42.4% GNP), however the amount of public expenditure rose simultaneously by 3.3% percentage points (from 40.6% GNP to 43.9% GNP). The sustainability of the growth in public expenditure is based on the parallel growth of public revenues, predominantly due to a steady growth of the GNP. Although the budgetary deficit of 1.5% GNP is sustainable, the increase in the public revenue and the public expenditure shares in the GNP results in the fiscal policy measures becoming more redistributive. An increased participation of the state in the economic activities generally shrinks the area for an optimal decision making in the private sector. The expansive fiscal policy measures did have an impact upon the maintenance of a high level of public expenditure within the GNP.

In case of Serbia, the study (the World Bank, 2004) analysed two scenarios of economic development. The effects of the first scenario, based on high fiscal adjustment<sup>4</sup>, would provide for a steady economic growth and a 17% higher GNP<sup>5</sup> in comparison to the latter (the public expenditure level and structure remain steady). The Serbian fiscal policy being predominantly cyclic did not produce an unfavourable impact upon the growth of public debt; on the contrary, the share of the public debt in the GNP continually decreased (by the debt repayments made possible due to the high level of inflow in the capital balance and the debt release by the foreign creditors), therefore, measured by the Maastricht criteria, the condition of public finances is absolutely stable. Besides the public debt reduction in an absolute amount, there was an additional factor of continuous GNP growth, which further reduced the share of public debts in the GNP. The public debt share in the GNP was reduced from 102.2% GNP at the end of 2001 to 29.4% GNP at the end of 2007 ([www.mfin.sr.gov.rs](http://www.mfin.sr.gov.rs)).

With the creation of an additional pressure upon the aggregate demand, the expansive nature of the fiscal policy proved to be a further problem to the National Bank of Serbia implementation of the disinflation policy. The

<sup>4</sup> With a faster productivity growth as a result of structural reforms, improvement of exports realization and high external capital inflows

<sup>5</sup> A steady economic growth projected at the time amounted to 5% annually, therefore the projected effects in case of inclusion of the realized, higher economic growth rates would certainly be higher.

inflation reduction trend in the 2001-2007 period was not steady. The inflation rate was reduced from 40.7% in 2001 to 7.7% in 2003, however, in 2004 it rose to 13.7%, with a further growth to 17.7% in 2005. In 2006 it was again reduced to 6.6%, but in 2007 it rose again to 10.1%. The rise in the public sector earnings, a result of the budget readjustment in 2006 (third quarter) may prove to be a strong pressure towards the rise in the inflation rate in 2007, due to the delay in the functioning of the transmission channel. In the conditions where the inflation trend is affected by the factors which are not related to the fiscal policy implementation (raising the state controlled prices, the trends in the prices of food and fuels on world market, etc.) it is not possible to accurately define the extent to which the implementation of expansive fiscal policy brought forth the rise in the inflation rate. Nevertheless, the impact of the expansive fiscal policy measures increasing the demand for commercial goods certainly create an inflationary pressure.

The impact of the expansive fiscal policy upon the increase in the foreign trade deficit can be determined with more accuracy. According to the IMF study (IMF, 2008), the budgetary balance has an important impact upon the balance of payments current account in Serbia. The ratio between the budgetary balance level change and the current account level is 1:1, which means the budgetary balance fall by 1% GNP results in the fall of the current balance by 1% GNP. Hence a conclusion can be drawn that an expansive fiscal policy affects the national economic operations to a smaller extent, i.e., that the predominant effect of an expansive fiscal policy is the increase in the imports of commercial goods.

A high level of the current account deficit is characteristic of a country in the first years of transition. The reduction in the current account deficit is possible to accomplish using three channels:

1. Accelerated GNP growth;
2. Reduction in investments;
3. Public expenditures reduction.

Regardless of a steady growth of the GNP in Serbia, the GNP current account experiences a growing deficit from 2001 to 2004; the deficit is reduced from 2004 to 2006, while the rise in the current account deficit is again evident in 2007 and 2008. The periods of the current deficit growth coincide with the implementation of the expansive fiscal policy. Having in mind the need for ever more numerous investments in Serbia in the period to come, the only channel to relax the balance of payments current account is the reduction of the amount of public expenditures.

The next transmission channel with an adverse impact on the balance of payments is the foreign exchange rate appreciation. In the observed period in Serbia, the foreign exchange rate appreciation was predominantly the consequence of a high capital inflow, which is characteristic of a large number of transition countries. The capital inflow had a favourable impact upon the Serbian economic growth; on the other side, it created the currency appreciation effect which has a negative impact upon the balance of payments.

The study of the appreciation spiral will be based on two aspects: the impact of the combination of fiscal and of monetary policies measures upon the foreign exchange and the effects of money transfers/remittances from abroad in the conditions of currency appreciation.

In case the maintenance of macroeconomic stability is set as an objective in economy, it can be clearly inferred that the optimal combination is that of restrictive fiscal policy and restrictive monetary policy. The implementation of such a combination of economic policy measures could, however, have an adverse effect upon the economic growth. The optimal combination in a transition country, such as Serbia, will therefore be: one policy measures are expansive, while the other policy measures are restrictive. The fiscal policy in Serbia was predominantly expansive, therefore the monetary policy measures had to be restrictive, in order that the price stability – the basic objective of the monetary policy – should be maintained. It was only in the 2004-2006 period, the period of restrictive fiscal policy, that the monetary policy measures were expansive and that they affected the business cycle trend in Serbia by controlling the money offer. In 2006 and 2007, the fiscal policy measures are expansive, which, aided by the restrictive monetary policy, they additionally created an appreciation pressure.

A considerable portion of Serbia's balance of payments are the money transfers from the Serbian citizens working abroad. These make an additional source of foreign currency that has a favourable effect upon the country's balance of payments and allows that the economy spends more than it produces. The effects of the transfers depend on the structure of the demand for commercial goods formed in the circumstances: in case the demand is larger, the imports will increase, while in case the demand for non-commercial goods rises, the consequence will be the rise in prices. Theoretically, the effects of remittances will be favourable in accordance with the government's willingness to create an economic environment in which productive activities will be financed (Glytsos, 1997); however, the transfers may produce adverse effects if the economy becomes dependent on their continual inflow (Boone, 1995).

In 2007, the total net inflow of current transfers amounted to \$ 4,250,000, the major portion being the remittances ([www.nbs.org.rs](http://www.nbs.org.rs)). In the conditions of the exchange rate appreciation in Serbia, the citizens receiving the transfers from abroad are forced to sell large amounts of foreign currency to purchase an adequate quantity of products. The effect of the process is an appreciation spiral creating an additional appreciation pressure in that it increases the offer of foreign currency, thus reducing the potential level of savings. In time, an increasing number of transfers/remittances is used for the purpose of consumption, whereas the savings decrease, which to a certain extent may cause the rise of the interest rate and the fall in investments.

In conclusion, in the observed period it is possible to identify a significant correlation between the public revenues and the public expenditures trends. There is a direct ratio between the increase in the trend of public revenues by a generated value added tax and the trends of two largest groups of public expenditures:

- a. expenditures for the employees and
- b. subsidies and transfers.

Namely, viewed exclusively from a macroeconomic level, the public expenditures can be seen as increasing in accordance with the trend of the rise in public revenues, hence the rise in public revenues was used to improve the economic position of the employed in the public sector, as well as to facilitate the work of the pension plan.

Essentially, the subsidies, the transfers and the rise in the public sector employees' earnings serve to perform a redistributive role of the fiscal policy. The principal quality of the redistributive role is the increase in the current budgetary expenditure which results into the reduction of the funds otherwise available for capital investments. This reduction of the available capital investment funds endangers the maintenance of economy and a steady economic growth.

#### 4. Conclusion

A predominantly expansive, procyclic fiscal policy in the 2001-2007 period had adverse effects upon the maintenance of macroeconomic policy in Serbia. Therefore, the implementation of the policy of budgetary deficit during the major part of the period failed to generate enough public savings to allow for the optimal counter-cyclic fiscal policy followings the beginning of the world economic crisis in 2008.

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# E-commerce, Slovenian Attorneys and Social Responsibility – in Search of a Link

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*E-commerce is today almost a necessity in any organisation, including the attorneyship, as a part of the judiciary system. In comparison to other parts of the judiciary system, the advocacy represents an independent public service, which makes it more sensitive to changes in its environment. The term social responsibility is generally used in connection to private entities, whereas the role of the state and public organisations is often forgotten. Attorneys around the world have realized the impact of increased competitiveness also in the legal areas and are therefore trying to adopt to the new demands of the »market« also via e-commerce. However, due to their specific line of business, where the social responsibility note is of the utmost importance, the area of e-commerce by attorneys is heavily regulated. In the paper we present the results of a study, which focuses on electronic filling and electronic communication as used by attorneys and attorneys offices and the results of the analysis of the web pages of slovenian attorneys, and we put both results in the perspective of the increasing need for a greater social responsibility of all organisations including those in the public sector.*

## 1. Introduction

Information, knowledge and response are important factors of successful business. Public sector and judicature must also keep this in mind. So the administration is supposed to become »service of citizens«, which is aware, that the consumers search of new and kinder accesses to products and services. Judicature must disentangle itself from vice of delays, that paralyze its activity. In both cases, electronic method of doing business will be (and is) key element of renovation of business, which was already successful to a certain extent (see e.g. Sovdat 2007 or Batagelj 2006). The term social responsibility is generally used in connection to private entities, whereas the role of the state and public organisations is often forgotten. Attorneys around the world have realized the impact of increased competitiveness also in the legal areas and are therefore trying to adopt to the new demands of the »market« also via e-commerce.

We can say, that electronic method of doing business is almost an urgency of every organization today, which also applies to advocacy. Advocacy is a special service within judicature, which assures professional representation of people and businesses in procedures before courts of justice and other state bodies, as well as other forms of legal assistance. As opposed to other parts of judicial system, advocacy is independent in its activity to state bodies and is an independent professional activity (Kaučič, Grad 2007). Exactly because of this position, the advocacy must, more as remainder of judiciary system, confront new and changed circumstances in its area. How the process of adapting is taking place in

Slovenia, will be presented via results of research in continuation. The survey focused, above all, on electronic archives, electronic submissions (so-called electronic filing) and electronic communicating as are used at attorneys, in order to show the degree of electronic method of doing business at attorneys.

## 2. Electronic business and its dimension

Formation of Internet vastly increased possibilities of companies for quicker, more precise, timely and spatially less restricted, more cost-efficient way of doing business adapted to individual customer (Kotler 2004). Internet of today works as source of information, source of fun, as a communication path, path for transactions and even as a marketing path. We can often use it as a sales center, television set, newspaper, library or telephone. Internet also enables sending e-mail, exchange of information and opinions, buying of products and access to news,... (Kotler 2004).

We also connect development of electronic business with development of computer networks and Internet, with agglomeration of information and telecommunication technology and standards for computer exchange of data (Jerman-Blažič 2001). In the case of latter it is more than mere common exchange of computer data and activity of an online store. Today electronic business comprises of: electronic trading, electronic banking, paying electronically, long distance work, electronic publishing, electronic insurance, electronic stock exchange... (Toplišek 1998).

Considering interaction of subjects of electronic business we separate electronic business (Kovačič, Groznik, Ribič 2005):

1. between companies and consumers (B2C),
2. between companies (B2B),
3. between consumers (C2C),
4. between companies and state administration (B2G),
5. between citizens and state administration (C2G) and
6. inside state administration (G2G).

Doing business electronically comprises of three levels, where every level requires higher level of technology and where every level offers results in different field of business. These levels are (Prešern 2006):

- 1<sup>st</sup> level: inner business processes, without connection to the Internet, since it comprises only of business processes inside the company, but it requires local computer network (LAN). Consequence of this level are faster, cheaper and better execution of business functions as keeping track of materials, general ledger, balance sheets.
- 2<sup>nd</sup> level: processes with buyers and suppliers, which are not only about management of inner business processes, but also about relations with buyers and suppliers. This form of e-business comprises of the same technology as 1<sup>st</sup> level and adds e-mail and web pages. Result of this level is quick and safe distribution of documents to and from business partners and better response time to anticipations of consumers.
- 3<sup>rd</sup> level: e-trading, where we upgrade technology necessary in previous levels with the ability to pay over the Internet.

Considering this definition, we can nowadays say, that all economic subjects have established a certain degree of doing business electronically. Whether individual organization utilizes all possibilities, is also dependent on legal restrictions. In case of attorney's services level three (e-trading) is questionable. In case of second level it may be only for use of e-mail for communication with customers and establishing of a web page.

If we focus our attention on the Electronic Commerce and Electronic Signature in continuation we can see electronic business as business in electronic shape on a distance by using information and communication technologies (ZEPEP, Ur. l. RS, No. 98/2004). Slightly modified definition listed there, is also used in literature (see e.g. Kovačič et al. 2004). Characteristics of electronic business are (1) computer communication, (2) organiza-

tion of business and (3) legal infrastructure to support such business (Makarovič et al. 2001). In electronic business, technically - technological and legally organizational ingredients interweave almost seamlessly. Today the focal point moves from technical toward non-technical (legal and organizational questions) (Toplišek 1998). These questions appear also at the concept of electronic database and at communication via e-mail, we are introducing briefly in continuation.

## 2.1 Electronic databases

Database is a group of equally formatted data, that we are keeping and using with the help of computer (Gradišar and Resinovič 1999) respectively is a group of connected files, that are organized and stored as a component of organization's computer supported information system (Gradišar and Resinovič 1998). Databases play four important roles in organizations (including law firms): (1) storage of personal data, (2) storage of data needed for business operations, (3) supply of data for management and (4) supply of data from organization's environment. Advantages of electronic archives are said to be (Skeniranje in elektronska obdelava dokumentov in Toplišek 1998):

- minimal costs of archiving,
- minimally need for physical place,
- documents are stored on an electronic medium, that allows quick access,
- containing of exact data without redundancy of data or superfluous doublings,
- adaptability
- enables efficient work,
- unlimited for making safety copies,
- preservation of quality of electronic document, in comparison to paper documents inertness to impacts of environment (water, fire, moisture, light),
- controlled access to archive documents on different levels of rights and assurance of safety.

## 2.2 E-communication with customers

Electronic mail is one of the most contemporary electronic manners of communication. It is asserting itself also as a medium for legally relevant messages. Statement of will is a rather well defined field in theory and judicial practice, however all key opinions are based on communicating on paper (letter). Author/sender and receiver both have paper message. These persons can do whatever they want with the paper, finally they can even destroy it. E-mail in majority of instances is located on a certain common place (common computer), where all messages are carefully logged and it is technologically possible to make impossible for the participants to breach integrity of stored messages. If communicating goes on directly between two computers, such tracking

is only possible on participating computers. From environment that uses e-mail as part of own business it is dependent whether it will make use of technological possibilities for reliable storage of messages in a time period, relevant for said environment (Toplišek 1997).

Today electronic business and with it, electronic archives and communication via e-mail are reaching more and more into the field of advocacy. We can say, that the internet changed the way attorneys do business, because regardless of their wishes they are subjected to demands of the market and as such forced to do business with subjects, which press heavily toward electronic business. Among the reasons for this trend we can also find numerous other reasons, especially e-mail communication (Harris 2001):

- simple use,
- particular computer knowledge is not necessary,
- we can send e-mail quickly and without additional costs of (physical) delivery,
- we can send e-mail to multiple addresses at the same time,
- e-mail can be sent from outside of the office (e.g. from home),
- e-mail can be printed and adds to archives,
- use of e-mail is conditioned by the manner of business in today's world and ever increasing demands of customers for such communication.

How are attorneys prepared for these facts in Slovenia and how are they utilizing advantages, that doing business electronically offers, in the next chapter.

### **3. Research on the use of electronic business of attorneys in Slovenia**

Toplišek was, in 1996, already studying the distribution of electronic business among attorneys in Slovenia and he found in his research, that only 15 % of attorneys had electronic addresses, while only 24 % of them had a computer with access to internet. Only about 5 % - 11 % of jurists had electronic address, of those most had commercial address (6%). 15 % of jurists were using internal e-mail at work, from those most are in administration and in economy; all other professional fields are falling way behind. Jurists were already at that time aware of possibilities, the e-mail offers them, because 38 % of them thought they would need it, 20 % were already planning to acquire and e-address. Still there was a large share of such, who do not know well enough about the technology, because 27 % of them were not certain, whether they would need electronic mail at all (Toplišek 1997).

Comparatively we can mention an American research from 1998 concerning communication of attorneys via e-mail (Harris 2001), which showed, that at that time, 53.6 % of American attorneys already communicated with their customers via the internet.

To demonstrate the state of use of e-mail among attorneys today and how they make use of other advantages, that contemporary technology brings, was the intention of a research, of which results we are showing in continuation.

#### **3.1 Method of data gathering**

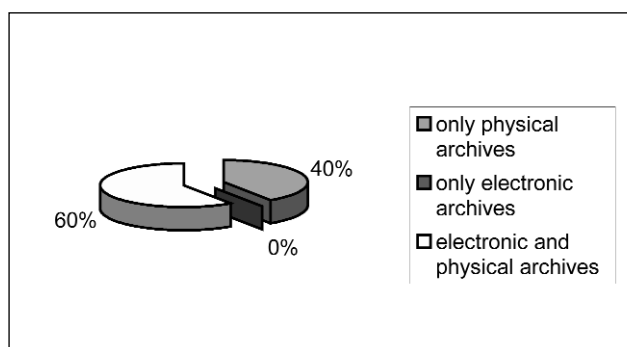
We did a research among Slovene attorneys in the time period from June to July 2007. Namely, we have done the research with the help of e-mail, whereas the basis for us was a register of lawyers of the Bar association of Slovenia, where attorney's e-mail addresses are listed beside basic data about the attorneys. We must forwarn here and now, that some of the listed addresses are not active, as well as that all attorneys in the register do not have an e-mail address listed. Response to the survey was very bad, because only 5,2 % of surveys sent were returned. Despite the bad response, we analyzed the returned questionnaires. We found, that majority of attorneys that returned the questionnaire had offices in business for over 15 years. Interesting is the data, that 44 % of offices are located in cities with over 100.000 inhabitants and 39 % are located in towns between 5.000 and 30.000 inhabitants. We must also stress that, »history« of existence of law firm does not influence in any way on the number of employees they have. So a good 69 % of the offices have only 1-3 workers employed.

The second part of our research was done by analyzing the attorneys web pages of Slovene attorneys. We did the analysis of web pages in period from March to April, 2008. The basis for a more detailed analysis was the database »Attorneys in Internet«, that was prepared by *IUS-Info* in cooperation with *The Bar Association of Slovenia*. The web pages in the database, were provided by the attorneys of law firms, which means, that the base is still deficient. Setting that aside, it is, however, the only reliable database of the sort. We found 66 web pages (3 were unactive) of law firms or individual attorneys. In the database we can find links that are tied to individual attorneys (that is why we can find 125 attorneys (and links) and »only« 66 web pages). We analysed these sites more in detail. Additionally we examined other web pages of Slovene attorneys, found with the search engine *Najdi.si* (namely with search inquiries "attorney", "law firm" and "attorney's society"). We found a further 39 web pages (or 37,15% of web pages), that we

analysed in a restricted scope (membership, market advantages, publicistic activity).

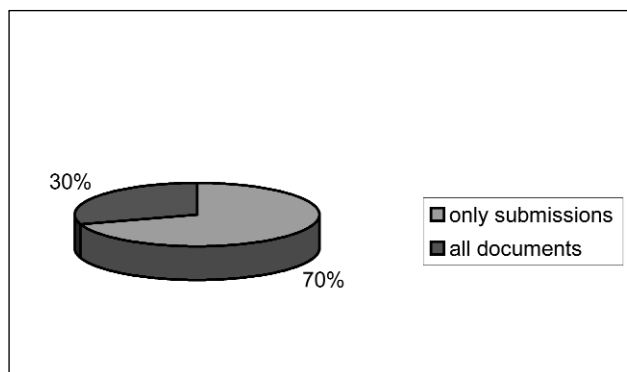
#### 4. Electronic archives and attorneys in Slovenia

First we asked interviewees about archives, its shape and reasons for it. As we can see in Picture 1, majority, good 60 % of law firms, are using electronic and physical archives at the same time, while others are only using physical archives. Between those, that also use electronic archives, 54 % of them are those that are using such method of archiving for old cases. We must also warn, that it is not fully evident whether the »use for old cases« does not perhaps only pertain to transfer of old files into electronic archives (and not the transfer all documentation into electronic form).



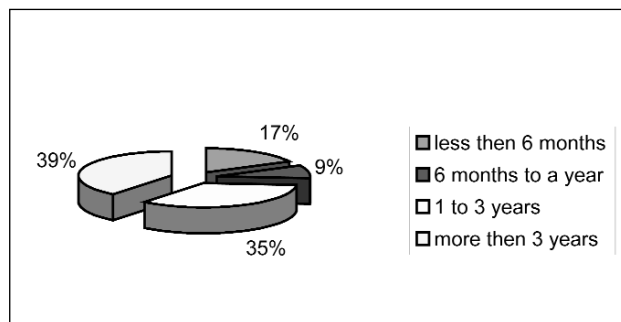
Picture 1: *Forms of archive among law firms in Slovenia*

Use of electronic archive is restricted regarding its scope, because courts of justice do not do business electronically. From this point of view it is understandable that, 70 % of offices using the electronic archive, have only file submissions in them. It is logical namely, that other documents (court rulings...), they get in paper shape, may not be discarded of, because doing that they would dispose of only documents, valid as originals. It would be interesting to look more precisely into the manner how the law firms, that answered they have all the material in the form of electronic archive, are dealing with this system.



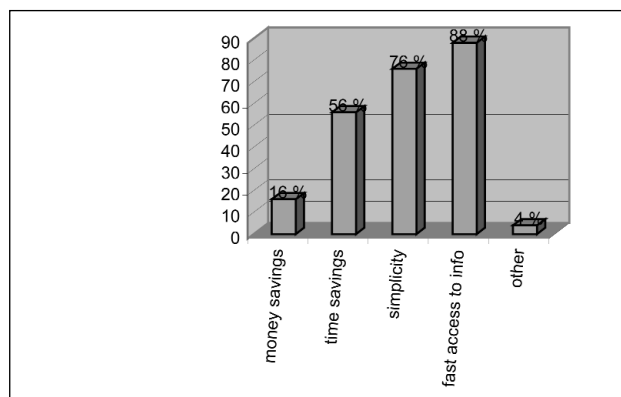
Picture 2: *Documents in electronic archives*

Among the users of electronic archives 39 % of interviewed law firms are such that use it already for more than three years, which is seen in the Picture 3.



Picture 3: *Period of use of electronic archives in law firms in Slovenia*

Considering, that electronic archive is bringing numerous advantages to its users, we were trying to ascertain also the reasons behind its introduction. 88 % of the law firms listed speed of access to data as the main reason. As can be seen in Picture 4, other important reasons listed are also simplicity and transparency of keeping the records, savings of time and savings of money.

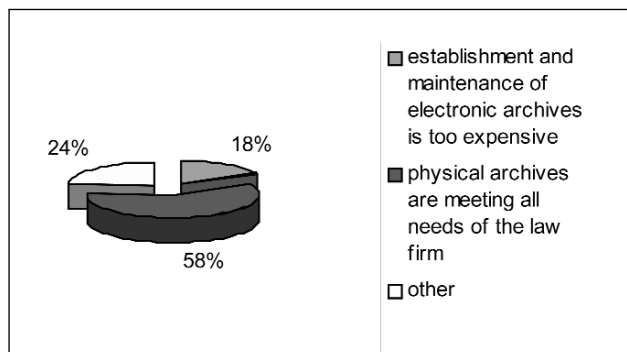


Picture 4: *Reason of use of electronic archive by law firms in Slovenia*

Picture 3 also leads us to infer about inconsistency of answers, because saving of time as an advantage of the electronic archives is listed by »only« 56 % of attorneys. We think namely, that advantages of quick access to data and saving time doing it, have a strong mutual connection, because quicker access to data saves also time. Presented results are not showing this.

Here we must also say, that the most widespread programme is Shakespeare, because 16 % of law firms are using it. Regarding this, we must of course emphasize, that many interviewees are using Microsoft Office, respectively MS Word for administration of their archive. Some law firms are using custom designed programmes, or programmes, which are a result of their own knowledge. Law Office is also in use by 10 % of law firms.

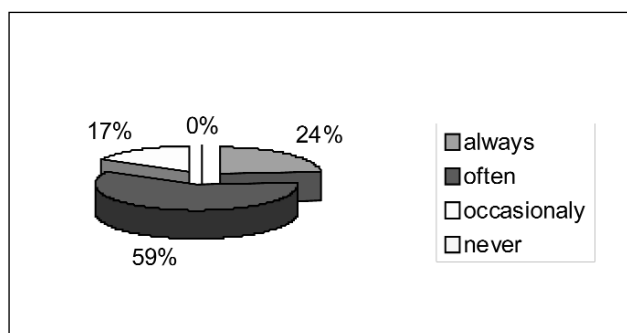
Considering the fact that just 40 % of law firms do not have electronic archives, the question concerning reasons for not having them showed some importantly. The prevailing reasons as showed are; that the establishment and maintenance of electronic archives is too expensive (58.8 % of law firms); that physical archives are meeting all needs of the law firm (17.7 % of law firms) or that the programmes unknown to them.



Picture 5: Reasons for non use of electronic archives

### 5. Use of E – mails and web pages among attorneys in Slovenia

We determined in the theory already, that second level of electronic business comprises e-mail and web pages. That's why we checked in research also, the use of both by attorneys in Slovenia and in what extent. We found, that in Slovenia the situation concerning the use of e-mail, considering the year 1996 improved considerably. The analysis of answers showed, that with the help of e-mail communicate with their clients 59 % of law firms often, and 24 % always, while other only occasionally.



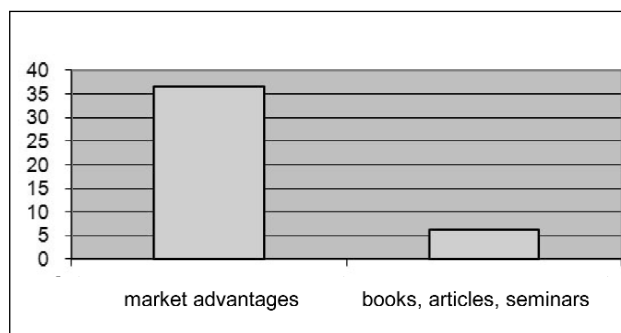
Picture 6: The use of e-mail for communication with clients

Concerning web pages of law firms we must first emphasize, that the admissibility/permisibility of attorneys web presentation in Slovenia was a long time subject of numerous debates, also because of connection with problems of advertisement of attorney's services. Individual problems in this field are repeating everywhere (in our country and elsewhere).

21st paragraph of the Attorneys Act is dealing with this subject. In this regard it is laying down the principle that attorneys may not advertise their activity. More precise is the Code of professional conduct, that states in the 23rd paragraph that defines what may not be looked upon as advertisement; if an attorney has on his web page data concerning his office (working hours, address, field of activity, specialization and similar), if these data are true and they refer to his activity.

However it is necessary also to consider the first part of the listed paragraph, since it limits the scope of allowed advertisement of attorneys. We would like to emphasize the following restraints: "Forbidden is the advertisement of attorney's activity, especially the praise of ones own quality, listing of successful defences, of won legal and other matters, cooperation in known cases, listing of clients and their importance, difficulties cases and similar, ..., references on their former activity, functions or position, ... references on influential unions and acquaintances, giving untrue or deceptive informations concerning their work, references on cooperation with important foreign attorneys and attorney's societies,...", because in practice we come across web pages, that break the listed rules.

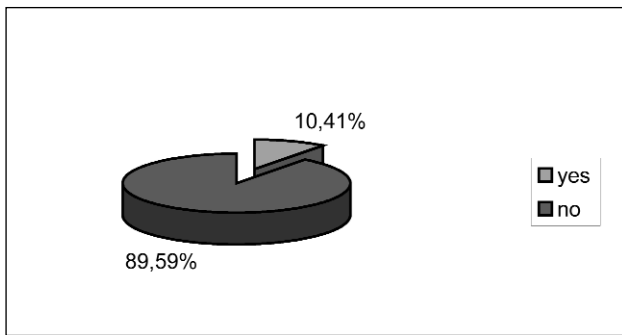
Above all, the web pages of attorneys appeal to certain "market advantages" (type of parties (bank, insurance companies,...), connections with other specialists (other attorneys, specialists on other fields,..., former professional experience ipd.); we also found a few web pages, that reference to publicistic and other professional activities of attorneys (of book, articles, seminars...).



Picture 7: Percent of mentioning of market advantages and of publicistic activity

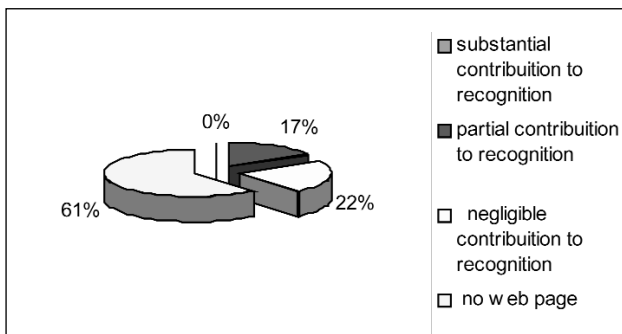
If we look at the base Attorneys on Internet approximately 10% attorneys have web pages (analysis showed, that majority of web pages belong to attorney's societies and not to individual attorneys). As mentioned before, there are 66 web pages listed in the base, while we found through the search engine *Najdi.si* further 39 web pages, that together consist 105 web pages of Slovene attorneys, which means, that common percent of attor-

neys with web pages would increase if they would all be taken into account.



Picture 8: Attorneys with web pages(as result of data-base analysis)

According to attorneys the web page does not contribute essentially to the recognition of the law firm, which is visible also on picture 9.



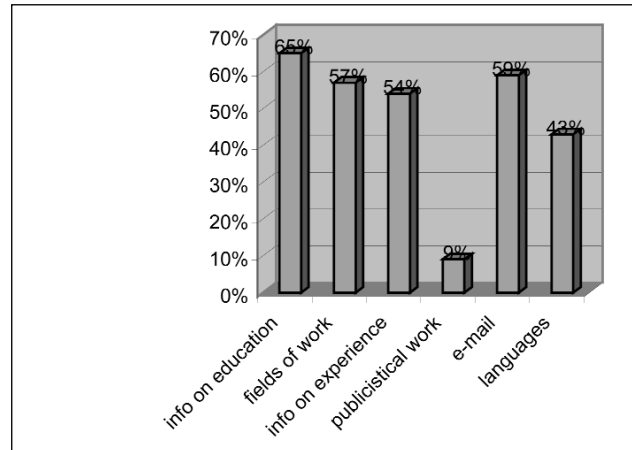
Picture 9: Recognition of law firms as a result of of web pages

The above opinion of attorneys is not astonishing, since the possibilities of choosing or finding an attorney are numerous: a) recommendation, b) through the bar association or of other professional organizations, c) through the yellow pages or own enquiry, d) through insurance companies, and e) through Internet. A German research showed half chooses attorneys considering recommendations of friends and acquaintances. This fact explains why relatively large percent of attorneys web pages are not listed in the base, since there is no predominant interest to do so, since the attorneys from setting up and of maintenance of web page hope for also of a certain positive benefit for themselves.

Most frequent data, that appear on web pages are :

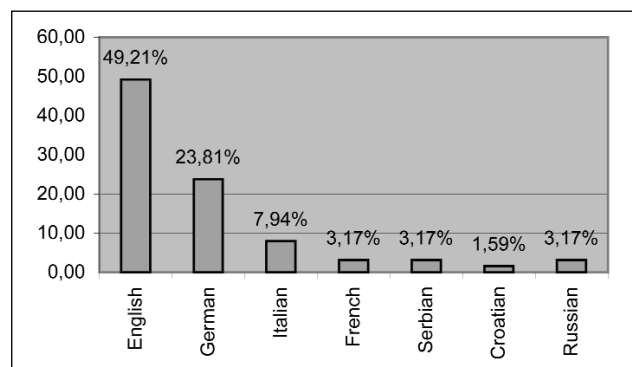
- 1) general short presentation of office - 82,5%,
- 2) telephone number - 100 %, number of the fax - 98 %, e-mail adress - 98 %, address - 100 % and map - 80,6%, indication of official hours - 76,12%, indication of languages in which they do business - 46 %
- 3) The field in which law firms engage in - 95,2% (and their specification - 68,2%),

- 4) Membership in professional organizations and associations (except for the Bar Association)- 19 %, (majority of attorneys of course lists membership in the Bar Association of Slovenia),
- 5) Attorneys and their presentation - 95,2% (in picture 5 a more detailed presentation of the information on attorneys is given).



Picture 10: Incidence of some informations concerning individual attorneys

- 6) connection to other web pages - 58,7%
- 7) Web pages in foreign languages (English - 49 %, German - 24 %, Italian - 8 %, other languages appear in restricted number are : French, Russian Serbian, Croatian and Spanish )



Picture 11: Web pages available also in foreign languages(according to database)

We also indicate following good practices.:

- 1) electronic forms for first legal advice or electronic forms for ordering an appointment at attorneys office,
- 2) pre-prepared samples of certain statements (for example statement concerning car crashes), that they are available on the web pages and clients fill them in in advance, .
- 3) description of the procedure at attorneys or indication of documents and proofs, that the clients must or should submit,

- 4) a more detailed specification of fields in which attorneys engage in (can be a big help to uneducated clients),
- 5) some applications "E-attorney" are available to clients on their web pages ,
- 6) interactive maps (some law firms are extraordinarily innovative in indicating their location to their (potential) clients).

## 6. E-service in the judiciary today and future prospects

The present researches showed, that the use of electronic archives in Slovenia and of web pages, in spite of all technical possibilities, is still not as expanded as initially expected. No law firm is using only electronic archives, which is understandable, since only electronic archives are not enough, since the courts do not do business electronically. On the other hand, attorneys use more and more e-mail communication

We should emphasise that the modernization of judicial system is a part of the project The modernisation of the judiciary system. Between its goals we can find the following:

- 1) The rise of efficiency of the judicial system,
- 2) The modernization of information structure and services,
- 3) Introduction of e-judiciary and others e-services in the field of administration of justice,
- 4) The implementation of electronic business of the judiciary and
- 5) The rise of productivity of the employees.

The modernization of the judiciary of course did not start with this project. Individual processes occurred before the project, and some of them were quite successful. Among them we should mention, for instance E-land registry, that has approximately million hits a year. Judicial delays were with it reduced rather successfully (Modic 2007). The data shows, that today 91 % of attorneys uses E-land registry. Some other e-services were also emphasised beside the above mentioned: E-register of companies, Ajpes...

In research we separately emphasised the project E-execution ("money claim on line"), where we speak only of execution based on a reliable charter. In spite of all the advantages, the project only launched in January of this year (with a six months delay). The research showed, that 97,6 % of interviewed attorneys intend to use the service. 95 % of all asked law firms also support further introduction of new e-service in the judiciary. Among

the options the most supported are the E-land proposal (85,7 % of asked) and E-civil procedure (59,5 % of asked). Attorneys also support other shapes of e-business; for instance e-submissions to the courts, possibility of e-registration of a company, possibility of notifying the parties in a court procedure concerning hearings and the electronic procurement of various confirmations.

## 7. A few proposals (en lieu of a conclusion)

The authors wished to show above all what the present state is ("sein"), their intention was not to give proposals on how it should be ("sollen"). However during the research of the present some possible proposals appeared:

- 1) The preparation of a strategy of introduction of electronic business of attorneys, that would serve as a guideline to attorneys in introduction of e-business.
- 2) The Bar Association should make clear coherent rules concerning web pages of attorneys, that should be based upon the de facto situation on one hand, and on what is moral on the other..
- 3) The Bar Association should purchase a programme for electronic business of law firms (cheaper aquittement, compatability)
- 4) Deliberation concerning setting up a model web page, that would enable all attorneys a uniform presentation in accordance with rules.
- 5) The attorneys should communicate the web address of their law offices to the Bar Association or IUS-info to allow a formation of a completer base, which could be used by their potential clients by providing them a more complete information.

During our research it became clear that the area of e-commerce of attorneys is a complex one. But attorneys now have a unique opportunity to respond to the changes in their environment even ex ante. What else could be a better demonstration of their responsibility toward their environment and stakeholdersØ

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# Implementation of the Adaptive System in Electronic Learning

UDC: 37.018.43:004.738.4

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*The paper presents one solution in the development of the adaptive system of electronic learning in the personalized environment LMS Moodle. The practice so far has shown that numerous electronic distant learning courses failed, due to the same static learning contents being implemented for all the students, which resulted in lack of motivation and poor results. The primary objective of this research is the personalization of electronic learning systems geared to the identified abilities, needs and preferences of each student, including the defined learning styles, too. The students were classed into three characteristic groups and the model of adaptive distance education system was presented.*

## 1. The learning management systems

The Learning Management Systems (LMS) are independent systems implemented in web technology-based education. The software that is the basis of the LMS controls all the elements of learning and records all the parameters required for the monitoring of the education process [14]. These parameters allow for the monitoring of the development of each individual student or group at any given moment, as well as for a reliable measurement and analysis of the results at the end of the education process.

The literature quotes several similar concepts which are frequently used as synonyms to the LMS: course management systems (CMS), virtual learning environments (VLE) and learning content management systems (LCMS). Strictly speaking, the differences among them are clear, e.g., the LCMS are the systems that, among other things, allow for creating the learning objects (LO) and their designation by the metadata, while the LMS do not offer such opportunity, but rather work with the previously prepared courses [11].

Some of the presently available LMS on the market are: Moodle, WebCT, Bazaar, College, eLearner, First Class, Intra Learn, Lotus Learning Space, Lotus Same Time, Tutor, dot LRN, Fledge, Ilias [9]. Until 2006, Blackboard and WebCT were separate commercial products, since then they have operated jointly [14]. The Moodle is developed and is still developing as an open code project.

### 1.1. LMS moodele

The Moodle is a modular-object oriented environment in learning development that is easy to compose and that offers an integrated user interface. The basic features of this system can be summed up as follows:

- High availability – capability of serving thousands of users simultaneously.
- Scalability – capability to support an increasing number of users without failing in performance
- User-friendly – an opportunity for the user (student or teacher) to master the use of the system in a short time
- Interoperability – capability of integrating with the existing software
- Stability – a stable version of the Moodle software ensures uninterrupted services to the student and teacher populations
- Safety – it is a quality of the system that it is not a higher safety risk in comparison to other components of the information system.

The above-mentioned features were sufficient for the authors to decide upon using this learning management system in this work.

Moodle needs no modifications in order to be implemented in Unix, Linux, Windows, MAC OS X, Netware, or any other systems supporting the PHP, including the majority of the Internet providers. The data are stored in only one database: MySQL and PostgreSQL, however, Oracle, Access, Interbase, ODBC and others can also be used [17].

Moodle is not the adaptive education MLS [3], however, in this work it is adapted only to the methodology area, without software changes.

## 2. Methodology

The first step in this research was to conduct a poll among the students in order to learn about their previous education, their preferences in learning, as well as the experiences in their work with the Moodle learning system. In addition, our goal was to identify each student's learning style.

The Felder-Silverman model defines the following learning styles [5]:

- active and reflexive learning style
- sensor and intuitive learning style
- visual and verbal learning style
- sequential and global learning style

The module graph (Figure 1) typical of group 1 shows the following:

- The lessons within the module are grouped according to their respective priority.
- The student-beginner follows the linear path in mastering the lessons.

Activity	Active	Reflexive	Visual	Verbal	Sequential	Global	Sensual	Intuitive
Forum	Concrete topics and problems	Issues to consider	No	Yes	Topics on each area and course part	Global topics	Facts, examples	Abstract topics
Chat	Yes	No	No	Yes	often	sometimes	Yes	No
Dictionary	As many terms as possible	Concepts	No	Yes	Yes	No	Yes	No
Workshop	Experiment, concrete problems	Discussing unexplored topics	Yes	Yes	Yes	Yes	Yes, with practical examples	Innovative topics
Research	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Selection	Yes	Yes	Yes	Yes	Yes	Rarely	Yes	No
Lesson	Yes, with problems and examples	Yes, with issues to consider	Yes, illustrations	Written and audio materials	Yes	Rarely	Yes, facts, algorithms	Rarely
Contact with teachers	Face-to-face	E-mail	Combine	Combine	Combine	Combine	Face-to face	Combine
Case study	Yes	Yes	Yes, illustrations	Written and audio materials	Yes	No	Yes	Yes, innovative topics

Table 1. Relations between the activities in the Moodle system and the learning styles [5]

The values of the attributes within one group are similar, whereas they differ significantly from group to group. The students were divided into three groups, so as to obtain more consistent, more logical and better quality results.

### 3. Content adaptation and content cluster-based navigation

Adaptability is implemented on the contents level (content-adaptation) as well as on the link level (link-adaptation) [1].

**Group 1** (beginner level students)

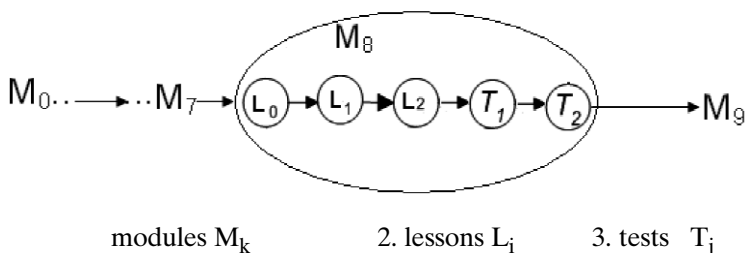


Figure 1. Group 1 module graph

- The module includes a preliminary test as well as a final achievement test.
- Navigation is conditioned by the final test results.
- Group 1 is offered only a short introduction into the topic to be studied, which suits the students without any previous knowledge (Figure 2). Each course week can contain the content description.

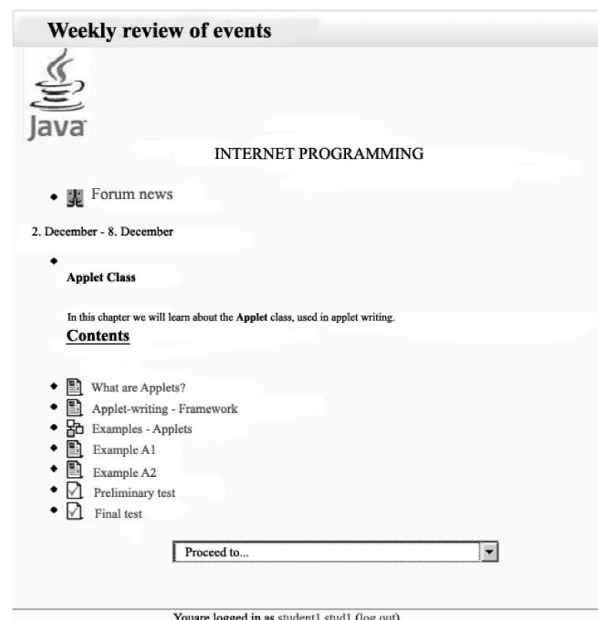


Figure 2. The look of one part of the course

- In the contents part the student is introduced to the lessons titles grouped within one module.
- Actual examples are given after each lesson, as in this way they facilitate the understanding of the learning contents and enhance learning.
- Lessons are linked by a precondition relation defining which lessons or clusters must be covered prior to moving on to the next lesson.
- It is important for the student-beginner that the number of examples be as large as possible.
- Each example has comments put in curly parentheses with short explanations of each line of the programme code, which the student-beginner will find very important for understanding the programme.
- There are no limits for the student as regards the defined deadlines.
- The Group 1 students take the exam part by part.

- Group 2 includes a broader version of the course unit “ Applet Writing –Framework“ with additional information on the applet-writing tools. The student is offered a selection of sites where he/she can learn more about the applet-writing tools (Figure 4).
- The intermediate level students are recommended some useful links on the Internet. The click on the chosen link automatically opens the web location whose contents are recommended by the teacher/tutor.
- The student prefers practical work to theory.

### Group 3

The Group 3 module graph (Figure 5) shows that there is no limitations as to the third group students’ (students with a higher level of previous knowledge) mobility across the modules.

### Group 2

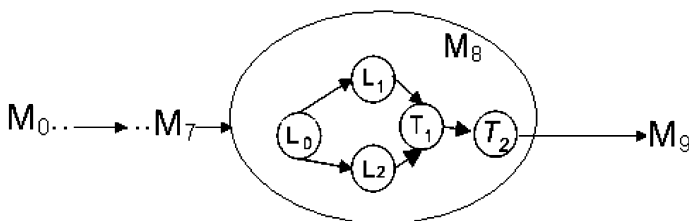


Figure 3. Group 2 module graph

modules  $M_k$  2. lessons  $L_i$  3. tests  $T_j$

- The module graph (Figure 3) typical of Group 2 shows the following:
- Lessons are grouped within the module according to their respective priority.
- The intermediate level student can take a random access to the lessons within a module, whereas random mobility across the modules is not allowed.
- The module includes a preliminary test as well as a final achievement test.
- Proceeding to the next module is possible only upon passing the final test from the previous module.

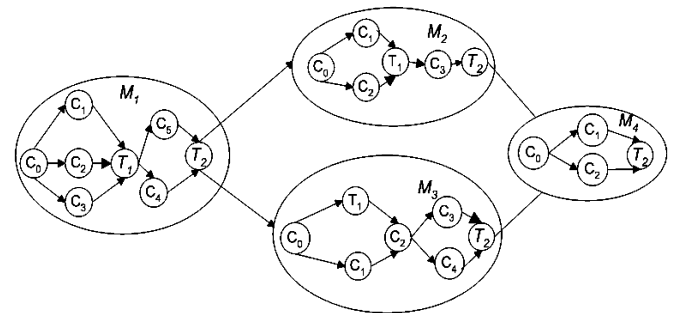


Figure 5. The Group 3 module graph

## 4. Results and discussion

The basic characteristics of students for each group according to the defined styles are presented in Table 2.

### Programiranje za Internet - Klaster2

VTŠ ► Klaster2 ► Resursi ► Alati za pisanje Java Apleta

<http://mathcs.shu.edu/Resources/Java/API/-Editor->Programmer's File Editor>

<http://www.lanacs.ac.uk/people/cpaap/pfe/-Compiler->SUN's Java compiler>

<http://www.javasoft.com/IDE->BlueJ version 1.1>

<http://bluej.monash.edu/IDE->Microsoft Visual J++ 6.0>

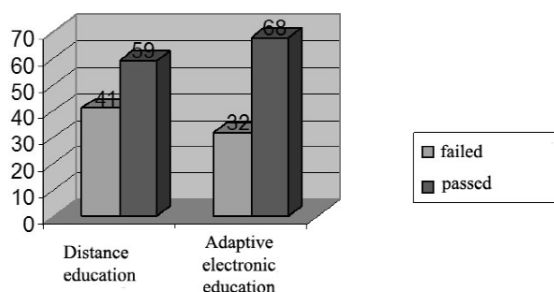
Figure 4. Additional information for Framework

Groups	Characteristics	Identified learning styles
Group 1	Multimedia materials	Visual
	Partial completion of exam obligation	Sequential
	Teamwork	Active
Group 2	Students choose topics	Intuitive
	Practical work	Active
	No strictly defined terms	Global
Group 3	Written materials	Verbal
	Partial completion of exam obligation	Sequential
	Teamwork	Active

Table 2. Study groups and styles

- Adaptability is implemented on the contents level as well as on the level of links by way of certain adaptation methods and techniques.
- At the end of the course, 82 per cent of the students claimed that they found the Moodle easy to use and understand.
- 92 per cent of students maintained that learning in an adaptive environment and at a self-adjusted pace improves their achievement at both the preliminary and the final tests.
- The mood and motivation for learning are significantly improved in all three group students, whereas in the control group students such improvement was not observed.
- The model is easy to implement on the existing open-source systems for on-line learning.
- A detailed review of the adaptive methods and techniques of electronic education is systematized and presented.
- Each group followed a respective course, specially geared to their needs.

**Comparative review of results  
in adaptive and non-adaptive  
conditions of electronic education**



*Figure 6. Achievement at tests in the adaptive environment of electronic learning*

## Conclusion

The paper defines a model of electronic distance-learning adaptive system. Basic phases and requirements are identified in the development of personalized systems of e-education, with respect to the identified learning styles. The electronic education group courses are personalized in accordance with the results obtained.

The proposed model supports the adaptability and at the same time maintains the simplicity in the course conducting process. The implementation of adaptability concept in electronic education can improve the efficiency of the education process through the personalized learning system, as well as the efficiency of the e-education system as a whole.

Further research will be oriented towards the completion of the present courses. Of great importance for further study will be the information on the efficiency and effectiveness of the adaptation activities implemented on the existing courses. The research will be extended by gathering new data on the students' characteristics.

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# Survive-to-Thrive

UDC: 005.51/52

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*Given the current economical crisis, surviving seems to be first thing for many manufacturers. Too often their policies are limited to drastic cost cutting activities, without a clear vision how to thrive to operations excellence. Nevertheless, aligning the business and manufacturing processes, the organization and the supporting tools is the core of the strategy and activities of the surviving manufacturers, successfully thriving for operations excellence. This paper has been presented at the SPIN09 conference in Belgrade on November 5, 2009*

## Introduction

Survive-to-Thrive was the theme of the European Conference of MESA International, held on October 27 – 28, 2009 in Utrecht, The Netherlands as well. Attendees, including manufacturers/producers, solution providers and analysts, heard how companies on either end of the spectrum need to think, act and engage in today's and tomorrow's global economic realities.

## Trends and observations

Given the current economical crisis, surviving seems to be first thing for many manufacturers. Too often their policies are limited to drastic cost cutting activities, without a clear vision how to thrive to operations excellence.

In the last decade, before the crisis, trends like shorter product life cycles, globalization of the market, regulations and increasing price pressure, were influencing the policy of industrial companies strongly.

Today, it is even more important to be ready to take up the challenge of the market and the supply chain successfully for whenever the next upturn will end the current less prosperous situation

Globalization of the market will remain influencing everything. "Make or buy?" and "Where to produce?" decisions has to be made. Globalization is about selling more products to new markets as well. This might be done directly or by cooperating with international distributors.

Managers are being squeezed between shareholders, pushing for more revenue and higher profits, and customers; demanding more for less money and a quicker delivery. The regulatory requirements are expanded year by year. While the General Food Law [1] is about timeliness of information, deliver proof within four hours, Sarbanes-Oxley [2] is requiring reliability of information.

All this is leading to supply chain challenges like reduction of stock-outs, lowering inventory to reduce holding costs, reduction of transportation and order management costs, etc. Currently, for a manufacturing manager, Vice President and even the CEO, it is nearly impossible to keep control over all operations.

## Transparency and visibility

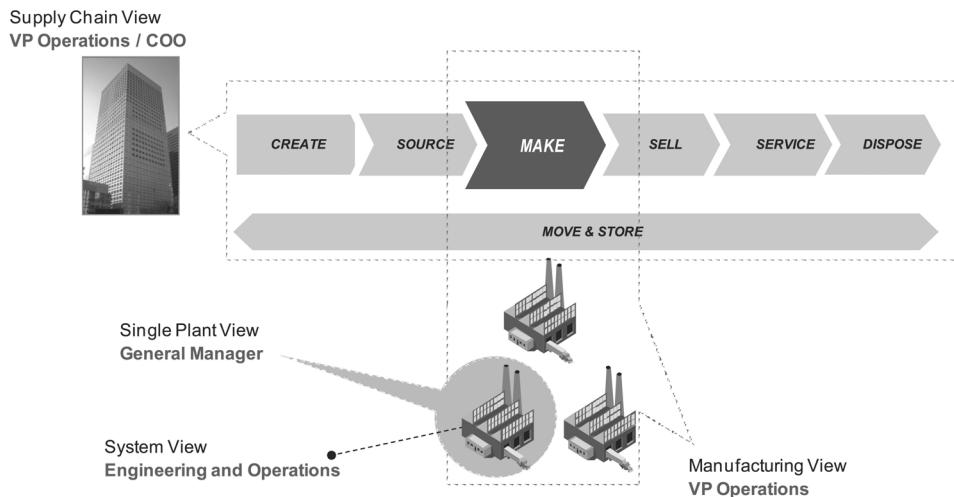
There is a clear need of transparency and visibility [3] in order to streamline production and other business processes and workflows. It implies the application of highly integrated information systems with rapid flows of accurate data. Integration of the plant and the enterprise are key for success.

To achieve transparency and visibility throughout the supply chain and manufacturing processes, a consistent (corporate) strategy and policy is required with clear strategic and operational objectives.



*Required alignment*

In this approach, business and manufacturing processes, organization and supporting tools, of which Manufacturing IT is just one, must be aligned. The objectives have to be communicated continuously to create and maintain sufficient support and involvement! The leading manufacturing companies see their factories, supply chains, logistics and procurement programs, inventory cycles and labor management as strategic assets!



### Information need in supply chain & manufacturing

The need for information is role dependent. The VP of Operations or COO is overlooking the whole supply chain or at least all manufacturing processes.

	VP Operations	Plant manager	Maintenance manager	Production manager	Planner/scheduler
<b>Metrics</b>	Return on assets	Manufacturing costs	Asset availability efficiency	Yield, cycle times	Changeovers compliance to plan
<b>Focus</b>	Across plants	Within a plant across processes	Within assets	Manufacturing process	Within supply chain
<b>Goal</b>	Profitability	Operational excellence	Reliable assets	Optimized manufacturing processes	Efficient fulfillment

### Information need per role

A plant manager is responsible for just a single factory, while engineering and operations are looking at the systems within that single plant. They have different metrics, focus and goals (see Figure 3).

To achieve improved profit margins, improved quality, improved compliance and reduce raw material costs at the same time is a challenging balancing act between operational planning and scheduling, asset performance and manufacturing execution. Everyone involved needs the right information in the right format at the right time. A real time multi perspective view at the complex reality of the manufacturing and other business processes is required.

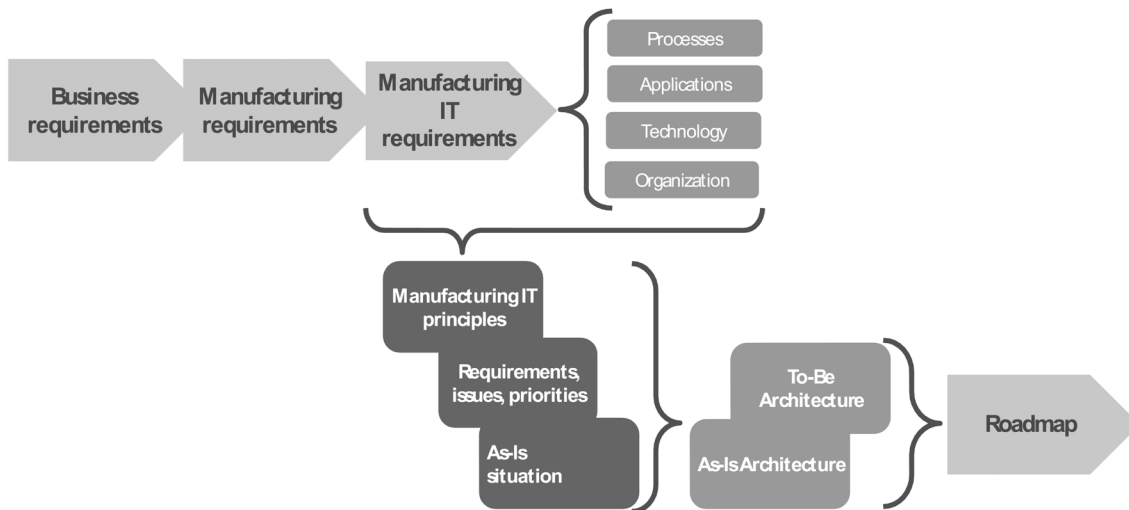
Today's portal technology with dashboards are helpful in presenting metrics and other relevant information to show what is really happening and how well we perform. That information is increasingly event based, providing information when something happens. The next step will be predictive metrics, full of intelligence and location independent, warning the responsible

people in time on their mobile device that something is expected to go wrong. Could this mean, that we can leave the factory and switch to 'unmanned' manufacturing or production?

An important prerequisite is that the production process is completely understood and that we really know how to control it. If that is the case, then the processes are not the restricting factor anymore, neither is the technology. It is all about how we make use of the information provided by the systems. Are we really consistent in our ways of working? It is up to the people to make it happen.

### Blueprint and roadmap

The business objectives, strategic and operational, are starting point for developing an architecture blueprint. From there the manufacturing and the manufacturing IT requirements can be derived with respect to processes, applications, technology and last but not least organization (see Figure 4).



*Proven approach to Value Adding Roadmap*

By a fit and gap analysis between the current and the desired future architecture, a step-by-step roadmap can be developed. The scope of the manufacturing IT architecture typically comprises the inbound logistics, make and outbound logistics functions of a manufacturing company. In accordance with the ANSI/ISA-95 standard, it covers all manufacturing operations and control activities (level 3) related to the material flow from supplier to customer [4][5].

In order to enjoy the full benefits of investments for business planning and logistics (ANSI/ISA-95 level 4), e.g. SAP and other ERP systems, the manufacturing operations management processes and applications (level 3) must be mature and harmonized.

### Other challenges

It is obvious, that 21<sup>st</sup> century manufacturing will have to face other challenges, like volatile raw materials markets, lack of well-trained workers and rising energy costs. Base metals and other raw materials are becoming very scarce. Actually, if the developing countries want to level with us in Europe and the USA, they need by far more raw materials than currently are available in the whole world. Instead of competing, we better focus to develop products and processes based on the use of other and new materials. The developing countries are competing with us for machines and tools as well. There is an explicit need for more efficient and effective way of working with respect to both processes and products.

Labor shortages will provide another challenge. By 2020, there will be only two workers to support the pensions of each retiree in Japan, Germany, the United Kingdom, and France - down from three and a half workers per retiree in 2000 [6]. In nearly all European countries, this is about the same! It will be

quite a challenge to find enough sufficiently good skilled employees. The consequences will be dramatic, as illustrated in the following example [7].

A tube and fitting manufacturer in northern Italy had enjoyed double-digit revenue gains from expanding sales in China. But when product demand jumped, the company could not find enough trained welders in the region. Eventually, it imported a contingent of Romanian workers, but unless conditions change, even those welders may soon prefer to work for Starbucks. And who can blame them?

### Conclusion

Investing in Manufacturing IT is not (only) about integration of systems and applications. It is about full integration of the plant, the enterprise and the supply chain. All aspects of the complete architecture are important and must be aligned: business and manufacturing processes, organization and people, applications, data and technical infrastructure.

This is the core of the strategy and activities of the surviving manufacturers, thriving for operations excellence.

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## Book review



# Managing Change

*Bernard Burnes, Managing Change,  
Prentice Hall, 2009*

## A Review

On more than six hundred pages, the book offers a thorough and comprehensive review of an ever intriguing area of change management. It can without doubt be recommended as a must-read for an overall understanding of this dynamic discipline. The fact that the fifth edition of the book has already been published is enough evidence on its fundamental character in the study of the change management field.

The premise that organizations have to change constantly, highlighted at the very beginning, has become the basic paradigm of management. We

still remember that many claimed it to be an overstatement when in 1993 the authors Hammer and Champy in their book *Corporate Reengineering* stated that “change has become prevailing and constant. It is a normal state of affairs.” The majority of people today agree that the statement is obvious and self-evident. The scope, the speed, the impact, and especially the unpredictability of change have become express and unavoidable conditions the managers are faced with in practice. In future, the changes are expected to intensify, hence the need to know more about the change.

Managing change has proved to be an extremely complex task in practice, which is reflected in a large number of change projects that failed; according to empiric research, as much as two thirds of all change in organizations fail. One of the leading consulting houses, Bain&Co, states that the general rate of project failures is 70 percent. Other research point to certain types of change and the extent to which they succeeded, and the results show that the projects concerning the change in organizational culture in the largest European, Asian, and American companies were inefficient in as many as 90 per cent cases.

The implementation of new technology, especially as regards the 1980's revolutionary changes in the field of micro-electronic engineering, the expansion of computer engineering and the introduction of computer-based processes in the majority of organizational sectors resulted in 40-70 per cent inefficient projects. The results of the total quality management (TQM) introduction in the U.S.A. companies in 1970s were rather poor: as many as 90 per cent of companies failed in this field. The data for Europe in the 1980s and 1009s are slightly more optimistic, in that about 70 per cent projects failed. The percentage of failed projects in the field of business processes re-engineering is estimated to be extremely high, as many as 80 per cent, regardless of great expectations in the beginning, when it was considered to be the "biggest business innovation in the 1990s".

The managers keep maintaining that the difficulties in managing change are one of key obstacles in their companies achieving higher competitive positions. It is a paradox that the failure rate of the change projects remains extremely high, despite an increasing interest in this field, reflected in a large number of published books, monography studies, articles in journals as well as the support and aid of consultant houses. The explanation may be found in the facts that theory itself sometimes offers puzzling and adversary recommendations and conclusions, that the need for interdisciplinary approach is well understood, but that only some aspects are observed or are dominant. Besides, it is clear that there is no ready "recepies" for change, therefore

theory cannot be expected to offer any integral, universally applicable solutions that can be implemented without being adjusted to a particular case. The book maintains that organizations in themselves are not entirely rational entities, despite the efforts made to achieve such a state, therefore they can hardly be set into a given cliché or model; as to the changes, it is only certain models and approaches that are most often offered. In practice, however, we must be highly open for ever new solutions, have a flexible approach to the models and processes, possibly combining and changing them. The acceptability of an approach to managing change depends on the type of that very change as well as on the conditions of the organization itself. If these organizational factors are identified as limitations, they may turn into the object of change, so that the organization should be brought into a desired, goal-defined, condition. We always start from the fact that the organizations, i.e., managers have numerous opportunities of choice when they are to make a decision on what and when they are to introduce change; therefore, the issues of decision and choice management – the change management model for organizational change are paid special attention to.

In the 1960s – 1970s period, the dominant approach to organizational change related to the planned changes with a range of methods, techniques and procedures to conduct in practice. The criticism of this approach, which started in 1980s, mainly referred to its inability to solve the situations of radical, abrupt, enforced changes, resulted in the rise of new theories, models and approaches. This new wave is recognized by the terms, such as continual improvement, organizational learning, or the approach of "emerging" changes. The emerging organizational change approach highlights the need to approach to change "bottom – up", rather than enforcing it "from the top" and making efforts to conduct it downwards. The authors point out that change is an open-ended process without a clearly visible end, and that it means a continual process of adjustment to the changed conditions and circumstances.

The change process is essentially a process of learning, not a method of changing organization-

al structure or practice. The emerging change, the book says, is a “long-term, complex and incremental process of designing change over time“ and it should be analysed thoroughly and contextually. The focal point of this approach are the organizational culture and the organizational learning, and the manager’s role is not to plan or conduct the change *per se*, but to design a long-term process of change by creating an organizational culture and climate that enhances research, learning and risk taking. The key point is the development of the employees, who are entitled to great freedom and are especially motivated to take responsibility to identify the needs for change and to carry it out.

The book is also a systematization of knowledge as the basis for problem solving in the practice of effecting organizational change, not as a given set of rules and principles to manage change. The set of systematized ideas about the organization in the already classic schools and theories of organization

are being studied as they are the basis for understanding organizational change. In order that organizations be changed, it is necessary that their structure, management and behaviour be perceived in a broader contextual, theoretical and historical perspective. It is also necessary that the organizational change should be observed as related to organizational strategy, therefore the analyses of strategic management in the section of the strategy execution are identified as synonymous with the change realization in the organization.

Each of the twelve chapters in the book finishes with the description of concrete problems presented in a case study, whereas the theoretical analyses are illustrated with numerous examples from practice. The book **Managing Change** is a compulsory reading matter for the students of management and organization, as well as for the managers who have to overcome the resistance to change and execute projects of change in practice.

**Dr Maja Levi Jakšić**

# Manual for Authors

## TITLE OF PAPER IN ENGLISH ( two lines at the most )

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<sup>2</sup>*Faculty of Economics in Belgrade*

**Abstract** - *These are instructions for preparing papers that will be included in the journal. Your papers should be prepared according to the instructions.*

### 1. INTRODUCTION

Papers have to be written in English. Original papers should be typed one sided A4 format (210x297mm). Use margin 2,5 upper, 2 cm lower, left and right.

Maximal length of paper is 8 pages including tables, text, pictures, literature and other appendices. Pages are numbered with graphite pencil in upper right corner.

Send two copies of the paper (original + one copy) and diskette in format MS Word 6.0.

If the last page of text is not filled up, the columns on the last page should be even, of the same length.

### 2. SUBTITLE (SIMULATION MODEL) (example: SIMULATION MODEL)

In the middle of the first page, after one empty line, insert English title of the paper. Use font Times Roman Bold 14 pt.

The name of authors and the names of their institutions in font Times Roman 10 pt. should be centered as in the model given at the beginning of this instruction..

Other parts type in two columns 0,5 cm in between. Paper is typed normal space and double space between paragraphs. Font Roman 10 pt is recommended. Beginning of the paragraph is typed at the very beginning of the columns.

The title of the paper and names of authors are followed by short abstract in Italic. All subtitles are typed in Bold, capital letters same sized as in the previous text (not smaller than 10 pt).

### 3. SUBTITLE (example: COMPARATIVE ANALYSES)

$$\sigma^2(r_p) = E\left(\sum_{i=1}^n [r_{p,i} - E(r_p)]^2\right) \quad (12)$$

All equations type in one column, numerated at the right side, as illustrated.

### 4. CONCLUSION

All figures, tables or graphic presentations are adapted to the width of one column. If necessary, when the figures do not fit in one column, use the width of the page, and then continue as previously, in two columns. See the figure below.

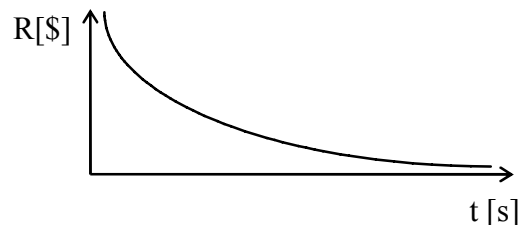


Figure 1. Graphic presentation of results

### REFERENCES

Only the literature related to the problems and main ideas presented in paper should be including and ordinal numbers of the references type in angular brackets.

Literature in text has to be quoted in angular brackets to the order of their quotation. For example in [5] it is shown that. The example of literature is shown below.

- [1] Banks, J. and S.J. Carson., Discete - Event System Simulation Prentice - Hall, New - Jersey, 1984.
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