

# Ekonomika preduzeća



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his edition of *Ekonomika preduzeća* consists of the Kopaonik Consensus document and eight papers.

As usual, this year's Forum was conceived so as to provoke a fruitful debate and to confront different perspectives. The Kopaonik Consensus document offers information to the readers about the main conclusions of this year's Forum. However, the Forum has introduced numerous discussions that are still open. One of them, particularly, refers to the reliability of the Labor Force Survey and to the official unemployment rate, which is the subject of the introductory paper of this issue. The second spotlight was directed to the amalgams of the ICT and physical technologies. Technology has always been an enabler of change and it has an immense impact on the economy, as well as on the society. In this edition of *Ekonomika preduzeća*, we also present a paper dedicated to the smarter pharmaceuticals and the application of the Web 2.0-oriented solutions.

As we have announced, in the *Introductory Paper*, *M. Arandarenko* and *D. Aleksić* refer to the article published in the last edition of *Ekonomika preduzeća*. The authors present and assess the main arguments of the Labor Force Survey criticism and analyze the inconsistencies between the employment trend and trends in revenues from social security contribution and personal consumption. They present proof that all the main claims of the criticizers are methodologically irrelevant and based on incorrect calculations and distortion of facts and terminology.

Motivated human capital has long been one of the key drivers of competitive advantage. Compensation is, basically, the most important pillar of motivation. The first paper in the section *Organization and Management*, written by *N. Janičijević*, deals with a rather insufficiently covered topic of pay secrecy. The author offers a systematic overview of the main advantages, as well as the disadvantages of this HR policy. Additionally, he explores the prime movers underlying such a choice, basing his research on empirical evidence obtained from companies in Serbia.

In close connection to the abovementioned driving force of competitiveness stands the next one – innovativeness. The second paper in this section, by the authors *M. Filipović*, *M. Nikolić*, and *D. Despotović*, explores the contribution of innovative high-tech and knowledge-based SMEs to economic growth, employment and competitiveness in the developed countries and provides recommendations for countries in lower stages of development, such as Serbia.

Innovativeness is the basic prerequisite of success and survival in tourism, as well. The authors of the third paper in this section, *A. Đorđević* and *B. Hristov-Stančić*, analyze the drivers of competitiveness in the tourism industry in Serbia, which are based on package tours. The results are in line with intuition: in a low-income country the total travel price reduction remains the most significant benefit which the tour operators offer. The demand with respect to significance of other benefits of package tours designed by tour operators remains inhomogeneous.

The first paper in the *Finance* section, written by *N. Vignjević-Đorđević* and *S. Kurtović*, explores the correlation between the development of corporate governance and the FDI in the Western Balkans. In the same section, a duo which includes *D. Marković* and *D. Azdejković* examines the financial performance of cross-border acquisitions in Serbia in the 2003-2008 period.

In the *Informational Technology* section, *D. Pantelić*, *M. Sakal*, and *L. Raković* explore the new communication landscape in pharmaceutical companies. Building on the fundamental ideas of Web 2.0, this paper deals with Web 2.0-oriented solutions for pharmaceutical companies.

The last paper in this edition, included in the *Marketing* section, is written by *D. Vaselić* and *D. Golijanin* and it deals with the presence of Shopper Marketing in the markets of the region, its benefits for the companies which adopted it, as well as the expectations about future development of the concept in the markets of the Western Balkans.

**Prof. Dragan Đuričin**, Editor in Chief

# KOPAONIK CONSENSUS 2016

## Multipronged reforms are the way to survive the future

Want to know why permanent interest of the *Kopaonik Business Forum* is the transition of Serbia from socialism to capitalism? In this geography it is not a trivial endeavor. Transition is much more than a non-evolutionary transformation of the system towards a full-fledged market economy.

After the fall of the Berlin Wall, Serbia was actually stuck in the middle between the empowering West and the declining East. As a consequence, the state collapsed and the economy was plunged into a regression which lasted more than a quarter of century. The freefall which started towards the end of the last century transformed itself into a multiple-dip crisis at the beginning of the following century. Today, the economy is not sustainable and political stability is challenged by many social pathologies triggered by the long and deep economic crisis.

From the very beginning, the *Kopaonik Consensus* had two mission statements. Firstly, to provide an update of the macroeconomic factsheet. Secondly, to suggest transition strategy corrections and policy improvements taking into consideration the necessity and feasibility. As far as the diagnosis is concerned, each year a sort of stereotype prevailed about the interpretation of the factsheet. Namely, while escaping the middle-income trap, Serbia has actually entered into a transitional trap. Instead of annulling the deeply rooted fractures of the system, these were in many respects additionally deepened by the transition.

In contrast with the peer countries in transition in Eastern and Central Europe, which had achieved a robust growth in the context of low inflation as a core benefit of multipronged reforms and as a prerequisite for catching up and income convergence with the Core Europe, Serbia underwent a delay in transition and, consequently, a significantly lower level of performance. Inadequate performance is the principal barrier to Serbia's accession to the EU.

Many reputable economists were asserting that misunderstanding of the leading trends in global politics, as well as overestimation on the part of the local political leadership of its own capacity to cope with these, were factors that eventually brought about Serbia's economy implosion in the 1990s. Deindustrialization and depopulation were the main economic consequences of political confrontation with the West.

After the political changes in 2000, policy of confrontation was replaced by the policy of integration. Unfortunately, new misconceptions and overestimations came into place. Namely, due to mechanical, but also the incomplete implementation of the neoliberal conceptual platform, the speed of EU integration has been excessively slow and, actually, on the elliptic trajectory.

Last but not least, in an impotent and out-of-tune economy such as Serbia's, the transmission mechanisms of the new normality emerging from the global context merely deepen the old fractures. Moreover, the new normality triggered elliptic trajectories inside the EU (Grexit, Brexit, Visegrad Group policy towards the refugee issue, the Dutch referendum about the EU enlargement, etc.). Increased volatility undermined the feasibility of Serbia's integration into the EU.

The prolonged accession process, combined with a shortage of funds and skills to follow the leading trends, particularly the changes in geopolitics, technology and climate, leads to a conclusion that the main challenge for Serbia is not future *per se*, but the question: How to survive it?

Good question, but perhaps there is a severe answer. The quest for an answer has steered the participants of the Forum towards four interrelated subjects. Firstly, the identification of strategic consequences of Serbia's current structural imbalances and macroeconomic fundamentals.



Secondly, the understanding of the hidden rules of the emerging context, sometimes labeled as hypercompetition. Thirdly, the identification of the EU reflections on these rules. Fourthly, the agenda for Serbia's transitionists in the process of adjusting the anatomy and physiology of the economic system in accordance with the new global normality.

Update for 2015 data shows some annulations of certain structural imbalances and visible improvements of certain macroeconomic fundamentals. The key results of the new policy are: fiscal consolidation and business climate improvement. However, the strategic audit of Serbia's macroeconomic factsheet shows that the transitional output gap at the level of 27.5% is an unquestionable indicator of sustained disequilibrium. Due to the geopolitical stuck-in-the-middle, the non-economic events during the 1990s completely destroyed the economy. After 2000, inadequate transitional strategy and wrongdoing, as well as mistakes and overestimations of the economic policy measures, paved the way for a dangerous combination of deindustrialization and high financialization. As a consequence, the J-curve, which portrays the long-term output movement during the transition, is not typical in case of Serbia, indicating the main structural imbalance of the system, the output gap. Moreover, in the 2008-15 post-crisis period, it is possible to identify a "triple J-curve", or three crises in a crisis.

The output gap is the cause of major vulnerabilities such as the twin deficits, particularly of the current account (4.8% of the GDP), unsustainable dependency ratio (less than one employee per one dependent), high youth unemployment (38.8%), high level of the NPL in the banking sector (23.0%), country credit rating at or slightly below the investment grade, low share of export in the output (36.5% of the GDP) for a high level of external debt (more than 80% of the GDP), and low investments (3% of the GDP).

In 2015 Serbia managed to come out of the recession again, although with a crawling growth. Macroeconomic indicators show improvement in the fundamentals of the system, primarily due to a significant reduction of the fiscal deficit, along with price and currency stability. There are also notable improvements in the quality of the business environment, which is reflected in the significant advancement on the World Bank's *Ease of Doing Business*

ranking list. Significant increase of the FDIs (EUR 1.8 billion) is a consequence of previous achievements. Given that the growth was achieved despite austerity measures, this policy could eventually be observed as "expansionary austerity".

Unfortunately, other macroeconomic indicators reveal a dual nature of Serbia's economic reality, the shining upside and the dangerous downside. Sluggish growth is a consequence of the fact that the progress on the export side is insufficiently strong to offset the depressed demand, partly due to austerity measures. Moreover, expansion in manufacturing is followed by jobless recovery. Unfortunately, the state sector is the largest contributor to the GDP. State sector is inefficient, primarily due to overemployment and human resource paradox (too many wrong people and not enough right people). Paradoxically, state-owned companies come from the sectors with high potentials for sustainable growth and value creation, such as telecommunications, energy, agriculture, and infrastructure. Structural imbalances, as fractures of the system, produce an uncontrollable leakage of funds, liquidity problem and, consequently, debt increase and insolvency threat.

Debt is constantly growing, primarily due to losses in the part of the economy which was not tackled by the structural reforms, pulling down the healthy part of the economy, banks and already restructured companies, into the liquidity crisis. Such situation produces certain strategic consequences. Firstly, an impotent economy with relatively low density of relevant economic agents does not offer a high level of attractiveness for investors. Secondly, an import and debt-dependent economy is neither sustainable nor capable of inclusiveness towards people and nature (climate change challenge). Thirdly, the shortage of funds for financing the health care system, science and education, as well as creative sectors, strongly increases the population risk. Moreover, ageing of the population, coupled with an intolerable level of unemployment, makes the pension system an unsustainable one, confining it to a pay-as-you-go structure. Fourthly, the achievements of the previous reforms are unsustainable. This is particularly conspicuous in the field of privatization (performance drop in the last two years in privatized companies and financial intermediaries), capital market retardation (market capitalization at the Belgrade





Stock Exchange at the beginning of 2016 was nearly five times lower than in 2006), and competitiveness decrease (there are practically no core advantages, nothing that is strong enough to counter the pressures of hypercompetition). The root causes of the abovementioned problems are primarily to be found in the misguided macroeconomic policies such as inflation targeting, allowing the FX rate to become overvalued in the long run and making no attempt to reduce the unusually high prime rate. In the neoliberal copy-pasted reform agenda, which mainly focused on liberalization of trade, quick privatization (with exclusive focus on the viable part of the economy combined with ignorance of the controversial one) as well as macromanagement which was reduced to inflation (low and stable), there was no room for micro reforms, particularly in the state sector, or for fiscal policy adjustments, infrastructure development, and improvement of competitiveness.

Impotent and out-of-tune economy which is highly dependent on import and debt is unsustainable not only because it does not dispose of sufficient liquidity to sustain its current level of activity, but also due to its inability to follow the leading trends through new capital investments. Moreover, the credibility of the economy is not at a level which provides opportunities for capital raising under favorable conditions or for stronger FDI influx enabling external liquidity. Instead of new investments, the new debt is primarily being used to refinance the previous ones. Also, income from privatizations has never been deployed towards reinvestment, but towards other purposes. As a consequence, divestment was followed by an increase in demand.

As far as changes in the global environment are concerned, the socioeconomic context and technological progress predominantly determined the growth model and type of management (macro and micro) in each development period. The new normality in the socioeconomic context is, among other things, influenced by human mistakes, particularly with respect to the growth model and the related economic policy platform.

The so-called "4Us principle" of market fundamentalism, in the sense of universal deregulation, universal privatization, universal cross-border integration, and universal implementation of inflation targeting policy tool, was the core idea embodied in the neoliberal conceptual platform. However, this combination does not work efficiently, not even in the developed countries. This is highly noticeable in case of capital markets deregulation, which was the primary cause of "the great deformation" of neoliberal capitalism, the 2008 crisis and its spillover from the financial sector into the real economy sector in the developed economies, and from the developed to the developing world. In many developing countries, inflation targeting is an irrelevant mission statement, given that the economy is burdened with the output gap. Contrary to the intention, the neoliberal version of globalization leads to a division of the global economy, instead of compatibility of its components.

The emergence of new competing development paradigms of the so-called "managed capitalism" and their implementation, particularly in the developing world, was conducive to the power shift and, consequently, to a non-economic reaction from the side losing its ground. Typical manifestations of geopolitical spillover to the economy are: the rising level of economic sanctions, growing share of interstate arrangements on trade and capital flows, intensification of regulation, expansion of client states and proxy wars, refugee influx intensification combined with terrorism, and the growing power of anti-establishment politicians. In the modern world, one billion people from more than fifty states live under the threat of war.

New normality leads to a permanent instability of the political system, controversial anti-crisis measures (quantitative easing, negative interest rates, etc.), decline in economic expectations, investment squeeze, credit crunch, and dominance of individual interests over the overall one, including interests regarding the environment. By losing the complementarity content, the globalization paradigm is quickly transformed into a deglobalization one.

Apart from the mentioned normality in the socioeconomic context, the industrial revolution 4.0 is a great opportunity for economic development. The ability of human beings to invent technology is their defining characteristic. The prevailing technology in each era of development, such as information and communications technology (ICT) in the information age, has impacts on the society as a whole, going far beyond the industry in which it was developed. New industrial revolution is emerging on the fundamentals of the previous one. The post-information age is characterized by a fusion of technologies from the ICT field (mostly virtual) and innovations from other technology fields (mostly physical). Intensity and influence of disruptive innovations on the competitive structure confirm the assumption that we are currently experiencing a new industrial revolution. The disruptive innovation wave explains a process whereby a new company with fewer resources, but with cutting-edge technology, is able to successively challenge and, in an extreme case, destroy its incumbent competitors.

In each industrial revolution, the core technology strongly affected economic development. In the industrial revolutions 1.0 (mechanization of production by harnessing steam power) and 2.0 (systems of mass production by exploiting electric power), the scientific optimism backed up by production engineering was the main driving force behind the output increase and productivity growth. In the industrial revolution 3.0 (automatization and integration of different phases of the value chain), the overall effects of the ICT on economic development were disappointing, because this technology was much less transformative than the core technologies in the previous two industrial revolutions. Industrial revolution 3.0 neither increased the productivity substantially nor did it create new jobs, like the previous two industrial revolutions did. Evidence support the previous claim. Firstly, the cost cutting based

on the reduction of information asymmetries exacerbated the deflation through revenue decrease and job cuts. Secondly, in terms of jobs creation, irrelevant investment strategies mostly concentrated on the external growth and share repurchase and, sometimes, on bizarre fields such as games and space tourism, strongly reduce the investment multiplier. Fourthly, the new technology decreases the density of relevant business agents, making the “winner-takes-all” principle feasible and reinforcing the tendency towards wealth concentration. For example, in the global economy at the beginning of 2016, the richest 62 people controlled more resources than 3.2 billion of the poorest ones.

Industrial revolution 4.0 has the potential to push the economy into a quantum leap of output and productivity owing to the emerging amalgams of innovations in the domain of virtual technologies (internet of things, big data, cloud computing, etc.) and physical technologies (human genome, nanotechnology, robotics, big molecules, 3D printing, etc.). These amalgams serve as basis for new industries and rejuvenate the mature ones. For example, the discovery of the human genome, combined with virtual technology breakthroughs, leads to the development of a new industry, life science. All citizens of the planet are potential users of this emerging industry. In the automotive industry, as a typical mature industry, innovations such as the electrical engine drive, autonomous vehicle, and universal connectivity have the potential to fully rejuvenate it.

Structural changes influenced by the new socioeconomic normality and the new industrial revolution make the risk universe an extremely complex and almost unmanageable one. The EU, as Serbia’s near environment, is also under the influence of the interactive game of risk stressors. The main challenges are the sovereign debt crisis, refugee influx combined with terrorism and competitiveness decrease due to low degree of investment in human capital and innovativeness. Moreover, an *à la carte* approach to the main political issues leads to the emergence of many elliptic trajectories inside the EU.

The EU is at a tipping point, which makes the accession of Serbia more challenging. It relates to the previously imposed question: On its accession path, what should Serbia do regarding the delay in catching up and income convergence with the EU when the EU itself is a moving target due to internal challenges and divergent solutions to these? The *leitmotiv* of the Forum was that the EU-like institutional setting is an absolute imperative for the decision-makers in Serbia.

In 2015 fiscal consolidation in Serbia was in the spotlight. The fiscal deficit was significantly reduced to the level of 3.7% of the GDP. Budget discipline improvement, combined with price and currency stability, is an indicator of recovery. After three contractions since 2008, the growth is now in the positive territory. However, it is a sluggish growth (0.8%). As a consequence, the GDP level in 2015 did not reach the pre-crisis level. Due to unsolved problems from the past, in the following period Serbia could expect,

at best, a gradual recovery. The IMF projections are 1.5% (2016) and 2.0% (2017). However, such growth dynamics is insufficient for catching up and income convergence with the EU. To achieve the strategic reform’s principle goal, integration with the EU, Serbia will need to attain a robust growth in terms of compound average growth rate of 6% until 2030.

Is this possible? Maybe yes, maybe no. Probably yes. Multipronged reforms are a prerequisite to achieve such breakthrough principle goals. This requires the implementation of the new model of growth and the related economic policy platform. New structural economics has offered the blueprint for the reforms. Industrial policies for tradable sectors are the core idea of the new approach. In case of Serbia, tradable sectors could be divided into sectors with comparative advantage (infrastructure, agriculture, metals, automotive industry, textile and fashion, and waste management), sectors with competitive advantage (energy, transport and city logistics, wood and furniture, and manufacturing), and sectors with sustainable competitive advantage (the ICT, health tourism, and organic food).

The new model of growth and the related policy platform should reboot Serbia’s economy and put it back on the path of sustainable and inclusive growth. In the new industrialization, Serbia needs a clear definition of priority sectors. Top priorities should include the ICT, infrastructure, agriculture, and energy. The ICT exhibits a strong potential for sustainable competitive advantage through rejuvenation of incumbent industries in the real economy, as well as improvement of services, including itself. The ICT shall allow Serbia to skip the previous stages of development and to introduce the leading edge technologies and more competitive industries.

Infrastructure development is not a very attractive business in terms of profitability, but it is a matter of compatibility with the near environment. Namely, infrastructure development is the price which must be paid for staying on the accession track. Zero tolerance policy in terms of using funds available from international financial institutions was prescribed for this industry. The aforementioned also refers to bank guarantees and similar support measures to domestic companies engaged in the said activities.

Special attention during the Forum was dedicated to the core macroeconomic policies, monetary and fiscal. Macroeconomic panel and the panel dedicated to the banking industry jointly identified the large volume of foreign currency denominated debt as a major vulnerability of the system. The solution for this inconvenience is to curb the borrowing in foreign currency. Knowing the currency composition of its own loans, the Government can simply say “no” and predominantly issue bonds in dinars. Bank supervision can be used as a leverage to discourage banks from borrowing and lending in foreign currency. However, a more complicated issue is the corporate borrowing in foreign currency. Preventing this trend would require the imposition of special mechanisms which would rather

discourage than prevent the borrowing denominated in foreign currency. Tax policy could help to achieve the said goal by applying tailor-made automatic stabilizers. Namely, tax policy could offer less tax relief for interest payments on foreign currency denominated debt and/or charge higher taxes on interest receipts on such debts.

As far as the tax policy is concerned, the general recommendation is that the most effective way to employ the fiscal policy as a countercyclical tool is to strengthen the automatic stabilizers and allow them to operate. Nevertheless, this policy can be introduced only during the boom stage of the business cycle. In addition to the fiscal policy, there are other measures that might assist in minimizing the risk of emergence of a crisis, such as the instance of inadequate FX policy. While the Government is at liberty to depreciate the currency in order to limit the negative effects of the crisis, it should also be proactive in seeking to control the appreciation during the boom stages of the cycle, particularly in periods when investors pump in the money through privatization.

A significant portion of the panel discussions was dedicated to industrial policies in certain priority sectors such as energy, agriculture, insurance, tourism, and consumer business.

In the energy sector, special focus was placed on the key elements of the negotiation platform during the process of accession to the EU, keeping in mind that the energy system in Serbia is based entirely on fossil sources, particularly on coal. To follow the global regulation rules in this field, primarily referring the CO<sub>2</sub> emission, it would require certain adjustments of the energy policy during the transition period (the case of Poland). Moreover, there is a need for fine tuning in the feed-in tariffs policy in order to exploit the difference between gross and net price of the electricity generated from the fossil fuels with the aim to finance renewable energy production. There is also room for industrial policies to foster liaisons between waste management and energy production.

In the agriculture sector, two subjects predominated. Firstly, the subventions. The general conclusion was that the prerequisite for a complete implementation of the free trade agreement entered into with the EU is the adjustment in subvention policies between Serbia and the EU. Secondly, the land sale. Participants underlined that land is the most attractive asset (no depreciation). Land sale is not a form of export nor of revenue increase, but of divestment. In order to prevent consumption growth due to land sale, it was suggested to establish the agriculture fund. The purpose of the fund would be to extend loans for financing competitive production (e.g. organic food).

In the insurance industry, special attention was dedicated to the proreform proposals and quick implementation of the new regulation with the aim of integral implementation of the Solvency II Directive. Practitioners from the field have reintroduced obligatory insurance against natural

disasters. Also, an initiative was put forward to finance the growth by using the funds from voluntary health and pension schemes and life insurance.

In the segment of supporting policies, those which were particularly discussed were the education policy, science policy, health insurance policy, and regional development policy. In the education sector, there has been some progress, but it is still lagging on the EU scale. There is no hope for sustainable and inclusive development unless the poor get more human capital, compared to what they have had in the past. Higher quality of education in a fragmented society could act as a catalyst for actual social cohesion. Participants of the Learning Society panel expressed strong support to the vertical industrial policy in science and technology, usually referred to as the national innovation system. This policy proposes the creation of an institutional infrastructure in which companies that intend to innovate could easily obtain the necessary support. Science policy must have a clear focus on a limited number of fields in which Serbia has displayed a potential for competitiveness improvement, as well as firm connections with the competitive industries. In addition to the competence level of the so-called "improved human capital" as a direct consequence of the science policy, the discussion also underlined the fact that adequate health care policy for the so-called "basic human capital" is a prerequisite for the increase of competitiveness.

In the domain of health insurance, special attention was extended to two issues: employee structure (back office enlargement) and failure of the system to absorb the young educated physicians. Furthermore, the cost structure of health insurance was under scrutiny of the panelists. They indicated the key vulnerabilities of the system, such as the health insurance fund liquidity problem, the ignorance of the authorities of the innovative drugs on the so-called "positive list", and the liquidity problem spillover in the supply chain.

In terms of regional policy, the problem of economic unsustainability of certain geographic regions was analyzed, particularly in the near-border areas. The necessary precondition for solving the said problem is economic growth. Sufficient precondition refers to the adequately defined regional policy which would be connected with population policies.

General impression of this year's Forum is that not only prosperity, but also the survival of Serbia, depends on the implementation of multipronged reforms. Selective macro-fiscal reforms that are not accompanied by the micro reforms, particularly in the state sector, or by automatic stabilizers from the monetary and fiscal spheres, are not effective. Those three perspectives of reforms should be in concert because they are inextricably linked. Namely, if one fails, they all fail. Multipronged reforms are a way to escape the structural crisis and to get the economy back on the sustainable path, while providing catching up and income convergence with the EU.



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## NOT ALL JOBS ARE CREATED EQUAL: HOW NOT TO MISREAD THE LABOUR FORCE STATISTICS IN SERBIA

Nisu svi poslovi jednaki: kako ne čitati pogrešno  
statistiku radne snage u Srbiji

### Abstract

In this paper we will closely examine a well-publicised attempt to proclaim the recent recovery in employment as revealed by the Labour Force Survey "an illusion" and to discard the Serbian LFS data as "unreliable", and "suspicious". We will present and assess all the main arguments of the LFS's denialists: comparative evidence on employment elasticity with respect to growth, major shifts in employment since 2008, as well as the alleged inconsistencies between the employment trend and trends in social security contribution revenues and personal consumption. We will demonstrate that all the main claims of the denialists are methodologically irrelevant and based on incorrect calculations and distortion of facts and terminology. We will continue to explain the development of the LFS, its international and European standards, and emphasise the growing significance of the LFS that extends far beyond its contribution to macroeconomic statistics.

**Keywords:** *Labour force survey, employment, national accounts, Serbia*

### Sažetak

U ovom članku bliže razmatramo jedan široko publikovan pokušaj da se nedavni oporavak zaposlenosti na osnovu podataka Ankete o radnoj snazi predstavi kao „iluzija“, a sami anketni podaci odbace kao „nepouzđani“, i „sumnjivi“. Predstavljamo i pretresamo sve glavne argumente poricatelja ARS – uporedne podatke o elastičnosti zaposlenosti u odnosu na rast, velike promene u zaposlenosti od 2008. godine, kao i navodnu nekonzistentost između trenda zaposlenosti i trendova u prihodima od doprinosa za socijalno osiguranje i u ličnoj potrošnji. Pokazujemo da su sve osnovne tvrdnje poricatelja metodološki irelevantne i zasnovane na netačnim računama i iskrivljavanju podataka i terminologije. Nastavljamo sa pregledom razvoja ARS i njenih međunarodnih i evropskih standarda. Ukazujemo na rastući značaj ARS koji je daleko obuhvatniji od njenog doprinosa makroekonomskoj statistici.

**Ključne reči:** *Anketa o radnoj snazi, zaposlenost, nacionalni računi, Srbija*

## Introduction

In their paper Petrović et al. [9] put forward a number of strong claims related to labour force statistics in Serbia. Basically, they resolutely deny the reliability and usefulness of the Labour Force Survey (LFS) data produced by the Statistical Office of the Republic of Serbia (SORS). Since Mr Petrović is the Chairman of the Fiscal Council, and his co-authors are engaged with the same institution, the paper, presented at the 2016 Kopaonik Business Forum, has received a fair share of public attention and has furthermore been posted on the official website of the Fiscal Council, among only a handful of research papers, with the general aim to stimulate academic discussion.

Although Petrović et al. make passing references to our recent paper co-authored with Kovačević [2], they still appear to apply the same simplistic and erroneous approach and make the same type of unfounded and essentially populist claims in the interpretation of labour market trends we have criticised in our paper<sup>1</sup>. Such claims, coming from an influential public body such as the Fiscal Council and its Chairman, cannot be ignored and should be repudiated. This is the first and more immediate reason to write this paper.

Another reason is, in our opinion, even more important. We want to support a more informed debate on labour market trends and labour market statistics in Serbia. Unlike the denialists, we see no reason to doubt that the LFS data are generally reliable and indeed indispensable for the purposes for which they are primarily being collected, while recognizing that there is room for further improvement. The limitations and methodological changes in the LFS need to be well understood and taken into account when analysing general and especially structural trends in the labour market activity of the population. Moreover, recent attacks on the Labour Force Survey and the “controversy” caused by these attacks have diverted the public and expert attention from the deeper and more important issues

related to the understanding of root causes of the poor performance and the seemingly counterintuitive dynamics of the Serbian labour market. Owing to its design, the LFS – unlike any other survey or data source – does reveal the fundamental and multidimensional duality of the Serbian labour market. This duality has emerged both as a result of various historical and structural factors, and as a result of institutional misconfigurations and grave policy mistakes. The duality of the Serbian labour market can be observed either by conducting a structural analysis at a certain time point or, even more effectively, by looking at the labour market flows by structures over time, inclusive of the use of transition matrices.

Finally, based on international standards and comparative experience, we shall briefly discuss the current state of development of the LFS and labour force statistics in Serbia, especially when it comes to the integration of the LFS and other sources of labour statistics into the system of national accounts – an issue surprisingly misunderstood by Petrović et al. who, instead of their nature, blame the quality of the LFS data for their alleged inconsistency with other macroeconomic indicators.

After the Introduction, the rest of the paper is structured as follows. In Section 2 we will discuss the first of the arguments against the reliability of the Serbian LFS data put forward by Petrović et al. which is based on comparative evidence from Central and Eastern Europe. In Section 3 we shall tackle their argument related to the improbability of large swings in employment since 2008. In Section 4 we will demonstrate that their calculations, showing stark inconsistencies between the formal employment trends and social security contribution collection trends, and also between the total employment trends and trends in private consumption, are incorrect. In Section 5 we will provide evidence that the expectations of Petrović et al. regarding the LFS are unrealistic, and show that there are well-established pathways to integrate employment statistics into the system of national accounts, but which include procedures that are far more complex than Petrović et al. envisage. In Section 6 we shall briefly explain the primary purpose and growing importance of the LFS, both generally and in the context of Europe 2020 Strategy and the Serbian Employment Strategy. Section 7 concludes the paper.

1 Actually, our criticism in Arandarenko et al. [2] was mostly aimed at the repeated claims made since 2013 in the Quarterly Monitor and in media appearances of the QM's Editor-in-chief, Mr Arsić, that the Labour Force Survey data were not to be trusted because they had been showing strong increase in employment despite the stagnation of the GDP, and that these had also been incongruent with other macroeconomic trends.

## Section 2: Comparative evidence

Petrović et al. begin their argument by looking at comparative evidence, comparing the cumulative GDP and employment growth in 13 Central and Eastern European countries in 2013 and 2014, with 2012 as the base year. They find that the employment growth of over 14% in Serbia was by far the greatest among the comparator countries – twice as large as in the next comparable CEE country, and that, at the same time, the Serbian GDP growth was below average. Furthermore, they calculate the elasticity of employment with respect to the GDP in the same period and obtain the elasticity value of 19.9, which is, according to them, far outside the theoretical boundaries, which range from 0 to 1.

It might be said that this, perhaps, was not the best way for Petrović et al. to start the argument they wanted to make, since they based it on an erroneous rationale. First, they calculated the employment growth to be 14% by comparing the incomparable, taking the employment numbers from their misconstrued Table 3 [9, p. 63], in which they put together the originally released annual employment data for 2012 and 2013 and the (upwardly) revised data for 2014 – which have been produced by the SORS to ensure forward comparability with the 2015 and later data, not the backward comparability. In doing so, they have inflated the employment growth in the 2012-2014 period from around 8.5% to 14%, and at the same time computed the employment elasticity of growth of 19.9, instead of the correct 12.4.

Since this mistaken series has been repeatedly used in their paper (from which it has unfortunately spread

to some of the media), to avoid any further confusion, in the left panel of Table 1 below we have presented their misconstrued employment series for the 2008-2015 period, while the right panel of Table 1 illustrates the correct employment series with comparable data for the same period, with the breaking point in 2014. The year 2014, which was marked by the introduction of the quarterly LFS survey, was the last year of the original series started in 2008. At the same time, its revised data (revised in order to be aligned with the continuous LFS survey introduced in 2015) are the start of the new comparable series for the period from 2014 onwards.

But is it not true that 12.4 is still far beyond “any possible range” of employment elasticity, as claimed by Petrović et al. for their (mistakenly measured) elasticity of 19.9? We believe that it is not. Actually, possible boundaries for the employment elasticity of growth are between minus infinity and plus infinity. According to the most basic definition applied by Petrović et al., employment elasticity is the percentage change in the number of employed persons in an economy, compared with a percentage change in economic output, measured by the gross domestic product. Islam [5] has demonstrated that year-over-year employment elasticities calculated using this method tend to exhibit a great deal of instability. As we have extensively discussed in our recent paper [2], based on seminal contribution of Kapsos [6], this instability is one of the key weaknesses of the simplest form of employment elasticity of growth. Countries with a GDP growth close to zero may exhibit large swings in employment elasticities arising from relatively small changes in the underlying variables. In that case even a relatively modest change in

**Table 1: Employment of adult population in Serbia, 2008-2015**

Incorrect series, per Petrović et al.		Correct comparable series		
Year	Employment	Year	Employment - old series	Employment - new series
2008	2,821,724	2008	2,821,724	
2009	2,616,437	2009	2,616,437	
2010	2,396,244	2010	2,396,244	
2011	2,253,209	2011	2,253,209	
2012	2,228,343	2012	2,228,343	
2013	2,310,718	2013	2,310,718	
2014	2,544,188	2014	2,421,270	2,544,188
2015	2,558,426	2015		2,558,426

Source: Statistical Office of the Republic of Serbia, the LFS.



employment (in either direction) can push the absolute value of employment elasticity into double or even triple digit territory. Let us take a simple example. Let us assume that the GDP growth rate in country A is 1%, and 0.1% in country B, while in both countries the employment growth rate is 5%. Employment elasticity of growth is 5 in country A, while in country B it is 50. According to the logic that Petrović et al. applied in their paper, the employment elasticity of growth in country A is high but possible, while it is impossible in country B. This reasoning is clearly wrong, because in reality both countries face unusual (relatively rare) but quite possible phenomenon of similar proportions – a strong increase in employment which is not related to the GDP movements.

We would like to clarify at the very beginning that no amount of comparative evidence, relevant or not, can prove that any set of data on employment or any other labour market indicator in a specific country is statistically incorrect. That could be proven definitely only by dissecting the very survey from which the data were obtained – analysing, for example, the questionnaire design, sample design and sample weights applied, interview techniques, data entry procedures, logical control and the like. Petrović et al. make no effort in that direction whatsoever. What they offer is a sort of indirect, “circumstantial” evidence.

Nevertheless, the case against the plausibility of the Serbian data based on comparative evidence is especially weak. Among the thirteen countries chosen, Serbia has the highest employment elasticity of growth in the two-year 2012-2014 period which was selected by Petrović et al. precisely because, at that time, employment grew “suspiciously” fast. Extend that period one or two or three years backwards and Serbian employment elasticity will retract closer to “normal”, average values, and some other country would certainly replace Serbia as an outlier. Should the labour force survey of that other country become suddenly “unreliable”? We believe that it would not.

### Section 3: Large swings of employment and inconsistency with the macroeconomic data

In addition to the discordant employment and GDP trends in the 2013-2014 period, Petrović et al. observe large swings

in employment since 2008 as another indication that the official labour market data are unreliable in the long run. Petrović et al. point out the fact that immediately prior to the latest increase in employment, from 2008 to 2012 Serbia experienced a “non-convincing episode” of an “enormous” decrease in employment of almost 600,000 people which, again, was not observed in other CEE countries, and which is also inconsistent with the fluctuations of all related macroeconomic indicators in Serbia.

We have already shown [2] that in the long-term perspective these two subsequent episodes of the dynamics of employment in Serbia in a way cancel each other out – the latter could be seen as a “regression towards the mean”, while the former could be seen as a “departure from the mean”, as a specific response of the labour market to the economic crisis that suddenly afflicted Serbia in 2008.

But let us address the issue of the “enormously” large swings in the total LFS employment which have not been adequately reflected in other macroeconomic indicators. Petrović et al. make every effort to persuade the reader that these swings were impossible to happen, and especially concentrate on the 2008-2012 episode of sharp employment decline. They hypothesise that the cumulative drop of almost 600,000 “employees” had to have happened almost entirely in the private sector, which at the start of the crisis comprised of about 2 million workers, while the rest of approximately 800,000 was employed in the public sector, and that employment in the public sector must have remained pretty stable throughout the crisis. Thus, it would mean that the private sector “laid off” almost a third of its employees when faced with a not-so-deep recession. Since this is highly unlikely, they conclude that these were actually “grave errors” in the estimates of employment numbers made by the SORS, indicating that there is a systemic problem in the SORS’s monitoring of employment [9, p. 64].

In this instance, Petrović et al. use flawed terminology and in doing so distort the facts in order to make their argument more convincing. They incorrectly speak of “employees” instead of “employed” (persons), and furthermore of “laid off employees” instead of, for example, “employment drop” – since many, or rather most, jobs in Serbia simply disappeared without the

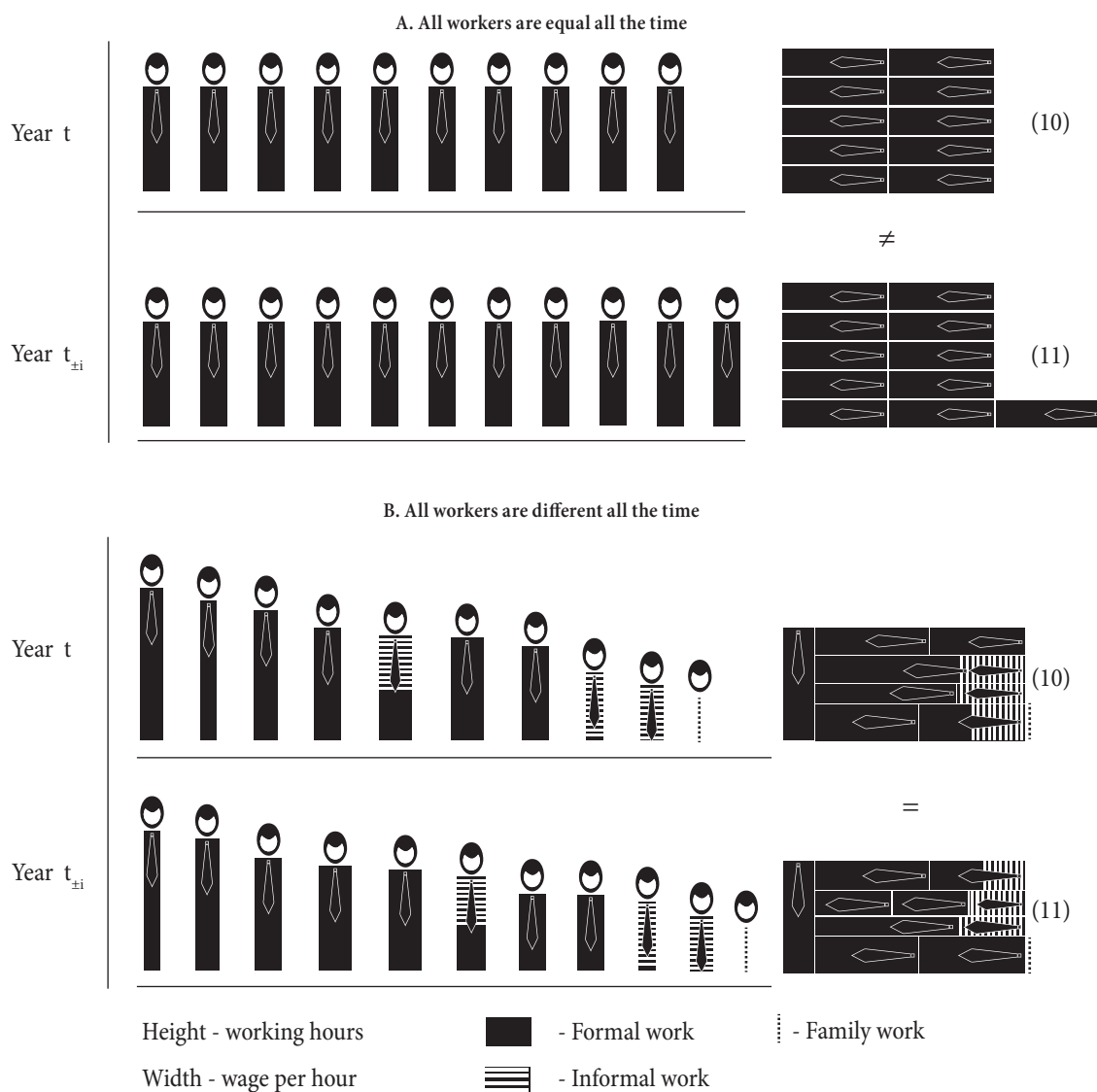
alleged layoffs. Actually, according to the LFS data, the total employment loss in the formal sector throughout the entire 2008-2012 period was approximately 325,000, which was proportionally smaller compared to the drop in the total employment. Within these formal jobs lost, many were based on fixed-term or temporary employment contracts that expired in their own right, service contracts completed and not renewed, and permanent jobs that were bound to disappear because of the effects of transition and privatisation (including those in the public sector as defined by the LFS) rather than on the account of the crisis. At the same time, the informal employment, self-employment and employment of unpaid helpers in family businesses (these are all partially overlapping categories

belonging to the secondary, less productive segments of employment), all recorded an above average decline.

In fact, Petrović et al. treat all employed persons in the economy as equally productive, and their labour input equally intensive in terms of working hours. Petrović et al. are in no way interested in structural characteristics of jobs – either in their totality, or only in the characteristics of the vanished or newly created jobs. This approach is very simplistic and far from the labour market reality – especially from a complex reality of a middle income country with a pronounced labour market duality and relatively large informal employment, such as Serbia.

Since we shall have to repeat this argument in the following sections, to make our point clearer, in Figure

Figure 1: Two approaches to the interpretation of labour force statistics



1 we have constructed two simple hypothetical labour market situations to reflect our alternative approaches to the labour market statistics.

The upper panel describes the way Petrović et al. essentially approach the LFS employment trends in their paper. Let us assume that in Year  $t$  there are 10 workers employed in the economy, and that in Year  $t+1$  there are 11 employed workers. Since they are all equally productive, they invest the same amount of work and receive the same wage, the employment increase of 10% automatically translates into 10% increase in output and wages, and inevitably leads to – among other things – growth of the GDP, personal consumption and fiscal revenues from labour taxes. If the GDP, personal consumption and collected labour taxes stagnate, or grow insufficiently, then the labour force statistics are inaccurate.

The lower panel – purely hypothetical and simplifying as it is – shows a much more complex and lifelike situation. In Year  $t$  there are again 10 workers employed in the economy, and in Year  $t+1$  there are 11 workers, the same as in the upper panel. However, in this case all workers are different – they may work different hours (reflected in their height) and receive different hourly wages (reflected in their width), presumably on the basis of their skills and experience. Some of them – contributing family workers – actually do not receive wages at all, and are thus represented with a vertical line instead of a rectangle. Working hours and wages of individual workers are not constant either – they vary from year to year. Thus, although the change in the total number of employed persons is included in the equation, depending on the changes in the number of working hours and the hourly wages (and the count of unpaid family members), the GDP, personal consumption and collected labour taxes might increase in Year  $t+1$ , but in uncertain proportions. It should be noted that the collected labour taxes and, to a degree, the recorded GDP also depend on the share of informal employment and that – to further complicate things – some persons can be formal workers, counted only as such by the LFS, but at the same time still involved in undeclared work and receiving envelope wages.

Crucially, as illustrated in our example in the lower panel, the abovementioned macroeconomic aggregates do

not have to increase at all, if the downward adjustments in hours worked and wages (total or formal) are strong enough to offset the increase in employment. In our hypothetical example, the total surface areas of individual workers' wages reflecting the total wage bill in the economy in Year  $t$  and in Year  $t+1$  are exactly the same. Within this framework, the LFS employment trends cannot be validated or dismissed on the basis of the trends in macro indicators, unless at least the wages and hours worked are also taken into account.

#### **Section 4: Alleged inconsistencies between the employment trends and trends in revenues from social security contribution and personal consumption**

To further support their claim, Petrović et al. attempt to prove that the employment increase in the 2012-2015 period is inconsistent with the amount of social security contributions collected by the tax authorities. According to the authors, formal employment, as reported by the LFS, grew by 12.1% in the three-year period, the average salary grew by 6.5%, and thus the total nominal wage bill implied by the LFS has increased by 19.3%. However, the social security contributions collected in 2015 were only 7.5% higher than in 2012. Finally, they deduced the average salary growth from the growth of social contributions and reached to an estimate of the actual increase in formal employment of 0.95% in the 2012-2015 period, instead of 12.1%, as reported by the LFS.

The abovementioned procedure is completely incorrect for a number of reasons. Firstly, Petrović et al. apply the average wage obtained from the establishment survey RAD conducted by the SORS (they do not disclose sources other than the Ministry of Finance; yet we have deduced the true source by applying the corresponding annual data on average wages from the RAD survey) and multiply it by the number of formally employed persons according to the LFS to impute the formal LFS wage bill. Such a procedure is methodologically flawed since it involves multiplying the LFS employment by the RAD wage, without even attempting to make any adjustments for the obvious stark differences between the two populations they cover. The



coverage of formal employment in the LFS differs from the RAD survey in several important aspects. To begin with, there are fundamental differences related to the units of observation: the RAD survey counts (the majority of) formal jobs, while the LFS counts employed persons – including those who can be multiple job holders. Most importantly, unlike the LFS, the RAD survey does not include formal self-employment in agriculture (farmers with registered agricultural households and their family members with paid social security contributions), formal jobs in the army and the police, as well as persons formally employed on the basis of temporary and service contracts. Most of the formal jobs that the LFS counts and RAD does not are of lower quality and belong to the secondary, lower-paid segment of the formal sector. Since their increase in this recent employment recovery has been above average, ignoring the differences in the composition and size of formal employment within the two very different surveys inevitably leads to biased results. Although in this single instance they do differentiate between the formal and informal employment, Petrović et al. do not allow for any differences within the formal employment, thus essentially remaining inside the framework of homogenous workers and jobs that we have illustrated in the upper panel of Figure 1 in Section 3.

Furthermore, returning to Table 1 in Section 2, Petrović et al. again compare the incomparable by using two different sets of the LFS data on employment – as the base point of 2012 they use data from the old LFS employment series that ended in 2014, while for 2015 they use data which are based on the new continuous survey, conducted for the first time in 2015. Since the revised employment numbers for 2014 are more than 100,000 higher than the originally published ones, it is clear that if the 2012 survey had been conducted in the way it was done in 2015, the estimated absolute number of employed persons in 2012 would have been significantly higher, and the difference in employment between the two data points much smaller.

At this point we should emphasise that any revision of the LFS data to account for the fundamental methodological changes introduced in 2015 would almost certainly not introduce a significant change to the labour market trends

in the 2008-2014 period, which are the main subject of criticism of Petrović et al. It would mostly affect the absolute numbers, but would not erase either the episode of intensive employment decline in the 2008-2012 period, or the following episode of strong employment recovery from 2013 onwards. [2]

Thirdly, and most fundamentally, the Labour Force Survey in its generic form is designed in such a manner that it cannot provide a direct link between the LFS employment data and any macroeconomic outcome expressed in monetary terms which is a part of national accounts. The reason is simple – the LFS is a household survey and a part of demographic statistics, and as such it is primarily concerned with quantities of the labour supplied and utilised, rather than with wages as prices of labour. Consequently, it is not intended to provide precise weights needed to translate employment into labour productivity trends, or self-reported wage ranges into the labour share, or, for that matter, the change in employment into the change in revenues from labour taxation.

As a minor point, Petrović et al. make an extensive effort to refute our proposition [2] that the observed reduction in average working hours between 2012 and 2014 recorded in the LFS – indicating a relatively slower growth in the total “fund of labour” compared to the number of the employed – might partially explain the slower growth in revenues from social contributions. The authors consider it erroneous, since “the increase in the share of part-time employment would also simultaneously decrease the average salary” [9, p. 65]. Again, they appear to be oblivious to the fact that the RAD based wage (related to the subset of formal jobs which are the least susceptible to part-time work) cannot be simply imposed on the entirety of the LFS formal employment. They even go on to hypothesise that the increase in part-time employment would have the opposite effect because of the existence of minimum social security contribution base at the level of 35% of the average wage. In reality, it is not possible to isolate any firm willing to employ low-wage part-time workers and to face an exorbitantly high labour tax wedge. The minimum base serves as a deterrent for low-wage part-time work, rather than as a labour tax revenue-boosting institution. Therefore, low-

wage part-time jobs paying less than the minimum base salary are always informal.

Nevertheless, we hope that we have convincingly shown that imposing the average wage from the RAD survey – which has its own limitations and significant biases that cannot be discussed here (for extensive elaboration, please see [1]) – to the LFS employment data is methodologically and practically incorrect.

To avoid repetition, we shall only briefly address the arguments of Petrović et al. related to the allegedly divergent trends between employment and private consumption from 2012 to 2015. The authors apply the same repertoire of flawed calculations and comparisons of the incomparable data. They took the real private consumption from macroeconomic accounts and found that it has decreased by 2.5% between 2012 and 2015. Then, using the already described incorrect calculation of the increase in employment and incorrect imputation of the average wage from the RAD survey to the LFS employment, they calculated that the total wage bill increased by 10% in real terms during the same period and concluded that the two numbers cannot be reconciled. This approach is even more erroneous because it is clear that the RAD average wage should be much higher than the (hypothetical, since it cannot be calculated) economy-wide LFS average wage – if for no other reason, then because of almost 10% of unpaid family workers within the LFS employment.

Furthermore, in a country with a very low employment rate, a modest labour share, and large number of families without employed persons or with low work intensity, patterns of private consumption significantly depend on the trends in the non-labour incomes. We have already shown elsewhere [2] that non-labour incomes of the population have followed a practically uniform downward trend during a prolonged period of time.

Finally, the passage of far-reaching changes in the Labour Law adopted in 2014 must have left its mark on wage trends – negatively affecting both private consumption and collection of labour taxes. Although the Fiscal Council was expected and was well-equipped to make such calculations owing to their potential impact on public revenues, it has been completely silent on this matter.

Nevertheless, our back-of-the-envelope estimates point to the one-off reduction by 2-3% in the average formal wage in the economy as a cumulative consequence of such changes in the Labour Law that could be expressed in monetary terms. These include the reduction of seniority premium from 0.5% to 0.4% per year of service and the introduction of the eligibility for premium only for tenure with the current employer; the removal of mandatory pay premium for shift work of 26%; the extension of the shorter work week from 32 to 36 hours; the relaxation of rules related to compensation hours (implying less overtime pay); the reduction of maximum allowed days of annual paid leave from 7 to 5; the change in the rules for calculation of paid annual leave; the change in the rules governing severance payments, and several other regulations. Apart from the direct impact that the changes in the Labour Law exerted on the average wage in the economy, there must have been an indirect negative impact on private consumption as a consequence of reduction in job security – or at least because of the widespread perception of increased job insecurity.

## Section 5: The LFS and macroeconomic accounts

Thus far we have demonstrated that the calculations and comparisons made by Petrović et al. with the aim to prove that the LFS trends cannot be reconciled with the trends in the GDP, collection of labour taxes or personal consumption, are all irreparably flawed. In this Section we move on to show that, more generally, the LFS (being it this current Serbian LFS or indeed LFS) cannot be put to the verification or falsification test by comparing its trends to the trends in the GDP, labour taxes collection or personal consumption.

Historically, modern employment statistics was born in 1915 in the United States, but it was derived from an enterprise survey (Current Employment Statistics) – counting only non-farm payroll jobs – rather than from a population survey. Specific population-based concepts of the labour force, employment, and unemployment were developed in the later stages of the Great Depression, since mass unemployment in the early 1930s increased the need for a reliable statistics of jobless persons. This population-

based approach implemented in the Current Population Survey was to become the basis for the development of modern labour force surveys.

The key difference between the LFS data and macroeconomic data that form the core national accounts is that while the former count indivisible persons, the latter are typically expressed in perfectly divisible monetary units. Simply put, the former are unweighted, the latter are weighted. Consequently, the former belong to the social and demographic statistics, the latter to macroeconomic statistics.

Owing to these fundamental reasons, employment and population have traditionally been considered as mere auxiliary variables in national accounts, aimed to calculate ratios such as value added, output, or labour costs per inhabitant or per employed person. The efforts to fully integrate the labour force statistics into macroeconomic statistics and system of national accounts – which is an ongoing process – have a long and complex history which we do not have the intention to explore here<sup>2</sup>. For the specific purpose of this paper, it is important to note that there is not a single country, even among the most developed ones, in which the LFS employment statistics are included in the system of national accounts without complex adjustments and imputations. Quite the opposite, there are certain, especially smaller, OECD member-countries which do not make much use of the LFS data in their national accounts, relying mostly on their various comprehensive administrative and census records.

Why is this so? In the first place, because without weights (such as working hours and wages), it is not possible to ensure satisfying consistency between the employment statistics and macroeconomic statistics in national accounts. At one point in time or over time, they can only be placed in a certain relation, so that, for example, it could be said that the labour productivity is on the increase if employment grows at a slower pace than the GDP, or if employment

drops despite the growth in the GDP. Or, it could be said that the quality of jobs deteriorates and the value added per employed person decreases, if employment grows faster (or drops slower) than the GDP. However, what is crucial is that the LFS is not designed to provide weights which are precise enough to be applied without extensive modifications. Most importantly, wages in the LFS are self-reported and it is well-known that many interviewees refuse to disclose their income, and many among those who accept to do it, tend to under-declare the full amount. In terms of our example in the lower panel of Figure 1, we can roughly estimate the height (hours worked) of employed workers, but their width cannot be reliably estimated – and without that dimension the total surface area (right section of the lower panel in Figure 1) representing the LFS-based wage bill in the economy, remains unknown.

But there are many more conceptual and practical complications related to the integration of the LFS employment into the system of national accounts. Such accounts necessarily involve a merger of data from different sources. According to Eurostat<sup>3</sup>, national accounts often integrate information on employment from many sources, and all of them, including the LFS, are assessed and the best way of their integration is subsequently decided upon. Most countries use the LFS data as the main, but not the single source of data on employment. However, some countries make very minor use of the LFS in their national accounts. Various pieces of information are combined to provide the most complete and consistent estimates – thus the estimates in the integrated national accounts typically differ from the results of individual basic sources. In national accounts, employment figures must be consistent with other variables such as output and compensation of employees, and adjustments are necessary to ensure consistency between these variables.

Let us briefly have a look at Germany as a typical example of a large developed economy with powerful macroeconomic statistics. According to German Federal Statistical Office, in accordance with the European System of Accounts based on the ILO definition, national accounts consider that persons in employment comprise all the

<sup>2</sup> For example, it was none other than Angus Maddison during his stint at the OECD in the 1970s who pushed for the introduction of more nuanced measures of “labour slack” instead of simple unemployment rates [8]. Maddison explained the relatively slow pace of integration of the labour force statistics into the system of national accounts by the fact that “labour statisticians are much less used to data merger and imputations of this kind than are the national accountants” [7].

<sup>3</sup> [http://ec.europa.eu/eurostat/cache/metadata/EN/employ\\_esms.htm](http://ec.europa.eu/eurostat/cache/metadata/EN/employ_esms.htm)



persons who perform a gainful activity as employees, as self-employed or as contributing family workers or who work pursuant to an employment contract. On the other hand, in addition to the LFS, approximately 60 individual statistical sources obtained through different reporting channels are currently evaluated for the purpose of calculation of employment statistics that are included in the national accounts. Most are official statistics designed for various subsectors of the economy (agriculture and forestry, fisheries, industry, services) or other branch-specific employment data reported by enterprises and their establishments (for example, in the field of postal/telecommunications, railways, or the financial system). The continuous data reports from the private sector are supplemented by yearly personnel data from public employers, monthly reports of the Federal Ministry of Defence on the number of staff of the armed forces and information on the number of persons engaged in voluntary civilian or social services. Additional data sources are the employment statistics of the Federal Employment Agency, which are based on the reports submitted to the social security funds, the business register of official statistics, the quarterly surveys of earnings and the microcensus with the labour force survey integrated in it. The “original” LFS employment and this macroeconomically “harmonised” employment typically differ by some 2.5 million persons – and interestingly enough, in favour of the latter<sup>4</sup>.

In countries where employment estimations for national accounts are well-developed based on comprehensive administrative records and establishment surveys on jobs, they are used primarily to follow employment in the context of the overall economic development and cyclical trends, while the LFS, with its large number of variables, is mainly utilised to analyse the situation of specific sections of the population, for interdisciplinary research, and for international comparisons<sup>5</sup>.

Our elaboration of these basic background pieces of information on the nature, linkages and differences between the LFS employment statistics and employment estimates for national accounts has been necessary to

understand how absurd is the appeal of Petrović et al. addressed to the SORS to revise its LFS statistics so as to fit in better with the macroeconomic trends. They also express a hypocritical concern that “economic policy does not have at its disposal some of the most basic economic indicators – how many people are actually employed in Serbia and what are the actual trends in the labour market”. But fortunately, “budget projections of contributions and income tax, as well as consumption projections... are still being developed without the inclusion of suspicious trends from the official labour statistics”. Petrović et al. even take a step further and confidently predict that “the actual employment trends will probably be stagnant in the medium term...” [9, pp. 66-67, emphasis added].

This entire dramatic construct has been created out of the fact that Petrović et al. apparently do not understand the fundamental difference between the two very different types of economic statistics – population statistics and macroeconomic statistics, and between the original data on employment in the LFS and the employment counts constructed to ensure consistency within the system of national accounts. Outside of the system of national accounts, the original LFS data should never be adjusted or revised to correspond better to the macro trends, and the request put forward by Petrović et al. to the SORS to act in such way is equivalent to exerting pressure on the SORS to forge the LFS statistics.

Furthermore, why would any Ministry of Finance make projections of labour tax revenues primarily based on the sheer number of the LFS employed persons if the weighted census-like data of superior quality from the Tax Administration are readily available? Similar reasoning is also applicable for the private consumption projections. In both instances, however, the LFS data should be used as an auxiliary source of information, but mostly to be able to encompass the informal sector for which no other data are available – for example, to assess the potential for the increase in revenues due to formalisation or to try to adjust the consumption projections for the estimated trends in informal wages.

In general, in Serbia, as in most other small middle-income countries, the integration of the LFS and other employment statistics into the system of national

4 <https://www.destatis.de/EN/FactsFigures/NationalEconomyEnvironment/LabourMarket/Methodology/EmploymentAccounts.html>.

5 [http://ec.europa.eu/eurostat/cache/metadata/EN/employ\\_esms.htm](http://ec.europa.eu/eurostat/cache/metadata/EN/employ_esms.htm).

accounts and creation of harmonised short and medium-term projections is a rather inexact science and involves quite a fair amount of heuristic reasoning. Certainly, this situation could be improved, but not, as Petrović et al. suggest, by stretching or cutting the LFS data to fit the macroeconomic Procrustean bed. Instead, more use should be made of job-based employment statistics, which contain additional, although still incomplete, information on wages in the economy. These statistics primarily comprise the recently created CROSO database, but also the improved establishment-based RAD survey.

## Section 6: Why is the LFS indispensable?

In the previous sections we have mostly focused on what the LFS cannot be expected to fully deliver. For example, the LFS cannot typically provide on its own the labour market statistics that can be – inclusive of both quantities and prices (wages) – inserted into the system of national accounts without adjustments and augmentation from other sources. However, this by no means translates to a statement that the LFS, as the key source on the size, structure, characteristics and attachment of the adult population to the labour market, should not be an important input to the system of national accounts.

However, the LFS is much more than that. As formulated by the Eurostat, national accounts are perceived as more suitable to measure employment levels, employment growth and industry breakdowns, while the LFS is more adequate to measure participation in the labour market (i.e. employment rates, activity rates, flows between employment and unemployment, etc.), demographic or social breakdowns (e.g. by age, gender or educational attainment) and it is more suitable for socio-demographic studies<sup>6</sup>. National accounts calculate labour productivity, but do not take into account variables such as unemployment or employment rates. Therefore, the approaches to employment taken by the LFS and by the national accounts complement each other: the former concentrates on the demographic and social aspect of employment, while the latter is focused on labour as

an input to processes of production, income generation and income distribution. In this Section we shall focus on the indispensable role of the LFS as the key source of labour market statistics, standing at the juxtaposition of economic and social dimensions of life.

Labour force surveys are conducted in most countries around the world. Although there are guiding principles developed by the International Labour Office and its International Conference of Labour Statisticians (ICLS), they are in many aspects quite diverse (questionnaire, frequency, definitions, variables, sampling design, data collection mode, etc.). However, they all share certain common features – they are household surveys and they are mostly targeted to collecting data on the labour circumstances of the respondents.

In the European Union, the labour force survey is a long-standing survey, in many countries going back to the 1950s or the 1960s. At the time, labour force surveys were developed independently by individual countries. The first steps towards an EU-LFS were made in 1960 within the then European Community. The concepts and definitions used in the following decades were those adopted in 1982 at the 13th International Conference of Labour Statisticians. In the early 1990s, the EU legislation was first used to further assure the internal comparability of the EU-LFS. EU regulations in the field of statistics are applied so as to standardise the survey design, the survey characteristics and methods. The most important is the Council Regulation 577/1998 which has placed the key pillars of today's EU-LFS. It has stipulated that the LFS should be a continuous quarterly survey and has also introduced an output harmonisation approach<sup>7</sup>. Furthermore, the European Statistics Code of Practice requires that the LFS statistics are consistent internally, over time and are comparable between regions and countries.

The EU-LFS currently covers thirty-three participating countries: the 28 Member States of the EU, three EFTA countries (Iceland, Norway and Switzerland), and two candidate countries, Turkey and the FYROM. Each quarter

6 [http://ec.europa.eu/eurostat/cache/metadata/EN/employ\\_esms.htm](http://ec.europa.eu/eurostat/cache/metadata/EN/employ_esms.htm)

7 Output harmonisation means that while inputs, such as survey questionnaires, can differ between individual countries, they all need to lead to a uniform and fully harmonised set of outputs – tabulations and indicators.

around 1.8 million interviews are conducted throughout the participating countries to obtain the data for around 100 variables. The national statistical offices design national questionnaires, draw the sample, conduct interviews and send results to the Eurostat in accordance with a common coding scheme established by the Commission Regulation (EC) 377/2008. Eurostat is in charge of monitoring the implementation of the Regulation (EC) 577/98, providing assistance to the national statistical offices, promoting harmonised concepts and methods, and disseminating comparable national and European labour market statistics. Due to the abundance of information and the large sample size, the EU-LFS is also an important source for other European statistics such as the Education statistics or the Regional statistics.

Over time, the EU-LFS has proven to be the only standard statistical source of information able to capture rapid and deep structural changes in the EU labour market, such as the increased participation of women, new forms and types of employment, changes in sectorial structures of employment, skill mismatches, emergence of mass unemployment in some countries, and the like. The EU-LFS is now universally recognised as an indispensable tool for monitoring labour market developments and for taking the appropriate policy measures.

The LFS has additionally gained importance and public prominence with the adoption of the Lisbon employment strategy, which set the target of reaching the employment rate of 70% among the working-age population (15-64 years of age) by 2010 as one of the key goals for the EU. In June 2010, the European Council adopted the Europe 2020 strategy for smart, sustainable and inclusive growth. Among the five headline targets, the first is to raise the employment rate for women and men aged 20 to 64 years to 75 % by 2020. EU Member States have all set their own national targets in the light of these headline targets while taking into account their baseline labour market and macroeconomic situation. The implementation of the strategy might be achieved, at least in part, through the promotion of flexible forms of employment, such as, for example, part-time work or work from home – which are expected to stimulate labour participation.

In Serbia, the LFS was introduced rather late, in 1995 (after a pilot survey in 1994). However, it was not before 2004 that its concepts and definitions became fully aligned with those recommended by the 13<sup>th</sup> ICLS. Since 2004, the SORS has benefited from continuous support of the ILO in addressing various technical aspects of the survey – sample design, sampling errors and weights, rotating panel features, questionnaire design, statistical release etc. It has also established a cooperation with the Eurostat with the ultimate aim to join the EU-LFS.

Until 2008, the LFS was conducted once a year, in October, on a rather small sample of approximately 21,000 individuals. In 2008, the LFS became semi-annual (with rounds in April and October). At the same time, the survey questionnaire was significantly expanded, to facilitate fuller inclusion of informally employed, marginally attached, family helpers and similar categories which had previously not been fully accounted for among the employed. In 2014, the survey became quarterly (with rounds in February, May, August and November), and the sample size was expanded accordingly. In 2015, perhaps the most important change took place – the survey has become continuous, in accordance with Article 1 of the Council Regulation 577/1998. Since by 2010 all the EU-LFS participating countries (except Turkey) have introduced the continuous survey, this change could be considered as one of the decisive steps towards Serbia becoming a participating country of the EU-LFS.

Approximately in the past decade, the LFS in Serbia has also gained public recognition and has been, similar to its EU counterpart, used in the development of economic strategies and in policy creation. The National Employment Strategy 2011-2020 has set the goal to achieve the LFS employment rate of 61% for the working-age population by 2020, while most other indicators of achievement (such as those related to youth employment, gender equality etc.) in this strategy also come from the LFS.

Since the alignment with the ILO concepts and definitions in 2004, the LFS has been reliable enough both to reflect the trends in key national labour market indicators and for the purpose of international comparisons. The two largest methodological changes, in 2008 and 2015, have only improved this reliability. They both resulted



in significantly increased estimates of employment (compared to the results implied by the counterfactual, i.e. previous, methodology), which is a typical consequence of improvements in the LFS – where perhaps the biggest challenge is to correctly account for those marginally attached to the labour market. The SORS has revised the quarterly LFS data for 2014 to ensure forward comparability with the continuous quarterly data for 2015 and onwards, but has, similar to the 2008 change, decided against further revisions for the 2008-2013 period.

In the context of a rather derogatory criticism of the LFS put forward by Professor Petrović and his co-authors and their likeminded colleague Dr. Arsić, it should be acknowledged that the introduction of a continuous survey in 2015, the change in estimation procedures, and the subsequent revision of 2014 data – which they apparently perceive as the response of the SORS to their criticism, or want to create such an impression – are in no way related to it. As we have shown earlier, the introduction of a continuous survey in 2015 and the accompanying methodological changes were in alignment with the EU regulations and statistical code of practice and represent a major advancement which should lead to Serbian LFS becoming a part of the EU-LFS.

## Conclusion

After a careful assessment of all key points of Petrović et al.'s criticism of the reliability of the LFS data, we can confidently reject these as factually incorrect and methodologically irrelevant. Petrović et al. use the weakest of arguments as shortcuts to support their very strong claims about the “illusory” increase of employment in the recent years. They deny any possibility for the employment trends to have a trajectory autonomous in relation to the GDP, driven either by the changing patterns of the labour supply, or by the structural and institutional changes in terms of labour demand. Instead, they straightforwardly derive their own alternative “true” employment trends, inclusive of projections until 2020, solely based on trends in macroeconomic indicators and from macro forecasts.

There is an intrinsic contradiction in this criticism, since in order to prove that the LFS data produced by the

SORS are unreliable, Petrović et al. use other data also produced by the SORS and take them at face value without ever questioning their reliability. Indeed, they make no effort whatsoever to assess technical aspects of the LFS – for their verdict it is enough that the LFS trends are allegedly irreconcilable with the macro trends.

Such approach is a disservice rather than a contribution to an informed public debate on labour market statistics, but also on employment policy in Serbia. It is an extreme case of a blunt denial of any significance of employment as one of the key objectives of socio-economic development. According to this approach, abandoned a long time ago in the developed countries, there is no room for employment-centred economic strategies and policies. Since employment can grow only through economic growth, growth-enhancing policies are all that is necessary.

This delusion has certainly contributed to the socially painful course of Serbian economic transition, with intensive economic growth until 2008 accompanied by the equally intensive destruction of jobs. By now we should know better. Instead of offhandedly discarding them, we should look harder at the Labour Force Survey data, however imperfect they might be, in search for clues and hints that could help us understand the events in the labour market and the main forces that are driving people in and out of jobs.

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Management**PAY SECRECY: PROS AND CONS\***

Tajnost zarada: za i protiv

**Abstract**

Pay secrecy is an intriguing, and also a controversial policy in human resources management with hardly anything written on the subject. As a form of systematic withholding of information from the employees on all or some aspects of salaries within a company, pay secrecy offers both advantages and disadvantages. The disadvantages are misconceptions about distribution of compensation; negative evaluation of distributive justice; reduced motivation, satisfaction and productivity of the employees; decline of the employees' loyalty and trust in the company; decrease in management's capability to influence and guide the behaviour of the employees; establishment of authoritarian culture and leadership style; as well as erroneous decisions made by the employees with respect to their job and career selection. Advantages of pay secrecy are reflected in better managerial control of organisation's processes; less conflict; better options for differentiating good from bad workers; less turnover and better position of the management in individual negotiations on salary with the employees. In each company, the management should decide whether pay secrecy is a preferable or ill-advised policy for the company in question. The factors that are relevant to the policy choice which should be considered while making the decisions about pros and cons of pay secrecy are the following: workforce characteristics, job design and technology, degree of trust between employees and management, organisational culture and leadership style, and trade unions. Some contextual factors exert the same influence on all companies: labour market, national culture, and transition of the company from socialist to capitalist institutional pattern.

**Keywords:** *compensation, human resources management, management, workforce, distributive justice*

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**Sažetak**

Tajnost zarada je intrigirajuća, ali i kontroverzna politika u oblasti upravljanja ljudskim resursima o kojoj se malo piše. Tajnost zarada, kao sistematsko uskraćivanje zaposlenima informacija o svim ili nekim aspektima zarada u preduzeću, ima svojih nedostataka i prednosti. Nedostaci su: pogrešna percepcija distribucije zarada, negativna ocena distributivne pravde u preduzeću, pad motivacije, zadovoljstva i produktivnosti zaposlenih, pad njihovog poverenja u preduzeće i lojalnosti, smanjene mogućnosti menadžera da usmeravaju i utiču na ponašanje zaposlenih, izgradnja autoritarne kulture i stila liderstva kao i pogrešne odluke zaposlenih u pogledu izbora posla i karijere. Prednosti tajnosti zarada su: bolja kontrola procesa u organizaciji od strane menadžera, manje konflikata, veća mogućnost diferenciranja dobrih i loših radnika, manja fluktuacija i bolja pozicija menadžmenta u individualnom pregovaranju o zaradama sa zaposlenima. Menadžment svakog preduzeća treba da proceni da li je tajnost zarada dobra ili loša politika u datom preduzeću. Faktori koji utiču na izbor i koje treba uzeti u obzir prilikom odlučivanja za ili protiv tajnosti zarada su: karakteristike radne snage, job design i tehnologija, stepen poverenja između zaposlenih i menadžmenta, organizaciona kultura i stil liderstva i sindikalno organizovanje. Neki kontekstualni faktori deluju podjednako na sva preduzeća: tržište radne snage, nacionalna kultura, tranzicija od socijalističkog ka kapitalističkom institucionalnom obrascu preduzeća.

**Ključne reči:** *zarade, upravljanje ljudskim resursima, menadžment, radna snaga, distributivna pravda*



## Introduction

Secrecy of pays of employees in companies, banks, public administration, as well as in all other types of organisations is a very interesting and controversial, but also a much neglected issue. Very little is written about it in both domestic and foreign sources [7]. In addition to this, this potentially highly important issue is also very little discussed in practice among managers and employees. It might be said that the attitude that pay secrecy is an issue to be covered by the business policy of the company's management and that there is nothing to be discussed there is tacitly accepted. However, even if this is the case, by neglecting this issue, the problem of depriving the companies' top management of the knowledge on potential advantages and disadvantages of pay secrecy, as well as on the factors that may impact its implementation or revoking, still remains present.

A large number of Serbian companies, as well as other types of institutions and organisations, apply the pay secrecy policy, even though it is not prescribed by any law. Indeed, it is not prohibited, but it is left up to companies to regulate this policy through its collective agreement, work regulations, salary regulations, business policy, or some other document. Thus, for example, the Work Regulations of one of Serbian state agencies states the following: "Employee's salary is a trade secret. Revealing the data regarding the amount of the salary represents a breach of the trade secret" [2, p. 9].

Although it is little known and written about, pay secrecy is highly important. Pay secrecy policy can, as we shall see further in this text, have far-reaching consequences on the employees' motivation and performance, the company's human resources management efficiency, conflicts and climate in the company, but also on the employees' decisions regarding their careers [10]. At social level, pay secrecy can affect labour market efficiency and bring about (sub)optimal decisions by the employees regarding their career choice, and thereby also influence on the efficiency of human resources exploitation at the level of national economy [7]. Finally, pay secrecy issue is, just like any other salary issue, always an interesting

topic for both employees and managers, as well as for the general public.

Having in mind the great importance of pay secrecy, the controversies that surround it, and also the relative lack of research into this issue, there is a clear need to define pay secrecy, to highlight its potential advantages and disadvantages, as well as the factors that promote it and also those that pose an obstacle to pay secrecy implementation. All of this will be presented in the content of this paper.

## What is pay secrecy?

Pay secrecy is simply defined as withholding information from the employees regarding the compensations of all other company's employees [11]. Therefore, it can be said that pay secrecy policy is applied when the management, in a systematic and planned manner, withholds from the employees the information about the distribution of compensations within the company. A common, but not necessarily mandatory dimension of this withholding of information is the prohibition to ask for and disclose to others the information regarding one's own or other employees' salaries, since this is also a way for the employees to obtain the information regarding distribution of compensations inside the company. However, it is very important to understand that pay secrecy is not a "yes or no" situation, but that it must be observed as a continuum [7]. Therefore, it is incorrect to assume that pay secrecy simply exists or does not exist; rather, it can exist to a smaller or larger extent. Thus, an absolute pay secrecy will exist when an employee has no information whatsoever regarding the compensations in the company, save for his/her own compensations. Pay secrecy is non-existent when an employee disposes of absolutely all the information about the compensations of all the company's employees. There are many variants between the two extremes, and they are the very ones most commonly found in practice.

Pay secrecy may be said to exist in several forms, depending on what type of information is withheld [11] [3]. For example, a company may provide to its employees all the information regarding the compensation system

(criteria, salary rates, salary calculation methods and procedures), but deny the information regarding individual amounts of the employees' salaries and incentives. On the other hand, a company may provide different levels of information to the employees regarding different elements of the compensation system. To clarify the concept, we must provide a brief outline of the compensation system and its structure.

Most often, a compensation in a company consists of direct compensation and indirect compensation [4]. This paper will not take into consideration non-financial rewards that employees in companies receive in addition to their salaries, such as respect, praise, learning and development, and company image, since these are usually not included in the compensation system. We will neither consider indirect compensations (benefits and perquisites) since they are in part mandatory by the law (health and social insurance) and also very noticeable (company car, computers, telephones). Direct compensation is the money that employees receive in exchange for the work they do, and it usually consists of salary (or wage) and incentives. Also, a pay raise due to the increase of the costs of living may also be treated as a form of compensation. Salary is the compensation paid to employees for performing their work and tasks at their workplace, and it depends on the complexity of work, as well as on the working conditions. Salary should be equal for all employees who perform the same type of work, that is, for all who have the same job position, and it must not depend on the employees' performance. Incentive is a compensation which depends on the employees' work results and it is different for each employee. As the basis for incentive, an employee's work results can be determined based on the performance he/she shows at his/her workplace by applying both qualitative and quantitative criteria (pay for performance). If this is difficult or impossible to apply due to the nature of work, education or work experience may be applied as the basis for incentives. The assumption is that more educated, knowledgeable or more skilled employees, as well as the ones with greater experience, will also show better performance (merit increases, pay for knowledge, etc.). Incentives are paid either as permanent rewards (pay rise) or as a one-time compensation (bonus). If incentive pay is

determined directly, based on the work performance, it is most often paid as a one-time compensation (bonus), while if it is determined based on knowledge and experience it is most often paid in the form of a pay raise.

Pay secrecy also differs in respect of whether it includes all the elements of direct or indirect compensation or just some of them [7]. Absolute pay secrecy usually includes withholding the information from employees on both the salaries of other employees in the company, as well as of their incentive payments and other benefits and perquisites. However, it is more frequent that pay secrecy policy includes providing information to employees on how salaries are calculated, but withholding the information on individual amounts of salaries and of all other incentive compensation of all other employees, as well. A more liberal policy of pay secrecy would include disclosing to the employees the information regarding basic salaries of all employees, but withholding the information on their incentive compensation.

Regardless of how it is defined, pay secrecy has its advantages and disadvantages which we will present further in the text. Nevertheless, before moving on to elaborate the said notion, we must emphasise the fact that some pay secrecy effects could be observed both as an advantage and as a disadvantage, depending on the conditions in which the policy is being applied, as well as on the respective point of view. For example, pay secrecy may influence individual negotiations between an employee and employer regarding the amount of salary in the sense that it is an advantage for the employer and, at the same time, a disadvantage for the employee. Bearing this in mind, we will analyse the advantages and the disadvantages of pay secrecy.

### **Disadvantages of pay secrecy**

Disadvantages of pay secrecy are indeed numerous, and any company management must be fully aware of these. If, despite the knowledge of such disadvantages, they chose to apply pay secrecy policy in human resources management, they will at least know what risks they are taking. Pay secrecy policy may cause misconceptions about compensation distribution in the company, a decreased

sense of internal and external equity (or fairness), decreased motivation, decreased capability of the management to influence the employees' behaviour at work, decreased employees' loyalty and trust in the company, and it might also bring about faulty decisions by the employees regarding their career choices [7] and [5].

The employees' perception of distribution of compensations within the company are the first to be sacrificed on the altar of pay secrecy [9]. It has already been proven long ago that withholding compensation information in a company, and even the prohibition to exchange information regarding salaries among employees, will not stop the employees' efforts to identify their respective position in the compensation distribution within the company [18]. The reason for such behaviour is the strong need of the employees for distributive justice, that is, for the feeling that internal equity is accomplished. It is considered that internal equity of the compensation system exists when employees perceive that compensations are fairly distributed, or, in other words, that compensations are adequately allocated according to the value of work that the employees perform in the company, as well as on the basis of the results they achieve [4]. In order to evaluate the fairness of compensation distribution, the employees must be presented with information on compensation. When these pieces of information are withheld from them, the employees strive to find alternative ways to obtain them. The author's extensive experience in the consulting business has shown that there is not a single company in which prohibition of sharing and discussing salary information has stopped the employees from forming some kind of perceptions regarding compensation distribution, and hence also regarding its fairness. Unfortunately, such alternative ways of procuring information on salaries are often unreliable: assumptions, stereotypes, speculations, gossiping, indirect deduction, etc. Due to the lack of accurate information, the erroneous ones are often the basis for creating the employees' perception on compensation distribution in a company. Research conducted in the past have shown that, due to the lack of accurate information on compensations, both managers and employees are inclined to overestimate other employees' salaries, and underestimate their own [16]. This is the main problem

arising from pay secrecy, since the very matter is the cause of nearly all other issues.

The first direct consequence of misconceptions about compensation distribution within a company is the negative perception of distributive justice and negative evaluation of internal and external equity guaranteed by the compensation system. Distributive justice has its informational, procedural, and distributive component [7] and [8]. Pay secrecy directly disables achieving informational justice since important information are withheld from the employees. Procedural justice is jeopardised since the employees are obviously denied the right to participate in the compensation distribution process, and thus their impact on making decisions regarding compensations is reduced. Finally, the distributive component is also at risk for two reasons. First, in the absence of reliable information about one's own and other people's salaries, an employee will naturally overestimate the compensations of others and perceive himself/herself more as the inflicted party than as a beneficiary [9]. On the other hand, in the presence of informational and procedural unfairness, the employee naturally believes that distributive injustice must also exist [18]. The employees' reasoning might be the following: If the management is withholding information about the compensation system and if I have no influence whatsoever on the compensation, it must be because this system is unfair to me. Thus, internal equity of the compensation system is jeopardised by the fact that, by not having the correct information, the employees are more prone to believe that the system is unfair (to their detriment) than vice versa. Internal inequity is in addition indirectly correlated with external equity, which refers to comparability between compensation within a company and the compensation for the same or similar work in other companies [4].

The perception of absence of distributive justice, or of internal equity inside the compensation system, has a direct negative impact on the employees' motivation, as well as on their job satisfaction. In order to understand this effect, it is necessary to briefly look back on one of the most important motivation theories – equity theory [1]. According to equity theory, employees' motivation does not depend on the total amount of their earnings as



much as it depends on the relative relationship between the efforts they put in (inputs) and the rewards (outcomes) they receive for it. Hence, employees with low salary may be much more motivated and satisfied than the ones with high salary if the former ones perceive that their input is at a lower level than the salary they receive. On the other hand, someone may have a very high salary, but still be unmotivated because they perceive that the input (efforts, work, time, education, experience) they bring in to the company is substantial and that their salary does not correspond to the said input. What makes matters more interesting is the fact that employees compare not only their own inputs and outcomes, but those of other people, as well. They develop perception of their own input/outcome ratio and compare it to the input/outcome ratios of their co-workers with whom they compare themselves. The result of this comparison is threefold: equity, underpayment or overpayment. The feeling of equity guarantees motivation and it is present when employees perceive that their input/outcome ratios correspond to that of their co-workers. However, underpayment, which implies that employees perceive that they invest the same amount of input in return for a smaller reward, or larger input for the same rewards, leads to decreased motivation. Therefore, the employees who perceive that they are underpaid will try to restore the balance of input/outcome ratio by requiring a greater reward for themselves, and if they do not get it, they will reduce their input to the level they see fit as corresponding to the rewards they receive. The case is similar with the impression of overpayment: even though the employees perceive that they bring less input for the same reward or the same amount of input for a greater reward, they will soon persuade themselves that their input is actually greater than that of their co-workers and hence that a greater reward is also justified. According to equity theory, it is extremely important for the employees' motivation that they develop a realistic perception of their own and of other people's inputs and outcomes (compensation). Pay secrecy represents a direct obstacle to achieving this goal. We are not saying that employees cannot develop a mistaken perception of inputs and rewards when pay secrecy is not applied, but this wrong perception is highly more likely to occur in the event of its application.

Underpayment reflects on motivation in another negative way: it decreases job satisfaction. Job satisfaction is a complex construct, because it emerges from the employees' evaluation of whether their jobs provide them with what is important to them [14]. Many often overlook the fact that what employees expect from their jobs is not just a salary, but also social contact, friendship and acceptance, possibilities to learn and improve themselves, praises and recognitions for the job well done, respect, etc. Therefore, there are several job dimensions whose importance varies depending on the employees' perspective, whereby employees evaluate to what extent their expectations are fulfilled in each of the said dimensions. Absolute job satisfaction is the outcome of the satisfaction with individual job dimensions. When underpaid, the employees will surely not be satisfied with salary as an important job dimension. However, here we would like to point to another job dimension: respect and recognition. Employees have a legitimate need for their work and results to be recognised and appreciated. In this sense, compensation is not just a sum of money that enables the employees to satisfy their basic needs, but it is also a symbol. Compensation symbolises the level of respect and recognition. If employees feel that they are underpaid, even if their compensation is high, they will not be satisfied because the compensation tells them that they are not appreciated, respected, and recognised enough in their company.

Compensation system, like other human resources management systems in a company, serves not only to motivate the employees, but also to manage and steer their behaviour [15]. By designing the compensation system, employees can be incited and motivated not only to perform their work and tasks, but this can also be used to influence the way in which the employees perform the said work and tasks. The compensation system rewards one type of work behaviour, and penalises the other, and thus effectively guarantees that employees will not only complete their tasks at work, but that they will do it the way the company expects them to. Compensation system affects the employees' behaviour in two different ways. First, the compensation system directly guides the employees towards a certain pattern of behaviour by rewarding some and penalizing other forms of behaviour. As rational people, employees

will try to practice the behaviour that the compensation system rewards, and avoid the ones it penalizes or does not reward. If a company's compensation system defines bonuses for the salespeople with the smallest stock, and penalties for the ones with the largest stock of goods, then they will surely pay attention to the stocks of the goods they sell. If this element is absent in the compensation system, then the salespeople will disregard the stock quantity. The other way in which the compensation system influences the employees' behaviour is symbolic. The compensation system always sends the message of what is and what is not appreciated in the company. If the compensation system defines a bonus for regular work attendance (even such companies exist), then the message the employees receive is very clear: discipline is more important than performance. If, however, a bonus is received depending on the initiatives undertaken and innovations introduced, the employees receive a clear message that initiatives, innovativeness, and creativity are what is expected from them and what is appreciated.

When the compensation system is kept secret, and especially when incentive or variable payments (that is, the portion of compensation which depends on the employees' performance) are not transparent, then the message that such system sends to the employees regarding their desirable behaviour remains blurred and unclear. If the employees are uncertain of the bonus awarding criteria in the company, then they will not have clear guidelines on how they are supposed to do their job and they will not know how they are expected to behave. In doing this, the management fails to take advantage of the opportunity to steer and manage the employees' behaviour by means of the compensation system, especially through incentive payments. If an employee is not sure why he/she received a bonus for one month (or quarter) while not receiving it for some other month (or quarter), then the compensation system has no effect on the behaviour of such employee. Additionally, the effect of following other people's example should not be neglected. If pay secrecy is absent, the employees will be able to see when, why and how much of a bonus their colleague received. In this case, since they also want a bonus, the employees will strive to perform their work in the way that provides such bonus. By openly

rewarding desirable behaviour of one or several employees, the management steers the behaviour of all or most of the other employees. Pay secrecy completely hinders this effect, and leads to confusion and uncertainty regarding the way in which the employees should perform their tasks.

Uncertainty with respect to compensation distribution and expectations regarding performance and behaviour that pay secrecy implies lead to a decrease in the employees' loyalty and trust in the company [6]. If the manner in which rewards are distributed in a company is kept secret, the employees will be uncertain regarding such rewards, and this is no way conducive to creating an ambience of trust. Respect should also be added to the list. Namely, when information about compensations in a company are withheld from the employees and when asking for and revealing the information regarding one's own and about other people's salaries are prohibited, the most logical question to ask oneself is the following: "Why mustn't I know that?" Of course, in such situations any responsible adult would reach to a conclusion that the organisation does not trust him/her. The logical consequence is that the employee starts to distrust the company. In addition to this, absence of trust is the immediate cause of decrease in one's loyalty to the company, which is defined as the employee's expressed willingness to be retained in the company, to invest more effort into the achievement of the company's goals, and to identify oneself with the respective company [13]. Diminished trust and loyalty produce several negative effects: decrease in the employees' motivation, greater workers' fluctuation, higher inclination to opportunistic behaviours, etc.

Another negative impact of pay secrecy is that it contributes to creating of authoritarian and paternalistic organisational culture. As it was mentioned before, pay secrecy sends a message to the employees that there are compensation related issues they are not supposed to know about, and that the management is taking care of everything. By excluding the employees from an important aspect of work within the company such as compensation distribution, and by placing this business aspect exclusively into the hands of the management, the employees are forced into a passive position where they depend on the management's authority. Pay secrecy sends the following

message to the employees: You should not think and you should not know – someone else thinks and knows for you. Authoritarian and paternalistic values in the organisational culture are strengthened through the said actions. This is especially true for national cultures such as Serbian, in which the values of collectivism and authoritarianism prevail at a national level [12]. Authoritarian culture may seem appealing to the management because it produces obedient employees who follow orders without asking any questions. However, we must always bear in mind the other side of the coin. Authoritarian and paternalistic culture is indeed conducive to obedience, but also to passivity and heavy dependence on the authority. The employees who work in an authoritarian and paternalistic culture perceive the organisation as a patriarchal family, its leader as the “*pater familias*” (father of the family), and themselves as family members (children). And just as the father of the family can fix any problem in the eyes of his children, without ever asking his children for their opinion, and just as the children should be obedient and simply let the father take care of their needs, so is the relationship of infantile dependence between the leader and employees established in an authoritarian and paternalistic culture. The consequence is that the employees are passive, with no ideas and initiative, reluctant to make changes and take risks. No smart manager wants such employees. In addition, authoritarian culture usually produces a spin-off effect: the more competent employees are not satisfied because they cannot actualise their potential, and hence they soon leave the organisation in order to create their own in which they will be able to exploit their talents better. The management is then left with mediocre employees who are comfortable with the situation in which no one asks them for their opinions and where they simply follow instructions.

One negative effect of pay secrecy does not relate to the company, but it rather concerns the employees and the economy at large, as well. We are now referring to the negative impact of pay secrecy on individual decisions of the employees regarding their job choices and career planning, as well as to the optimal allocation of the workforce in the labour market [20]. Namely, every employee makes his/her own decisions regarding job choices and

career planning. The employee makes these decisions based on his/her own preferences, but also based on the information about the labour market, company, types of job, etc. One of the important factors which influence the employees’ decision, for example, to change jobs or to move to another company is the compensation. In a situation where salaries are kept secret, the employee will simply not dispose of enough credible information to make these decisions properly. The resulting consequence will be mistaken or suboptimal decisions, observed from the aspect of the employee’s goals and interests. For example, an employee may lack information about compensations in the company and be convinced, contrary to the reality, that the company underestimates him/her and therefore seek job opportunities in another company just to discover that he/she will be even more underappreciated there. However, observed from the perspective of the economy in general, these decisions may lead to suboptimal allocation of the workforce as a labour market resource. Pay secrecy decreases the efficiency of the labour market as workforce allocator, especially in the long-run.

### Advantages of pay secrecy

No company management would implement pay secrecy policy if it did not bring some sort of advantages to the company and its managers. The following advantages are most commonly observed in practice: improved organisational control and less conflict, greater possibilities for differentiation between good and bad workers, ensuring employees’ privacy, and reduced turnover of the employees [7]. Another convenience which occurs in certain companies, especially in small privately-owned businesses, should be added to the list: better position of the employer during salary negotiations with the existing or potential employee.

The less information the employees have, the more easily they are controlled by the management. Withholding information and disclosing only the selected details is one of the main forms of manipulation through which the management can guide the employees to act the way the management wants. When denying to the employees the right to have discussions on certain matters is added to

this set of actions, it is clear that pay secrecy is conducive to more efficient control of both the employees' individual behaviour and interactions between them, and through this it also leads to more efficient control of interpersonal processes in the organisation. After all, in political circles it is a well-known fact that all totalitarian dictatorships strive to limit information (although today, in the Internet era, this is virtually impossible to do) which reach their citizens because it is a tool to keep them subdued [21].

Since compensation distribution is one of the most frequent sources of conflict in an organisation, the secrecy of compensation distribution decreases or completely eliminates conflicts inside the organisation. When employees are not in possession of information on salary and are, in addition, prohibited to give, ask for or discuss them, then there is no room for discussions and conflicts. This, in turn, creates the ambience which the management prefers – a one without conflicts. Conflicts have a wide range of negative aspects, such as disturbing the normal functioning of the company, diverting the attention from the company's to personal goals, supremacy of emotions over reason in the decision-making process, problem personalisation, as well as negative effects to people's mental and physical health [15]. Even though conflicts might result in some positive outcomes, such as initiating changes, the managers aim to avoid conflicts whenever possible. Pay secrecy enables them to achieve this at least when compensation is concerned.

Pay secrecy enables managers to employ compensation to differentiate the good from the bad workers in a simpler and extensive manner. If we assume that the management is willing to reward the best employees through compensation, and especially through incentive payments, the logical obstacle to this is the negative reaction of all those who did not receive a reward (or who even received a penalty). After negative reactions, conflicts between the employees and managers, and also among the employees themselves, are inevitable. When pay secrecy is applied, there is no such reaction, because those who would otherwise respond negatively are not aware of the rewards being received. Consequently, there are no conflicts that would certainly ensue if the pay secrecy policy was not applied. This is why, when pay secrecy is applied, the managers

can safely and without fear from the employees' reaction, reward the desirable behaviour and performance of the best workers. It has been empirically proven that, in the absence of pay secrecy, managers show tendency to narrow the salary spread between the best and the worst employees in order to avoid conflicts [17]. This is especially important in collectivistic and egalitarian cultures such as the Serbian one. Collectivism implies that cohesiveness of the collective (unison, brotherhood) is highly valued, whereas anything that disturbs this cohesiveness is not welcome [12]. Salary differentiation is, by all means, such occurrence. On the other hand, the values upheld by egalitarianism imply equality in distribution of material goods. It is not desirable that an individual stands out in the sense of receiving a higher salary, even though this may be justified by a more outstanding work performance. Therefore, the pressure to uniform compensations is far greater in collectivistic and egalitarian cultures than in individualistic ones (mostly Western, and especially Anglo-Saxon cultures) that promote equal opportunities and not equal rewards. This is the reason why managers in Serbia have greater difficulties than their colleagues in the Western world to differentiate better workers by means of higher salaries, and hence pay secrecy is more valuable to them.

If the positive effects of pay secrecy on distinguishing better workers are greater in collectivistic cultures, its positive effects on privacy are greater in individualistic cultures. Namely, it is often emphasised that pay secrecy enables greater privacy for the employees and better protection of their personal interests [23]. This is certainly true: if no one but the employee knows the amount of this person's salary, their privacy is guaranteed. Positive effects of pay secrecy on privacy protection, however, depend on how much the employees value the said privacy. Privacy is certainly more important in individualistic than in collectivistic cultures. This might be explained by the difference of where the borderline between the private and the public is set in collectivistic, on one hand, and in individualistic cultures, on the other [12]. In individualistic cultures, the sphere of individual's privacy is much larger and includes a substantially wider information spectrum than in collectivistic cultures. In a collectivistic culture it



may well happen that the prevailing assumption is that personal earnings are not a private matter and that pay secrecy makes no sense, at least not as a means of protection of privacy. Pay secrecy in collectivistic culture should, therefore, protect the privacy of information on something that is not private, but public. For the same reason, it is more difficult to implement pay secrecy in collectivistic cultures. A particular challenge is to prohibit asking for and disclosing information on compensation among the employees, as well as discussions on the issue because the employees do not consider this matter private.

From the companies' perspective, one positive effect of withholding the information on compensation is the decrease in the turnover of employees. Namely, when the information on compensation system are withheld from the employees, their motivation and tendency to leave the company are reduced. In the absence of information regarding distribution of compensation inside the company, and often even outside the company, the employees often find themselves in a state of uncertainty. It has been proven that the absence of information on compensation in a company is often accompanied by a lack of information on compensation outside the company, that is, in other companies in which an employee could perhaps seek new employment. This situation of uncertainty discourages the employees to make decisions which involve risk, and switching the company and/or the job is certainly one of such decisions. When an employee is uncertain regarding the compensation distribution, his fear and insecurity grow and this certainly does not contribute to his/her desire to leave the company. Although this consequence of pay secrecy is negative for the employees, because they are individually denied the opportunities to make optimal decisions regarding their career choices, it is certainly positive for the company. The reason for this is that high turnover of employees is negative for the company in many respects [15]. High workforce turnover creates additional cost to the company which arise from the need to recruit and select new employees. Also, as a rule, the newly employed workers are less productive, at least during the period of socialisation and learning the new work, and there are also additional training expenses for the newly employed. The risk of making mistakes in the selection

of new employees, and also the issue of whether they will successfully blend in with the organisation's culture or not, are also observed as negative consequences of workforce turnover. Also, a problem in its own right can be the loss of specific knowledge or skills that an employee who is leaving the organisation possesses, but that no one else in the organisation can offer. For all the above mentioned reasons, it suits the company's management if the employees show as little as possible tendencies to leave the organisation and, as we have seen, pay secrecy contributes to this purpose.

Finally, a positive effect of pay secrecy, again for the company but not for its employees, is the strengthening of the management's position in negotiating with individual employees regarding their salary and working conditions. This effect of pay secrecy may be exploited only in the absence of collective negotiations between the employer and the employees (trade union), which is most often the case in small private companies. If pay secrecy is applied, the employer (owner or manager) can take full liberty to use his/her negotiating skills to reduce the level of the employee's compensation to the smallest possible amount. A possible outcome in this situation could be that a person A and a person B do exactly the same job in the company and receive very different compensations for their work, depending on how skilled they were while negotiating with the employer during their job interviews. In the absence of pay secrecy, the person earning less money will be highly unsatisfied, so he/she would complain or resign. This is why it is very important for the employers to withhold information about other employees' compensation packages, but also to prevent discussions on compensation among the employees of the company.

### **Factors relevant to pay secrecy: pros and cons**

Since pay secrecy produces both negative and positive effects, the decision on the application of pay secrecy depends on whether the pay secrecy advantages in a specific company prevail over the disadvantages or vice versa. The company management should evaluate the importance of all the negative and also of all the positive effects of pay secrecy in the process of deciding about its

pros and cons. The decision should be based upon the prevalence of either positive or negative consequences. The present situation in a company and the company-specific factors shall determine the importance of both negative and positive effects of pay secrecy. This practically means that evaluating the pros and cons of pay secrecy depends on the situation in which a company finds itself or, more precisely, it depends on the specifics of the situation factors for the given company. Therefore, in order to make the proper decision regarding pay secrecy, besides being aware of pay secrecy effects, the management should know which situation factors are relevant to the selection of pay secrecy policy. We will now list just a few obvious ones. These factors mainly emphasise the importance of some positive and negative effects of pay secrecy, and thereby play a determining role in the choice regarding pay secrecy.

The first factor to be considered is certainly the set of qualities of a company's workforce, such as their qualifications or level of education [7]. This factor highly correlates with job aspects and job design, and properties of the company's technology. When all other factors are equal, the companies in which highly educated experts constitute the majority or a very significant percentage of the employees may implement the pay secrecy policy, because of the fact that the human resources character neutralises to a large extent some key negative effects of pay secrecy. The reasons for this are numerous, but we will mention three main ones: nature of motivation, control mechanism, and labour costs. Highly educated experts (professionals) who perform, with a high degree of autonomy, non-repetitive and creative jobs and tasks at job positions that are not highly specialised, and who use sophisticated technology are mostly intrinsically motivated. Therefore, they are driven by the motivators categorised as higher-level needs in Maslow's hierarchy: self-actualisation, development, learning, status, and non-material needs [19]. Since salary does not play such a significant role in their motivation, pay secrecy will not have a negative effect on their perception of distributive justice, motivation, and loyalty and trust in the organisation. Similarly, human resources specifics, job and tasks' design, as well as technology also decrease the negative effects of pay secrecy on possibilities for controlling the employees.

It is not possible to control professionals only by means of compensation; hence pay secrecy, which reduces the possibilities to control the employees' behaviour, is not something to be considered vital. Managers may exert influence on the professionals by granting them autonomy at work, providing them possibilities for further learning and advancement, accepting initiatives, and also by praising – in other words, they *can* influence the professionals by means of salary, but only to a certain extent. In this case, implementation of pay secrecy will not decrease the capability of the management to control the work and behaviour of the employed professionals. Finally, the process of recruitment, selection, training, and development of a professional requires a considerable amount of time and it is extremely expensive. It takes years to create a good professor, lawyer, or company consultant, and hence the company cannot afford to let them leave the company so easily. Since pay secrecy decreases turnover of employees, it is reasonable to introduce it in this type of companies. It is quite the opposite in the companies in which the majority of employees are low-skilled workers who perform simple, repetitive tasks at highly specialised job positions by using simple technology. For this type of employees, salary is a highly important motivator, and all the negative effects that pay secrecy has on motivation are extremely noticeable here. The most efficient way for the managers to control such workforce is precisely by means of compensation, and therefore pay secrecy is a poor solution in this case. Finally, since the cost of recruiting and training of low-skilled workers are not very high, the company can afford even a high level of workforce turnover, which also creates the basis for pay secrecy.

The second critical factor that might influence the decision on pay secrecy implementation is the trust that employees have in the company and its owner(s) and/or management. If the employees' trust in the company (that is, its management or the owner) is very high, if there are no tensions and conflicts between the management and employees, and if majority of the employees are loyal to the company, then pay secrecy may be implemented without negative effects on motivation, employee satisfaction, and productivity. But if the employees' trust in the company is low, if tensions and conflicts between the management

and employees are frequent, and if the employees are not loyal to the company, then all the negative effects of pay secrecy will be even more prominent. This is why such companies are advised not to implement pay secrecy. In such a company, pay secrecy would be yet another reason for conflicts between the employees and the managers/owners. The company's history and track record certainly have a great impact on the level of the employees' trust in the company. If a company's management has made some unfair moves in the past (from the employees' perspective), if there have been recent lay-offs, if salaries are not paid regularly and on time, it is only natural that the employees cannot have much trust in the company. Major organisational changes also contribute to the lack of trust, since they are always accompanied by conflicts and clash of power where some individuals and groups win while other lose. The employees' trust in the company and its management often depends on the leader's and/or owner's personality. If the leader is a person of high integrity, consistency and charisma, the employees may develop trust and loyalty not so much to the company, but rather to the leader. In such case, pay secrecy is easier to implement, since the employees believe that their leader would not deceive them.

As we have already explained earlier, pay secrecy is conducive to the establishment of authoritarian culture and paternalistic leadership. But the opposite influence is also present: authoritarian organisational culture and benevolent authoritarian leadership style strengthen the tendencies to implement or strengthen pay secrecy. Pay secrecy is compatible with authoritarian cultural values and management style. Authoritarian leader is far more inclined to implement pay secrecy than the leader with democratic or participative management style. In authoritarian culture, even the employees observe pay secrecy as something natural and compatible with authoritarian leadership style. On the other hand, if the values of employees' participation in decision-making, autonomy, and people development prevail in a company, and if the leader practices participative leadership style where employees are included in decision-making and are allowed to have autonomy in their work, then pay secrecy is not recommended. In this case, pay secrecy

would cause a great resistance in the employees, and its negative effects would come to the fore. Democratic culture and leadership in which an individual is treated as an autonomous personality cannot be developed if the information on compensation are at the same time concealed from the employees.

Trade unions of employees within a company may also be the factor that would influence the management's decision about the pros and cons of pay secrecy. If there is a trade union (or several of them) in a company, if it is strong and well organised, the possibilities for pay secrecy implementation are significantly decreased. The assumption is that trade unions genuinely represent and protect the workers' interests. If this is indeed the case, trade unions will actively oppose pay secrecy, and their power and influence in the company would determine whether or not the management will benefit from entering into a conflict with the trade union on the issue of pay secrecy.

Besides the factors that are company-specific and which determine whether or not the management of a certain company should implement pay secrecy, there are also other factors that are equally relevant to pay secrecy in all the companies in a given economy. These contextual factors may also work in favour of or against pay secrecy.

Labour market is certainly an important factor that impacts pay secrecy in Serbian companies. The following applies as a general rule: the higher degree of unemployment, the wider the opportunities to implement pay secrecy. To put it more simply, in an environment where unemployment rate is high, the employees have less room to manoeuvre when it comes to switching jobs and companies, and hence their resistance to pay secrecy is weaker. The employees' motivation and their productivity will not be reduced due to pay secrecy because they are aware that if they lose their current job, it will not at any rate be easy to find another one. Since the unemployment rate is very high in Serbia, it is clear that our companies favour pay secrecy as a tool to influence the labour market. This might not apply to all industries, all types of companies, and all profiles of employees in companies. For example, labour market will not have a positive impact with respect to pay secrecy in the companies doing business in the sector of information

and communication technologies, but this applies only to IT professionals.

National culture, with its values, may act in favour of or against pay secrecy in all the companies in the country. As far as Serbia and influence of our national culture are concerned, this may be described as controversial. Namely, Serbian national culture is marked with a high power distance (authoritarianism), high uncertainty avoidance, collectivism, and the so-called “feminine values” [12]. A high degree of authoritarianism in our national culture is the root-cause of a large number of our companies developing authoritarian organisational culture, as well as the authoritarian leadership style. People in Serbia prefer to have a strong leader who will solve all their problems instead of them. This works highly in favour of pay secrecy. Expressed uncertainty avoidance means that people in Serbia do not like changes, uncertainty, risk, ambiguity, and diversity [12]. Since pay secrecy introduces some degree of uncertainty, it is clear that this cultural value inhibits pay secrecy. The increase in uncertainty caused by pay secrecy would be faced with a tough resistance of the employees and emphasise negative effects of pay secrecy. Collectivism has a similar impact on pay secrecy. Namely, in collectivist cultures, the cohesion of the group (unison) is very important, and pay secrecy greatly jeopardises it. Collectivism is also often accompanied by egalitarianism, that is, by striving to make all the members of the collective equal in their earnings as much as possible and to erase all the differences between them. This in turn also advises against pay secrecy because it causes doubts in differentiation between the members of the collective. Finally, the presence of feminine values in a national culture means that people hold in high regard the social relations and harmony between people and nature more than they appreciate result, success, and material gains [12]. In such culture, pay secrecy is less problematic for the employees, since other values are more important to them than material ones. In summary, authoritarianism and femininity in Serbian national culture work in favour of pay secrecy, while uncertainty avoidance and collectivism inhibit pay secrecy in Serbian companies.

Transition of the Serbian economy from the socialist to the capitalist model represents an element

of the context in which Serbian companies do business and which stimulates them to implement pay secrecy. Institutional theory of organisation and change defines the concept of institutional pattern [22]. It is a set of mutually consistent practices, rules, and structures that show how processes should be performed in certain social and business circles. In the modern market economy, institutional pattern of the organisation shows how a company should be structured and how it should function. It is interesting that institutional pattern is being created in a process that is not necessarily objective, and that this process does not necessarily have to be rational or economically efficient. It may even, and it often does contain rationalised myths [22]. However, companies must implement it in order to prove their legitimacy to society. Great changes occur in the society, economy or organisations within them when the institutional pattern of society, economy or organisations is changed. Therefore, transition may be understood as the process of institutional changes in which the existing institutional patterns (socialist society, economy, or company) are replaced by other, capitalist patterns. It is a feature of the socialist pattern of a company that the society has external control over the processes within the company. This form of control was formally conducted by the Social Bookkeeping Service. In such a pattern, compensation of all the employees in a company were public. In the institutional pattern of capitalist companies there is no external control of companies' procedures (hence the Social Bookkeeping Service was dismissed in Serbia at the beginning of the transition process), and compensation is kept secret. It is possible that this is just a myth, but nevertheless it is something that the managers and employees in Serbian companies believe in and something that they strive to adapt to. Just as they have adopted board of directors instead of workers' councils, managers instead of directors, human resources department instead of personnel department, Serbian companies are also adopting pay secrecy. So, if a company (and its management) wants to prove that it is legitimate, modern and a true capitalist company, then it must implement pay secrecy. This is the factor that steers all the companies in Serbia towards pay secrecy.



## Conclusion

Pay secrecy is a very interesting and controversial element of human resources management in modern companies. Defined as withholding the information from the employees on different compensation aspects in the company to a smaller or larger extent, pay secrecy is applied in a great number of companies, both throughout the world and in Serbia. Pay secrecy offers advantages and disadvantages to both the employees and also to the company and its owners and managers. Therefore, the following questions are rightfully asked: Does pay secrecy pay off? Do advantages of pay secrecy surpass its disadvantages and under what circumstances? In which situation should a company choose pay secrecy and when should the company avoid it? This paper represents an attempt to answer these questions.

Disadvantages of pay secrecy are numerous. The main negative effect of pay secrecy is the misconception of compensation distribution in the company, which gives rise to negative evaluation of distributive justice, decrease in employees' motivation and job satisfaction, diminution of the employees' trust in the organisation and its management, and decline in loyalty. Also, pay secrecy deprives the management of a very important tool for controlling and guiding the employees' behaviour, which in turn become less efficient. Pay secrecy brings about the feeling of underappreciation and uncertainty in employees. It also contributes to creating an authoritarian organisational culture and leadership style. Finally, pay secrecy jeopardises the employees' capacity to make rational decisions regarding their job and career choices.

Pay secrecy also has its advantages. It enables the management to exert a higher degree of control over the organisational processes, and it also causes less conflict. Moreover, pay secrecy enables managers to differentiate, to a larger extent, the employees showing good from those displaying bad performances, and this is especially true in collectivist cultures such as Serbian. Also, pay secrecy decreases the turnover of employees, which is a very positive effect for a company. Finally, pay secrecy provides the management or company owners with a more favourable position in negotiations with potential employees regarding the conditions of their employment.

The factors that impact the pros or cons in making the decision on pay secrecy can be company-specific, but also contextual factors that produce equal effect on all the companies in the Serbian economy. Among the company-specific factors, the most prominent are the following: workforce characteristics, job design and technology used, organisational culture and leadership style, the degree of the employees' trust and loyalty to the company which is determined by the history of interpersonal relationships, and power and the level of organisation of trade unions. Pay secrecy will be a good solution when the workforce is highly educated and/or performs complex and creative tasks by using sophisticated technology, when autocratic culture and leadership style are applied in organisations, when the degree of the employees' trust in and loyalty to the company are high and when there is no history of conflicts between the employees and management, when there were no recent dismissals and layoffs, etc. Finally, pay secrecy is a good solution when trade unions are weak, disorganised or non-existent. In the event when the workforce is low-skilled and/or performs simple, routine tasks by applying simple technology, when autocratic culture and leadership style are not applied in organisation, and when the degree of the employees' trust in and loyalty to the company are low, while trade unions are strong, then pay secrecy is not a good solution.

Contextual factors that equally influence the decisions of all companies on whether to accept or refuse to apply pay secrecy are the following: labour market, national culture and transition from socialist to capitalist institutional patterns of management. Labour market, as well as moving away from socialist and accepting institutional patterns of capitalist companies, act simultaneously in the favour of pay secrecy implementation. National culture has a controversial impact, since authoritarian and feminine values have a positive impact, while collectivism and uncertainty avoidance have a negative impact on pay secrecy.

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## INNOVATIVE SMALL AND MEDIUM-SIZED ENTERPRISES IN THE KNOWLEDGE-BASED ECONOMY

Inovativna mala i srednja preduzeća u ekonomiji zasnovanoj na znanju

### Abstract

The contribution of innovative high-tech and knowledge-based SMEs to economic growth, employment and competitiveness is significant in developed countries. Innovation-oriented SMEs occur as a unique source of diversification, flexibility and long-term improvement of innovative system performances. They play a key role in discovering and developing new markets and expanding their supply in existing markets. These enterprises test, explore and push the boundaries of production and consumption, search for new ways to meet consumers' needs, and are a driving force of total economic growth and crucial factor in creating new employment. The role of technology-oriented SMEs in the economic development and in creation of employment largely depends on the existence of a favorable business environment, entrepreneurial culture, supporting activities and technical infrastructure, as well as the availability and accessibility of key resources (skilled labor, funding opportunities, etc.).

**Keywords:** *innovation, innovativeness, small and medium-sized enterprises, knowledge-based economy*

### Sažetak

Doprinos inovativnih visokotehnoloških i na znanju zasnovanih MSP ekonomskom rastu, zapošljavanju i konkurentnosti značajna je u razvijenim zemljama. Mala i srednja inovativno orijentisana preduzeća se javljaju kao jedinstveni izvor diverzifikovanosti, fleksibilnosti i dugoročnog poboljšanja performansi inovativnog sistema. Ona igraju ključnu ulogu u otkrivanju i razvoju novih tržišta i proširivanju ponude na postojećim tržištima. Ova preduzeća testiraju, istražuju i pomeraju granice proizvodnje i potrošnje, tragaju za novim načinima kako da zadovolje potrebe potrošača; pokretač su ukupnog ekonomskog rasta i bitan faktor u kreiranju nove zaposlenosti. Ostvarivanje značajnije uloge tehnološki orijentisanih MSP u ekonomskom razvoju i stvaranju zaposlenosti u velikoj meri zavisi od postojanja povoljnog poslovnog okruženja, preduzetničke kulture, podržavajućih aktivnosti i tehničke infrastrukture, kao i raspoloživosti i dostupnosti ključnih resursa (kvalifikovane radne snage, mogućnosti finansiranja i dr).

**Ključne reči:** *inovacije, inovativnost, mala i srednja preduzeća, privreda zasnovana na znanju*

## Introduction

Knowledge-based economy is characterized by strong development of manufacturing and service enterprises whose operations are based on knowledge and new technologies. In the knowledge-based economy, technology and knowledge are becoming increasingly complex, with growing importance of and possibilities for connecting enterprises with other companies and research organizations [9, p. 28]. Such an environment creates opportunities for new knowledge acquisition and development, implementation and diffusion of innovation, leading to further development of productivity as well as improvement of competitiveness of the high-tech sectors and the economy as a whole [16, n.d.].

Technology-intensive enterprises are often referred to as high-tech enterprises. These enterprises are vital to the competitive position of the country because:

- they are associated with innovations and hence tend to achieve higher market share, create new products and services for the market and use resources more efficiently;
- they are associated with high value-added product manufacturing and success in foreign markets, allowing them to achieve higher productivity;
- research and development (R&D) activities in production enable positive spillover effects onto other economic sectors by creating new products and processes, often leading to an increase in productivity, business expansion and creation of well-paid jobs [2, p. 219].

The achieved level of development of enterprises in the high-tech sectors is a good indicator of whether the economy is based on knowledge. The most developed economies today are the economies whose enterprises from the high-tech sectors play an important role in and are the basis of the new growth, employment, productivity and competitiveness.

The increasing role of knowledge and the modern economy's dependence on knowledge, information and specific skills have caused a significant increase in the share of knowledge-based high-tech products and services in the structure of developed economies. OECD defined a knowledge-based economy as an economy which is

directly based on the production, distribution and use of knowledge and information [10, p. 7]. The basis of its development consists of interactive processes that enable the creation and exchange of knowledge and innovations within and among enterprises and other organizations [21, n.d.].

The Document of the European Commission states that creation, use and commercialization of new knowledge and technologies have become essential in the global battle for the realization of competitiveness, and high-tech sectors have become the most important driving force of economic growth, productivity, environmental sustainability as well as the major source of high value-added and well-paid jobs [3, p. 151].

Innovations in the knowledge-based economy are very important because knowledge creation and exchange are not aims per se, but provide the basis for development and source of new innovations (whether technological, production, marketing or organizational innovations, business methods and models, etc.). The approach to innovations has been radically changed in the knowledge-based economy, as well as the innovation process itself. The approach which states that innovation is based on technological research and exchange of technology among enterprises (the so-called closed innovation system) has been replaced by encouraging innovations that take place within a broad network of innovative cooperation (joint development, knowledge and ideas exchange, joint use of results, etc.) among various enterprises and other interested entities (institutes, laboratories, public and private development centers, etc.). In such a system, knowledge plays the most important role in encouraging and developing innovations. Most innovations are created by combining existing forms of knowledge. Knowledge has to be available in order to be turned into innovation; i.e. fast, easy and inexpensive access to large quantity and wide spectrum of knowledge is necessary. In addition to availability, transforming knowledge into innovations requires professionals who are able to apply available knowledge and create a new one [4, p. 3].

Numerous manufacturing and service industries have increased the use of knowledge-based technologies in their production and service providing. Innovations are



not just associated to high-tech enterprises that produce radical new products and services. Innovations occur in all enterprises, including companies in traditional manufacturing and service industries. Ever-increasing need for innovations has led to increased investment in innovative activities and capacities.

## Innovative enterprises

An innovative enterprise can be defined in several ways. According to the basic definition, innovative enterprise is an enterprise that has realized at least one innovation, while product or process innovator is defined as an enterprise that has introduced either product innovation or process innovation [22, n.d.]. Innovative enterprises are those that have introduced an innovation during the observed period, where the innovation does not have to achieve commercial success. Innovative enterprises can be divided into two categories. The first category consists of enterprises which develop innovations independently or in cooperation with other enterprises or public research organizations. The second category consists of enterprises which innovate mainly by taking innovation (e.g. new equipment) developed by other enterprises. We can also distinguish innovative enterprises according to the types of realized innovations. Accordingly, there are innovative SMEs that have realized new products or processes, new marketing methods or organizational changes [27, p. 28].

Innovation-active enterprises are those enterprises that have had innovation activities during the observed period, including both ongoing and abandoned innovation activities. In other words, enterprises that have had innovation activities during the observed period, regardless of whether the activity resulted in the implementation of innovations, are innovation-active. Potentially innovative enterprises are a type of innovation-active enterprises that have made innovation efforts, but have not achieved innovation results [13, p. 47]. This is a key element of innovation policies that are aimed at encouraging, facilitating and helping enterprises to be innovative.

Also, there are other ways of defining and classifying innovative enterprises depending on the research needs. Distinguishing between enterprises according to

innovativeness could be used in order to determine the percentage of enterprises (by size, sector, country, etc.) representing each of the four types of innovations, or the percentage of enterprises that have realized combined innovations, such as product and marketing innovations or process innovations and organizational innovations. Classification by innovative status can also include other data, such as data on the creators of innovations. Thereby it can be determined which enterprises developed innovations independently, which enterprises developed innovations in cooperation with other enterprises and/or research organizations, as well as which enterprises took finalized innovative solution. Enterprises may perform innovation activities in the observed period without actually realizing innovation. Innovation activities are all activities involved in development or implementation of innovations, including those that are planned to be realized in the future. In the observed period, innovation activities can:

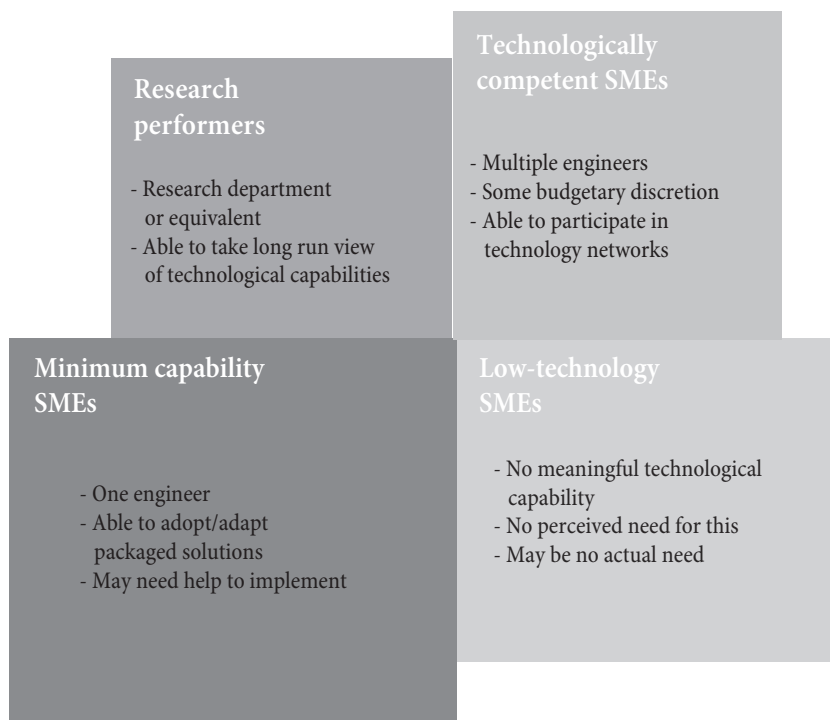
- be successful and result in successful implementation of innovation (although the innovation does not have to be commercially successful);
- be ongoing and include all innovative activities that are in progress and have not yet led to the implementation of innovation;
- be abandoned, i.e. innovative activities that are abandoned before the implementation of innovation.

Enterprises without innovative activities are those enterprises that do not have innovative activities in the observed period at all. In survey research on innovativeness of these enterprises, they answer only to a limited number of the research questions that relate to the reasons for the lack of innovative activities (e.g. What factors make it difficult to innovate? Is there patent protection? And so on.) [22, n.d.].

## Innovative SMEs – classification and importance

According to characteristics of innovativeness, manufacturing SMEs can be grouped into several categories: from low-tech SMEs through SMEs with the minimum of technological capabilities, technologically competent SMEs, to SMEs able to independently and successfully carry out research in order to create a new innovation (Figure 1).

Figure 1: Hierarchy of enterprises by technological intensity



Source: according to [1, p. 21]

For the purpose of statistical monitoring by Eurostat, enterprises can be divided into three groups by innovation activities:

1. enterprises that create product innovations and/or process innovations (without innovations in the field of organization and/or marketing);
2. enterprises that innovate in the organization and/or marketing (without product and/or process innovations);
3. innovative enterprises that have developed both product/process innovations and organization/marketing innovations [23, n.d.].

In countries that are innovation leaders, the share of enterprises that develop both product/process innovations and organization/marketing innovations is higher compared to other less innovative countries.

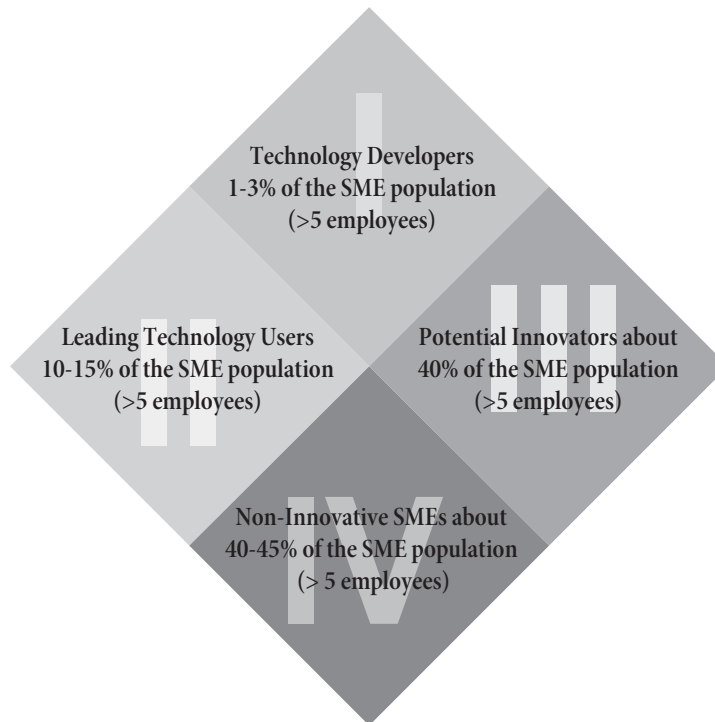
SMEs represent a large and very heterogeneous group of companies in terms of innovative capacity, motivation for innovation, innovation activities and innovation results. Accordingly, SMEs can be classified into four main groups: technology developers, leading technology users, potential innovators and non-innovative SMEs (Figure 2).

SMEs that are technology developers and leading technology users innovate actively and constitute less than 20% of SMEs population. About 40% of SMEs population have the potential to be innovative and are potential innovators; about 40-45% of SMEs are non-innovative enterprises.

Technology developers (innovation leaders) are SMEs which are focused on innovations, have sufficient capacities required and base their development and operations on development of new superior products and services. Usually they are small and young enterprises. Technology developers can be divided into two basic groups. First group consists of high-tech SMEs (most often they are companies with high potential for rapid growth) [12, p. 9].

The second group of innovative SMEs consists of small and medium-sized enterprises which are the leading (first) technology users. These companies do not have the capacity to be technology developers but their survival is based on the rapid implementation of new knowledge and technologies, thereby providing better commercialization of innovation results. Enterprises in this group can be divided into two main subgroups: SMEs with sufficient R&D capacity to create innovations independently and

Figure 2: Two-dimensional plot of SMEs according to their innovative capacity



Source: according to [12, p. 20]

SMEs that rely more on R&D capabilities and innovation results of others. Some of the main characteristics of these enterprises are:

- they employ a significant number of highly educated experts;
- they introduce at least one new product on average;
- they care about the satisfaction of consumers and recognize the value of market research;
- they are willing to cooperate with other companies;
- they rarely receive subsidies;
- they rarely have their own patents [12, p. 9].

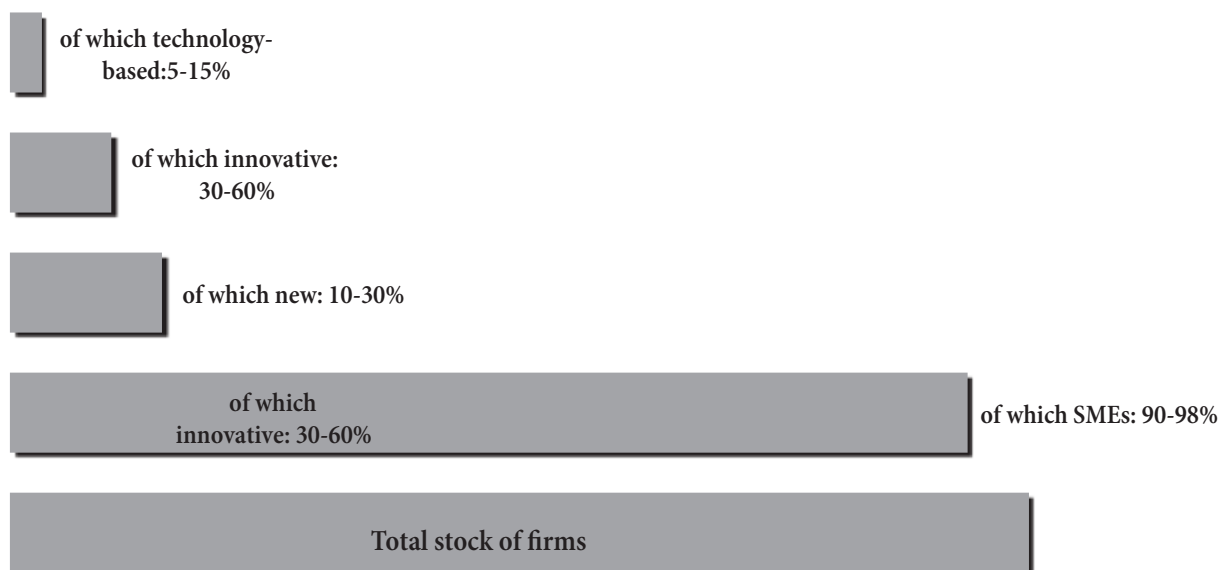
The third group consists of enterprises that are potential innovators. It is a large group which makes up about 40% of all SMEs. These enterprises are not too innovation-oriented; they exist for many years and are positioned in the market; they usually operate in traditional industries where technological change is not too rapid and radical; they actively follow the most important innovations and adopt them. Development of innovations is not the focus of their development strategy, but they actively follow innovation trends in the market and will be willing to develop and implement innovations if an opportunity arises.

The fourth group consists of SMEs that do not have ambitions, capacities, capabilities and a need to innovate. These SMEs are old and well-established in the market, mainly in the low-tech manufacturing industry, whose survival is not threatened by rapid technological development. They often use old production processes, rarely cooperate with other enterprises, have no significant development activities and rarely launch new products.

Classification of SMEs according to the innovation potential is significant because enterprises from different innovation groups have different needs for innovation and encounter a variety of challenges and problems in their innovation activities. It is possible to increase innovation capabilities of SMEs through creation of innovation policy, only if we recognize and take into account heterogeneity of innovation capabilities and needs of SMEs. This means that measures and instruments of innovation policy must be adjusted to each particular group of SMEs, taking into account their goals, capabilities and need for assistance in innovation activities.

The importance of small innovative enterprises (including new technology-based enterprises) in the

Figure 3: Share of new technology-based enterprises in the OECD countries



Source: according to [11, p. 31]

knowledge-based economy can be seen in the example of OECD countries.

Research findings are as follows:

- Between 30 and 60 per cent of all SMEs in the OECD countries (90-98% of the total stock of firms) can be characterized as innovative, but only a relatively small share (approximately 10%) is technology-based.
- Between 10 and 30 per cent of all SMEs (9-29% of the total stock of firms) could be categorized as new enterprises, where new is defined as less than five years old.
- New technology-based enterprises account for relatively small share (1-3% of all firms) [11, p. 31].

### Summary of empirical research

The importance of innovative SMEs has increased over the past few years. The experience of the most developed countries indicates importance and capabilities of SMEs in developing innovations. Many studies show that size of an enterprise does not matter much to the R&D intensity and innovation efforts and that in certain industries SMEs have an advantage in terms of innovation development. These findings are confirmed by the fact that of the 70 most important inventions of the 20th century, more than half came from individual inventors, whose innovative

entrepreneurial spirit created products such as: personal computers, jet engine, helicopter, color photographs, pen, radar, missiles, cellophane, DDT, streptomycin, biosynthetic insulin, etc. [5, p. 31]. Also, 46 of 58 major inventions in the United States and Western Europe in the twentieth century belong to individuals and small enterprises. According to the US National Science Foundation, small enterprises in the United States are 2.5 times more innovative and 24 times more efficient in their innovations compared to large enterprises (for enterprises with up to 500 employees, each dollar invested in scientific research yields 24 times more new inventions than for large enterprises with more than 10,000 employees), and innovations are commercialized one year faster, with costs lower by 25% [28, p. 7].

Flexibility, simple organizational structure, low risk level and practicality of SMEs are essential characteristics that enable them to be innovative [6, n.d.]. Hausman points out that closer relationships between the small enterprises' owners and consumers can positively affect their innovativeness because they can get better and faster insights into the consumers' needs. Absence of cumbersome bureaucracy and presence of more informal relationships within an enterprise can improve trust and communication within the organization and create a sense of belonging and cooperative competition, thereby positively contributing to innovativeness within SMEs. Also, the owners (managers)



of SMEs have more operational knowledge which (combined with a good knowledge of consumers) can and should be transformed into innovative solutions [7, n.d.].

Empirical research suggests that not all SMEs have the same level of innovativeness and the potential to be innovative. Different levels of innovativeness of SMEs are reflected in the fact that few highly-innovative and fast-growing SMEs contribute more significantly to innovative development than majority of other SMEs that are not so innovation-oriented. The age structure, size and sector specialization of enterprises are the key to understanding innovation within SMEs. Therefore, it is useful to distinguish innovations in high-tech SMEs, innovations in knowledge-based services and innovations in young innovative enterprises. That is why there is a clear distinction between these groups of SMEs in the literature and policies that support development of innovativeness. SMEs from each group innovate differently and are of different significance for the development of innovations. On the one hand, there are few highly-innovative and fast-growing SMEs that tend like pioneers to push existing boundaries significantly and create new value for consumers through innovative development (they are focused on knowledge, technology and innovation). On the other hand, there are SMEs that survive and develop by focusing on gradual improvements (incremental innovations) and their careful introduction to the markets.

In the past few years, special emphasis has been given to the establishing and role of the new (young) innovative SMEs that are believed to play critical role in development, diffusion and implementation of innovations. New and existing dynamic innovative SMEs contribute significantly to overall productivity of the economy by squeezing out less innovative and less productive enterprises, thus increasing the development and competitiveness of the economy as a whole. The new spin-off investments allow commercialization of knowledge, and its realization would depend on decisions, interests and development strategies of large enterprises, universities and research organizations.

In the case of Italy, Pellegrino et al. have concluded that intensity of innovation in young innovative SMEs depends mainly on the types of technical changes that

have occurred outside the enterprise. By contrast, the older enterprises rely more on innovative solutions developed within the enterprise [18, n.d.]. Schneider and Veugelers have used German example to show that SMEs that combine novelties, limited supply and high R&D intensity achieve significantly higher sales of highly-innovative products compared to other innovative enterprises, especially when it comes to innovative products that are new in the market [20, n.d.]. Also, the regional dimension and the business environment are important factors that determine the success of the young innovative SMEs, whether they are high-tech manufacturing SMEs or service knowledge-based SMEs. Various studies have shown that SMEs on average do not tend to be more innovative when their size is reduced, but become more active in the realization of innovations. Innovative SMEs play an important role in the exchange of knowledge within the innovation systems, not only as users of knowledge but also as a source of new knowledge.

Innovation in SMEs is a continuous process which plays more important role in the economic growth and development of innovativeness in the economy than is commonly recognized. In addition to new, radical and economically important innovations, innovations within SMEs also include introduction of improved products and services, new processes, appearance in new markets and new market niches, introduction of new or improved management system and organization, etc.

Although most of these innovations are internally oriented and significant only to those enterprises that introduce them, various studies show that only 6-10% of all innovations are based on new technologies and radical technological and other innovative breakthroughs. In fact, innovations in SMEs are often the result of enterprises' need to respond to changing consumer demands or obligation to implement new standards. Many SMEs innovate by taking actions to improve the business, but are not aware of it.

### **Advantages and disadvantages of SMEs compared to large enterprises**

The majority of SMEs are more market-oriented and less research-oriented; faster in exploiting new opportunities

and chances for development in the market, more flexible, they adjust better to market requirements and are more focused on incremental innovations. The role of SMEs in the innovation process is determined by a number of specific factors relating to the technology itself, but also to the structure and requirements of the market. Unlike large companies which have more opportunities to attract financial, material and human resources and may perform innovative activities that require high capital investments (for their successful implementation, economies of scale is often necessary), SMEs play a more significant role in the innovations that are oriented toward segmented markets, as well as toward development of specialized products and services that complement the offer of large companies, thereby making the value chain in the economy complete.

SMEs have the ability to efficiently innovate and develop new products faster than large companies. O'Regan et al. point out that capacity of SMEs to meet the growing expectations of consumers is mainly based on their ability to innovate and deliver new products at competitive prices [15, n.d.]. However, as Todling and Kaufman point out, many SMEs still do not recognize available opportunities and advantages such as: flexibility to adjust products to the demands of consumers, fast responsiveness to changes in demand, etc. In fact, they emphasize that SMEs innovate differently from the large enterprises and that interactions among SMEs are more informal and based on trust [25, n.d.].

The inability of many SMEs to successfully transform the R&D results into innovation indicates that there are numerous obstacles and constraints to be overcome in the innovation process. O'Farrell and Hitchens come to the conclusion that SMEs are often unable or unwilling to operationalize new concepts and business practices because of the decisions of their owners (managers) or a lack of adequate resources [14, n.d.]. SMEs have less resources (e.g. funds for financing R&D activities) and generally encounter greater uncertainty and limitations in the innovation compared to large companies [26, n.d.]. Also, SMEs' disadvantages in performing innovation activities (compared to large enterprises) are reflected in the number and quality of researchers, management modes and techniques, communication and establishing

efficient relationship with the environment, the inability to achieve economies of scale, low negotiation power in relation to other entities from the environment, insufficient strength in lobbying for obtaining government assistance to finance or co-finance innovative activities, etc. However, the biggest problem of SMEs in their innovative activities relates to the capability of financing those activities. Piatier indicates this problem by pointing out that the problem of R&D financing is particularly serious in new SMEs which do not have many successfully completed research projects that creditors would use as a proof and a guarantee that their investments will pay off [19, n.d.].

Compared to larger companies, SMEs rely more on their own informal, rather than formal, innovations. Also, although SMEs largely depend on innovations, they are less able to use only the external inputs than larger companies [24, n.d.]. SMEs are not just small versions of large enterprises, but rather they have their own laws and they not only lack the financial and human resources that large enterprises have enough of, but their management and reward structures are often completely different [7, n.d.]. Compared to large enterprises, communication within SMEs is easier, faster and closer. Many decisions are made informally, which significantly increases the speed and flexibility of decision-making and the speed of innovation development.

According to Paunović and Prebežac, the main advantages of SMEs over large companies are: reduced barriers caused by the hierarchy, greater flexibility in decision-making; faster feedback on needs of consumers and market; and easier establishing of partnerships with companies suitable for achieving synergistic business results [17, n.d.].

In the literature, there are some other views of the most significant advantages of SMEs in terms of business and innovations. According to Paunović and Prebežac, the most important advantages of SMEs are as follows:

- flexibility, sense of initiative, dynamism and agility in the management decision-making;
- absence of inertia that is typical for adjusting to ever-changing technology and market conditions;
- increased propensity for new, original innovations and technologies;

- absence of excessive bureaucracy and formalism in the organization of daily business and innovation process;
- high level of capability in providing diversified products and services in line with changes in demand and fast responsiveness to changes in economic conditions;
- relatively low capital intensity;
- rapid return on investment;
- production of SMEs largely coincides with the modern trends of individualization of demand [17, n.d.].

## Conclusion

SMEs are the driving force of knowledge-based economy due to their multiple contributions to growth, technological development, employment, competitiveness and export. Through successful innovation, SMEs increase revenue, create new consumer needs (new market niches) and better satisfy existing ones. They also develop new technological and non-technological innovations, make connections and collaborate, thereby reducing the advantage of large companies that resulted from the size of the available resources and opportunities for achieving economies of scale. The ability of SMEs to innovate is of great importance because innovations provide a sustainable competitive advantage. Innovativeness of SMEs enables and encourages growth of SMEs at the micro level and of the industry in which they operate as well as of the economy at the macro level.

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# CREATING PACKAGE TOURS IN TOUR OPERATOR BUSINESS: ANALYSIS OF KEY BENEFITS FOR TOURISTS

Kreiranje paket aranžmana u turoperatorskom poslovanju: Analiza ključnih koristi za turiste

## Abstract

The main feature of the modern tourism market is an increasingly emphasized competitive pressure. Due to more extensive travel experience and improvement of quality in the process of supplying information by the travel agencies, as well as due to a wider range of travel destinations, tourists are now more demanding and sophisticated in their preferences and expectations. Innovativeness in business is the basic prerequisite of successful operation and survival of companies in the tourism market. Tourism is a complex system and a great number of different companies (travel agencies, tour operators, transporters, hotels, different companies at travel destinations, etc.) take part in designing a tourist product. Tour operators have a significant role in the tourism value chain as the most relevant type of intermediaries in sales of services. Within their business activity, the tour operators combine different services to form package tours and organize travels for tourists. In modern tourism there is a pronounced trend of independent searches and bookings, which directly reflects on the demand for products and services offered by tour operators. Due to changes in the tourism market, there is an increasing need to adapt the business activities of tour operators. Package tours are the core product of tour operators, and their business results largely depend on the success in the designing and sales of such products. This paper analyzes different elements of tour operator package tours, aiming to determine the level of significance of different benefits which the package tours offer to tourists. The research has been conducted based on the application of the AHP research methodology. The basic idea behind the paper is to use the AHP methodology to determine the most significant benefits in order to conduct an in-depth analysis of significance of different elements of package tours designed by the tour operators for tourists for the purpose of defining basic guidelines for designing the offer and achieving competitive advantage in the market.

**Keywords:** *tour operators, package tours, benefits, tourists, preferences, segments, the AHP model*

## Sažetak

Savremeno turističko tržište karakteriše sve izraženiji konkurentski pritisak. Turisti su sve zahtevniji i sofisticiraniji u preferencijama i očekivanjima usled sve većeg iskustva u putovanjima i unapređenja kvaliteta procesa informisanja od strane turističkih preduzeća i destinacija. Inovativnost u poslovanju je osnovna premisa uspešnog poslovanja i opstanka preduzeća na turističkom tržištu. Turizam je složen sistem i u kreiranju turističkog proizvoda učestvuju veliki broj različitih preduzeća (turističke agencije, turoperatori, prevoznici, hoteli, različita preduzeća u turističkim destinacijama i dr). U lancu vrednosti u turizmu turoperatori imaju istaknutu ulogu kao najznačajniji tip posrednika u prodaji usluga. U okviru poslovne delatnosti, turoperatori objedinjuju različite usluge u paket aranžmane i organizuju putovanja za turiste. U savremenom turizmu izražen je trend samostalnih pretraga i rezervacija, što se direktno odražava na tražnju za proizvodima i uslugama turoperatora. Usled promena na turističkom tržištu, potreba prilagođavanja poslovnih aktivnosti turoperatora sve je izraženija. Paket aranžmani su osnovni proizvod turoperatora, pa od uspešnosti njihovog kreiranja i plasmana u najvećoj meri zavise i poslovni rezultati. U radu su analizirani različiti elementi paket aranžmana turoperatora sa ciljem da se utvrdi koliki značaj imaju različite koristi koje oni nude za turiste. Istraživanje je sprovedeno na bazi primene AHP istraživačke metodologije. Osnovna ideja rada je da se korišćenjem AHP metodologije utvrde najznačajnije koristi kako bi se dublje analizirao značaj različitih elemenata paket aranžmana koje turoperatori kreiraju za turiste, kako bi se definisale osnovne smernice za kreiranje ponude i ostvarivanje konkurentске prednosti na tržištu.

**Ključne reči:** *turoperatori, paket aranžmani, koristi, turisti, preferencije, segmenti, AHP model*

## Tour operators in the modern tourism market

Over the past decades the tourism has become one of the fast growing economic sectors with average growth rate above 4% [38]. According to the official data published by the World Tourism Organization, the number of international travels in 2014 was about 1.13 billion, which is by 4.3% higher compared to the previous year of 2013. Official data for 2015 are yet to be published, but estimates are that the growth rate exceeded 4.0%. Europe is still the dominant tourist region, with about 582 million foreign tourists per year. The number of international travels on a global level should be supplemented with 5-6 billion of domestic tourists [38].

Apart from quantitative growth, the modern tourism market is characterized by a pronounced dynamics and intense competition. Globalization, as well as technological and informational changes have been conducive to significant shifts in the tourism market, which resulted in the change of the role of its participants. As present-day tourists possess a higher level of knowledge and familiarity regarding the offer, new requirements to adjust the offer are placed every day before the tour operators [10, p. 40]. The principle of "Fordian" mass tourism prevailed in the 1980s, while individual and customized travel is more dominant in the period after 2000 [32, p. 55].

The tourism industry is a complex one, which is supported by the fact that a great number of factors related to travel destinations and services provided by different participants during the travel have an impact on designing the tourist product [12]. Many different companies that make up the tourism system, or the industry as referred to it by certain authors [37, p. 1630], are involved in providing services to tourists during their travel. Macro value chain in tourism is used for analysis of different companies and business systems relevant for the actualization of the travel. Macro value chain has been analyzed by a great number of authors from different perspectives [15, 30, 42, etc.]. Yilmaz and Bitici [42, p. 342] have defined the value chain from the tourists' perspective in a way that includes all business systems involved in the provision of services from the moment the travel decision is made, through performance of necessary activities prior to travel, to the

very return from the travel. According to these authors, the most significant participants in the actualization of travel are: (1) travel agencies (provide services before the travel); (2) tour operators (provide services before the travel and during the travel); (3) transporters (provide services during the travel); (4) hotels (provide services during the travel) and (5) destination as an attraction business system within which a large number of companies perform their business activities (restaurants, cafés, ship renting agencies, markets, etc.) and in doing so they contribute to the quality of the tourists' stay.

Tourists who travel for holiday use a large number of different services and enjoy attractions at destinations that they perceive as parts of a unique product [33, p. 111]. Over time, motives and reasons for travel have undergone an evolution, so expectations of tourists with respect to travel changed significantly. The desire for experience, or the so called "hunger" for experience, is one of the main reasons for travel in modern tourism [34, p. 1227]. The need to satisfy personal, social and business needs has evolved into the need for a unique sensation and experience. Having in mind that changes happen intensively in the tourism market, the creators of tourist offers are under constant pressure to be innovative, flexible and to deliver superior value for tourists through provision of unique service.

Tour operators have a significant role in the tourism market. Their role is particularly important for tourists travelling for holiday and relaxation, while this relevance is less expressed when it comes to business tourists [16, 33].

According to the Package Travel Act (1079/1994) [38], the travel organizer, i.e. tour operator, "designs and provides packages and offers them for sale indirectly through cooperation with other organizations or directly on one's own account". This has defined the role of the tour operator as one who combines and merges different tourist services by designing unique package tours. Tour operators most frequently purchase services directly from the service providers (hotels, transport companies, etc.), combine them in attractive packages, and then sell them directly to tourists or indirectly through travel retailers. Having in mind their significant negotiating power, the tour operator giants are able to secure lower prices on products and services which they are purchasing, and

this in turn enables them, through the economy of scale, to offer lower prices of package tours to customers [32, pp. 60-61].

Due to changes in the tourism market, which is now dominated by individual custom-made travels for tourists, tour operators, as creators and initiators of mass tourism, are also compelled to adapt their offer to individual requirements and preferences of tourists, to make it unique, flexible and diversified. Hence, the role of the tour operators has taken on new forms in the past few years, which was a forced response to the impending crisis of the traditional form of tour operator service provision. Influenced by powerful informational and technological changes, the role of tour operators and travel agents has been significantly modified and, accordingly, they evolved from pure package tour providers to full-fledged tourist travel consultants. This diversification has elevated the quality of their business to a considerably higher level [6, p. 42].

Having in mind the progress achieved in the tourism market, it is important to consider the extent of the tour operators' contribution to the achieved results. There are no precise data in any of the reference sources based on which exact conclusions can be made regarding the role of tour operators in the tourism market. On the basis of the performed analyses it may be observed that in Europe, the most developed market for organized travels, two mega tour operators have been created – the TUI Travel Group and Thomas Cook Travel Group [8, p. 12]. These two giants serve more than 55 million tourists from over 30 different countries of Europe per year, and together they have a portfolio of 230 brands [39, 41]. This establishment of two market leaders in Europe is the result of current trends of globalization and concentration in tourism. Based on the analysis of annual financial statements of Thomas Cook Travel Group [40], it may be observed that the annual growth rate in 10 most important emitting markets (the United Kingdom, Germany, France, Belgium, the Netherlands, four Nordic countries and Canada) is 2.8%. The earnings from sales of package tours, which generate about 29 billion pounds of income, exhibit a growth rate of 2.1%. For intermediary online services, it is projected that 25% of growth recorded in 2009 will escalate to 31%

in 2016. In 2014, Thomas Cook, the tour operator with predominant presence in the area of central and northern Europe, recorded a total income of £ 9,808.9 million, which is approximately an increase of 10% compared to 2010.

According to the annual statement of the TUI group for 2013/2014 [42], in 2014 this tour operator generated a total turnover of € 18,330.3 million, which was by 4.9% higher compared to the previous year.

In addition to the two large tour operators in the European market, there is a great number of minor tour operators that specialize in narrower market niches. The indicators of global operation of tour operators, such as the facts presented for the two largest ones, also show substantial growth.

In the USA small independent travel agencies still hold the dominant position. However, at the same time, a number of large agencies is emerging, especially the so-called mega agencies, such as the American Express Travel Services and Uniglobe Travel and Morris Travel [2]. Unlike the market of Great Britain and Germany, where major portions of market share are held by the TUI Group, Thomas Cook and Thomson Holiday, and which are characterized by a pronounced inclination of population towards tourist travels organized by tour operators, the American market exhibits a high share of individual travels in the total number of undertaken travels. The trends prominent in Europe were present also in America before the period of mass use of the Internet.

According to the data of the United States Tour Operators Association (USTOA), 10 million Americans in average decide to purchase package tours from tour operators. The total value of purchased package tours is about 8 billion dollars, which is a far smaller amount compared to the leading European emitting areas. Estimates are that organized travels participate with about 30% in the total number of foreign travels in the USA. It was estimated that in 2014 two thirds of tour operators that were members of this association experienced a sales growth, whereas 40% of them recorded growth by more than 10%. According to the USTOA survey conducted before the Paris terrorist attack, as many as 90% of the tour operators that are members of this association offered optimistic prognoses with respect to sales in 2016, where

60% of them forecasted their growth to be between 7% and 10% [46].

According to the data of the National Association of Travel Agencies and Tour Operators (YUTA), in 2014 in Serbia 874,322 tourists travelled for holiday using tour operator services. The number of tourists who used only accommodation services was 212,432. According to the data of the said association, the total population that used package tours containing at least accommodation and transport was 661,890. The association estimates that 70% of this number travelled for summer holiday.

According to the presented analysis, it may be concluded that tour operators still occupy a very important position in the tourism market, even though tourists' requirements have undergone radical changes.

### Package tours: benefits for tourists

Tour operators provide services to tourists by selling package tours and by organizing travels. The term "charter travel", which primarily refers to mass tourism and trips realized by air organized by tour operators, is frequently used in relevant sources to refer to tour operator services [32, p. 60].

Package tours may be defined as a combination of prepared services offered at closed price, which includes at least transport and accommodation. Save for specific cases, package tours are usually sold by tour operators or retail travel agents. Package tours combine travel services with the period of use over 24h or with mandatory boarding included. This definition of the package tour has been provided in The Package Travel Act (1079/1994) document [38].

One of the most influential authors in the field of tourism marketing, Middleton [25, p. 292], defined package tours as "a standardized offer, with controlled quality, made of one, two or more elements: transport, accommodation, food, destination sights, entertainment activities, organized visits to sights, etc.". Package tours have traditionally referred to the domain of mass tourism. In modern tourism, package tours are highly individualized and customized products which are designed for a narrow targeted market niche [35, p. 3].

Tour operators have designed a great number of benefits for tourists, and these are called package tour elements. Benefits (elements) are the basic value drivers that promote the use of tour operator services. One of the elements of the package tours is the travel price reduction, which is an extremely relevant benefit for tourists. Tour operators have a relatively high negotiating power which they are able to exploit due to economy of scale (the number of passengers they serve), as well as the possibilities of advance payment for services to hotels and other participants, which enables them to obtain significantly lower prices in the market [28, 16]. Holloway [15] points out that tour operators form their price according to a much higher level of occupancy of capacities compared to the other bidders, and this, in turn, allows them to lower the sales price for tourists. Having in mind that price is a marketing mix instrument, which is strategically relevant in building competitive market position in the tourism market, it is important to emphasize the relevance of this source of benefit included in the tour operator package tours [39, p. 581; 11, p. 179].

Some authors point out that regardless of the stereotype definition stating that, due to the reduced price of travel, package tours are mainly used by lower and middle class population, research have confirmed that lower price is not the only reason for opting for package tours [39, p. 112]. Characteristics of a travel program are often one of the basic reasons (benefits) why tour operator services are chosen, since these make up a special experience that tourists can enjoy during their travel [33, p. 112]. Benefits for tourists contained in the travel program are a result of connecting different services from different parts of the value chain into unique packages, all with the aim to maximize the total value [23]. Combining different services into unique packages is particularly significant for tourists who travel for holiday [33, pp. 111-112]. Kolb [20] has emphasized that basic benefits for tourists based on the purchase of travel programs which include greater number of services are: (1) increase of comfort through purchasing the entire package tour instead of individual elements; (2) savings on expenses, as well as on time spent on planning and selection of travel as a unique product; (3) budget planning and more detailed identification



of holiday expenses; and (4) increased guarantee that products included in the program will provide a unique and expected experience. The role of tour guides is significant in designing benefits for tourists offered by the tour operators [4, 16, 11, 26, etc.].

Transportation arrangements are also a significant source of benefits contained in the tour operator travel program. Dallen [9, p. 108] has indicated that transport of tourists has a relevant role in creating value for tourists. Travels imply a physical change of location which requires transport services. Tourist transport services to and from a destination imply that tourists will reach the desired destination with a high degree of safety, and with as little effort as possible [3]. The basic benefits for tourists in this respect are the speed of travel and comfort offered by the means of transport. Transport in modern tourism is reflected in several aspects, which are divided into leisure and non-leisure ones. Dallen [9, p. 110] has indicated in his paper that transport of tourists is an attraction in its own right that is most frequently organized by the tour operator. Transport between destinations allows tourists to enjoy visits and sightseeing between destinations [13, p. 160]. Visiting sights between destinations has a significant impact on tourist experience [13, p. 160], as does the entertainment in the means of transport (e.g. ship transport, railway transport, etc.) during the travel between two destinations [9, p. 111] where tour operators can significantly improve the quality of customer experience through provision of various services.

The role that tour guides have in designing benefits for tourists is reflected in different aspects of assistance during the travel that facilitate the very process of travelling [16]. During the travel, tour guides are very important as the mediators who introduce the tourists to the visited sights, and all this contributes to the increase of quality of interpretation and enhances positive experience for tourists. Black and Weiler [4, p. 35] especially emphasize the role of tour guides in designing positive experience through high-quality personal communication with tourists and in providing information on the sights visited during the travel.

Since tourism would not exist without tourist sights, which are the basic component of tourism industry [12]

and one of the “demand generators” [27], it is necessary to present them in an adequate manner, which additionally emphasizes the significance of the tour guide’s role. Competitiveness of a destination is largely dependent on available sights, so the tour guide occupies an important position when it comes to raising the level of satisfaction and offering adequate experience to visitors and tourists [5, p. 269]. Having in mind that tourists observe a destination from a holistic perspective, it is necessary that all elements of a tourist product provide the ultimate experience, i.e. the maximum experience of adventure for the tourists [7, p. 336].

Research conducted in this field have identified the tour guide service as one of the crucial elements, both for the selection of package tours, and for the achieved level of tourist satisfaction [18, pp. 3-4].

## Empirical research

### Analysis of package tours in previous research

Over the last few decades, tour operators have been the most important mediators in international travels in Europe, and their role is pronounced in the USA market, as well. Despite the increasing use of the Internet in the process of travel planning, most Europeans still decide to purchase package tours, which is particularly expressed in the markets of Germany and Great Britain [21, p. 65].

Wong and Kwong [40, pp. 590-591] have researched into the selection criteria for “all-inclusive” package tours applied by tourists from Hong Kong. The research results showed that crucial elements in making a decision on purchasing are types of travel package tours and quality of services. Apart from the stated elements, the tour operator’s reputation (brand), expected quality of services provided in terms of transport and accommodation, expertise and experience of tour guides, guaranteed departure, safety of the route and a convenient itinerary are also significant.

Johns, Avcı and Karatepe [19, p. 96] conducted a research based on SERVQUAL scale, and the results showed that participants were most concerned with the efficiency of service delivery, and far less with the degree of personalization of offered services.

In order to define the main sources of customer satisfaction among the users of package tours, Hsu [17, p. 291] carried out a study based on factor analysis which included over 55 different attributes of travel package tours. Flexible itinerary, tour guide expertise and package tour price were identified as the key elements that have an impact on the level of overall tourist satisfaction with the entire service provided by tour operators. One of the important factors frequently mentioned as essential for reaching a travel decision is the price. Even a slight difference in price may have a significant impact on travel demand, having in mind its feature of high elasticity [28]. Given that tour operators have a dominant role in the development of tourism in Greece, a research was conducted regarding the degree of reliability of tour operators on the island of Crete. One of the conclusions indicated that price margins for individual travels are higher compared to margins in case of package tours, resulting in smaller participation of individual tourists in the market, compared to those who used tour operator services [1, p. 33].

The study performed by Geva and Goldman [11, p. 184] showed that performance of the tour guides is indeed of vital importance for businesses of tour operators, but a doubt remains regarding the widely distributed presumption that a company directly benefits from the success of the tour guide's work, in the sense of it being conducive to positive effects on the corporate image, the increase in the number of repeated purchases and of loyal customers. The authors consider that even though the tour guide is an employee and representative of the tour operator, the travel participants will not identify him/her with the tour operator itself. Hence, the satisfaction with the good work of the tour guide will not be entirely reflected on the overall level of satisfaction with the package tours. On the other hand, research have shown that tour operators' ability and professionalism directly influence the level of satisfaction with the entire guided tour, and indirectly shape the level of satisfaction of tourists with tour operator services, i.e. with the entire service provided. Therefore, this study has confirmed that tour guides do have a significant role in the process of making a decision on purchasing package tours, since they have an impact on the level of tourist satisfaction [18, p. 29].

Previous research have shown that different tourists prefer different elements of travel package tours and, accordingly, their decisions on purchasing package tours will differ significantly. In order to know which package tours to offer to a certain tourist segment, it is necessary to learn their needs, desires and expectations.

In accordance with the previously stated arguments, the research presented in this paper is based on the evaluation of significance of individual elements of package tours by applying the AHP model. The research was conducted in the Republic of Serbia with the aim to determine critical elements for making decisions on purchasing travel package tours.

### Research methodology

Upon consulting the relevant sources, it may be observed that modern-day tourist demand is characterized by a high level of heterogeneity and individuality, and that the use of the Internet has brought about changes in the habits of modern tourists. Relevant research performed in the last 10 years indicated that there is a need to analyze preferences of modern tourists and to adjust the tour operators' offer to modern tendencies for the purpose of designing package tours which are competitive in the market.

The idea of empirical research is to determine the significance of different benefits for tourists contained in package tours designed by tour operators. The basic methodological approach used in the research is the AHP. Based on the AHP, significance level of different benefits contained in package tours was determined for each participant.

AHP (Analytic Hierarchy Process) is a complex mathematical model developed primarily to analyze the complex process of decision making [31, p. 997]. The AHP model is structured in such a way so as to determine the relative significance of different elements being evaluated using a systematic approach [22, p. 180]. The model was developed by Saaty and it is predominantly based on fuzzy math logic that enables comparison of significance between alternatives for the purpose of determining the relative significance of each of them [14].

The research procedure which employs the AHP methodology implies several connected stages [36, p. 144]:

- stage one implies dividing the subject of the research into several components in a way so to make the division logical and clear to the participants of the study;
- stage two implies placing the elements which are being researched into mutual relations associated with the components defined in stage 1. This stage implies developing a diagram with several hierarchy levels;
- stage three is the comparison of significance of different alternatives grouped within the same hierarchy level. Essentially, the idea is that each participant compares different alternatives.

According to the model developed in 1980 by Saaty [36], on the basis of the results of the comparison, fuzzy numbers are obtained through complex algebraic operations. Fuzzy matrix and fuzzy vector are formed based on these numbers and they serve as the basis for obtaining evaluations to determine the level of significance of each element under evaluation.

Evaluations of comparison of each alternative are translated into the Saaty scale. An example of evaluation of comparison of two alternatives has been presented in Table 1.

Based on the comparison of alternatives, the comparison matrix is formed. The comparison resulted in fuzzy numbers based on which the comparison matrix is formed and fuzzy vector defined by triangular fuzzy numbers.

In order for evaluations to be valid, it is important to test the consistency of the matrix, i.e. responses provided

by the participants regarding the comparison of different elements [24, p. 4801]. The indicators of consistency are the consistency index (CI) and consistency ratio (CR). Consistency ratio indicates whether comparisons made by the participants were consistent or not. Saaty [36] states that the requirement of 10% cannot be made smaller such as 1% or 0.1% without trivializing the impact of inconsistency.

Based on the evaluations obtained by applying the AHP methodology, estimates for specifying significance level for each participant have been determined. Cluster analysis has been applied to the obtained evaluations to identify different segments.

On the basis of single factor analysis of variance (ANOVA), hypothesis has been tested with regards to whether the more efficient method for market segmentation is the one based on evaluation of significance of different benefits contained in the tour operator package tours or the one based on application of traditional segmentation criteria.

### Research procedure

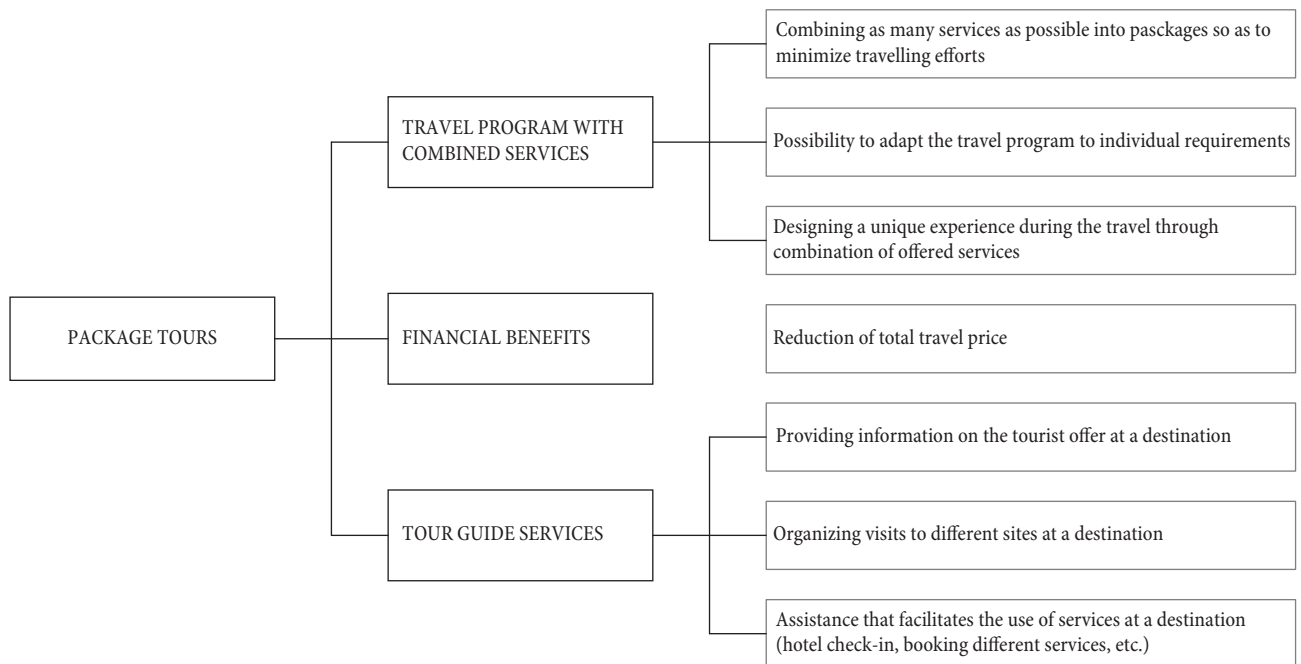
Research has been conducted in several connected stages in accordance with the principles of the AHP methodology and research objectives. According to the theoretical analysis presented in the theoretical part of the paper, package tour elements for tourists who travel for holiday have been determined. Hierarchical relations, which are necessary to be defined in order to evaluate different benefits, have been presented in the hierarchy diagram in Figure 1.

**Table 1: Method to obtain evaluations of comparison between two alternatives**

Evaluation	Description of difference between two alternatives	Saaty scale number
1	Very high	9
2	Between very high and high	7
3	High	5
4	Between high and medium	3
5	Equal	1
6	Between medium and low	1/3
7	Low	1/5
8	Between low and very low	1/7
9	Very low	1/9

Source: [36, p. 24]

Figure 1: Hierarchy diagram



Elements of the hierarchy diagram presented in Chart 1 have been mutually arranged in accordance with the principles of the AHP methodology. The hierarchy diagram was formulated on the basis of the presented reference sources. The first level of the diagram contains package tours. The second level includes basic elements of package tours: (1) travel program with combined services used by tourists who travel, (2) financial benefits offered to tourists by tour operators based on the reduction of total travel price, (3) tour guide services. For each of the three elements found at the second level, benefits for tourists generated based on these elements have been defined. Benefits are found at the third level of the hierarchy diagram (see the third level of the hierarchy diagram in Chart 1).

Importance of different benefits has been evaluated based on the questionnaire designed in accordance with the AHP methodology. The questionnaire included three parts. *The first part* of the questionnaire introduced the question of whether the participant travelled to summer holiday destinations by using tour operator package tours in the previous three years. Participants who replied affirmatively to this question were further asked to answer questions from the other two parts of the questionnaire. Participants who replied negatively did not reply to questions from the other two parts of the questionnaire.

*The second part* of the questionnaire requested that the participants make a comparison of significance between different variables defined within the same hierarchical level. Participants ranked each answer on a scale from 1 to 5 so as to demonstrate to which extent one variable was more valuable compared to the other. Possible replies were: (1) equal importance, (2) little importance, (3) strong importance, (4) very strong importance, and (5) extreme importance. *The third part* of the questionnaire contained questions regarding information on the participants such as: sex, level of education, amount of personal monthly income, level of household income.

The study was conducted in the Republic of Serbia in January 2014 on a sample of 850 participants.

The research employed a stratified sample presented in Table 2.

The criterion for defining stratum while employing the geographical criterion was determined based on the administrative division of Serbia (without Kosovo and Metohija) in four statistical regions – Šumadija and Western Serbia, Belgrade, Southern and Eastern Serbia and Vojvodina (Law on Regional Development of the Republic of Serbia, the Official Gazette of the Republic of Serbia, Nos. 51/2009 and 30/2010, 2010).

Sample survey was conducted over the phone, by randomly selecting landline telephone numbers from the



**Table 2: Description of the sample used for conducting the research**

		Sample	
		%	N =
Gender of the participants	Male	37.2%	271
	Female	62.8%	458
Age of the participants	18-24 years	14.5%	106
	25-29 years	17.8%	130
	30-39 years	19.9%	145
	40-49 years	19.1%	139
	50-59 years	16.6%	121
	60+ years	12.1%	88
Personal monthly income	Without income	23.7%	173
	Under 30,000 dinars	16.5%	120
	30,001-50,000 dinars	22.5%	164
	More than 50,000 dinars	14.7%	107
	Doesn't know/refuses to answer	22.6%	165
Monthly income per household member	Under 20,000 dinars	17.8%	130
	20,001-30,000 dinars	16.6%	121
	30,001-50,000 dinars	18.8%	137
	More than 50,000 dinars	11.8%	86
	Doesn't know/refuses to answer	35.0%	255
Place of residence	Belgrade	23.9%	172
	Eastern Serbia	28.9%	208
	Western Serbia	25.8%	186
	Vojvodina	21.4%	154
Obtained level of education	Quit primary school/primary school/secondary school (3 years)	7.4%	54
	Graduated from secondary school, 4 years (grammar school, vocational school)	41.3%	301
	College degree	15.2%	111
	A Bachelor's degree, Master's and PhD	36.1%	263

*Telekom Srbija* database. According to the evaluations obtained from the participants, the comparison matrix was formed. Based on the matrix, the significance of each value element was determined for each individual participant.

Processing the results implied testing the consistency ratio for each individual participant. Consistency ratio was tested for each pair of elements compared by the participants. Each comparison whose consistency ratio exceeded 0.05 ( $CR > 0.05$ ) was rejected as inconsistent. Participants who had made one or more inconsistent comparison of pairs, where consistency ratio was higher than 0.05, were not included in further analysis and drawing conclusions. It was determined that 121 participants provided 173 inconsistent replies. The participants whose every reply was consistent, 729 of them in total, were analyzed.

## Research results

Based on the performed research, the employment of the AHP methodology rendered results which are presented in Table 3.

By observing Table 3, it may be concluded that the reduction of total travel price in package tours has the highest level of significance for tourists. Price reduction is the result of financial benefits offered by the tour operators. Apart from price reduction, the greatest significance lies in benefits derived from travel program features, primarily the possibility to adapt the travel program to individual tourists' requirements. Overall, the lowest significance reported was in the tour guide services, although access to information offered by a tour guide regarding the details of the tourist offer at a destination is ranked as relatively significant.

**Table 3: Level of significance of different benefits in package tours in the entire sample**

	Level 1 (variable)	Evaluation	Level 2 (variable)	Evaluation	Result	Level
PACKAGE TOURS	TRAVEL PROGRAM WITH COMBINED SERVICES 1)	0.345	• Combining as many services as possible into packages so as to minimize travelling efforts	0.326	0.114	3
			• Possibility to adapt the travel program to individual requirements	0.345	0.13	2
			• Designing a unique experience during the travel through combination of offered services	0.329	0.112	5
	FIANANCIAL BENEFITS 2)	0.351	• Reduction of total travel price	1	0.351	1
	TOUR GUIDE SERVICES 3)	0.304	• Providing information regarding the tourist offer at a destination	0.243	0.073872	4
			• Organizing visits to different sites at a destination	0.225	0.0684	6
			• Assistance that facilitates the use of services at a destination (hotel check-in, booking different services, etc.)	0.238	0.072352	7

1) C. I. = 0.091, C. R. = 0.013, 2) C. I. = 0.0090, C. R. = 0.011, 3) C. I. = 0.011, C. R. = 0.015, 4) C. I. = 0.063, C. R. = 0.022

Cluster analysis was performed in order to examine the level of heterogeneity of demand. Two-level cluster analysis was conducted in order to determine the segments. Two-level cluster analysis implies two levels of clustering: (1) *priori clustering*, based on which the participants are grouped into pre-clusters, and (2) *hierarchical clustering*, which implies observing all clusters as individual cases and selecting the most efficient clustering based on which segments are defined [43, p. 112]. Log-likelihood distance was used as a measure of distance in the hierarchical clustering, while the BIC (Bayesian information criterion) was used as a criterion for clustering. This approach to clustering is recommended for samples above 500 and for analysis on continuous variables, which is the case with the results obtained during the conducted research.

The analysis has revealed the existence of three independent segments. The size of each segment is presented in Table 4.

Based on Table 4, it may be observed that the size of each segment is higher than 20% of the population, which suggests that segments are large enough to provide basis for their detailed analysis.

**Table 4: Size of segments**

	N =	%
Segment 1	346	47.5%
Segment 2	187	25.7%
Segment 3	196	26.9%

Table 5 presents the evaluations for each element of package tours in each of the three defined segments.

Based on the data presented in Table 5 we may note that the benefit of the total travel price reduction offered through the purchase of package tours is the basic benefit for all three segments. Total price reduction is a universal and most significant benefit designed by tour operators through package tours.

According to the data presented in Table 5, more precise descriptions for each of the three segments may be provided:

Segment 1 is the category of tourists for whom, apart from price reduction, the travel program bears special significance when it comes to selecting tour operator package tours. In this segment, higher level benefits are those that enable to design the program according to individual requirements, as well as those that refer to combining a greater number of services into one travel program. Tour guide services are less significant in this segment. Among the benefits derived from provision of tour guide services, the most significant benefit is the one of obtaining information on the details of the tourist offer at a destination. This category of tourists primarily chooses package tours since they guarantee a lower price, but flexibility in selection of services is also extremely important for them. The dominant benefits in this segment are those that reduce efforts, since high significance of benefits deriving from package tours with high level –

**Table 5: Evaluations of significance of different benefits in package tours and levels for segments**

Level 2 (variable)	SEGMENT 1		SEGEMENT 2		SEGMENT 3	
	Evaluation	Level	Evaluation	Level	Evaluation	Level
• Combining as many services as possible into packages so as to minimize travelling efforts	0.131	3	0.101	4	0.104	6
• Possibility to adapt the travel program to individual requirements	0.154	2	0.119	3	0.109	5
• Designing a unique experience during the travel through combination of offered services	0.109	5	0.142	2	0.101	7
• Reduction of total travel price	0.351	1	0.086	1	0.076	1
• Providing information regarding the tourist offer at a destination	0.129	4	0.086	6	0.128	2
• Organizing visits to different sites at a destination	0.103	6	0.092	5	0.121	3
• Assistance that facilitates the use of services at a destination (hotel check-in, booking different services, etc.)	0.1	7	0.081	7	0.111	4

(1) possibility to book a greater number of services; and (2) information provided by tour guides on the details of the tourist offer at a destination – predominantly refer to the reduction of effort in making reservations and obtaining information.

Segment 2 is the category of tourists for whom, apart from price reduction, the travel program also bears special significance. In this segment, unlike segment 1, the most relevant benefits are those that relate to designing a unique sensation and experience. Tour guide services are also less significant for this segment of tourists. However, among the benefits derived from provision of tour guide services, the most significant benefit is the one of organized visits to sights during the stay at destination, which also contributes to a better experience and quality of the tourist offer during the stay. Therefore, this category of tourists primarily opts for package tours because they guarantee lower price, but also because of a unique experience that a specially designed travel program and organized sight visits during their stay at a destination can provide.

Segment 3 is the category of tourists for whom, apart from price reduction, the tour guide services bear special significance when it comes to selecting package tours. Tour guide services are significant for this category of tourists, both with respect to providing information on the details of the tourist offer at a destination, and with respect to organizing visits to sights at a destination. Likewise, this category of tourists appreciates if the travel program offers a selection of services adapted to individual requirements. This category of tourists primarily chooses package tours because they guarantee lower price, but also because of

the services of tour guides who provide information on a destination and organize sightseeing at a destination, which improves the quality of the tourist offer during their travel. Unlike segment 2, tourists that are included in this segment prefer to design the travel program by themselves (high relevance of the benefit of being able to design the travel program as per individual requirements).

Based on the obtained results of the segmentation presented above, the importance of the difference between evaluations of variables has been tested among the segments obtained on the basis of significance of different benefits included in the package tours. According to the purpose of the research, the following research hypothesis was established:

H0: The degree of difference between segments sorted as per preferences of different benefits in package tours is statistically significant.

H1: The degree of difference between segments sorted as per preferences of different benefits in package tours is not statistically significant.

Single factor analysis of variance, ANOVA, was used to test the significance of difference. The analysis was employed to test significance of differences in evaluations between two and more independent sets. The ANOVA test is applied by calculating two evaluations of basic sets of distribution variance: (1) variance between samples, and (2) variance within samples.

By applying the ANOVA, the F-statistics was obtained and based on the value Sig. statistical significance of difference was determined. If the Sig. value is between 0.01 and 0.05, we can claim with 95% and higher certainty

that there are statistically significant differences between subgroups of categorical variable and that these differences obtained from the sample of participants actually exist in the population represented by that sample. Analysis results are presented in Table 6.

Based on Table 6 it may be concluded that the difference between segments obtained on the basis of preferences of different benefits in travel programs is statistically more significant.

## Conclusion

Tour operators in the global tourism market play a vital role in travels of tourists who journey for the purpose of holiday. Over the last two decades, the tourism market has undergone significant changes. If the tour operators aim at maintaining business success, they need to adapt their business activities to the modern tendencies. Key changes in the tourism market have occurred as a result of internationalization of tourism, development of the Internet and quality improvements of marketing communications.

Starting from the period of tourism popularization, tour operators had been the most significant intermediaries in the tourist market. Benefits for tourists included in package tours, the core product of tour operators, ensure a stable operation of their businesses. However, having in mind the current trend of individual search and independent design of package tours by tourists, the tour operator's position as an important participant in the value chain is somewhat different. The opportunity for survival in the market and business development of tour operators in modern operating conditions may be

reflected in finding a specific market niche and adapting the package tour elements according to the preferences of this narrow target group.

Based on the conducted research, the total travel price reduction remains the most significant benefit which the tour operators offer to tourists by means of package tours. This benefit has traditionally been the most important element of package tours, whereas in modern circumstances its significance is relatively highly ranked, but it is not the only one. Certain relevant research indicate that this is not the only benefit with high significance [33, p. 111] which was supported by the conducted research.

According to the research, it may be concluded that demand with respect to significance of other benefits designed by tour operators in package tours is not homogenous. Research results indicate that there are three segments with statistically significant difference with respect to preferred benefits provided by package tours. Achievement of competitive advantage of tour operators therefore depends on their adjustment of package tour features to the preferred benefits. Apart from adjustments, it is important that benefits which are significant for each of the three segments are emphasized in marketing communication.

Benefits resulting from the work of tour guides have a high significance for one segment. In one scientific paper, Pond [29] has emphasized the need to perform evaluations and regulations of their work. The significance identified in the paper additionally indicates that tour guide training, permanent measurements of work quality, including briefings that are in line with a guarantee of a certain level of professionalism, must not be ignored.

**Table 6: Value of the F-statistics and significance of differences between segments obtained by segmentation based on preferred benefits in package tours**

Variables	SEGMENTS	
	F	Sig.
• Reduction of total travel price	41.9	0.00
• Combining as many services as possible into packages so as to minimize travelling efforts	79.5	0.00
• Possibility to adapt the travel program to individual requirements	234.5	0.00
• Designing a unique experience during the travel through combination of offered services	240.1	0.00
• Providing information on the tourist offer at a destination	119.9	0.00
• Organizing visits to different sites at a destination	161.1	0.00
• Assistance that facilitates the use of services at a destination (hotel check-in, booking different services, etc.)	157.1	0.00



The research conducted is restricted by a series of limitations. *Firstly*, the empirical research was performed based on one single methodology – the AHP, which partly limits the possibility of generalization of obtained results. *Secondly*, the empirical results indicate general preferences of tourists. The impact of situational factors, which might include: friends one is travelling with, social environment during the travel, motive for travel (honeymoon, visit to family and friends, etc.), emotional disposition, etc., may have a major impact on preferences and results of evaluations of significance of different elements in package deals. *Thirdly*, the research setting has not taken into account the impacts of all external factors on the preferences of tourists. For example, national culture, as a particularly significant external factor, has been abstracted from the research. Had the influence of other national cultures been taken into consideration, there is a possibility that the results of the analysis would have been different and that basic values would have been different compared to the obtained results.

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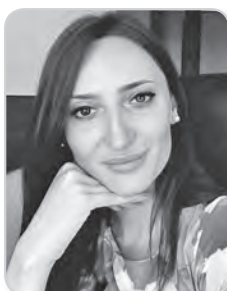
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# CORPORATE GOVERNANCE AND FOREIGN DIRECT INVESTMENT: LESSONS FOR THE FUTURE OF THE WESTERN BALKANS

Korporativno upravljanje i strane direktne investicije –  
lekcije za budućnost zemalja Zapadnog Balkana

## Abstract

Stability of a financial system depends on the ability of the system to adapt to the demands of the time in which it should exercise its functions. If these functions are not fully incorporated in the laws and regulations governing the financial system of a country, it is understandable that there is a need for such legislation and such a system to be aligned with the current needs and requirements of the financial market. In everyday life, changes are becoming increasingly normal and commonplace. The need for change has become one of the biggest challenges facing the modern strategic management of companies. Looking at the macro level, a varying success in coping with the coming changes affects the relative position of individual countries, their industrial base, wealth and power. Corporate governance system refers to the entirety of laws, quality institutions, professional chambers and business ethics. Corporate governance is based on elementary rules of protection of property rights and is a prerequisite for achieving the market institutions' integrity.

Foreign direct investment (FDI) is an important driver of the economic development in the Western Balkans. The Western Balkans countries include Albania, Bosnia and Herzegovina (B&H), Croatia, Macedonia, Montenegro and Serbia. We also analyze Croatia among the countries of the Western Balkans, despite the fact that it joined the EU in July 2013. The countries of the Western Balkans, in comparison with the countries of the Central and Eastern Europe, received less FDI during the 1990s. The main reason for this is that most of the countries of the Western Balkans were in transition or involved in war conflicts. Countries such as Albania, Bulgaria, Croatia, Macedonia, Romania, except for Bosnia and Herzegovina which was at war, were observed from 1990 to 1996, when they realized FDI inflows amounting to USD 3.4 billion or 5.7% of total FDI in 27 transition economies in the world.

**Keywords:** *corporate governance, foreign direct investment, transition, institutions*

## Sažetak

Postojanost jednog finansijskog sistema zavisi od sposobnosti tog sistema da odgovori zahtevima vremena u kojem treba da ostvaruje svoje funkcije. Ukoliko ove funkcije nisu u potpunosti implementirane u zakonima i drugim propisima kojima se uređuje finansijski sistem jedne zemlje, razumljivo je da postoji potreba da takvi propisi i takav sistem budu usklađeni sa aktuelnim zahtevima i potrebama finansijskog tržišta. I u svakodnevnom životu promene sve više postaju normalna i uobičajena stvar. Potreba za promenom postaje jedan od najvećih izazova sa kojim se susreće strateški menadžment savremene kompanije. Posmatrano na makro planu, zahvaljujući različitoj uspešnosti u suočavanju sa nastupajućim promenama, preuređuje se relativni položaj pojedinih zemalja, njihova industrijska osnova, bogatstvo i moć. Kvalitetno korporativno upravljanje obezbeđuju odgovorne upravljačke strukture uz uvažavanje interesa akcionara i svih zainteresovanih subjekata za uspešno poslovanje korporacija. Ono je u osnovi izvedeno iz elementarnih pravila zaštite svojine i predstavlja preduslov integriteta tržišnih institucija.

Strane direktne investicije (SDI) su važan pokretač ekonomskog razvoja u zemljama Zapadnog Balkana. Zemlje Zapadnog Balkana su: Albanija, Bosna i Hercegovina (BiH), Hrvatska, Makedonija, Crna Gora i Srbija. Među zemljama Zapadnog Balkana se analizira Hrvatska uprkos činjenici da je ušla u Evropsku uniju u julu 2013. Zemlje Zapadnog Balkana su, u poređenju sa zemljama Centralne i Istočne Evrope, primile manje direktnih stranih investicija tokom 1990-ih. Glavni razlog za to je činjenica da se većina zemalja Zapadnog Balkana nalazila u tranziciji ili u ratnom sukobu. Zemlje, kao što su Albanija, Bugarska, Hrvatska, Makedonija, Rumunija, osim Bosne i Hercegovine, koja je bila u ratu, u periodu od 1990. do 1996. godine imale su priliv SDI u iznosu do 3,4 milijardi dolara ili 5,7% ukupne SDI u odnosu prema tranzicionim ekonomijama u svetu.

**Cljučne reči:** *korporativno upravljanje, strane direktne investicije, tranzicija, institucije*

## Introduction

The relation between the real sector and financial markets needs to be adequately controlled to reduce the risk of all participants. The main objective of the Organization for Economic Cooperation and Development (OECD) is to ensure, through the Global Forum on Corporate Governance, the improvement of standards of corporate governance and, in particular, to ensure their application in developing countries and countries in transition, the development of entrepreneurial spirit, improved accounting, transparency, accountability and integrity in business. One of the major shortcomings of capital markets in transition countries is the lack of transparency, low efficiency in detecting financial irregularities and unexpected price fluctuations of stock prices, indicating that the integrity of the market is not built. The main areas of the research of IFC/MIGA are the development of entrepreneurship and the efficiency of private investment, as well as the development of suitable business environment. The intention is to integrate environment, corporate and social governance and to ensure that problems in corporate governance do not inhibit investment. These goals are accomplished through various forms of political dialogue, convening of conferences on corporate governance and organization of round tables at the national and regional levels [3, p. 11]. They can be applied in countries with “civil law” and “common law” legal tradition, at different levels of ownership concentration. Activities of international organization whose focus is to help corporate management in industry are reflected on policy segment. These goals are achieved through the transfer of knowledge and by ensuring private sector project financing with good corporate governance, research and consulting. They do not have a primary activity, strong competitiveness in the projects and ensuring the elements of corporate governance. Therefore, the supervisory role of the market depends on the size and sophistication of the local capital market. Thus, the risk of getting to know the local corporate governance imperfections (idiosyncratic risk) and their alliance with the cost of capital is an important foundation for a stable business environment of the domestic economy. Scenario in which privatization has as its aim the increase of social wealth, and not legislation that will provide an indirect

route to reaching this goal, leads to property theft and dilution of wealth. This topic is of great importance for the development of economic science in the field of financial markets in the Balkan region, which is characterized as a determinant of market transition.

FDI inflows within the Western Balkans countries observed from 1989 to 2000 amounted to 15.3 billion dollars or 9.4% of total FDI in 27 transition economies. The Western Balkans countries have achieved FDI of 5.8% in 2010, and all the countries of South Eastern Europe recorded 14.7% (South East European countries are all the countries of the Western Balkans as well as Romania and Bulgaria) [10, pp. 11-32].

One of the main goals of this paper is to explore the main determinants that affect the inflow of FDI in the Western Balkans countries: first of all, the size of gross domestic product per capita (GDP), growth rate of gross domestic product, the share of trade in GDP and inflation rates. Accordingly, the aim of this study is to assess which of these variables have greater impact on FDI inflows into a country and identify the reasons as to why some variables have less influence in attracting FDI.

## Institutional and corporate infrastructure

The investment climate is not the same for every business in any one state. In order to advance the business environment, the opinion of international institutions is that it is necessary to create opportunities for both domestic and foreign institutions.

Investor protection is a priority for modern regulation of developed financial markets, including transition markets. In terms of transition, a special problem is the process of conversion of a company from the state or private structures or mono-ownership structures to open joint stock company. By a standard definition, an open joint stock company is obliged to report on its financial position, legal status and procedures as well as business, to report to narrower and the general public regulators [17, p. 123] and only regulated market is a framework for the financial indicators and results.

A necessary precondition for the proper functioning of corporate governance and capital market [15, p. 31] is



a stable legal system in the country and development of institutions [13, p. 27]. Therefore, the study of various aspects of corporate governance is in the initial stages of development, with no single international organization covering the area of corporate governance with a clear vision in all its segments. The transition conditions are necessary. In transition economies, the process of concentration of ownership is very dynamic due to the widespread distribution of property rights in the models of mass privatization. One of the causes of accelerated concentration is a low level of investor protection. Investor protection and protection of all external and internal shareholders and creditors from expropriation or impairment of standard rights of ownership is the problem which is present when there is external financing of business entities. Consequently, the low level of investor protection and dispersed and non-concentrated ownership structure are mutually opposing structures. Reducing the level of investor protection, which normally happens in a crisis situation, causes rapid concentration of ownership and further endangers the external investors as to the concentration realized by the undervalued equity securities regime.

When it comes to improving capital markets and investor protection, the area of corporate governance is an unavoidable and essential need. The transition economies and developing economies do not have a lot of achievements in this area. The biggest problems of the market in transition and emerging markets relate to: instability, generally unstable economic conditions, liquidity, leaving the company with a listing and capital outflows, accounting standards and standards of the international comparative audit, inefficient political and legal environment, corruption (see Table 1) and lack of trust in the financial system [20, pp. 291-298].

The instability of the ownership structure has the effect of market volatility, thus protecting shareholders' rights should further regulate and promote the development of legal standards, more transparent adoption of appropriate

laws and harmonization with the European Union. Markets in most transition countries in the Balkan region are dominated by systems of corporate governance and financial systems which provide a lower legal protection to investors compared to the systems that provide the strongest protection. Identified weaknesses that are characteristic of most of the capital markets in transition countries can be, to a great extent, alleviated by passing laws in the area of development of capital markets and corporate governance.

For advancement of the business environment, it is necessary to create investment climate for everyone who has taken part in business life – domestic, foreign, bigger and smaller investors. Effective institutions reduce transaction costs. The idea of a company as a legal form comprising a set of contractual relations between individuals should be minimization of agency costs between shareholders and managers [8, p. 13]. Namely, the agent will be paid to use the funds (to limit the charges) if he guarantees that he will not take action that may be harmful to the principal. Principals (shareholders) are taking the risk, transferring the right to decide to an agent.

System of corporate governance in a country includes formal and informal rules of conduct, accepted practices and enforcement mechanisms, whether private or public [21, p. 97], which with common interaction successfully control corporations (“corporate insiders”) on the one hand, and all others who may invest, on the other.

However, many authors conclude that empirical findings depend on the selected research methodology. At the same time, they emphasize that the theory of corporate governance is underdeveloped.

### Harmonization of national legislation and protection of investors to develop the financial market

The process of harmonization of national legislation in the field of business [16], is the process of creating legal norms

**Table 1: Ratings of corruption in Serbia and the average score for the Balkan region**

Year	2007	2008	2009	2010	2011	2012
Mark for Serbia	5.25	5.20	5.0	5.1	5.2	5.1
Average for the Balkan region	5.04	4.86	4.97	4.93	4.91	4.95

Source: Authors

under the EU law. The Europe Union has recommended the development of company law based on expansion transparency. Other important areas for the regulation of corporate governance are the financial services regulation and voluntary regulation - in the EU there is a number of codes of corporate governance adopted by various institutions, professional bodies and associations on a voluntary basis, with the voluntary national codes and their respect, who are performing convergence of corporate governance practices.

Harmonization [16, pp. 34-50] of national legislation with the EU regulations is aimed at improvement of chances of a country to become a member or to speed up the process<sup>1</sup>. Regime of foreign capital is an arranged set of rules.

In addition to shareholders' rights, equal treatment of shareholders, disclosure and transparency, within the framework of the OECD<sup>2</sup> principles of corporate governance, the information relating to the role of other persons with an interest in the work of the company as well as explanations of the duties of the management body play an important role. Control of the use and misuse of inside information is one of the most important means of protection of external investors. As the internal owners are the greatest beneficiaries of this type of information, the rules define users of privileged information. These are mostly insiders by virtue of the ownership or on the basis of employment status and may be the mediators and regulators. The use and abuse of insider information relates to the exploitation of the benefits for the purchase or sale of securities, directly or through another person, as well as to the communication of privileged information or counseling, on that basis, to third parties in order for them to take advantage of the benefits for the purchase or sale securities.

In the area of monitoring the reliability of operations (prudential control), one should adopt a directive on the winding-up of banks and insurance companies, on the treatment of "electronic money", improve the directive on money laundering and improve rules on the supervision of financial conglomerates.

1 The European Commission believes that there is convergence between voluntary national codes of corporate governance and practices and that there is no need for a single European code.

2 Code of Corporate Governance OECD can be downloaded from the website: [www.oecd.org/home](http://www.oecd.org/home)

Practices of corporate governance are of crucial importance in the banking sector [7, pp. 7-11]. It is well known that banks operate on the basis of allocation of excess savings of the population toward the most profitable activities of the company [4, p. 48].

## Foreign direct investment inflows to the Western Balkans

Observing the individual countries of the Western Balkans, we can point out that Bosnia and Herzegovina realized FDI in the amount of EUR 5.856 million in the 2005-2013 period [3]. According to the Central Bank's data, an increase in foreign direct investment was registered in 2010 and 2011. The inflow of FDI in 2010 was increased by EUR 307 million or 70.5% compared to 2009. FDI inflows in 2011 amounted to EUR 355 million, which represented 2.7% of GDP and an increase of 15.7% compared to 2010. Unfortunately, besides promising forecasts, foreign direct investment in 2012 amounted to EUR 285 million, which represented a decrease of 2.2% of GDP or 19.6% compared to 2011. Significant decline in FDI inflows continued during 2013, amounting to EUR 252 million.

Albania realized FDI inflows of USD 1.051 billion in 2010. A slight decrease of FDI was recorded in 2011, totaling USD 1.036 billion. A downward trend continued in 2012, when the total FDI amounted to USD 957 million. In 2013, there was a significant increase in FDI inflow, which amounted to USD 1.35 billion (2). Montenegro achieved total FDI inflows in the amount of EUR 1.066 billion in 2009. That year was followed by a decline in FDI inflows in 2010 (EUR 552.107 million). In 2011, a downward trend continued and FDI was EUR 389.104 million. A slight increase in FDI inflows was recorded in 2012, amounting to EUR 461.59 million, followed by another fall in the inflow of FDI in 2013 to EUR 323 million [5, p. 13].

In the period from 1993 to 2013, Croatia achieved total FDI inflows in the amount of EUR 26.865 billion. A record year was 2008, because the FDI inflow amounted to EUR 4.053 billion. This year was followed by a decline in FDI inflows in 2009 (EUR 2.408 billion) and also in 2010 (EUR 370 million), which is linked to the recession in the Eurozone and Croatia itself. During 2011 and 2012, FDI

in Croatia recorded a significant increase and amounted to EUR 1.091 and 1.055 billion, respectively. In 2013, a significant decline in FDI inflows was recorded, which at the time amounted to EUR 436 million [13, p. 9]. In the period from 2005 to 2012, Serbia recorded a net inflow of FDI of EUR 12.5 billion. In 2006, Serbia achieved a record in net inflow of FDI in the amount of EUR 3.322 billion. This year was followed by a significant decrease in the inflow of FDI. During the 2010 and 2011, FDI amounted to EUR 860 million and EUR 1.826 billion, respectively. In 2012, a drastic decline in FDI occurred, which totaled only EUR 241 million. In 2013, a significant increase in FDI inflows was recorded, which amounted to EUR 768.534 million. In the period from 2003 to 2013, Macedonia achieved a total net FDI inflows amounting to EUR 2.938 billion. A record year in the inflow of FDI to Macedonia was 2007, when FDI stood at EUR 506 million. In 2010, FDI amounted to EUR 160 million. In 2011, FDI was EUR 336.8 million. In 2012 and 2013, FDI amounted to EUR 72 million and EUR 251.5 million, respectively [19].

In this paper we analyzed the impact of variables on the net inflow of FDI (15), such as GDP, growth rate of gross domestic product, the share of trade in GDP and inflation rate. We found that GDP and the share of trade in GDP had a significant effect on the net inflow of FDI in the Western Balkans, while the effect of GDP growth and inflation rate on FDI was insignificant or even negative. The positive effect of GDP per capita on the net inflow of FDI in the Western Balkans countries can be explained by the fact that these countries as a whole represent an important market in terms of size and future market potential. In the early 1990s and during the transition period, GDP per capita in the Western Balkans countries was low, but in the early 2000s there was a significant increase due to the inflows

of FDI, which together with the process of transition and privatization played a critical role. These processes did not take place in the same manner in all the countries (3, 4, 5). In particular, this process was delayed in Bosnia and Serbia. In the case of a share of trade in GDP, we found a significant effect of the given variable on the net inflow of FDI. First of all, this is a result of the policy of openness and liberalization of economies of those countries. In particular, this effect was enhanced at the moment when the majority of countries signed an agreement on accession and candidate status. Besides this, these countries became members of the trade agreements, such as CEFTA, EFTA, etc. All this resulted in increased inflow of FDI.

In our analysis, a high correlation between the observed variables within the initial value was not observed. It is generally known that a high correlation can lead to a problem of multicollinearity. This means that it is difficult to assess the correlation of one variable while the correlation of other variables is constant. All this leads to a less reliable conclusion. The problem of multicollinearity is present if two regression variables (or more) are linearly dependent or nearly linearly dependent (including variable  $x_0=1$ , which generates a constant member). Much more common and serious is the problem of approximate multicollinearity or nearly linear dependence of regression variables, which exists if two or more regression variables are highly correlated. When the observed variables are highly correlated, it is difficult to separate their individual effects on the dependent variable. If the objective of forecasting is the future value of the dependent variable on the basis of the established regression model, multicollinearity problem is ignored, but in other cases, the problem is more rigorously approached. In the Table 2 we can see that a high correlation does not exist, and therefore conclusion can be more reliable.

**Table 2: Correlation of variables**

	GDP	_GG	FDI	_TRA	_CPI
GDP	1.000.000	-0.167026	0.764458	0.099721	-0.075895
_GG	-0.167026	1.000.000	-0.103533	0.163760	-0.076216
FDI	0.764458	-0.103533	1.000.000	0.156032	-0.101126
_TRA	0.099721	0.163760	0.156032	1.000.000	-0.252533
_CPI	-0.075895	-0.076216	-0.101126	-0.252533	1.000.000

Source: Authors

Note: \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% level, respectively.

Remark: GDP - Gross domestic product per capita; \_GG - Growth rate of gross domestic product; FDI - Foreign direct investment; \_TRA - Share of trade in GDP; \_CPI - Consumer price index.

In our analysis, we started from  $H_0$  hypothesis that these variables have negative impact on FDI inflows. Based on our panel analysis of the lowest squares, we found the following results based on four independent analyzed variables that affect the dependent variable FDI. Based on findings of p-values, we can present the probability that the estimated  $\beta = 0$ . We selected a level of significance in the range of  $\beta < 1\%$ ,  $\beta < 5\%$  and  $\beta < 10\%$ . Based on the observed p-values, we can conclude that GDP per capita has a value that is less than  $\beta < 1\%$ , which means that it has a significant and positive impact on FDI inflows, and we rejected the null hypothesis ( $\beta \neq 0$ ). In the case of GDP growth or  $\_GG$ , the p-value is 0.8711%, which represents a value above the chosen level of significance  $\beta < 5\%$ , which means that it is insignificant or has no impact on FDI inflows. Based on the share of trade in GDP or  $\_TRA$ , the p-value is 0.2093%, which means that it is significant, and that it has a positive impact on FDI in the Western Balkans. Finally, the rate of inflation  $\_CPI$  is 0.6990%,

which is above the rate of 5%, and presents the negative significance (see Table 3).

The data used in this research were taken from the database of the World Bank. We selected a sample of six Western Balkans countries. We analyzed the time period from 1994 to 2012. It is the period in which most of the Western Balkans countries were in a transition phase. In this analysis, a dependent variable is net FDI inflows, while independent variables are GDP per capita, GDP growth, the share of trade in GDP and the inflation rate. Their value is above the threshold of 5%. If the growth rate of gross domestic product is observed, a high value represents values that exceed the determined amount of 5%, which indicates that it is insignificant, and that it does not affect FDI inflow. This is explained by the fact that the observed countries in the analyzed period recorded most of the time the low rates of growth, which had a negative impact on FDI inflows. The rate of inflation or  $\_CPI$  is also insignificant, indicating that inflation does

**Table 3: Panel EGLS (Cross-section random effects)**

Dependent variable: FDI				
Method: Panel EGLS (Cross-section random effects)				
Date: 06/01/14 Time: 18:56				
Sample: 1994 : 2012				
Periods included: 19				
Cross-sections included: 6				
Total panel (balanced) observations: 114				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.163981	0.192724	-0.850859	0.3967
GDP	0.050375	0.004049	12.43977	0.0000
$\_GG$	0.001017	0.006874	0.147950	0.8827
$\_TRA$	0.002437	0.002089	1.166795	0.2458
$\_CPI$	-0.001207	0.003017	-0.399881	0.6900
Effects specification			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			0.684137	1.0000
Weighted statistics				
R-squared	0.591489	Mean dependent var		0.750038
Adjusted R-squared	0.576498	S.D. dependent var		1.084160
S.E. of regression	0.705539	Sum squared resid		54.25859
F-statistic	39.45570	Durbin-Watson stat		0.840969
Prob (F-statistic)	0.000000			
Unweighted statistics				
R-squared	0.591489	Mean dependent var		0.750038
Sum squared resid	54.25859	Durbin-Watson stat		0.840969

Source: Authors

Note: \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% level, respectively.



not affect the net inflow of FDI. The random effects model analyzes individual variables with respect to the overall appearance, while the fixed effects model analyzes the difference between each variable. Fixed effects is otherwise called Least Squares Dummy Variables model – LSDV (see Table 4), and it allows different amounts for each group (section), and dummy variables for each section. The usefulness of the fixed effects is reflected in the fact that certain disturbances in the inflow of FDI may occur in the observed period due to recessionary trends, so that without fixed effects a panel regression would not be able to explain a given phenomenon. In addition, the fixed effects includes omitted variables in certain countries, and increases the accuracy of the regression. On the other hand, the use of a random effects model has some advantages in terms of estimating the less data than a fixed model, providing further explanation of the variables.

In Table 5, on the basis of the unit root test, the variables *\_GG*, *\_CPI* have a stable stationarity. In case of *\_TRA*, *FDI* and *GDP*, a significant unsteadiness is noticed. On the basis of the observed p-values, i.e. on the basis of the observed value  $\beta < 1\%$ , it is noticed that *\_GG* and *\_CPI* variables have a lower value, which means that we can reject the null hypothesis that they are significant. In the case of  $\beta = 1$ , then it is a perfect autocorrelation. However,

if we assume that the p-value is  $\beta < 5\%$ , then we can say for variables *\_TRA* and *FDI* that they are significant. Finally, in the case of *GDP* p-value being above 5%, it indicates that it is insignificant. After we make the correction of data based on non-stationary distribution of the t-statistic, the conclusion will be reliable. In addition, there are other problems that can lead to inconsistent conclusions.

In our analysis, we applied the LSDV or fixed model and the random model. Fixed or LSDV model allows heterogeneity and individual differences between countries. Based on the fixed effect or LSDV, we can conclude that the observed variable *GDP* has low p-values that are less than 1% and 5%, which means that we reject the null hypothesis and consider it as not significant (see Table 6).

This means that there is a strong connection between *FDI* inflows and *GDP* in the Western Balkans countries. Higher *GDP* per capita can be a sign of a larger market and the improvement of the business climate. Equally, in the case that *\_TRA* or the trade share of *GDP* p-value is less than 5% of the eligible amount, it means that we reject the null hypothesis and we consider that the given variable is significant. The main reason why the share of trade in *GDP* is significant has been explained by the increased openness in terms of imports and exports of selected countries and their presence in a number of trade and customs agreements,

**Table 4: Panel Least Squares**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.163981	0.198753	-0.825048	0.4111
GDP	0.050375	0.004176	12.06242	0.0000
_GG	0.001017	0.007089	0.143462	0.8862
_TRA	0.002437	0.002154	1.131401	0.2604
_CPI	-0.001207	0.003112	-0.387750	0.6990
R-squared	0.591489	Mean dependent var		0.750038
Adjusted R-squared	0.576498	S.D. dependent var		1.084160
S.E. of regression	0.705539	Akaike info criterion		2.183159
Sum squared resid	54.25859	Schwarz criterion		2.303168
Log likelihood	-119.4401	Hannan-Quinn criter.		2.231864
F-statistic	39.45570	Durbin-Watson stat		0.840969
Prob (F-statistic)	0.000000			

Source: Authors

Note: \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% level, respectively.

Table 5: Unit Root tests for variables \_GG, \_CPI, GDP, FDI, \_TRA

Null Hypothesis: Unit root (individual unit root process)				
Sample: 1994 : 2012				
Exogenous variables: Individual effects				
User specified lags at: 1				
Total number of observations: 114				
Cross-sections included: 6				
<b>_GG (Growth rate of gross domestic product)</b>				
Method	Statistic	Prob.**	Cross-Sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.73131	0.0000	6	102
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-3.60898	0.0002	6	102
ADF – Fisher Chi-square	34.7411	0.0005	6	102
PP – Fisher Chi-square	43.2670	0.0000	6	108
<b>_CPI (Consumer Price Index)</b>				
Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	21.4905	1.0000	6	102
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.63585	0.0042	6	102
ADF – Fisher Chi-square	27.5607	0.0064	6	102
PP – Fisher Chi-square	548.104	0.0000	6	108
<b>GDP (Gross domestic product)</b>				
Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-0.04977	0.4802	6	102
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	2.23199	0.9872	6	102
ADF – Fisher Chi-square	2.47456	0.9983	6	102
PP – Fisher Chi-square	2.25818	0.9989	6	108
<b>FDI (Foreign Direct Investment)</b>				
Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-0.82796	0.2038	6	102
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.27968	0.3899	6	102
ADF – Fisher Chi-square	11.8911	0.4545	6	102
PP – Fisher Chi-square	10.5184	0.5706	6	108
<b>_TRA (Share of Trade in GDP)</b>				
Method	Statistic	Prob.**	sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-1.55991	0.0594	6	102
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.63401	0.2630	6	102
ADF – Fisher Chi-square	12.4084	0.4135	6	102
PP – Fisher Chi-square	11.7335	0.4673	6	108

Source: Authors

Note: \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% level, respectively.

such as the EU, CEFTA, EFTA, etc. Regarding the growth rate of gross domestic product or \_GG and inflation rate \_CPI, we can say that they are insignificant, or that they do not have a significant impact on FDI inflows. Their value is above the threshold of 5%. If a high value of the growth rate of gross domestic product that exceeds the determined

amount of 5% was observed, which indicates that it is insignificant, it means that it does not affect the inflow of FDI. This is explained by the fact that the observed countries in the analyzed period had for the most part a low rate of growth, which had a negative impact on FDI inflows. The rate of inflation or \_CPI is also insignificant, indicating

**Table 6: Fixed effects – Least Squares Dummy Variables (LSDV)**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.528534	0.224580	-2.353429	0.0205
GDP	0.056259	0.007485	7.515996	0.0000
_GG	0.003236	0.007402	0.437149	0.6629
_TRA	0.005785	0.002553	2.265475	0.0256
_CPI	-0.001283	0.003539	-0.362479	0.7177
Effects specification				
Cross-section fixed (dummy variables)				
R-squared	0.633517	Mean dependent var		0.750038
Adjusted R-squared	0.601802	S.D. dependent var		1.084160
S.E. of regression	0.684137	Akaike info criterion		2.162313
Sum squared resid	48.67649	Schwarz criterion		2.402331
Log likelihood	-113.2519	Hannan-Quinn criter.		2.259723
F-statistic	19.97536	Durbin-Watson stat		0.913473
Prob (F-statistic)	0.000000			

Source: Authors

Note: \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% level, respectively.

that inflation does not affect the net inflow of FDI. This statement is identical to the previously conducted research.

On the basis of the Hausman test, we got a high statistical and low p-values of 0.0192%, which is less than 5% and we rejected the null hypothesis. Based on this information, we decided to use a fixed effect model, because we believe that it is better for assessment of the analyzed phenomenon (see Table 7).

### The market for corporate control

The market for corporate control requires more or less organized market or, in the narrow sense, that it is characterized by efficiency [5, pp. 13-18] and transparency [9, pp. 650-655]. The financial market [23, p. 264] can be seen in a broad and a narrow sense. In a broader sense, it implies any market place where financial transactions are

performed; in a narrow sense, it can be characterized as an organized market in which financial assets are traded.

Investor protection is defined as the first priority and as being above the national rules of the regulation (IOSCO)<sup>3</sup> [4, p. 11]. The level of investor protection and the financial market development are closely linked, which means that the development of regulatory institutions determines the level of protection, which is increased after every crisis faced by external owners.

A significant impulse for trading on organized markets is a fiscal treatment of securities. Previous solutions on the markets in the Balkan region created the fiscal environment which can be considered reasonable, including comparison with successful emerging markets, whereby the same status is given to domestic and foreign investors.

**Table 7: Hausman test**

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	11.766089	4	0.0192

Source: Authors

Note: \*\*\*, \*\*, and \* represent statistical significance at the 1%, 5%, and 10% level, respectively.

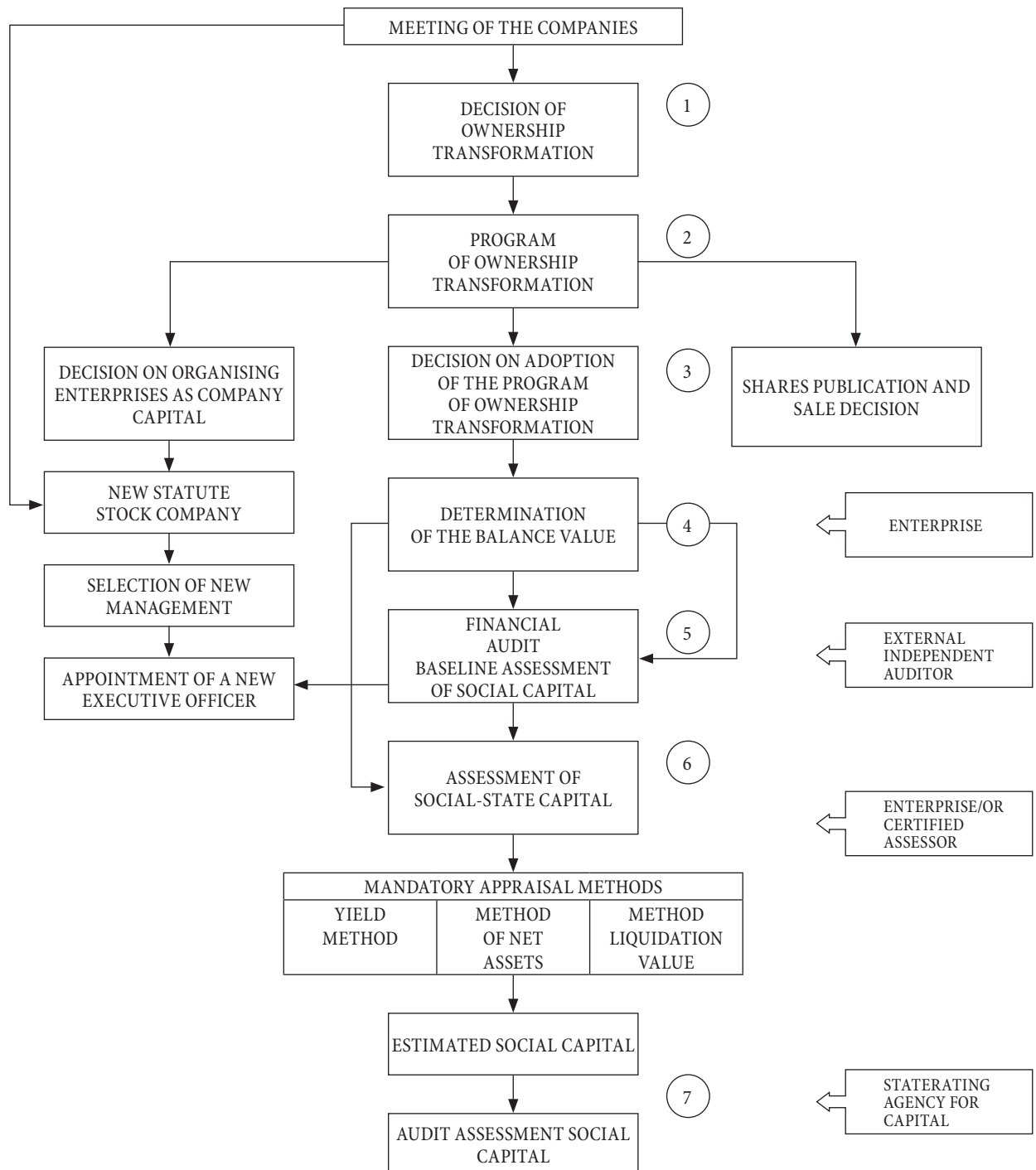
Positive and high dependence degree of ownership dispersion (see Figure 1) and the level of investor protection are present in all transition economies.

Timely and accurate information disclosure of all material facts relating to the company's operations, including issues relating to financial situation, performance, ownership structure and the management of the company [2, p. 21] should be made, wherein special attention should

be paid to the following material information essential for shareholders and protection of their management rights:

- The financial and operating results of the company;
- The objectives of the company;
- Data on majority shareholders and their voting rights;
- Information on the members of the management body, on key executives and their income;
- Information about foreseeable material risk factors;

Figure 1: Process chart of ownership transformation



Source: Authors



- Data on substantive issues, concerning employees and other third parties;
- Data on the management structure and business policy.

### Contemporary trends of corporate governance: Lessons for the future

OECD Principles of Corporate Governance represent a framework of corporate governance which should protect shareholders' rights. Those rules are not binding but are recommended, especially in the part relating to the shareholders' rights, equal treatment of shareholders, disclosure and transparency of information, where their application is provided through statutory provisions of national legislation. In this regard, the rules and procedures on the acquisition of corporate control in the capital markets, and extraordinary transactions such as the takeover and sale of a controlling stake, should be clearly specified and made public, so that investors understand their rights and are able to protect them.

A wide circle of international organizations, bodies and associations [22, p. 310], in cooperation with transnational organizations [4, p. 13], holds annual meetings to discuss very meticulously corporate governance system and finding of ways for permanent and continuous improvement.

International organizations that are dealing with and promoting standards of corporate governance [8, pp. 17-21] are OECD, World Bank, MIGA, IFC [23, p. 45], International Chamber of Commerce, European Commission, UNIDO and UNCTAD.

They do not have a primary activity in the projects and in ensuring the elements of corporate governance. Therefore, the study of various aspects of corporate governance is in the initial stages of development, with no single international organization covering the area of corporate governance with a clear vision in all its segments.

### Conclusion

The current extremely difficult economic conditions, the global economic and financial crisis, financial illiquidity, declines in economic activity and consequent decrease in

the collection of value added tax and other public revenues have severely affected the regular functioning of the public sector. Therefore, it is necessary to intensify the efforts aimed at introduction of the institution of internal audit in the public sector in order to ensure rigorous control of public spending and streamlining of the public administration, thus contributing to a faster reduction of the budget deficit. Preserving the integrity of the market is imperative for all participants, institutions, capital markets, economy, various occupations and professions.

During the transition period, GDP per capita in the Western Balkans countries was low, but in the early 2000s there was a significant increase due to the inflow of FDI, which together with the process of transition and privatization played a critical role. These processes are not taking place equally well in all countries (3, 4, 5). In particular, this process is delayed in Bosnia and Serbia [24, p. 61]. First of all, this is the result of a policy of openness and liberalization of economies of those countries. In particular, this effect was enhanced at the moment when the majority of countries signed an agreement on accession and candidate status. Besides this, these countries became members of the trade agreements, such as CEFTA, EFTA, etc. All this resulted in increased inflow of FDI.

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## FINANCIAL PERFORMANCE OF CROSS-BORDER ACQUISITIONS IN SERBIA

Finansijske performanse međunarodnih preuzimanja u Srbiji

### Abstract

Intensified globalization of business environment in the last two decades has resulted in a growing number and value of cross-border acquisitions, which have become a commonly used strategy for business restructuring. Economic reforms in transition economies, including Serbia, opened the way for growing use of cross-border acquisitions in these markets. This paper examines financial performance of cross-border acquisitions made in Serbia in the period 2003-2008. The sample comprises 79 target companies. Analyses of changes in targets' return on sale, return on investment and return on equity showed that foreign acquirers did not manage to improve targets' financial performance in post-acquisition period, because these companies encountered numerous problems before the acquisition and the global economic crisis spilt over into Serbia in this period.

**Keywords:** *cross-border acquisitions, return on investment, return on equity, return on sale, transition economies*

### Sažetak

Globalizacija poslovnog ambijenta koja je na značaju dobila poslednje dve decenije dovela je do rasta broja i vrednosti međunarodnih preuzimanja. Međunarodna preuzimanja su postala jedna od čestih strategija poslovnog restrukturiranja. Usled sprovedenih ekonomskih reformi, međunarodna preuzimanja su postala sve zastupljenija i u zemljama u tranziciji, kojima pripada i Srbija. Ovaj rad analizira uspešnost međunarodnih preuzimanja u Srbiji realizovanih u periodu od 2003. do 2008. godine, kroz unapređenje finansijskih pokazatelja „meta“ u postakvizicionom periodu. Analizirajući promene stope neto poslovnog dobitka, prinosa na imovinu i prinosa na kapital na uzorku od 79 međunarodnih preuzimanja u Srbiji, došli smo do zaključka da strano vlasništvo nije doprinelo unapređenju finansijskih performansi kod „meta“. Razlog za to su bili poslovni problemi kojima su se odlikovale preuzete kompanije i prelivanje globalne ekonomske krize na Srbiju.

**Ključne reči:** *međunarodna preuzimanja, stopa prinosa na imovinu, stopa prinosa na kapital, stopa neto poslovnog dobitka, tranzicione zemlje*

## Introduction

Increasing globalization during the first two decades of the 21<sup>st</sup> century has created a business environment that offers ample business opportunities, but also involves growing business risks. Multinational companies (further in the text MNC) use cross-border acquisitions to grasp these global business opportunities, to gain new competencies, to further exploit the competencies they already have, to achieve geographical and product diversification, and to reinvent their business models. The value of cross-border acquisitions made in 2014 was almost USD 400 billion, which is still much below the all-time peak of USD 1.032 billion reached in 2007, before the global economic crisis took hold [24, p. 8].

Cross-border acquisitions of targets from emerging and transition markets are growing in importance. Increasing growth rates of these economies attract the attention of MNCs from developed countries which perceive them as an alternative to large but saturated domestic markets. However, integration of targets from emerging markets is more complex because these markets are characterized by undeveloped formal institutions, unpredictable actions of informal institutions, weak legal protection and a broad base of poor customers [27]. Specific institutional environment affects the efficiency of market mechanisms and thus increases transaction costs [6]. All these factors can significantly impair a target's financial performance in post-acquisition period.

Taking into account the specific marketing and institutional environment in emerging and transition economies, it is important to compare success rate of cross-border acquisitions in these markets with studies on cross-border acquisitions in developed economies showing that about two-thirds of them do not create value for shareholders [10]. Management scholars have used several approaches to measure financial performance of cross-border acquisitions, some being the following: short-term financial performance, accounting performance, long-term financial performance, etc., [21, p. 116]. Considering poor institutional environment in emerging and transition economies, these approaches need to be modified when used in these markets.

This paper examines the success rate of cross-border acquisitions made in Serbia in the period 2003-2008 measured by targets' financial performance. It consists of three parts. The first part offers a literature review of the methods for measuring success rate of cross-border acquisitions and a review of previous researches conducted in this field. The second part of this paper gives an insight into the methodology and data used in this research. Finally, in the third part of the paper we discuss the obtained results and certain limitations of this research, and offer some directions for further research.

## Literature review

Performance of cross-border acquisitions, as one of the commonly used strategies for business restructuring, has been analyzed a great deal in the field of finance and management. This analysis is very complex as researchers have to identify an adequate measure of performance, to define a suitable time frame, and isolate other factors that could affect the final results of the analysis. There are several most frequently used methods for measuring success rate of cross-border acquisitions.

Analysis of share prices of acquiring firms or target firms before and after the acquisition is the commonest method for measuring success rate of cross-border acquisitions. This approach is based on the view that the main goal of acquisition is to create value for shareholders, as the most important stakeholders. It also assumes maximum efficiency of financial markets and that investors have all the necessary information when making decisions, meaning that decision-making process is free of bias (management hubris, for example) [22]. Researchers compare share prices during a period surrounding the acquisition announcement (window) with the "normal return" that would have been achieved if the acquisition had not been made [20, p. 65]. "Abnormal" return rate resulting from an acquisition indicates that the acquisition was successful. "Abnormal return" is calculated by subtracting the expected return, the so-called benchmark (its approximate value is obtained through CAPM or return from S&P 500 index) from the actual return [5, p. 30]. In practice, this method is used to measure success rate of acquisitions both in the short



and in the long term. Event windows of two, eleven and twenty-one days have been used for measuring the short-term performance of acquisitions [21, p. 118].

However, there are many arguments against the use of short-term window event methodology. The first is that this is an *ex ante* measure of performance, i.e. it does not measure actual performance of an acquisition but investor's expectations. Furthermore, this method can be used only for public listed companies and in countries with highly efficient financial markets, meaning that it cannot be applied in transition economies where financial markets have not reached their full efficiency. Results from this stream of research show that acquisitions create value for targets' shareholders, while, on the other hand, the results for shareholders of acquiring companies are somewhat mixed [13]. Actually, majority of these studies show that acquisitions do not create value for acquirers. In order to overcome the foregoing limitations, some researchers decided to increase the length of the event window from several days to several years. The main problem with long-term window event methodology is that a longer time period implies more factors that could affect performance of acquisition, and cannot be easily isolated from the analysis (strategic decisions that are not directly related to acquisitions, economic crisis, disturbance in the market of strategic products, etc.) [20, p. 68]. Results from this stream of research depend to a large extent on the method for calculating "abnormal returns" [13]. Majority of these studies showed that acquisitions destroy value for shareholders of acquiring companies [22].

In order to overcome the foregoing limitations, some researchers tried to find objective *ex post* measures of performance. Comparison of pre-acquisition and post-acquisition accounting-based measures was a logical solution. This approach has been used mainly in studies conducted in the field of strategic management and organization, and it is the second most commonly used method for measuring success rate of acquisitions [28]. The two most important arguments for the use of this methodology are that accounting-based measures show the actual long-term performance of an acquisition rather than investor's expectations, and that synergies from acquisitions are best reflected in long-term ratios such as

return on investment and return on equity [21, p. 120]. Researchers have used a number of accounting-based ratios, but the commonest are return on investment, return on equity and return on sale. However, this approach has been criticized for many reasons. One argument is that accounting-based ratios can be made up through different accounting policies. Another argument is that, although there is no direct relationship between them, accounting-based ratios affect to a large extent share prices, meaning that this method has similar shortcomings as the long-term window event methodology [20, p. 75]. Results from this stream of research are not fully consistent, and therefore, we cannot be certain whether acquisitions create value for shareholders in the long term [1].

In contrast to the aforementioned approaches, some researchers measured acquisition performance by the level of satisfaction of the competent parties involved in an acquisition with the extent to which the goals behind the acquisition have been achieved. Although this is a subjective measure of success, it reflects to a large extent the level of objective performance. Typical time period for which the respondents, usually managers of the acquiring firm directly involved in acquisitions or consultants, rate the extent to which the goals have been achieved is three to five years after the acquisition. A frequently quoted research showed that 44% of managers participating in the research were dissatisfied or very dissatisfied with the achieved results [19], and a similar research showed that only 37% of respondents perceived the acquisitions as successful [2]. The main limitation of this approach is respondents' bias. A way to overcome this limitation is to include multiple respondents involved in a single acquisition, for example consultants and a larger number of managers, and to compare their answers.

In order to overcome the limitations of the foregoing approaches, some researchers tried to calculate the percentage of targets that were subsequently divested, assuming that divestment expresses shareholders' dissatisfaction with the acquisition performance. Porter, a pioneer of this method, found that divestiture rate ranges from 60% for acquisitions of companies involved in related business activities to 74% in conglomerate acquisitions [17]. Similarly, some later studies showed that majority of targets in conglomerate

acquisitions were divested five years after the acquisition [1]. However, critics of this approach say that divestment is not necessarily a sign of failed acquisition but that it could mean that the acquirers decided to change their corporate strategy. They also claim that some investors purchase troubled companies, revitalize them and then sell them at high premiums, which cannot be considered a failure [25, p. 277].

Since each of the aforementioned methods has certain limitations, some researchers employed several approaches simultaneously to measure acquisition performance, trying to determine whether the obtained results correlate with each other. A study combining abnormal returns for the event window of 21 days, divestiture rates for the time period of six, nine and thirteen years after the acquisition, and managerial and relevant experts' perception of acquisition performance showed that all these methods reported success rate of 44-56%, but that there was no statistically significant relation between the results obtained through the *ex ante* method (abnormal returns) and the *ex post* methods [19]. Similarly, the success rate of acquisitions made in Greece was analyzed in a study combining abnormal returns, changes in accounting-based ratios two years after the acquisitions and managerial perception of acquisition performance. It reported success rate of 50% and did not find any statistically significant relation between the results obtained through the *ex ante* method (abnormal returns) and the *ex post* methods [16]. Absence of strong correlation between the results obtained through *ex ante* and *ex post* methods indicates that there is information asymmetry regarding target restructuring between managers and investors, which implies inefficiency of financial markets.

Finally, some researchers compared success rates of cross-border and domestic acquisitions to determine which are more successful. Results from this stream of research are somewhat mixed. Some studies carried out in developed economies showed that cross-border acquisitions, unlike domestic acquisitions, created value for shareholders [11 and 4], mainly because acquirers can further exploit their strategic resources abroad (internalization theory). Another study found that US

acquirers experienced significantly lower stock and operating performance for cross-border acquisitions than for domestic acquisitions, due to acquirers' inability to correctly value or capture synergies in cross-border takeovers [15]. Finally, some studies indicate that overall acquirers incur losses, with domestic acquirers' underperforming cross-border acquirers in general [7].

Cross-border acquisitions made by emerging market MNCs have come into focus of many researchers recently. Some of them show that cross-border acquisitions of targets from developed markets carried out by emerging market MNCs create value for shareholders of acquiring companies [8], because acquirers combine their low-cost competencies with target's strategic resources. Some studies suggest that cross-border acquisitions made by emerging market MNCs cannot create value for shareholders [26] because acquirers lack the necessary competencies for smooth integration of targets. Performance of cross-border acquisitions in small transition economies has not been examined much.

## Data and methodology

This paper examines financial performance of cross-border acquisitions made in Serbia in the first decade of the 21<sup>st</sup> century. The analysis is based on the three most commonly used accounting-based ratios - return on sale (ROS), return on investment (ROI) and return on equity (ROE). We chose these ratios because they are *ex post* objective measures, and a large number of the targets were not publicly listed companies. ROS, as the ratio of operating profit to sales income, measures profitability of business operations. It indicates whether or not an acquiring company has managed to increase target's operating margins after the acquisition, either through premium pricing or through cost reduction. ROI, as the ratio of net profit to total assets, measures profitability of a company as a whole. It indicates changes in profitability of business operations and measures how efficiently a company uses its assets. Finally, ROE, as the ratio of net profit to shareholders' equity, measures how well a company manages to serve shareholders' interests. Besides measuring profitability of a company's business operations and its

asset management efficiency, this ratio also indicates how efficiently the company uses financial leverage.

In the absence of a comprehensive database on cross-border acquisitions in Serbia, we had to use the data obtained from the Serbian Privatization Agency and SIEPA, and the Internet, to draw a sample for this research. The sample comprised 79 cross-border acquisitions of large and medium-sized companies with continuity of business operations from 2006 to 2012, and in almost all cases longer. Three targets were liquidated in 2013, so the sample for that year comprised 76 companies. All the necessary data were obtained from the official financial statements.

In order to determine the impact of cross-border acquisitions in Serbia on targets' financial performance, we compared the values of the aforementioned ratios in the year of acquisition with their post-acquisition values. The global economic crisis which spilt over into Serbia in 2008 made this analysis more complex. To isolate its effects, cross-border acquisitions made in 2003, the period of strong economic growth, were analyzed separately from those made in 2008, at the onset of the global economic crisis. Another reason for using this approach is that most of the acquisitions made before the crisis were privatization acquisitions, while most of the targets acquired in 2008 were privately-owned companies. The following three hypotheses were tested:

- H1: Cross-border acquisitions in Serbia resulted in higher post-acquisition return on sales of target companies.
- H2: Cross-border acquisitions in Serbia resulted in higher post-acquisition return on investment of target companies.
- H3: Cross-border acquisitions in Serbia resulted in higher post-acquisition return on equity of target companies.

We used two samples to test our hypotheses. A Paired T-test was used for samples comprising more than 30 companies and the Mann-Whitney test for samples comprising less than 30 companies. In cases when p-value was close to the border, bootstrapping method was employed to check the results. This method gave the same results, so we present only the first ones.

## Results and discussions

In transition economies, cross-border acquisitions are fraught with risks and uncertainties arising from unstable business environment and numerous structural problems inherited from the socialist period. One such problem is inadequate employee structure regarding their age, professional qualifications and education. The majority of targets from transition economies, including even some privately-owned companies, have an excessive number of employees. Acquirers, therefore, need to rightsize target's workforce, to develop the lacking competences of the acquired employees, and to hire new employees already possessing the necessary competences [18]. Outdated technology is another important issue relating to cross-border acquisitions in transition economies. The acquiring company usually has to invest heavily in target's technology in order to enable it to compete in domestic and foreign markets [9]. Acquirers develop their strategy for target restructuring bearing in mind these two issues, which then affects target's short-term and long-term financial performance. Foreign acquirers encountered these two problems in majority of companies included in our sample, because most of these targets were under state or social ownership before the acquisition.

We first analyzed changes in ROS of 34 targets acquired in 2003. The T-test with 95% confidence interval showed that there was no statistically significant increase in this ratio three years after the acquisitions (Appendix 1.1.;  $p = 0.646$ ). In post-acquisition period acquirers take certain measures to rightsize targets' workforce [3], which has positive impact on operating costs and efficiency. However, in transition economies acquirers have to be careful not to act against the host government's interests [23], so they need to carry out the process of employee downsizing gradually and to offer a satisfactory severance pay to the redundant employees, which pushes up short-term operating costs. Furthermore, targets from transition economies usually have a very poor technological base, which requires large post-acquisition investment in new technology and employee training [14], and consequently pushes up short-term operating costs. The targets from our sample had an excessive number of employees before the

acquisition, and their technological base was very poor. Obviously, restructuring-driven rise in their sales income could not compensate for the increase in operating costs.

The results also showed that there was no statistically significant increase in this ratio six (Appendix 1.2.;  $p = 0.219$ ) and nine years after the acquisitions (Appendix 1.3.;  $p = 0.476$ ). Target restructuring and stabilization of business activities were not followed by the expected gradual rise in sales, due to a crisis-driven decline in economic activity in Serbia and in the key export markets. In such circumstances, target companies were not able to expand their business operations, and thus increase their ROS.

To determine whether the foregoing findings refer exclusively to targets acquired in 2003, we analyzed 40 cross-border acquisitions made after 2003. Many of the targets were under private ownership before the acquisition, and few of them were state-owned or socially-owned. The T-test with 95% confidence interval showed that there was no statistically significant increase in ROS achieved by these companies in 2006 compared to 2003 (Appendix 1.4.;  $p = 0.476$ ). There are several reasons for this. On one hand, socially-owned targets did not have the resources to update their technology, and lacked the necessary competencies to keep up with the growing competition. Consequently, their sales profitability fell. On the other hand, privately-owned targets were under strong pressure of foreign competitors in this period, i.e. market liberalization and inflow of foreign investment led to a tough price competition and consequential decrease in ROS.

At the next stage of this research we analyzed ROS of targets acquired in 2008, at the beginning of the global economic crisis. We identified 12 such companies. However, this sample was too small to use the T-test. Instead, we used the Mann-Whitney test with 95.4% confidence interval. The results showed that there was no statistically significant increase in ROS three years after the acquisition (Appendix 1.5.; test of  $\eta_1 = \eta_2$  vs  $\eta_1 \neq \eta_2$  is significant at 0.5067). The majority of these targets were privately-owned companies that were in the black before the crisis. However, the acquirers did not manage to fully carry out the process of target restructuring because the crisis started. Consequently, operating costs were not reduced and sales income was not increased.

Economic activity declined in this period because domestic demand, previously funded by the inflow of foreign capital, and demand in the key export markets (EU, CEFTA and Russia) fell. This was a period of negative or negligible growth rates. Declining economic activity affected financial performance of the acquired companies. To determine the impact of the global economic crisis on ROS, we applied the T-test with 95% confidence interval to the entire sample (79 targets). The results showed that there was no statistically significant increase in this ratio three (Appendix 1.6.;  $p = 0.952$ ), four (Appendix 1.7.;  $p = 0.302$ ) and five years (Appendix 1.8.;  $p = 0.416$ ) after the crisis started. The acquirers did not manage to increase targets' ROS five years after the acquisition due to a prolonged economic and debt crisis in Europe and structural economic problems in Serbia.

Cross-border acquisitions made in 2003, the period of strong economic growth, were analyzed separately from those made in 2008, at the beginning of the crisis. The T-test with 95% confidence interval was used on the sample comprising cross-border acquisitions made in 2003. The results showed that there was no statistically significant increase in ROI achieved by these targets three, six and nine years after the acquisition (Appendix 2.1.;  $p = 0.245$ , Appendix 2.2.;  $p = 0.086$  and Appendix 2.3.;  $p = 0.065$  respectively). Targets' ROI was not increased due to the following factors: 1. the acquirers failed to increase targets' ROS (Appendix 1.1., Appendix 1.2. and Appendix 1.3.) and 2. transfer of new technology from investors to targets [12, p. 283] increased the value of total assets, but it was not accompanied by higher sales income, and resulted in lower efficiency in asset management.

We then analyzed changes in ROI of 40 companies acquired after 2003. Most of these companies were under private ownership before the acquisition. The T-test with 95% confidence interval showed that there was a statistically significant increase in this ratio three years after the acquisition (Appendix 2.4.;  $p = 0.004$ ). As the foregoing analysis showed, these companies failed to increase their sales profitability in the analyzed period, so this increase in ROI is attributed to larger total asset turnover. The majority of these targets (especially state-



owned and socially-owned companies) postponed the necessary investment in this period (harvest strategy), which pushed up the ratio of sales income to total assets. Taking all this into account, we can conclude that this increase in ROI was more a consequence of short-term orientation and disregard for targets' long-term prospects, than a sign of actual improvement in targets' financial performance.

At the next stage of this research we analyzed changes in ROI of targets acquired in 2008, at the beginning of the global economic crisis. The sample comprised 12 companies and was too small to use the T-test. Instead, we used the Mann-Whitney test with 95.4% confidence interval, which showed that there was no statistically significant increase in this ratio three years after the acquisitions (Appendix 2.5.; test of  $\eta_1 = \eta_2$  vs  $\eta_1 \neq \eta_2$  is significant at 0.5067). The acquirers failed to increase targets' sales profitability (Appendix 1.5.) and total asset turnover in this period. A crisis-driven decline in demand kept down the total asset turnover.

Finally, we analyzed changes in ROI of all 79 targets from the sample during the crisis years. The T-test with 95% confidence interval showed that there was no statistically significant increase in this ratio three, four and five years after the crisis started (Appendix 2.6.;  $p = 0.771$ , Appendix 2.7.;  $p = 0.476$  and Appendix 2.8.;  $p = 0.368$  respectively). This is in line with the foregoing results showing that there was no statistically significant increase in targets' ROS in this period (Appendix 1.6.; Appendix 1.7. and Appendix 1.8.), and with the studies showing that cross-border acquisitions do not improve asset management efficiency [12, p. 228].

ROE is one of the most relevant measures of financial performance. Besides measuring sales profitability and asset management efficiency, this ratio also indicates how efficiently a company uses financial leverage. In spite of many arguments against it, this ratio is often used as a measure of success of cross-border acquisitions. Several targets from the sample posted loss above capital amount in some years, so it was not possible to calculate their ROE for those years. Consequently, these companies were excluded from the sample. Changes in this ratio before and during the crisis were analyzed separately.

The T-test with 95% confidence interval used on the sample of 33 targets acquired in 2003 showed that there was no statistically significant increase in ROE achieved by these companies three years after the acquisition (Appendix 3.1.;  $p = 0.198$ ). This is in line with the foregoing results showing that there was no statistically significant increase in targets' ROI in this period (Appendix 2.1.). The time frame of six and nine years after the acquisition comprised 32 targets. The T-test with 95% confidence interval used on this sample showed that there was no statistically significant increase in ROE of these targets six and nine years after the acquisition (Appendix 3.2.;  $p = 0.195$  and Appendix 3.3.;  $p = 0.826$  respectively). Serbia was hit by the crisis in this period, so the acquirers failed to increase sales profitability more notably and to improve asset management efficiency. Accordingly, possibly more efficient use of financial leverage was not sufficient to increase ROE.

To determine whether the obtained findings refer exclusively to companies acquired in 2003, we analyzed changes in ROE of 35 companies acquired after 2003. The T-test with 95% confidence interval showed that there was a statistically significant increase in ROE in 2006 compared to 2003 (Appendix 3.4.;  $p = 0.014$ ). Insufficient investment in fixed assets pushed down the value of total assets. Consequently, total assets turnover rose, and so did targets' ROE and ROI.

We then analyzed changes in ROE of targets acquired in 2008, at the beginning of the global economic crisis. The sample comprised only 11 companies, and was too small to use the T-test. Instead, we used the Mann-Whitney test with 95.4% confidence interval, which showed that there was no statistically significant increase in ROE three years after the acquisitions (Appendix 3.5.; test of  $\eta_1 = \eta_2$  vs  $\eta_1 \neq \eta_2$  is significant at 0.4701). This period saw a decline in economic activity, so the acquirers were not able to fully restructure the targets, and thus increase their ROE.

Finally, we analyzed trends in ROE during the crisis years. The T-test with 95% confidence interval used on the sample of 69 targets showed that there was no statistically significant increase in ROE received by these companies three years after the crisis started (Appendix 3.6.;  $p = 0.588$ ). Time frame of four and five years after the beginning of

the crisis comprised 68 companies. The T-test with 95% confidence interval used on this sample showed that there was no statistically significant increase in ROE of these targets four and five years after the crisis started (Appendix 3.7.;  $p = 0.333$  and Appendix 3.8.;  $p = 0.557$  respectively). This is in line with the foregoing results showing that the acquirers failed to improve targets' sales profitability and asset management efficiency during the crisis.

### Conclusions, limitations and further research

Transition of Serbian economy sped up after 2000 resulting in a growing number of cross-border acquisitions. Many targets were state-owned and socially-owned companies. Targets from transition countries, sometimes even privately-owned companies, usually have an excessive number of employees, use outdated technology, lack marketing and management competencies and need to undergo radical restructuring in post-acquisition period. The aim of this research was to determine financial performance of cross-border acquisitions in Serbia. Changes in targets' post-acquisition ROS, ROI and ROE were analyzed. The sample comprised 79 companies acquired over the period 2003-2008. Global economic crisis which spilt over into Serbia in 2008 made this analysis more complex. Cross-border acquisitions made before the crisis were, therefore, analyzed separately from those made in 2008.

Analysis of the sample comprising cross-border acquisitions made in 2003 (period of economic prosperity) showed that there was no statistically significant increase in ROS of these targets three, six and nine years after the acquisition. The majority of these targets were state-owned or socially-owned companies that had an excessive number of employees and used relatively outdated technology. Accordingly, the acquirers had to invest considerably in target restructuring in post-acquisition period and, therefore, did not manage to increase targets' ROS. Furthermore, crisis-driven drop in demand forced many companies to reduce prices in order to preserve their market share, which had negative impact on their ROS. Statistically significant increase in ROS achieved by the targets acquired in 2008, at the beginning of the global economic crisis, was not detected three years after the

acquisition, because the crisis did not allow the acquirers to carry out the process of target restructuring properly.

The entire sample comprising 79 cross-border acquisitions made in Serbia in the period 2003-2008 was analyzed to determine the impact of the global economic crisis on targets' ROS. The results showed that there was no statistically significant increase in this ratio three, four and five years after the crisis started.

This research did not confirm the first hypothesis (H1) stating that cross-border acquisitions in Serbia resulted in higher post-acquisition ROS of target companies. The results showed that cross-border acquisitions made before or at the beginning of the global economic crisis did not result in a statistically significant increase in targets' ROS. These acquisitions implied considerable cost of target restructuring, because the targets were in a quite poor state before the acquisition. Furthermore, companies were forced to reduce prices to adjust to the crisis-driven drop in demand.

Similar methodology was used to analyze the impact of cross-border acquisitions in Serbia on targets' ROI. The results showed that cross-border acquisitions made in 2003 did not result in a statistically significant increase in targets' ROI three, six and nine years after the acquisition. ROI depends on sales profitability (ROS) and asset management efficiency. The acquirers did not manage to improve efficiency in targets' asset management in the short run, because this was a complex task and required considerable investment. In addition, these investments could not produce a more notable increase in sales income because the crisis started.

Cross-border acquisitions made in 2008 did not result in statistically significant increase in targets' ROI three years after the acquisition. Investment in target restructuring did not result in a more notable increase in operating income due to the crisis-driven drop in domestic and foreign demand in this period. Consequently, efficiency in targets' asset management was not improved. Targets' ROI was not increased because the acquirers failed to improve sales profitability (ROS) and asset management efficiency.

Analysis of the entire sample comprising 79 internationally acquired companies showed that there

was no statistically significant increase in ROI achieved by these companies in 2011, 2012 and 2013 compared to 2008, because global economic crisis had negative impact on sales profitability and asset management efficiency in this period.

This research did not confirm the second hypothesis (H2) stating that cross-border acquisitions in Serbia resulted in higher post-acquisition ROI of target companies. On one hand, acquirers had to invest heavily in target restructuring in post-acquisition period. On the other hand, these investments did not produce desired increase in sales income due to the crisis.

Finally, we analyzed changes in targets' ROE in post-acquisition period. First, we analyzed the sample comprising cross-border acquisitions made in 2003. The results showed that cross-border acquisitions did not result in a statistically significant increase in targets' ROE three, six and nine years after the acquisition. Analysis of the sample comprising targets acquired in 2008 also showed that there was no statistically significant increase in this ratio three years after the acquisition. Finally, analysis of the entire sample showed that there was no statistically significant increase in ROE of these targets three, four and five years after the crisis started.

This research did not confirm the third hypothesis (H3) stating that cross-border acquisitions in Serbia resulted in higher ROE of target companies. As shown before, high cost of target restructuring and global economic crisis prevented the acquirers from improving targets' sales profitability and asset management efficiency. Consequently, possibly more efficient use of financial leverage was not sufficient to increase returns on equity.

This research had two significant limitations. The first one refers to the available data. Official financial statements submitted to the Serbian Business Registers Agency were used in this research. However, there was no mechanism to check whether these financial statements had undergone independent audit or to see the auditor's report, so we were not able to eliminate the companies that had received adverse opinion or disclaimer of opinion.

The second limitation refers to the size of the sample comprising cross-border acquisitions made in 2008. This sample comprised only 12 companies and was too small

to use the T-test, so we had to use the Mann-Whitney test instead. Therefore, the obtained results should be taken with a certain degree of scepticism.

Finally, we can give some directions for further research in this area. Larger sample size would enable researchers to analyze financial performance of internationally acquired companies by different industries. This would allow them to compare the impact of cross-border acquisitions and global economic crisis on targets operating in different industries. This research could also be expanded to the region of Southeast Europe. Since these countries differ by the level of economic development and the pace of transition process, researchers could try to determine the relationship between these two factors and the impact of cross-border acquisitions on target's financial performance.

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## APPENDIX 1: RETURN ON SALE

### Appendix 1.1.: Cross-border acquisitions realized in 2003 (T-test)

	Number of companies	Mean	Standard Deviation	SE Mean
2003	34	0.81	18.21	3.12
2006	34	2.17	12.27	2.1
Difference		-1.36	17.16	2.94

Paired T-test for 2003-2006

95% Confidence Interval for the mean difference (-7.35; 4.63)

T-test of the mean difference = 0 (vs ≠ 0): T - Value = -0.46 P - Value = 0.646

### Appendix 1.2.: Cross-border acquisitions realized in 2003 (T-test)

	Number of companies	Mean	Standard Deviation	SE Mean
2003	34	0.81	18.21	3.12
2009	34	4.66	10.3	1.77
Difference		-3.85	17.91	3.07

Paired T-test for 2003-2009

95% Confidence Interval for the mean difference (-10.1; 2.4)

T-test of the mean difference = 0 (vs ≠ 0): T - Value = -1.25 P - Value = 0.219

### Appendix 1.3.: Cross-border acquisitions realized in 2003 (T-test)

	Number of companies	Mean	Standard Deviation	SE Mean
2003	34	0.81	18.21	3.12
2012	34	-1.9	31.45	5.39
Difference		2.71	21.96	3.77

Paired T-test for 2003-2012

95% Confidence Interval for the mean difference (-4.95; 10.37)

T-test of the mean difference = 0 (vs ≠ 0): T - Value = 0.72 P - Value = 0.476



**Appendix 1.4.: Cross-border acquisitions not realized in 2003 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2003	40	-0.4	10.6	1.7
2006	40	-10.1	78.9	12.5
Difference		9.7	74.2	11.7

Paired T-test for 2003-2006

95% Confidence Interval for the mean difference (-14.0; 33.4)

T-test of the mean difference = 0 (vs ≠ 0): T – Value = 0.72 P – Value = 0.413

**Appendix 1.5.: Cross-border acquisitions realized in 2008 (Mann-Whitney test)**

	Number of companies	Mean
2008	12	5.5
2011	12	2.4

Point estimate for  $\hat{\eta}_1 - \hat{\eta}_2$  is 3.8

95.4% Confidence Interval for  $\hat{\eta}_1 - \hat{\eta}_2$  is (-5.9; 11.5)

W = 162.0

Test of  $\hat{\eta}_1 = \hat{\eta}_2$  vs  $\hat{\eta}_1 \neq \hat{\eta}_2$  is significant at 0.5067

**Appendix 1.6.: Cross border acquisitions realized between 2003 and 2008 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2008	79	0.32	31.6	3.56
2011	79	0.55	26.67	3
Difference		-0.23	34.11	3.84

Paired T-test for 2008-2011

95% Confidence Interval for the mean difference (-7.87; 7.41)

T-test of the mean difference = 0 (vs ≠ 0): T – Value = -0.06 P – Value = 0.952

**Appendix 1.7.: Cross-border acquisitions realized between 2003 and 2008 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2008	79	0.3	31.6	3.6
2012	79	-22.3	193.9	21.8
Difference		22.6	193.1	21.7

Paired T-test for 2008-2012

95% Confidence Interval for the mean difference (-20.7; 65.8)

T-test of the mean difference = 0 (vs ≠ 0): T – Value = 1.04 P – Value = 0.302

**Appendix 1.8.: Cross-border acquisitions realized between 2003 and 2008 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2008	76	0.3	31.6	3.7
2013	76	-9.2	100.5	11.5
Difference		9.6	102	11.7

Paired T-test for 2008-2013

95% Confidence Interval for the mean difference (-13.7; 32.9)

T-test of the mean difference = 0 (vs ≠ 0): T – Value = 0.82 P – Value = 0.416

**APPENDIX 2: RETURN ON INVESTMENT****Appendix 2.1.: Cross-border acquisitions realized in 2003 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2003	34	-1.71	14.71	2.56
2006	34	1.81	12.34	2.15
Difference		3.51	17.05	2.97

Paired T-test for 2003-2006

95% Confidence Interval for the mean difference (-9.56; 2.53)

T-test of the mean difference = 0 (vs ≠ 0): T – Value = -1.18 P – Value = 0.245

**Appendix 2.2.: Cross-border acquisitions realized in 2003 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2003	34	-1.71	14.71	2.56
2009	34	2.87	9.76	1.7
Difference		-4.57	14.84	2.58

Paired T-test for 2003-2009

95% Confidence Interval for the mean difference (-9.83; 0.69)

T-test of the mean difference = 0 (vs  $\neq$  0): T - Value = -1.77 P - Value = 0.086**Appendix 2.3.: Cross-border acquisitions realized in 2003 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2003	34	-1.71	14.71	2.56
2012	34	3.37	10.68	1.68
Difference		-5.07	15.24	2.65

Paired T-test for 2003-2012

95% Confidence Interval for the mean difference (-10.48; 0.33)

T-test of the mean difference = 0 (vs  $\neq$  0): T - Value = -1.91 P - Value = 0.065**Appendix 2.4.: Cross-border acquisitions not realized in 2003 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2003	40	-3.13	12.49	1.97
2006	40	6.62	15.68	2.48
Difference		-9.75	20.2	3.19

Paired T-test for 2003-2006

95% Confidence Interval for the mean difference (-16.21; 3.29)

T-test of the mean difference = 0 (vs  $\neq$  0): T - Value = -3.05 P - Value = 0.004**Appendix 2.5.: Cross-border acquisitions realized in 2008 (Mann-Whitney test)**

	Number of companies	Mean
2008	12	0.57
2011	12	0.12

Point estimate for  $\hat{\eta}_1 - \hat{\eta}_2$  is -1.6695.4% Confidence Interval for  $\hat{\eta}_1 - \hat{\eta}_2$  is (-11.23; 3.92)

W = 138.0

Test of  $\hat{\eta}_1 = \hat{\eta}_2$  vs  $\hat{\eta}_1 \neq \hat{\eta}_2$  is significant at 0.5067**Appendix 2.6.: Cross border acquisitions realized between 2003 and 2008 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2008	79	2.75	13.78	1.56
2011	79	2.22	12.23	1.39
Difference		0.52	15.78	1.79

Paired T-test for 2008-2011

95% Confidence Interval for the mean difference (-3.04; 4.08)

T-test of the mean difference = 0 (vs  $\neq$  0): T - Value = 0.29 P - Value = 0.771**Appendix 2.7.: Cross-border acquisitions realized between 2003 and 2008 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2008	79	2.75	13.78	1.56
2012	79	1.53	13.96	1.58
Difference		1.21	14.95	1.69

Paired T-test for 2008-2012

95% Confidence Interval for the mean difference (-2.16; 4.58)

T-test of the mean difference = 0 (vs  $\neq$  0): T - Value = 0.72 P - Value = 0.476

**Appendix 2.8.: Cross-border acquisitions realized between 2003 and 2008 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2008	76	2.96	13.86	1.6
2013	76	0.99	17.5	2.02
Difference		1.97	18.87	2.18

Paired T-test for 2008-2013

95% Confidence Interval for the mean difference (-2.37; 6.32)

T-test of the mean difference = 0 (vs ≠ 0): T - Value = 0.91 P - Value = 0.368

**APPENDIX 3: RETURN ON EQUITY****Appendix 3.1.: Cross-border acquisitions realized in 2003 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2003	33	-13.7	71.5	12.4
2006	33	4	47.2	8.2
Difference		-17.7	77.5	13.5

Paired T-test for 2003-2006

95% Confidence Interval for the mean difference (-45.2; 9.8)

T-test of the mean difference = 0 (vs ≠ 0): T - Value = -1.31 P - Value = 0.198

**Appendix 3.2.: Cross-border acquisitions realized in 2003 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2003	32	-13.1	72.5	12.8
2009	32	3.8	23.7	4.2
Difference		-16.9	72	12.7

Paired T-test for 2003-2009

95% Confidence Interval for the mean difference (-42.8; 9.1)

T-test of the mean difference = 0 (vs ≠ 0): T - Value = -1.33 P - Value = 0.195

**Appendix 3.3.: Cross-border acquisitions realized in 2003 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2003	32	-13.1	72.5	12.8
2012	32	-17.2	76	13.4
Difference		4.1	104.4	18.5

Paired T-test for 2003-2012

95% Confidence Interval for the mean difference (-33.6; 41.7)

T-test of the mean difference = 0 (vs ≠ 0): T - Value = 0.22 P - Value = 0.826

**Appendix 3.4.: Cross-border acquisitions not realized in 2003 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2003	35	-7.39	25.12	4.25
2006	35	8.71	27.63	4.63
Difference		-16.09	36.81	6.22

Paired T-test for 2003-2006

95% Confidence Interval for the mean difference (-28.74; -3.45)

T-test of the mean difference = 0 (vs ≠ 0): T - Value = -2.59 P - Value = 0.014

**Appendix 3.5.: Cross-border acquisitions realized in 2008 (Mann-Whitney test)**

	Number of companies	Mean
2008	11	1.65
2011	11	0.77

Point estimate for  $\hat{\eta}_1 - \hat{\eta}_2$  is 2.31

95.4% Confidence Interval for  $\hat{\eta}_1 - \hat{\eta}_2$  is (-12.11; 16.23)

W = 138.0

Test of  $\hat{\eta}_1 = \hat{\eta}_2$  vs  $\hat{\eta}_1 \neq \hat{\eta}_2$  is significant at 0.4701

**Appendix 3.6.: Cross-border acquisitions realized between 2003 and 2008 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2008	69	-4.29	52.54	6.33
2011	69	0.28	55.01	6.62
Difference		-4.57	69.88	8.41

Paired T-test for 2008-2011

95% Confidence Interval for the mean difference (-21.36; 12.21)

T-test of the mean difference = 0 (vs ≠ 0): T – Value = -0.54 P – Value = 0.588

**Appendix 3.7.: Cross-border acquisitions realized between 2003 and 2008 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2008	68	-3	52	6
2012	68	-115	940	114
Difference		111	942	114

Paired T-test for 2008-2012

95% Confidence Interval for the mean difference (-117; 339)

T-test of the mean difference = 0 (vs ≠ 0): T – Value = 0.97 P – Value = 0.333

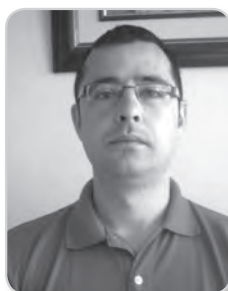
**Appendix 3.8.: Cross-border acquisitions realized between 2003 and 2008 (T-test)**

	Number of companies	Mean	Standard Deviation	SE Mean
2008	68	-5.6	53.5	6.5
2013	68	-17.6	160.2	19.4
Difference		12	167.2	20.3

Paired T-test for 2008-2013

95% Confidence Interval for the mean difference (-28.5; 52.4)

T-test of the mean difference = 0 (vs ≠ 0): T – Value = 0.59 P – Value = 0.557

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# PHARMACEUTICAL INDUSTRY'S WEB 2.0 INITIATIVES IN THE NEW COMMUNICATION LANDSCAPE

Upotreba Web 2.0 tehnologija u komunikacionim  
strategijama farmaceutske industrije

## Abstract

Pharmaceutical companies function in complex, heavily regulated markets characterized by declining access to physicians, limited customer loyalty, downward pricing pressure and low levels of public trust. The communication with key influencers requires above-average creativity and knowledge, and old, analogue patterns of communication in the new digital world are not an effective option anymore. Building on the fundamental ideas of Web 2.0, this paper deals with Web 2.0-oriented solutions for pharmaceutical companies. New communication landscape requires pharmaceutical companies to rethink the communication logic, which will help them to reach out to key influencers.

**Keywords:** *Web 2.0, pharmaceutical industry, social media, marketing*

## Sažetak

Farmaceutske kompanije funkcionišu u kompleksnom okruženju koje karakteriše stroga zakonska regulativa, sve teži pristup lekarima, limitirana lojalnost potrošača, pritisak da se snize cene farmaceutskih proizvoda, kao i nizak nivo poverenja javnosti. Komunikacija sa uticajnim donosiocima odluka u oblasti zdravstvene i farmaceutske zaštite zahteva natprosečnu kreativnost i znanje, a stari, analogni obrasci komunikacije, u novom digitalnom svetu više nisu najefektivnija opcija. Polazeći od ključnih ideja na kojima su Web 2.0 tehnologije zasnovane, rad istražuje komunikaciona rešenja u sferi Web 2.0 tehnologija namenjena farmaceutskim kompanijama. Novi komunikacioni „pejzaž“ zahteva da farmaceutske kompanije revidiraju svoju komunikacionu strategiju, što im može pomoći da njihove poruke dopru do ključnih donosioca odluka u sferi zdravstvene i farmaceutske zaštite.

**Ključne reči:** *Web 2.0, farmaceutska industrija, društvene mreže, marketing*

## Introduction

Over the past few years, we have been witnessing the transformation of McLuhan's vision of the Global Village into reality: the number of Internet users has grown by over 140 times since 1995; more precisely, from 16 million in late 1995 (accounting for 0.4% of the world's population at the time) to more than 3.3 billion in November 2015 (46.4% of the global population) [29]. The network effect generated in such a fashion [20, pp. 509-542] has unprecedentedly transformed the communication landscape: becoming a universal information source at work as well, and imposing an imperative need to be online, the Internet has served as an avenue for introducing business into the era of ultimate transparency owing to Web 2.0, and caused "businesses [to] have increasingly less control over the information available about them in cyberspace" [33, p.60]. Consequently, Web 2.0 has become very influential in identifying and/or defining needs, potential suppliers, and in the final selection of a supplier [64]: by placing at free disposal a practically unlimited choice of easily and simply available (more or less) independent and reliable user-generated content about products and services, Web 2.0 tends to facilitate the discovery and evaluation processes, and, owing to the experiences of others, enables identifying and learning practically everything about a

product or service without interaction with retailers, which essentially influences the negotiating powers and positions.

Yet, having analysed over 400 research papers in the field of Internet marketing created in the same period, Corley et al. [18] have reached the conclusion that one of the major thematic gaps in research lies within the area of Web 2.0. Focussing the scope of attention on recent empirical data and business practice of pharmaceutical companies yields the information that online presence by pharmaceutical companies in 2013 was dominantly achieved through: company websites (84%), product (71%) and disease websites (70%) – still in secure realm of Web 1.0 [59]. A complementary note is sounded by the opinion that pharmaceutical industries still view social media as uncertain [59], and the report of Capgemini consultant agency *The Digital Advantage* [15] which deals, among others, with the digital (im)maturity of pharmaceutical industry, scoring them low in both digital intensity dimension (investment in technology-enabled initiatives) and transformation management intensity dimension (leadership capabilities to drive digital transformation through organization).

The article is built around the concept of utilisation of Web 2.0 technologies by pharmaceutical companies, in order to achieve some of their communication (and marketing) goals. The first part of the paper introduces fundamental ideas on which Web 2.0-based social media are established, with the main purpose to reveal its impact on changing communication landscape. The second part of the paper leads marketing practitioners from pharmaceutical industry towards available prescriber and patient-oriented Web 2.0 initiatives, discussing the benefits and perils of their utilization.

## Fundamental ideas of Web 2.0 technologies

Using “network as a platform” [47], Web 2.0 technologies enable users to evolve from mere passive consumers of one-to-many created web content in the one-way dialog of the Web 1.0 era into active creators, whether as independent creators or contributors (or both) of Web content by using user-friendly easy-to use application not requiring specific ICT knowledge (many-to-many Web content creation). “The

most popular categories of Web 2.0 applications (often referred to as building blocks concatenated into Web 2.0) include blogs, wikis, social networking, tagging and social bookmarking, multimedia sharing, podcasting, RSS, etc.” [57, pp. 87-88]. These products of Web 2.0 evolution rest on some (or all) of the key ideas of Web 2.0 [3]:

*Individual production and user-generated content* is the idea serving as a basis for the so-called citizen journalism or grassroots journalism [25], podcasts, multimedia sharing sites (such as YouTube, Flickr, etc.) and social networking sites (such as Facebook, MySpace, Twitter, LinkedIn, etc.).

*Wisdom of Crowds*, as one of the manifestation forms of the Harnessing the Power of the Crowds principle, “is the basic idea of Web 2.0-style thinking, starting from the viewpoint that the solution to the problem, proposed collectively but independently by individuals comprising a large group, the so-called ‘crowd’, is better in quality than a solution offered by the most intelligent group member” [58, p. 746]. The same principle applies to “asking the audience” in the “Who Wants to Be a Millionaire?” quiz show [3, p. 16], while typical examples of Web 2.0 services/applications based on the Harnessing the Power of the Crowds principle are wiki systems, and, to some extent, blogs.

*Architecture of participation* refers to the idea of designing a Web 2.0 service so as to provide an architecture whose simplicity and ease of use encourages and facilitates mass user participation; through the contribution of a large number of members to generating contents offered by the service, mass user participation contributes to improving the quality of service.

The idea of *Openness* is based on the concept of open source software, but rather than the code, it opens the content, and thus enables mash-ups, i.e. its re-use in various combinations. Even if users do not generate original content, they can take the role of active producers by disseminating content or generating new combination of data.

Based on Metcalfe’s Law, *Network effect* concerns the economic and social implications of adding new users to a social network: the value of a network grows with every new registered user (but also with new posts, multimedia content upload, comment, or as little as a mere view). One

should, however, not ignore the fact that users are less likely to leave networks with more numerous members, which makes “competition at the early adopter phase of the innovation demand curve where social phenomenon such as ‘word of mouth’ and ‘tipping point’ and the human tendency to ‘herd’ with others play an important role” (Klemperer [35] cited in [3, p. 21]) exceptionally important.

*Data on an epic scale:* the volume of available data has never been larger in the history of mankind. However, quoting Tim O’Reilly [48], Anderson [3, p. 25] points out that “...the power may not actually be in the data itself but rather in the control of access to that data. Google doesn’t have any raw data that the Web itself doesn’t have, but they have added intelligence to that data which makes it easier to find things.”

Research conducted by Andriole [4], regarding the use of Web 2.0 technologies by pharmaceutical companies, shows that they see blogs, wikis and podcasts as most beneficial platforms. All the three categories belong to the social media [33], which is an umbrella term that covers the categories of Web 2.0 online media offering their users the generation and/or remixability of content (text, images, audio, video etc.) and supports social interaction among users by sharing, talking, participating, collaborating, networking, bookmarking, etc. [2], [62], [13].

*Blogs.* With their ease of use of Web 2.0-based collaborative communications tools (or even knowledge management systems) for knowledge sharing, reflection and debate [70], where “knowledge elements are annotated and augmented by the readers” [9, p. 455], blogs feature as an “important and influential socio-cultural force” that promotes critical, analytical, creative, intuitive, analogical, associational thinking, and, through the combination of the “best of solitary reflection and social interaction”, they increase access and exposure to quality information [22]. A special type of this media is audio blogging, better known as podcast, defined by Anderson [3, p. 10] as “audio recordings... of talks, interviews and lectures, which can be played either on a desktop computer or on a wide range of handheld MP3 devices”. In addition to audio files, podcasts also provide very simple availability of video footage (vidcast), as well as .pdf files, but a podcast may refer to any other type of file.

*Wikis.* Unlike content-centric blogs, wikis are collaboration-centric. They can also be defined as ever-growing knowledge repositories under permanent community-based peer revision, which “embody the collective efforts of multiple users and reflect a generally agreed-upon view” [64]. The positive characteristics of blogs can be attributed to wikis as well, and Kokkinaki [36] extends them further: “...wikis improve teamwork skills, group processing and social skills...they promote better comprehension, active processing and positive interdependence while at the same time they can be used as a digital environment for ‘problem sharing’ and prompt feedback” [36, p. 1121].

## The pharmaceutical industry’s communication environment and goals

Pharmaceutical companies function in a complex environment. According to Campbell [14], demand on this market is generated through three key groups of influencers: prescribers, patients and payers. Consequently, communication goals have to be tailored towards these constituents through the prism of their competences, role and impact on decision making regarding the choice of pharmaceutical therapy. The focus of this paper will exclusively shift towards ethical (prescription) drugs. Prescription pharmaceuticals require expert medical opinion in diagnosis; seriousness of condition dictates medical supervision during the treatment; and finally, inappropriate use may represent serious health hazard. Besides being one of the most heavily regulated markets<sup>1</sup>,

1 The sources of such legislation should also be sought in historical data, where unregulated promotion in this sphere of trade resulted in the sale of pharmaceutical products by the formula ‘...one for man, two for beast...’ Without strict legislation, ‘...often not labelled with their ingredients, resulting in benign substances as well as dangerous chemicals being touted as cure-alls containing “secret” ingredients.’ [65, p. 12]. Although there is no precise data, it was not uncommon for such preparations not only not to help patients, but also to exacerbate their condition, including the case of sulfanilamide poisoning in 1937, leading to the loss of 100 lives. Another tragedy, 30 years later in Europe, taking the sedative Thalidomide in pregnancy resulted in the births of a large number of children with deformities. These two isolated cases contributed to a strict regulation of pharmaceutical industry, with the requirement to prove the safety and effectiveness of a drug before the sale license is issued. Legislation defining the labelling, packaging and promotion of pharmaceuticals was developed simultaneously.

the market for ethical pharmaceuticals has specific characteristics that require knowledge and above-average creativity to communicate with the target market. The OTC products (“over the counter”, sometimes referred to as the parapharmacy) market resembles more the FMCG (“fast moving consumer goods”) market.

The moving forces on the demand side in pharmaceutical industry can be identified through three aforementioned key roles. However, physicians in role of prescribers and patients as end users will be discussed in details, whereas payers’ facilitating role is left out of the scope of this paper.

- Physicians as prescribers play a key decision making role in the choice of pharmaceutical treatment. It is therefore no wonder that they are indicated as the most important communication “target” for pharmaceutical industry [11], [52], [27], [21]. The prescribers “initiate drug therapy and select the product that best fits patient’s needs and personal situation” [14, p. 42], and the key factor differentiating them from other stakeholders is their right to prescribe a drug. Smith et al. [60] support the thesis that, when speaking of ethical drugs, the focus of interest of pharmaceutical marketing is on the intermediary rather than the final consumer. Unlike consumer goods (and OTC medications), in the case of ethical drugs, a relatively small group of people makes decisions on specific products that the final consumers or patients are to use. In order to address this specific group of decision makers, companies have so far relied on massive sales force and personal selling (referred to in the industry as detailing). Available time for sales pitch is steadily declining [38], [12], so companies are finding new methods strongly supported by Web 2.0 technologies, i.e. e-detailing [1], [68], [59]. According to Weinstein [69], expenditures for e-detailing are gaining larger share of promotional budget, and the most successful e-detailing campaigns have a three-figure percentage rise in the number of “virtual visits” to physicians.
- Patients act as the end users of pharmaceutical therapy. As much as their role in influencing the choice of (pharmaceutical) therapy is far more limited than when choosing a bar of chocolate or a new tablet, it

is wrong to conclude that patients have no influence in this process. “Today’s and tomorrow’s patients are demanding, informed and sophisticated.” [19, p. 18]. Pharmaceutical industry and its marketers have the task of understanding the consumers in their patient role, their motivation and decision-making process, as these parameters will reflect powerfully on generating the appropriate marketing mix. Web 2.0 tools can be, and already are used as powerful, almost CRM-like [49] systems for tracking patients’ experiences with different medical misalignments and/or therapies, from searching the information to supporting patients’ compliance<sup>2</sup>. Furthermore, concept of Patient 2.0 [1] was introduced to define the change affecting relationships between different constituents of healthcare system, dominantly recognizing the role of new technologies in supporting this transition.

- Health insurance systems (public and/or private) provide the complete or partial coverage of the healthcare cost, including the costs of pharmaceuticals. The payers’ special position can be defined through three key objectives of the healthcare system [44]: quality, costs and availability.

Consequently, the specific nature of pharmaceutical products [34], [46], [50] “...complex, and sometimes controversial amalgam of science and business” [14, p. 4] draws extraordinary attention of vast stakeholder front, from policy makers to general public. The problem is certainly not new, as Reekie [53, p.33] stated, “Advertising frequently generates controversy. Few industries, however, have so much strong feeling aroused by their promotional activities as pharmaceuticals.” Being under the keen eye of the public, the pharmaceutical industry’s communication efforts are constantly on the brim of controversy, the clash between “for-profit” business logic and “consumers’ preference for health-related endeavours to operate with

2 Patient compliance has two key segments: taking medications in accordance with the prescribed regimen (i.e. three times a day) and perseverance in terms of adherence to therapy over the prescribed time period. Unless the patient adheres to therapy, i.e. if (s)he deliberately reduces either the frequency or duration of therapy, therapeutic effect can be diminished, but also this will produce a reduction of the theoretical market for a given medicine.



sensitivity to communal norms” [40, p. 163] being the main source of debate. One of the major challenges is the way pharmaceutical companies are addressing multiple audiences on their target markets, especially in light of the dramatic changes in the communication landscape over the last two decades.

### Pharmaceutical industry and WEB 2.0

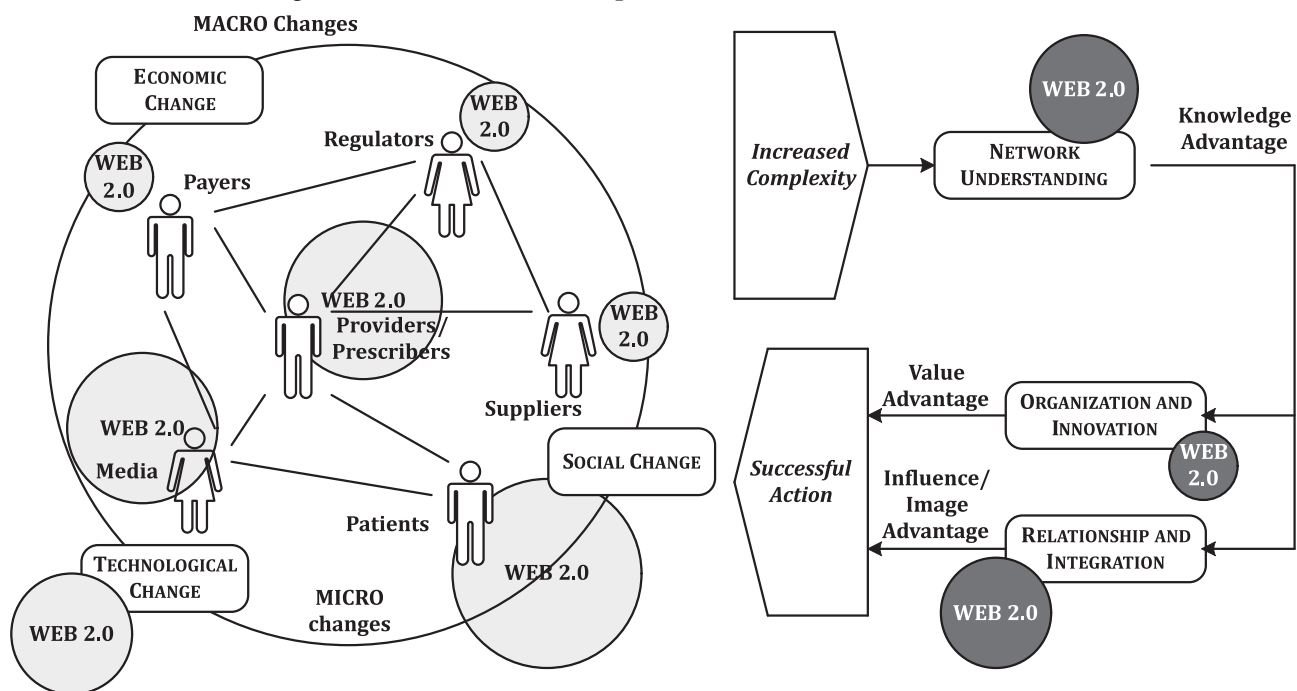
Pesse et al. [51] introduced the idea of networked healthcare. The concept makes a lot of sense if cross-referenced with advances in technology and new “networked” world in which we live. It is amplified by the fact that pharmaceutical industry has its meaning in a wider frame of reference, as a part of available (mainstream) healthcare system in a certain geographical area.

According to Meadows-Klue [42, p. 247], “Web 2.0 DNA” supports creation of platforms that enable creation of social networks<sup>3</sup>, with the ability to generate and share content – social media. Additional support for this course of action is certainly in the industry’s response to troubled relationships with stakeholders. Many authors have already

indicated inadequate understanding of the industry’s marketing environment, declining access to physicians (so far dominant target of pharma communication), shift towards personalized solutions in health care and pharmacy, limited customer loyalty, downward pricing pressure and low levels of public trust [23], [43], [61], [1]. Web 2.0 is certainly not a panacea, but offers an opportunity, with other efforts, to improve the pharmaceutical industry’s “health” – dominantly through better understanding of network constituents and significant potential for enhancing influence and image (see Figure 1).

The Networked Healthcare concept can facilitate creation and delivery of value added (which is, essentially, the central issue of marketing) to all stakeholders, (the whole “network” as such), in a balanced and “sustainable” manner [63]. Web 2.0 services – based on their two-way exchange of information – provide pharmaceutical companies with ability to gather data and simultaneously exercise influence on various target audiences [10]. Better understanding of various elements of network (see Figure 1) translates into ability to use acquired knowledge in adjusting organizations to suit the needs of stakeholders

Figure 1: Points of WEB 2.0 impact on networked healthcare market



Source: Adapted from [51, p. 170]

<sup>3</sup> Social networks are not new to humanity; social psychology studies mutual relationships between individuals within a particular social group, the development of Internet and Web 2.0 moved the concept to virtual communities.



better, and, to a certain degree, to employ findings in their organizational model, as well as their R&D process.

The advantage of networked healthcare model [43] is its compatibility in logic with the major communication tool of marketers today – Web 2.0. Following this idea, a pharmaceutical company can employ systematic approach to:

- a) defining the communication goals (raising awareness about the disease, promoting prevention, building awareness about possible therapies (including building product/brand recognition), supporting patient compliance, rehabilitation, etc.);
- b) understanding the stakeholder network – “mapping” the network allows identifying key groups for goal achievement, and figuring out possible technologies for reaching these groups, as well as tailoring message to the specific needs of target audience; and
- c) analyzing influence of networks – understanding “network knots”, identifying different aspects of contacts among social network members, patterns of influence, types of connections (professional/social, regular/irregular, with/without feedback), allowing creation of Web 2.0 tools and tactics for managing these networks. An average marketing student today is educated to encompass “social media, word of mouth, buzz and influence” [26], [71] in integrated communication plans.

We shall now look at some specific examples of Web 2.0 initiatives, which can focus our attention on this emerging, yet not fully utilized, communication channel and its benefits.

### Prescriber-oriented Web 2.0 initiatives

SERMO ([www.sermo.com](http://www.sermo.com)) is the largest online community for physicians in the US, although not yet global [7]. We can say that SERMO is the Facebook of MD's. Currently, there are more than 200,000 physicians, covering 68 different specialities. Recent acquisition of SERMO by WorldOne Interactive promises the global development of platform based on SERMO model to gather virtual community of 1.8 million health care professionals from 80 different countries [7]. A recent rise of strong competitors like Doximity and

PeerCase [6] speaks volumes about benefits of business idea to create social networking platform dedicated to physicians. SERMO financing model is based on allowing “...financial institutions and government agencies to view discussions between doctors.” [41, p. 56], but is rapidly expanding its client base with pharmaceutical companies. Benefits for different stakeholders are obvious:

- The government has a more efficient pharmacovigilance<sup>4</sup> system;
- Financial institutions (in the role of healthcare insurance companies) get insights related to standards in practice, therapies, and can even track some aspects of pharmacoeconomics<sup>5</sup>;
- Pharmaceutical companies (like Pfizer as the first SERMO customer) follow prescribers' (MD's) communication and gain valuable information regarding different behavioural patterns of prescribers, which allows adjusting personal sales efforts to them, thus being translated into organizational enhancement. On the other hand, by following prescribers' practice and cases, new ideas can emerge transforming into R&D advantage.

As previously mentioned, the most commonly used Web 2.0 applications in pharmaceutical industry are blogs, wikis and podcasts. These platforms are considered most beneficial, and it is expected that they will be used at a greater scale in future, based on their perceived productivity, speed and cost. A whole plethora of possible web-solutions can be built having in mind the following two-dimensional matrix (See Figure 2):









- associations with companies (branded or unbranded).
- strategic orientation on: specific products, therapeutic areas or certain medical conditions.

It is (not) surprisingly difficult to find clear affiliations of branded web initiatives; they are usually “hidden” under

4 Monitoring the adverse effects of drugs.

5 Scientific discipline comparing the value of one drug therapy to that of another; pharmacoeconomics analyses the cost (expressed in monetary units) and effects (expressed in monetary units, efficiency or improved quality of life) of a pharmaceutical. Pharmacoeconomic evaluation can be viewed from several aspects: cost minimization, cost-benefit analysis, cost effectiveness analysis and cost-utility analysis. The basic idea is that limited resources are allocated in a standardized and scientifically based way. Pharmacoeconomic analysis also implies decision making about the perspective from which the analysis is performed: institutional or social.

Figure 2: Different web-based communication solutions

	ORIENTATION ON DISEASE (CONDITION)	THERAPEUTIC AREA	SPECIFIC PRODUCT
<b>UNBRANDED</b>  <i>without association to pharma company</i>	<b>PATIENTLIKEME.COM</b> <i>Website for sharing real life experiences and focus on different medical conditions . Not specialized in any particular disease .</i>  <i>Active presence on different Web 2.0 services:</i> 	<b>CARDIOLOGY/VASCULAR DISEASES</b> <a href="http://drwes.blogspot.com/">http://drwes.blogspot.com/</a> <i>Blog by cardiologist Westby G . Fisher, coves interest in cardiology , but also broader topics in healthcare .</i>  <b>THERAPEUTIC AREAS FORUM</b> <a href="http://www.doctorslounge.com/">http://www.doctorslounge.com/</a> <i>Communication between patients and professionals in different therapeutic areas.</i>	<b>N/A</b>
<b>BRANDED</b>  <i>With association to pharma company</i>	<b>PARKINSON'S DISEASE,</b>  <a href="http://www.parkinsons-voices.eu">www.parkinsons-voices.eu</a>  <i>Company sponsored website ; platform for communication and sharing information between people with Parkinson's disease . Patients testimonies shared over</i>  	<b>ONCOLOGY</b>   <a href="http://mylifeline.org">http://mylifeline.org</a> <i>Portal is supporting exchange of life stories and experiences of cancer patients. In list of major strategic partners are several pharmaceutical companies with strong portfolios in oncology.</i>  	<b>ACCU-CHECK</b>  <a href="http://www.accu-checkdiabeteslink.com">www.accu-checkdiabeteslink.com</a>  <i>Company sponsored website ; links towards different social media . Oriented towards diabetes and clearly sponsored by brand of diabetes diagnostic tools from Roche Inc .</i>  

Source: The authors.

strategic partnerships and in funding statements. Colombo et al. [17] expresses concerns regarding the transparency of the relationships between different patient/consumer groups and pharmaceutical companies, and argues that building trust and credibility requires affiliation/funding information to be clearly stated, which is currently not the case.

Chataway [16, p. 38] advocates shift from "...well funded advertising and corporate communications campaigns", because new media require new logic. Web 2.0 requires communication from both sides, and companies are impaired by legislation, and even more by tarnished reputation. Truth be told, bad reputation comes from a bad behaviour, which means that prior communicational efforts of pharmaceutical companies were perceived by public as troublesome. Pharmaceutical companies are advised to direct their activities at the more mediating role of "... adding relevant and useful information, or identifying other credible sources of information and amplifying thoughtful conversations, without trying to drive it." In the long run, image improvements are possible if actual behaviour is in line with that of a good corporate citizen. One of the most important tools or benefits of engaging

in Web 2.0 is actually listening; according to Houston [28], this is essential for any good social media initiative. Transferring old, analogue patterns of communication into the new digital world is not an effective option; the industry needs to rethink its entire communication logic. Web 2.0 offers wide opportunities to meet needs and expectations, simultaneously embracing technological change, and reaching wider stakeholder base (payers, media, general public, etc.).

### Patient-oriented Web 2.0 initiatives

The real power (burdened with real perils) of Web 2.0 comes from the ability to connect with a much broader stakeholder base than was possible in the "analogue" era. Patient-oriented Web 2.0 solutions are numerous. Iskowicz [31] brings several stories of renowned companies that utilized blogosphere to gain valuable understanding of their target market, i.e. Roche supporting the Accu-Check brand through sponsoring influential diabetes bloggers, and later expanding activities to Facebook and Twitter.

The Snow Company [66] pioneered the Patient Ambassador program, dominantly focussed on building

various communication platforms to reach patients, dealing with their "...motivation, recruitment, screening and compliance training". Pharmaceutical companies benefited through gaining genuine patient insight that helps them in their patient outreach. At the same time patients can be assisted in their search for objective information.

Orientation to value-adding for various groups can alleviate some of the pressure generated by the so-called taboo trade-off [40], sending message about greater sensitivity to communal considerations. Numerous points of impact can be identified that can easily and effectively utilize Web 2.0 technologies, and are congruent with major (communication) objectives of the pharmaceutical industry.

All these have in common the ability to be perceived in the public/stakeholders' eye as much more leveraged, and useful, than other routes of communication. Patients identify much more easily with another patient, they listen more tentatively, and they act with more vigour.

Following a web page, blog or social network site oriented to patients with a certain condition, the gathered information can be used to change drug formulations and drug delivery, easing administration or supporting patient compliance with innovative ideas. Even greater benefits could be materialized in influence/image categories with possibilities of addressing wider audiences. Active participation in disease awareness programs and supporting disease prevention through web technologies makes a lot of sense for enhancing image and extending goodwill. Numerous programs also try to work on enhancing the life of patients suffering from certain medical conditions and are also a good opportunity to emphasize good corporate citizenship.

As a result of insight into complex healthcare networks, pharmaceutical company marketers must understand that the consumer/client is the network itself rather than any of its separate elements. Marketing effort, especially in segments where the pharmaceutical industry's efficiency and/or reputation is at stake, must be directed to various stakeholders who have key impact on their behaviour within the network or pharmaceutical market. A better understanding of the needs of the target market – defined as a complex network – leads to innovation in the function of meeting their needs more efficiently and effectively. Organization of marketing activities

becomes more efficient and oriented towards exploiting information and knowledge with the aim of achieving business results, and it also opens the opportunity to strengthen the reputation of pharmaceutical companies which become integrated through this process into the environment in which they operate.

### **The other side of the coin: controversy of liberal media and controlled market**

Pharmaceutical companies' online presence, and especially their utilization of Web 2.0 technologies, is still relatively low. We shall briefly address some of the major obstacles to more efficient and effective utilization of this obviously important, and even hip communication channel. The fact is that pharmaceutical companies are following trends and want to be where the action is; expenditures for internet promotion are increasing [45], [30]. It is as simple as – if you are not present, others might be – your competitors, or opponents, or disillusioned customers, grumpy public, and it is increasingly easy for all stakeholders to engage in communication and convey their message wider than ever before. Pharmaceutical industry seems to be hesitating to engage Web 2.0 technologies for enhancing the experience of all stakeholders. Factors that are perceived as obstacle are for sure: regulation, fear of losing control over communication process and content, tarnished reputation that haunts the industry, and last but not least, strategic indecisiveness of top management to accept technology with all its potential and limitations.

Strict regulation creates substantial barriers regarding the topics, scope and content of communication [6], [5], [31]. Making it possible for the other side to communicate actively (which is the main feature of Web 2.0), pharmaceutical companies are losing control over the content, but legislators still consider them accountable. Consequently, this induces rigorous monitoring (and censorship from the side of the company) of communication amplifying the voices of industry adversaries even more [1]. Whenever you give opportunity to the other side to express their opinions, you can count that there will be the negative ones [28], and the industry still needs to learn how to deal with those. Fragile trust and chipped image can easily break

apart through Web 2.0 – especially if you helped creating efficient a platform for sharing opinions and perspectives – information spreads like the flue through a kindergarten.

National legislation, although somewhat different<sup>6</sup>, has the same standard for communication regarding pharmaceuticals. The primary purpose of pharmaceutical promotion is conveying objective and balanced information. Promotional activities on this market are strongly related to the content of the message, which has to be strictly based on clinical trials. However, Frosch et al. [24] reveal that most of Big Pharmas' communication glorifies benefits and diminishes side-effects, which certainly does not help with tarnished reputation. The decades-long debate on direct-to-consumer (DTC) promotional activities is fuelling controversy even more. According to Egilman and Druar [21], research data confirm patients' perception that pharmaceutical promotion contributes to their understanding of health condition and treatments. The real question is the extent of unbiased, objective information provided by pharmaceutical companies.

The industry seemed previously to be handling the issue of DTC with (un)intentional clumsiness. "US internet-based marketing is available in all countries to anyone with an internet connection" [21, p. 4497], yet companies will hide behind ridiculous disclaimers, especially on branded, product-oriented websites. "This Web site is intended for US consumers only" (www.lipitor.com; www.advair.com; www.crestor; www.arimidex.com) will hardly keep away customers from other geographical areas. From the technological perspective there are far more efficient and simple solutions, like rerouting visitors from certain IP addresses to other (less promotion-oriented) websites.

McCubrey and Forgues [39] argue that legislators were slow in responding to the new communication channel and introducing guidelines, making the industry more wary of pursuing new communication channels. That certainly induces strategic/tactic indecisiveness regarding the web, and, more specifically, Web 2.0 technologies.

<sup>6</sup> Promotional activities of prescription drugs directed to patients are allowed on the US and New Zealand market; in the US with active legislation directing DTC practice, and in New Zealand – a lack of firm guidance on the issue allows DTC promotion of ethical drugs. Pressure exists to allow this practice on EU market, but so far without EU legislator yielding in front of pharmaceutical lobbyists.

According to Capgemini report [15], "digital immaturity" of pharmaceutical industry comes from weighing threats and opportunities from engagement with social networking, blogosphere, multimedia sharing, wikis, and multidimensional downsides (aforementioned legislation and lack of control primarily).

Taking all things in consideration, the benefits are great and promising, but the industry seems to be constantly walking on the edge "...where boundaries between legal/illegal, ethical/unethical and commercial/altruistic are blurred most of the time" [50, p. 31].

## Current state of affairs and conclusions

Communicational goals of an average pharmaceutical company do not differ from the goals of a company in any other industry. Legislation determines what is permitted in the promotion of pharmaceutical products, but it would be wrong to conclude that this limits the creativity in their promotion. Marketers in pharmaceutical industry have all the instruments of promotional mix and all their combinations at their disposal to convey the intended message to the multiple target audiences. What makes things more complex are the facts that depict this market:

- R&D-driven industry that spawns a substantial number of new pharmaceuticals;
- development of new communication channels; and
- internationalisation.

A number of interviews the authors conducted with professionals involved in marketing in the pharmaceutical industry have revealed that this market shows a strong orientation of marketing towards content, i.e. information and knowledge in the function of higher quality of decisions made by prescribers, in a joint mission of providing patients with the best possible and/or available therapy. Rod & Saunders [54] stress out the importance of informative component in pharmaceutical promotion.

Sackett et al. [56, p. 71] consider the concept of evidence-based medicine (EBM) as '...conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients.' Where does this evidence come from? They are the output of scientific research process, clinical trials, advances in



and development of the medical profession. However, according to Kushner [37, p. 50], 'pharmaceutical industry has inserted itself into every aspect of medical practice from medical education to basic research and clinical care.' Modern society has opened space for the pharmaceutical industry to legitimately claim the right to such impact, relieving society of:

- a part (or all) of the care of continued education of physicians and pharmacists;
- the need to disseminate information in medicine/ pharmacy via formal channels; and
- to conduct clinical trials proving the effectiveness and safety of a drug at the expense of society.

In all this, the assumption on which the ethical/moral aspect of this concept rests is that commercial interest will not overpower the medical/altruistic one. If the marketing function, marketing organizational unit and marketing activities were removed, would the problem disappear as well? Or are we trapped in a 'tangle of moral compromise' [8, p. 5], where each of the parties gives something in exchange for something, but none of them is entirely satisfied?

Kane et al. [32] see Web 2.0 as a tool that enables deep relationships with stakeholders, with the ability to be extremely efficient in mobilizing people and resources towards different goals, as well as the superior ability for knowledge generation and synthesis.

There is a new generation of physicians and a new generation of patients living their lives and making decisions, from Y generation to millenians or iGeneration [55], the latter two being native in digital society. How will they search for information, where will they turn, when they are so used to having everything available – not anymore with a mouse click, but with a swipe of their finger? Will they share news and update statuses on numerous social media about illnesses, cures, therapies, life style changes and experiences? It is already happening.

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# SHOPPER MARKETING AS A WAY TO IMPROVE COMPETITIVENESS IN THE WESTERN BALKANS REGION

## Shopper marketing kao način unaprijeđenja konkurentnosti na tržištima Zapadnog Balkana

### Summary

In the past decades a shift of power from manufacturers towards retailers occurred. Following this path, many significant changes took place in the business conduct of companies involved in the consumer goods industry. In the last decade, however, power shifted from retailers to shoppers. On the heels of this change, among other things, Shopper Marketing was created. The term was first officially presented at the FMI (Food Marketing Institute) conference in 2004. Shopper Marketing is striving to improve business operation through simultaneous advancement of sales and improvement of brand performances. By adopting such concept, managers not only wish to work more on the improvement of their brands but they also wish to do it better, in a more efficient manner and with high quality. For that reason, Shopper Marketing has become a practice not only in developed markets but also in the regional markets. This paper deals with the presence of Shopper Marketing in the markets of the region, its benefits for the companies which adopted it as well as the expectations about future development of the concept in the markets of the Western Balkans.

**Keywords:** *shopper marketing, retail, shoppers, consumers*

### Sažetak

U decenijama koje su iza nas, došlo je pomjeranja moći u lancu vrijednosti od proizvođača prema maloprodavcima. Tragom ovih dešavanja, nastale su značajne i brojne promjene u odvijanju poslovanja kompanija uključenih u industriju robe široke potrošnje. U zadnjoj deceniji dešava se pomjeranje moći od maloprodavaca ka kupcima. Tragom ove promjene, između ostalih, nastao je Shopper marketing. Prvi put termin Shopper marketing je zvanično predstavljen na FMI (Food Marketing Institute) konferenciji 2004. godine. Shopper marketing nastoji da unaprijedi poslovanje kroz istovremeno unaprijeđenje prodaje i unaprijeđenje brend performansi. Usvajajući ovaj koncept, menadžeri pored toga što žele da rade više na unaprijeđenju svojih brendova, žele da to rade i bolje, kvalitetnije i na efikasniji način. Zato se posljednjih godina, kako na razvijenim tržištima, tako i na tržištima regije, sve više počinje praktikovati Shopper marketing. Ovaj rad će se baviti zastupljenošću Shopper marketinga na tržištima regije, koristima koje iz njega proizilaze za kompanije koje su ga usvojile, kao i očekivanjima o budućem razvoju ovog koncepta na tržištima Zapadnog Balkana.

**Ključne riječi:** *shopper marketing, maloprodaja, kupci, potrošači*

## Introduction

It has recently come to the fore through various types of marketing research that there is a significant difference among factors which influence shopping, even if the consumer and the shopper are the same person. A person in the role of a consumer often has different motivations from (frequently the same) the person in the role of a shopper.

Very often a shopper as an individual exhibits different behavior in different shopping categories. In one product category a shopper may be extremely loyal to one brand (i.e. baby food), whereas in other category the orientation may shift towards the choice of products with the lowest price (i.e. baby wet wipes).

In the marketing research, participants may say that they prefer premium brands while in the actual decision making during shopping they decide in favor of a cheaper brand. A reason behind this is the fact that one person is differently identified as a consumer and as a shopper.

This is also confirmed by the statement of Chris Hoyt, pioneer of Shopper Marketing, who stated: "Brand managers have to realize that it is not important how much they spent to build the brand; when the shopper is in shopping mode, it changes" [10, p. 29].

Besides such differing identification, shopping barriers are important factors for diverging attitudes in the consumption mode and behavior in the shopping mode. For example, if the consumer has a desire for a specific product, during the shopping trip a shopper can find the following shopper barriers which could diverge his(her) actual behavior: limited distribution of that product, product being out of stock in retail store, high price of that product, hard to find on shelves, promotion of competitor's product, etc.

When these insights were accepted, it became clear that the process which starts with the consumer and ends with the consumer had some other building components. When analyzed, it is possible to identify the following components: a consumer who actually uses the products and/or services, a shopper who buys the products and/or services, a retailer who acquires the products for further sales.

The Shopper Marketing framework includes activities which influence increase of sales, but they also influence building and improvement of brand image. Until recently, such thing was virtually unimaginable. Marketers mainly took care of the brand improvement and retail-oriented staff focused on the sales increase. However, as BTL (below the line) budgets grew [10, p. 16], it became evident that the activities financed through this budget often harmed the brand image in a way to decrease the perceived price point and erode loyalty to the brand with frequent and deep promotions. For that reason, attempts were made to find a solution to influencing the increase in sales and improving the brand image with the same budget. The solution was in Shopper Marketing activities. For this particular reason, fast increase of investment in these activities took place and Shopper Marketing gained improved significance in the management circles [38, p. 159-160].

## Conditions that led to the emergence of Shopper Marketing

*Media fragmentation* led to difficulties in effective media investment. Namely, hand in hand with the proliferation of media channels and occurrence of digital media possibilities, the work of any media strategist became more complex. In the past, there was a dominant television channel which had the biggest outreach to world audiences. If any brand was oriented to wide audience, the choice was simple – television. In the process, the only decisions to be made were the ones on the campaign parameters to be achieved and the choice of target population, TV channels, TV shows with different ratings, how to optimize delivered ratings towards entire population (TRP – target rate point), reach, proportion between GRP and TRP (Affinity Index) and others depended on it. Besides television, newspapers and magazines were the second most influential manner of influencing the target consumers, so they were more or less used depending on the strategy employed. However, regardless of low number of alternatives, effectiveness of television has reduced over time. A study has shown that an average American citizen in 65 years comes under the influence of 2 million promotional adverts. The



same study has shown that in the 1990, the percentage of remembering promotional messages was 8%, whereas the same percentage in 1965 was 34%. In the same period, expenses of companies for media advertising increased eleven times [10, p. 11]! All of this has significantly changed in the past 20 years. The main reasons behind changes are the digitalization of everyday life and development of digital media channels; and digitalization is accelerated by possession of digital devices such as PCs, tablets, smart phones etc. In a short period of time, smart phones have gained more influence as the world population becomes more accessible via these devices. The estimates are that the influence of these devices will significantly grow in the years to follow. New media channels offer various ways of presenting media content to target audience: web ads, web banners, Facebook Ads, Google Ads, You Tube, direct mailing, QR codes, personalized coupons etc. For example, a You Tube video with the highest number of views in March 2013 had 1.4 billion views, while the most popular TV show in America was watched by just 20.6 million Americans. Facebook states that it has 1.06 billion active users each month who spend an average of 6.4 hours on this web site a month [10, p. 12].

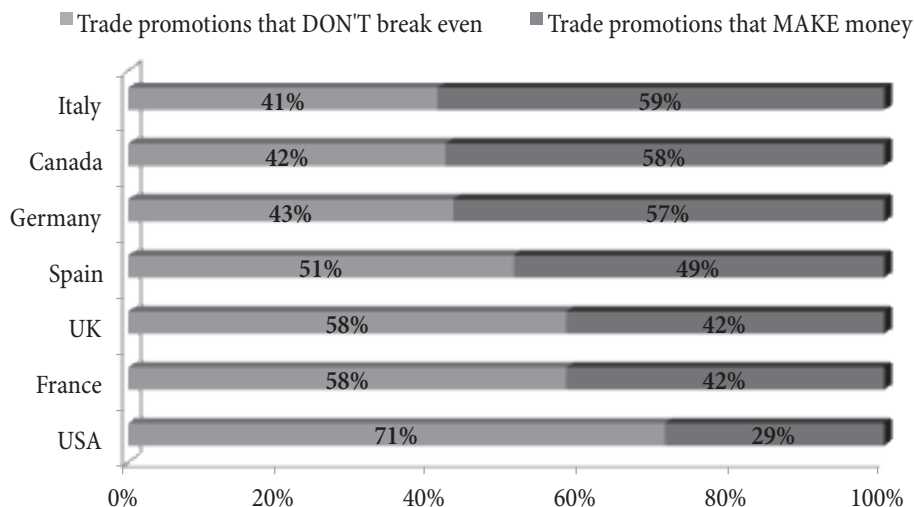
*Increase of investment in activities directed to sales increase* which take place in retail facilities. This is something that has a significant influence on total profitability of FMCG (Fast Moving Consumer Goods) sector. Namely, the growth of BTL investment has become much larger than total sales growth, so the reduction in profit rates occurred. Everyone who deals with this issue reports significant increase of investment into BTL activities, and consistency in reports is evident in Deloitte, Bain and Nielsen which report that there has been a 65% increase in investment in promotion at retail facilities in the past three years. In order to grasp the amount of investment, calculation of global BTL investment follows. According to Herb Sorensen, FMCG is globally worth 14 trillion USD annually. Out of this amount, 8 trillion comes from manufacturers who annually invest about 10% of sales into BTL activities. This means that annual investment of manufacturers in BTL activities is around 800 billion USD [10, p. 16]! It can be concluded from the above-mentioned that the increase in BTL investment

in three years was 315 billion USD! Sad fact is that such amount of investment had no influence on increase in profitability but it led to decrease in profit rates. Average profit rate of the world's leading retailers is only 3% [10, p. 13], whereas average profit rate of 250 world's biggest manufacturers is around 8.5% [10, p. 22]. It is evident from everything above-mentioned that FMCG sector annually invests considerably more into BTL activities than their total profitability is.

*Reduction of efficiency of BTL investment* largely contributed to questioning of marketing and sales strategies. As we have seen, the increase of investment did not bring increase but decrease of profitability. The same happened to ROI (Return on Investment Index). According to recent studies, ROI index in BTL promotions for manufacturers is between 0.55 and 0.65% [10, p. 18]. Bearing in mind the above-mentioned rates of profitability, it is easy to calculate that with this return index manufacturers actually lose money. That means that it would be better for them in a short term not to invest in BTL activities. However, in a long term, that would mean significant reduction in sales and losing the market share, and eventually they would be forced to leave retail shelves. Data also shows that 70% of BTL investment resulted in a loss of money. If we consider the fact that 250 world's biggest manufacturers invest around 280 billion USD in BTL activities, then we can conclude that around 200 billion USD was not a justified investment! This is a very large amount, but if we bear in mind success balance structure, this becomes less odd. We can imagine sales of 100 units of any product which has a value of one monetary unit and which has gross profit of 25%. It leads us to sales of 100 units of the product and 25 monetary units of gross profit. We can also assume that the price is reduced by 10% as promotional BTL activity. We arrive to reduction in sales to 90 monetary units and gross profit to 15 monetary units. It is evident that the reduction in price of 10% created a 40% drop in profit. It is also easily calculated that it is necessary to create increase in sales of 67% in order to achieve the same profit. Having in mind that the average reduction of prices on shelves is over 30%, then it can be concluded that the sales have to be increased several times in order to maintain the same profit as it was before the promotion. That is not



Figure 1: Share of profitable and non-profitable trade promotions per market



Source [31]

easily achieved<sup>1</sup>. Ratio of profitable and non-profitable trade promotions differs according to markets, which is presented in the following figure.

*Increased influence of retail outlets on shopping decisions* is definitely the most influential for the increase of the above-mentioned investment into BTL activities. Simply, marketers were guided by the data on the increase of percentage of decisions made in retail outlets and accordingly increased BTL budgets each year. POPAI, a global association for retail marketing, was established in 1936 and it states that 70% of brand-oriented decisions are made in a retail outlet [38, p. 150]<sup>2</sup>. Moreover, this was done by majority of FMCG participants, so the entire industry shifted to a higher investment level, which meant greater promotional diversity for the consumer. Consumers quickly adjusted to the higher scope of promotions and oriented more towards shopping on promotions. It led to reduction in consumer loyalty, which had devastating effect on FMCG.

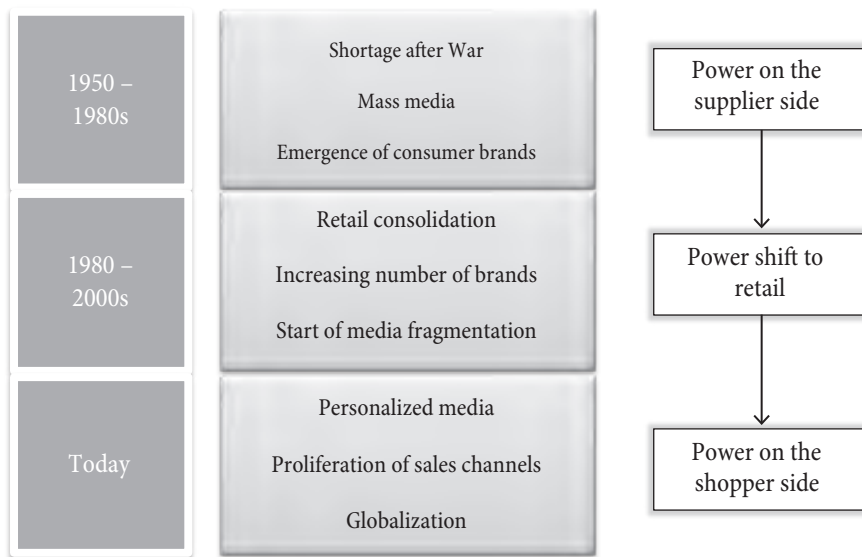
1 For the purpose of easier calculation of how much is necessary to increase sales during promotion, we can use the following calculus: from gross margin (25%) reduce percentage of reduction in price (10%) and then divide the margin with the number you got for a result (25-10=15; 25:15=1.66). The obtained result shows by how many times (in this example it is 1.66) you have to increase the sales in order to achieve desired profit.

2 A number of practitioners started to oppose this data when it was released. Afterwards, similar data was obtained through other studies which eventually became the guideline for increase in investment to BTL activities.

*Power in supply chain shifts to shoppers.* During the 1960s, traditional brand management was the prevailing practice in the developed markets [5, p. 309]. At the time manufacturers were dominant. Also, supply was smaller than demand, so manufacturers were able to sell everything they produced. It gave them comfortable position in relations with partners and they dictated the conditions. Since the beginning of 1980s, a surplus in supply has started and retails have grown bigger, which reduced significance of manufacturers. In that period, the power in the supply chain started to shift to the side of retailers. This was significantly aided by technological innovations such as bar codes, changes in marketing channels and concentration of capital on the retail side [5, p. 309]. With the development of private trademarks by many larger retailers, this power firmly stayed on their side. However, as the Internet developed as a sales channel, the change took place as well. Now, retail is not the only option for buying certain products. Now they can be bought online. A large number of product categories can be bought worldwide and received at home address by mail (for certain categories of products, though, still not possible). That is how our local retailer experienced reduction of power which shifted to shoppers who have the budget and want to make the purchase.

*Increase of number of options for the shopper,* which leads to the reduction of purchase termination. It is called

**Figure 2: Power shift in the supply chain**



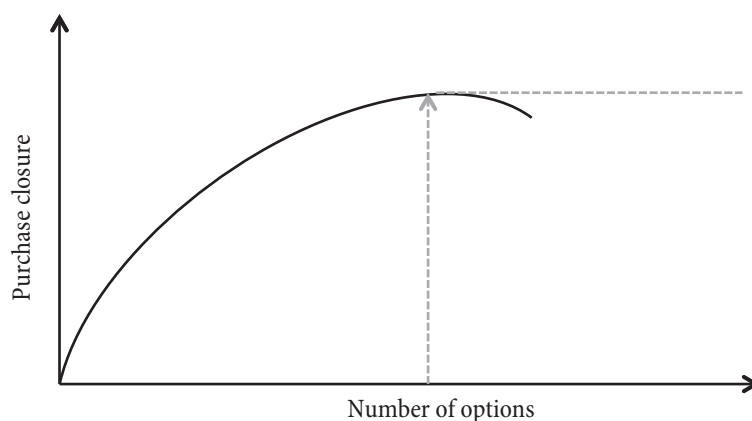
Source [38]

the choice paradox and it describes the situation when the number of options for the shopper increases over certain limit, which leads to the reduction in number of purchased products. Choice paradox is about the number of available products and not the increased number of promotional offers and it is also about the increased number of channels where purchase can be made. All of the above-mentioned influences the consumers in a manner that they spend more time on the evaluation of the offered, so they eventually have lower number of real purchase.

Having in mind everything stated, it has become clear that it is necessary to search for new sources of competitive advantage. As current way of business operation ran out of most of its potential, it was necessary to consider new

possibilities and offer new leverage. Some have started to have holistic approach to this challenge through potential defining of the current business model. In such deductive observation of the process from the moment when the desire/need for the product occurs, through the process of shopping to product evaluation, it was noticed that there were certain differences between product and/or service consumers and shoppers of the same products/services. It was noted even in cases when the consumer and the shopper are the same person. Considering the fact that the industry, primarily the manufacturing part, focused on consumers up to that moment, potential for improvement through better understanding of the role of a shopper in the entire process was recognized. It was

**Figure 3: Choice paradox**



Source [38]

understood that whatever applied to a consumer mostly did not apply to the shopper in an opportunity to do the shopping. The reason is that the consumer and the shopper have different motives and behavior when assuming these two roles. Since there was a lot of research performed about the consumers, it was understood that it was necessary to make an extra effort to understand the shoppers and their motives and behavior.

### Field of performance and definition

Shopper Marketing, as a part of buyer management [4, p. 144] has a scope of activities which influence the increase in sales and simultaneously influence development and improvement of the brand. Until recently, this was unimaginable. Marketers mainly focused on the development of brand image and sales-oriented staff took care of the increase in sales. However, as BTL budgets grew it was concluded that the activities financed with this budget often harmed the brand image. Therefore, it was necessary to find a solution how to influence the sales increase and improve the brand image with the same budget. This was achieved with Shopper Marketing activities. For that very reason, a rapid increase in investment growth for these activities occurred as well as significance of Shopper Marketing in management circles. Field of performance of Shopper Marketing is presented in Figure 4.

Sudden increase of significance of Shopper Marketing activities is largely conditioned by the fact that it allows reconciliation of seemingly opposing sides: increase in sales through BTL activities and brand improvement through BTL activities.

In defining Shopper Marketing, some authors focus on the act and process of shopping itself. Other authors, in addition to the shopping and the role of shopper, also put accent on the role of the consumer. There is also a group of authors which have a wider view of Shopper Marketing and they consider that its primary mission is in the change of behavior of shoppers and consumers. Some authors in their definitions stress out the role of creating the knowledge about the shoppers, while others put accent on the role of marketing mix.

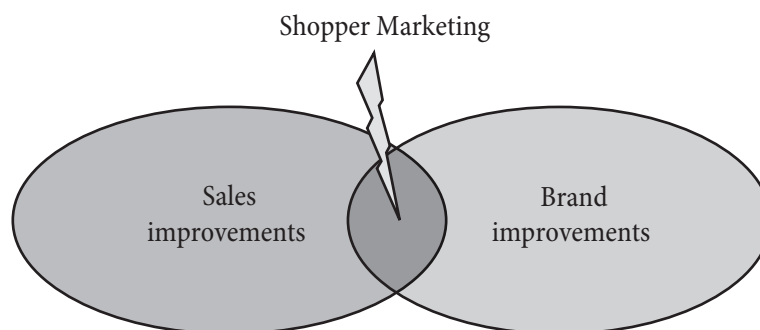
Toby Desforges and Mike Anthony in their book *“The Shopper Marketing Revolution”* give the following definition: Shopper Marketing is systematic creation and application of marketing mix elements created for the purpose of achieving positive change in the shopper’s behavior and cause consumption of certain brand [10, p. 36].

Deloitte Research defines Shopper Marketing as engagement of any marketing stimulus developed on clear understanding of shopper’s behavior created for the purpose of building the brand image and shopper engagement which leads to purchase termination [32, p. 1].

There are much wider definitions like one provided by Shankar, who states that it is planning and execution of all marketing activities which influence the shopper throughout and after the entire path towards the purchase, from the moment desire to make the purchase takes place through the purchase itself, consumption and repeated purchase and recommendation [32, p. 1].

Retail Commission on Shopper Marketing defines Shopper Marketing as the use of knowledge-motivated marketing and product presentation for the purpose of answering the needs of target shoppers, improving

Figure 4: Field of performance of Shopper Marketing



Source: The authors’ model based on the literature review and research

business results and brand image for manufacturers and retailers [21, p. 7].

Flint, Hoyt and Swift argue that Shopper Marketing is understanding how target consumers behave as shoppers in different channels and retail formats and using that knowledge through strategies and initiatives resulting in balanced benefits for all the parties involved – brands, retailers and common shoppers [12, p. 6].

### Application of Shopper Marketing in the markets of the Western Balkans – research methodology

Research about the achievements in application of Shopper Marketing was conducted from June to October 2015. It was performed by an online questionnaire. The territory where the research was conducted involved the markets of Serbia, Croatia and Bosnia and Herzegovina, since these three markets are the biggest representatives of this region.

An integral part of the questionnaire preparation were in-depth interviews with representatives of multinational companies present in these three markets. Interviews were performed in order to obtain qualitative data which was used for quality preparation of the questionnaire.

The aim of the research was to establish the level of development of Shopper Marketing practices in these three markets. Besides this, we wanted to establish opinions of the industry about the potential of this concept. Through the answers obtained we wanted to confirm or oppose the thesis that there is potential for the development of business operation on the ground of Shopper Marketing

and that there are possibilities to have synergetic effects with other concepts.

Addresses of 5,387 individual respondents in FMCG sector in all three markets were gathered. The first step was to divide these individuals according to markets in order to get the appropriate geographical dispensation. The second step was to divide respondents according to the areas of FMCG and classify them in the following groups: manufacturer, retailer, supplier and other. In the group 'other' there were different agencies which operate in FMCG industry. Following this, the next step was to select respondents from the top management, sales and marketing departments of companies, since people in these sectors should have knowledge about Shopper Marketing. The middle and senior management staff were selected from these three functional areas of companies. At the end, out of 5,387 initial respondents, 220 individuals from respectable companies were selected and asked to complete the online questionnaire. Bearing in mind the fact that the presence and knowledge of Shopper Marketing in observed markets is limited, this number is acceptable and more than sufficient. Expected return rate of completed questionnaires was set 20% in order to be able to determine how representative the base aggregate number was.

At the end of the research, the number of completed questionnaires was 52, which is 26% of the total number. The return rate is satisfactory having in mind the presence of Shopper Marketing practice in three observed markets.

Besides that, we wanted to achieve balance of gathered questionnaires from individual parts of FMCG

**Table 1: Geographical sample dispersion**

	Serbia	Croatia	Bosnia and Herzegovina
Collected questionnaires	36%	29%	35%

Source [38]

**Table 2: FMCG sector branch sample dispersion**

	Manufacturer	Retailer	Contractor	Other
Collected questionnaires	51%	25%	16%	8%

Source [38]

**Table 3: Functional sample dispersion**

	Top management	Sales	Marketing	Other
Collected questionnaires	26%	42%	24%	8%

Source [38]



industry, so we had an equal number of manufacturers/suppliers, retail companies and, as the third group, other respondents in FMCG sector.

The following three tables display the sample of respondents, or how the companies-respondents which completed the questionnaire were divided. The tables will represent geographical division, division according to companies as part of FMCG industry and division according to functional areas within the companies where the respondents are employed.

Within the sample, 48% of the respondents are from the companies present in over 10 markets, 14% is present in 6 to 10 markets, 35% is present in 2 to 5 markets and only 3% of companies is present in only one market.

One of the requirements was also the number of employees in the companies of the respondents, and following answers were obtained: 48% of companies have over 1,000 employees, 25% have 100 to 1,000 employees, 23% have 10 to 100 employees and only 4% have less than 10 employees.

### Application of Shopper Marketing in the markets of the Western Balkans – research results

In the beginning, we wanted to find out about basic intentions for practicing Shopper Marketing in the observed

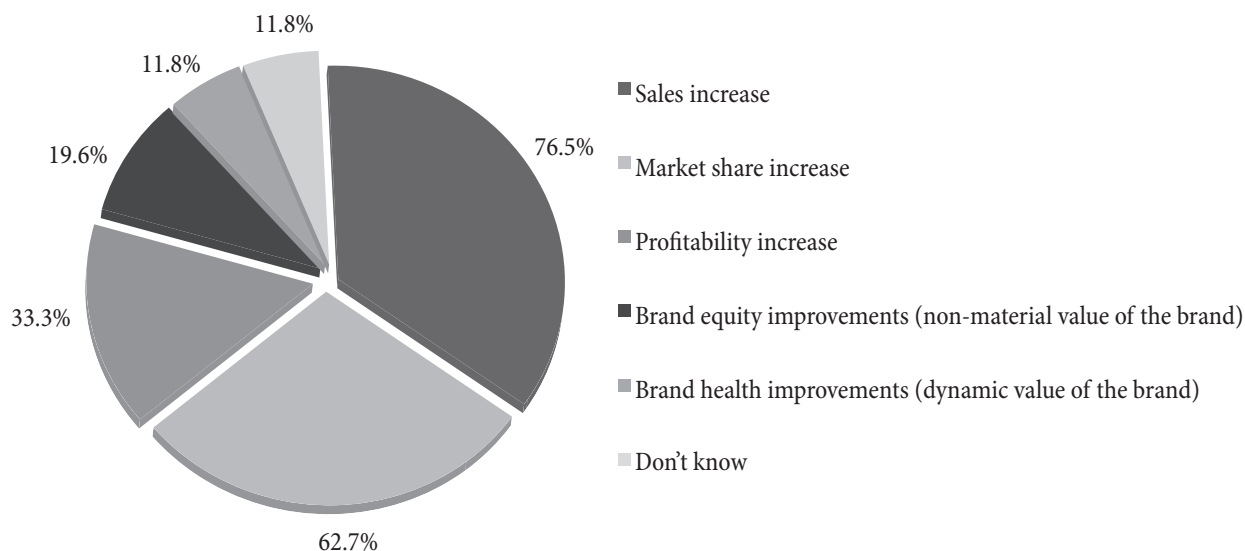
markets. In this part we wanted to see the answers to the question: ‘What are the aims of companies which practice Shopper Marketing’.

It is evident that the two answers with the highest percentage are actually the part of sales tasks. Two of the aims specific to marketing got the lowest percentage of answers. If Shopper Marketing activities were present in the companies, then all five answers would have had more or less equal percentage. From this, we can draw a clear conclusion that the companies in the region still perceive Shopper Marketing as one of the means to increase sales while the marketing component of Shopper Marketing is still neglected.

In the following part we wanted to see how able the companies in these three markets are to create Shopper Marketing strategies and tactics and how dependent they are on central offices placed in other markets.

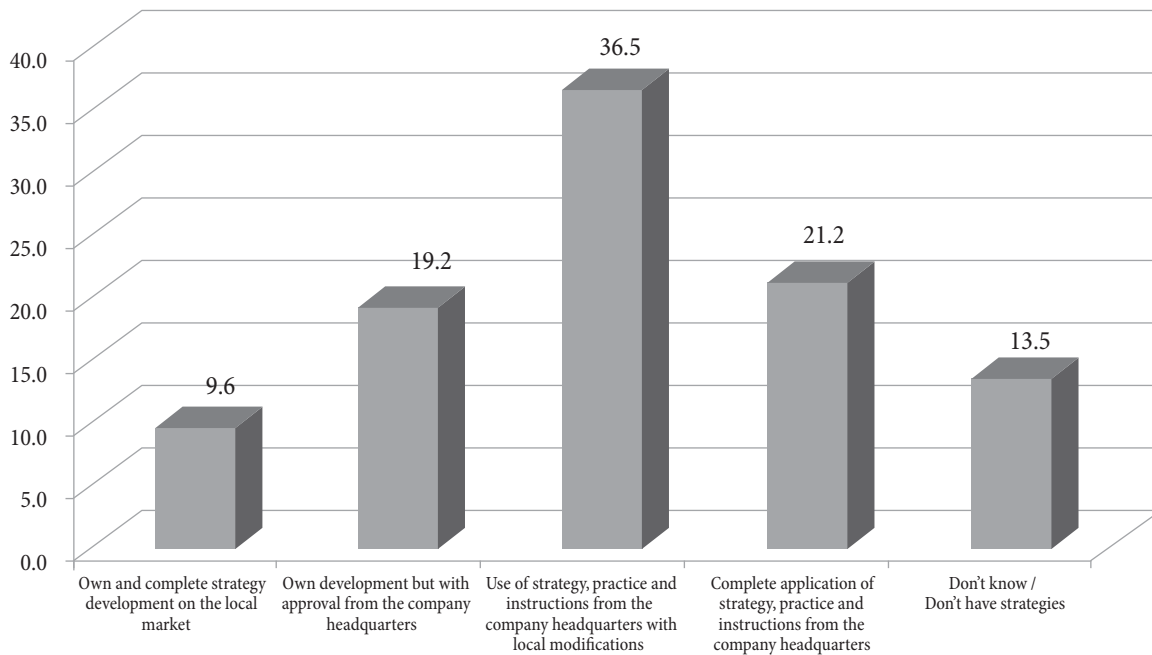
It is evident that majority of the activities is planned in central offices of the companies and as such applied in the regional markets, with companies having only abilities to perform some local modifications and implementation. In the regional markets, strategies are created in only 9.6% cases, which means that below 10% of companies in the regional market are independent in Shopper Marketing strategies. In 19.2% of cases, Shopper Marketing strategies are created in the regional market, but such strategies are subject to approval by central offices. Most frequent

Figure 5: Basic aims of Shopper Marketing activities



Source [38]

**Figure 6: Manner of planning Shopper Marketing activities (%)**



Source [38]

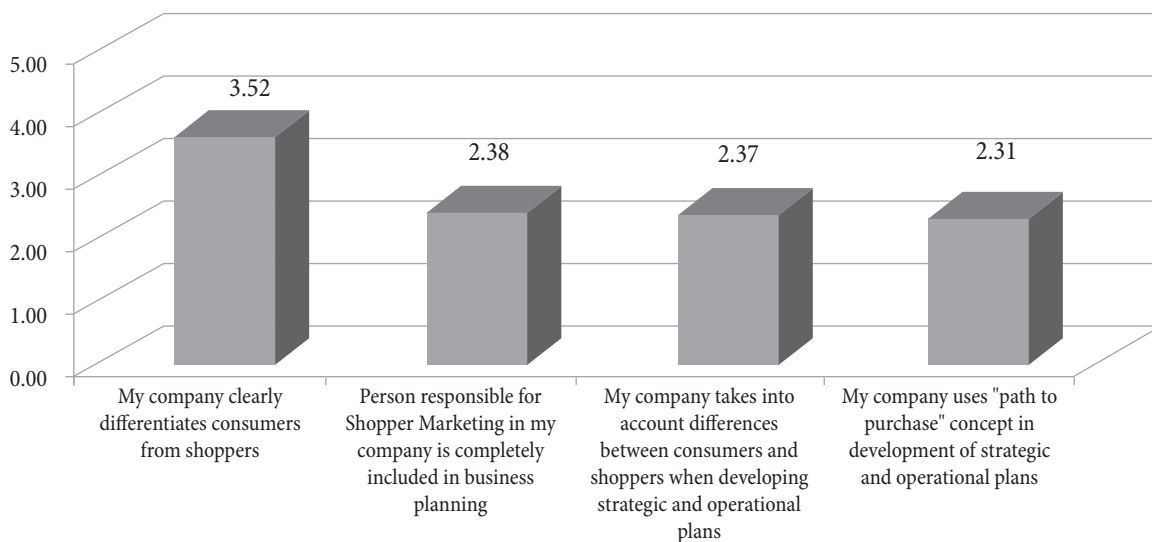
practice, with 36.5%, is the one which means application of practices and directions from central offices with local modifications. Following the strategies and practice of central offices “blindly” occurs in 21.2% of cases. It is important to mention that 13.5% of respondents stated that they were not aware of or that their companies did not possess Shopper Marketing strategies.

Since the basic aim was to examine the adaptation of Shopper Marketing, this part included additional questions aimed at examination of the extent to which Shopper

Marketing elements were adopted by the companies. In this part, respondents gave marks from 1 to 5, where 1 had extremely negative connotation, 3 neutral and 5 extremely positive connotation.

The statement ‘Company where I work clearly differentiates consumers from shoppers’ got solid 3.5. It proves that companies still have the understanding of differences between consumers and shoppers. But, the statements ‘Company where I work takes into consideration differences between the terms shopper and consumer

**Figure 7: Adopting of individual elements of Shopper Marketing (average grade)**



Source [38]

while creating strategic and operational plans’ and ‘Company where I work uses a path to purchase concept while creating strategic and operational plans for Shopper Marketing activities’, got low marks, which shows that the companies do not apply the acquired understanding. Also, the statement ‘Person in charge of Shopper Marketing in my company is fully involved in business planning’, which got very low 2.38, is also a clear indicator of low level of adopting the Shopper Marketing in the regional markets.

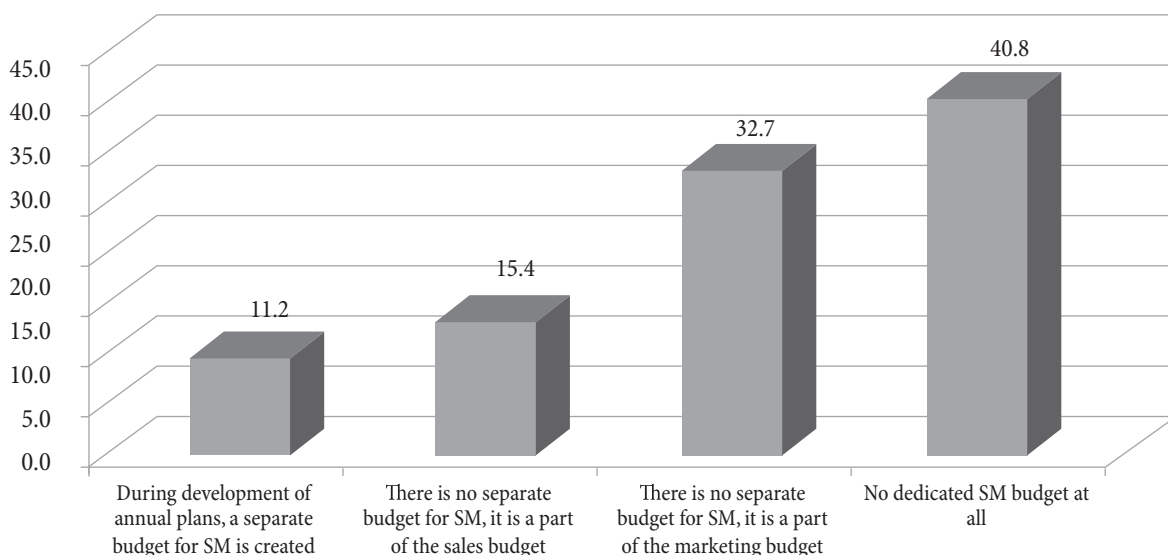
The following part is supposed to show the practices in the budget creation process for Shopper Marketing, or if there are separate Shopper Marketing budget provisions in the course of annual planning.

It can be concluded from the Figure 8 that in only 11.2% of cases companies allocate separate budgets to Shopper Marketing. In 15.4% of cases Shopper Marketing is financed from the sales budget and in 32.7% of cases from the marketing budget. The largest number of respondents provided the answer that the companies where they work did not have any budget for Shopper Marketing.

At the end of this part we wanted to see the attitude of the respondents towards the adopting level of Shopper Marketing in the markets where they operate. The results are presented in the following Figure.

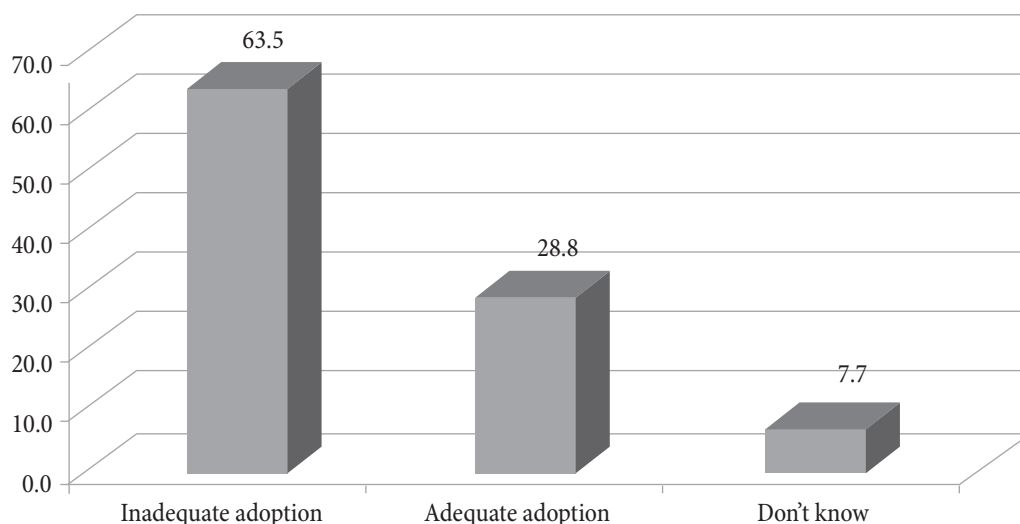
It is evident that almost two thirds of respondents consider that Shopper Marketing is not sufficiently adopted

Figure 8: Manner of budget creation for Shopper Marketing in the regional markets (%)



Source [38]

Figure 9: Shopper Marketing adoption level in the regional companies (%)



Source [38]

in their markets. This is in correlation with the previous responses and it makes it easy to conclude that Shopper Marketing is still in early development stage.

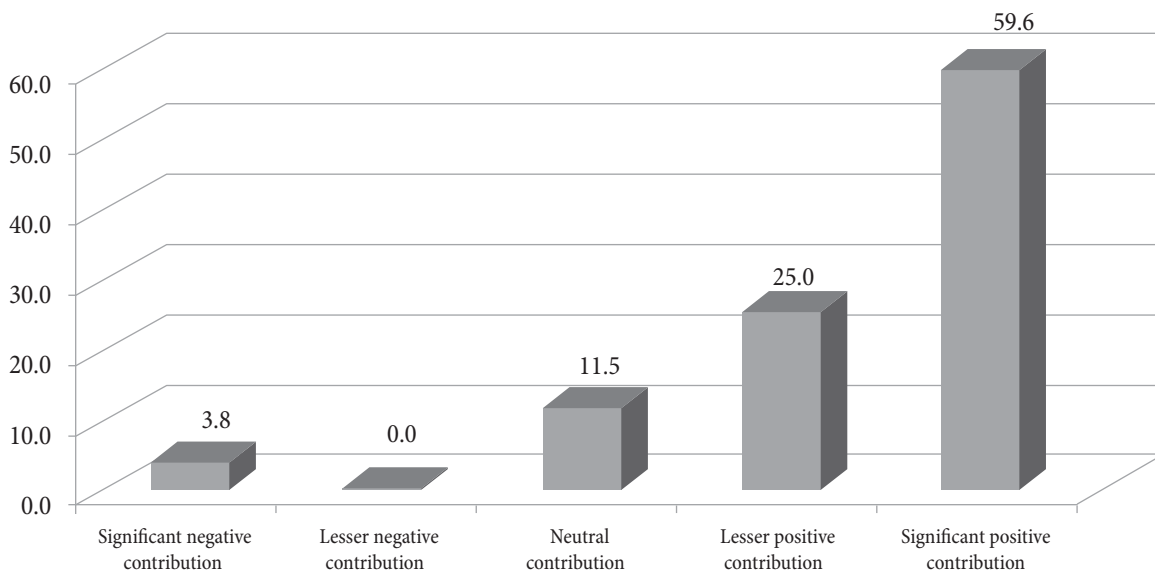
After having established the condition of development of Shopper Marketing in the regional markets, the intention was to establish the attitudes towards influence of Shopper Marketing on companies' business operation. Following that path, we looked for the answers regarding the influence of Shopper Marketing on the total business results.

Answers 'Significant negative contribution' and 'Lesser negative contribution' occur in insignificant number. Almost the same situation applies to the answer 'Neutral contribution', which occurs in 11.5%

of cases. 'Lesser positive contribution' occurs in 25% of cases. However, majority of respondents provided the answer 'Significant positive contribution' in 59.6% of cases. Almost 60% of respondents consider that Shopper Marketing has significant positive contribution to business operation and that is a clear evidence of the potential this concept holds.

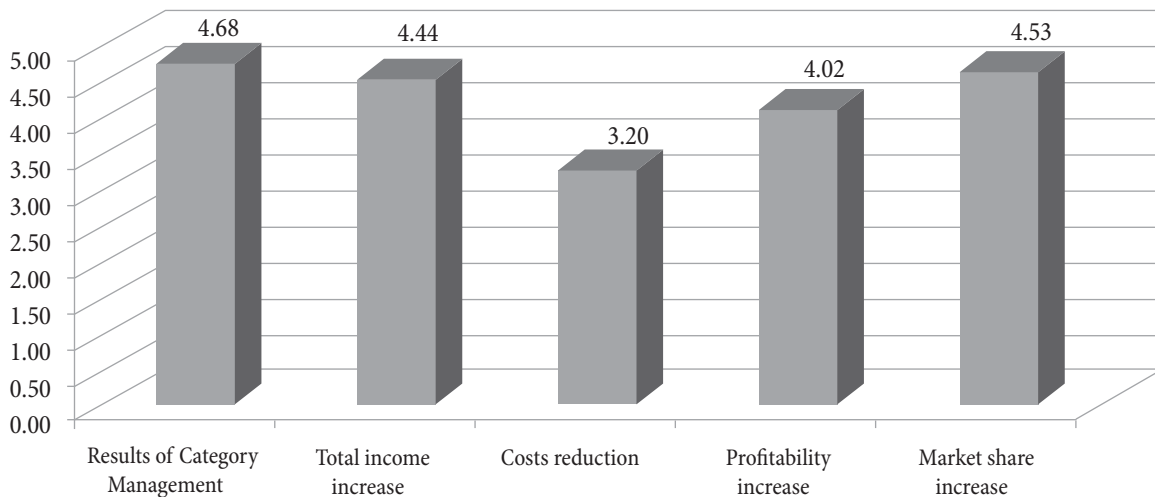
Nonetheless, to move away from generalization, the respondents were asked to mark how Shopper Marketing contributes to individual components of business operation shown in the following Figure. Marks ranged from 1 to 5, where 1 had very negative connotation, 3 was neutral, and 5 had a very positive connotation.

**Figure 10: Contribution of Shopper Marketing to overall business operation results (%)**



Source [38]

**Figure 11: Influence of Shopper Marketing on individual business operation aims (average grade)**



Source [38]

The Figure shows that two categories were marked over 4.5, which is a very high result. These categories represent the influence of Shopper Marketing to Category Management and the increase in market share. That means that respondents consider that Shopper Marketing has the greatest influence in these two areas. The greatest significance is in the mark 4.68 awarded to the positive influence of Shopper Marketing to the results of Category Management, which was the first hypothesis of this paper. The next two areas where Shopper Marketing has positive influence but with less intensity are the income increase and profitability increase. The marks for both areas are within the range of 4.0 to 4.5, which is also a high result. In the area of reduction of expenses, Shopper Marketing was awarded the lowest mark considering the fact that the average mark was 3.2. Nevertheless, bearing in mind that mark 3 was the borderline of transition from negative to positive area, we can draw a conclusion that Shopper Marketing was graded as mildly positive in this area as well. In the end, when we make a cross-section of all these five areas where answers were demanded, we get the logical harmony. Almost neutral impact on expenses with increase in income leads to increase in profitability and positive influence on Category Management, all of which is followed by the increase of market share.

Considering the fact that significant positive contribution of Shopper Marketing was established in overall business operation as well as in individual

business operation parameters, in the following part we wanted the answers about the future of Shopper Marketing in the regional markets in the period of 1 to 5 years. The respondents' attitudes are presented in the following Figure.

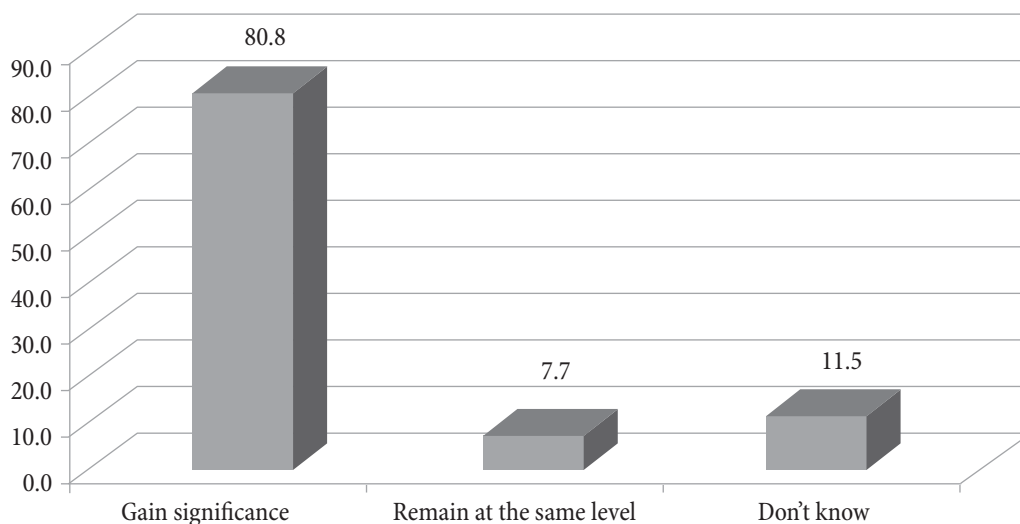
It is evident that over 80% of respondents provided the answer that Shopper Marketing would gain in significance in the period from 1 to 5 years in the future. Those who consider it will remain at the same level are present in almost insignificant percentage. We can easily conclude that more significant adoption and development of this concept in the regional markets is still to come.

### Conclusion

Shopper Marketing is, in a qualitative sense, still underdeveloped in the regional markets. This is confirmed by the aims which Shopper Marketing activities are created for, embodied in increase in sales and increase in market share, while marketing aims embodied in improvement of brand performances are mostly not present.

Shopper Marketing strategies and initiatives mostly come from the companies' central offices which are not situated in the regional markets. That narrows down the freedom of action and flexibility of companies in the observed markets. In this manner, regional companies execute plans which are not ideally prepared for the regional markets and hence suboptimal.

Figure 12: Opinions about the future of Shopper Marketing (%)



Source [38]



It is typical for Shopper Marketing that no budget is planned for it, or that only a small portion of marketing budget is allocated to it. That is considered one of the greatest obstacles to larger presence of Shopper Marketing. Allocation of separate budget for Shopper Marketing is one of the basic prerequisites for further development.

Majority of respondents considers that Shopper Marketing has great positive contribution to business operation results. This is one of key indicators that justify the introduction of Shopper Marketing to business operation. Also, under the influence of such attitudes, more significant adoption of the concept in the future is surely going to take place.

Shopper Marketing has extremely positive influence on overall business operation as well as individual business aims embodied in income, profitability, market share and Category Management results. Bearing in mind positive influence on all the above-mentioned parameters and knowing that it has neutral influence on expenses, Shopper Marketing is excelling as a powerful tool for improvement of competitive advancement of companies.

In the future period of 1 to 5 years, a significant development and increase in practice of Shopper Marketing is to be expected in the markets of the Western Balkans. Extremely high percentage of respondents who suggest it provides certainty of such development.

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