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This edition of *Ekonomika preduzeća* covers a vast array of topics, both of national as well as broader (regional or global) character. The first paper in the *Organization and Management* section written by *O. Abidi, V. Dženopoljac* and *S. Janošević* represents an explorative study of the impact of firm characteristics on FDI within Middle East and North Africa (MENA) region. Research propositions stipulate the role of firm-specific variables in explaining the regional expansion of MENA companies through FDI.

In the *Finance* section, a trio *J. Kočović*, *M. Koprivica* and *B. Paunović* deals with initial effects of Solvency II implementation in the member states of the EU, while respecting the macroeconomic environment in which it is implemented. Although Serbia is not an EU member, the effects of this concept are also relevant to the domestic insurance market, due to reinsurance business, the presence of insurers belonging to insurance groups based in the EU, and the gradual integration of parts of the EU regulations into the local legal framework within the accession process. The authors identify the key problems that have emerged in the first year of Solvency II application and propose possible ways to overcome them.

In the second paper in this section *G. Radosavljević* examines the relationship between the level of fiscal decentralization and economic growth across Serbian local self-governments over the 2002-2011 period by using a panel data approach with fixed effects. The author's results suggest that there is a modest positive impact of fiscal decentralization on local economic growth in that period in Serbia.

In the *Tax and Law* section, *J. Perović* analyzes the rules concerning the limitations on liability for the loss arising out of business contracts from the perspective of the principle of full compensation and its limitations by the foreseeability rule. Given that the contractual liability may apply only if no circumstances that exclude it have occurred, the paper provides a careful analysis of the rules of the Law on the exemption of liability, as well as contractual clauses on the exclusion and limitation of liability in terms of their validity and legal effects.

In the second paper in this section, *N. Krstić* and *J. Protić* review the effects of the implementation of the Law on Professional Rehabilitation and Employment of Persons with Disabilities from the business perspective. A survey involving companies from various sectors and sizes was conducted, and the results are cross-referenced with the findings from interviews with selected employers and representatives of the state administration. The authors detect various obstacles with the employers regarding misunderstanding as to how the Law should be applied, along with the imbalance between the needs of the labor market and the number and quality of employable persons with disabilities.

The first paper in the *Transition and Restructuring* section, written by *I. Popović Petrović* and *P. Bjelić,* explores the implementation and existing obstacles from the Trade Facilitation domain in the CEFTA 2006 countries. The authors focus on TF measures and show that many possibilities and burdens are still present. They provide concrete proposals like investing in TF instruments that could elevate the trade volume increase in this region.

The second paper in this section, by *M. Šestović, K. Radosavljević* and *B. Chroneos Krasavac*, assesses the impact of IPA funds on the country's competitiveness considering data on funds specifically intended for agriculture (IPARD), and their impact on the export of agricultural products to beneficiary countries. In addition, analyses of available data on starting a business and trading across borders, and their correlation with data on absorption of IPA funds, were used to determine the importance of EU pre-accession funds for a country's competitiveness.

In the last paper, *S. Milićević, S. Cvetanović* and *D. Despotović* investigate the movement of competitiveness of industry in 212 countries of the world measured by the amount of manufacturing value added per capita during the period from 1970 to 2015. The authors show that the productivity in industry of developed countries is significantly higher than the average productivity of world industry, which is a specific confirmation of their competitive superiority.

Prof. Dragan Đuričin, Editor in Chief

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A REFLECTIVE ANALYSIS OF FIRM-LEVEL DETERMINANTS OF BINARY INVESTMENTS BETWEEN MENA COUNTRIES

Teoretski prikaz mikro-faktora binarnog investicionog odlučivanja u zemljama MENA regiona

Abstract

This explorative study advocates firm characteristics as potential drivers of Foreign Direct Investment (FDI) within the Middle East and North Africa (MENA) region. Research propositions stipulate the role of firm-specific variables in explaining the regional expansion of MENA companies through FDI. MENA companies in different sectors have increasingly invested in other countries in the region over the last years and this does not seem to be restricted to isolated cases. These regional investors are not dissuaded by the challenging economic and institutional conditions in MENA economies. Therefore, there is a need to understand what could possibly lead companies in MENA countries to invest in other markets in their region despite their unattractiveness for the outside investors. A set of eight propositions has been established to account for the potential role of firm-level variables in explaining this decision. Variables pertain to firm size, ownership advantages, productivity, networking capabilities, international experience, affiliation with homeland authorities, and leverage.

Keywords: *FDI, MENA, firm-level variables*

Sažetak

Ova eksplorativna studija nastoji da identifikuje potencijalne pokretače stranih direktnih investicija (SDI) u okviru regiona Bliskog istoka i Severne Afrike (Middle East and North Africa, MENA). Istraživačka pitanja nastoje da ukažu na ulogu i značaj mikro faktora konkurentnosti koji opredeljuju ekspanziju kompanija iz MENA regiona posredstvom SDI. Kompanije iz MENA regiona, koje pripadaju različitim industrijskim granama, sve više investiraju u druge zemlje ovog regiona tokom poslednjih godina, pri čemu se ne radi o izolovanim slučajevima, već o pravilu. Pomenute investitore iz ovog regiona od SDI ne odvraćaju ni izazovi ekonomske i institucionalne prirode pojedinih MENA zemalja. Stoga je jako bitno razumeti faktore koji motivišu strane investitore da investiraju u tržišta ovog regiona, uprkos njihovoj relativno slaboj atraktivnosti. Set od osam istraživačkih pretpostavki predstavljenih u radu osvetljavaju značaj i ulogu različitih mikro faktora kod donošenja ovakvih investicionih odluka. Identifikovane varijable obuhvataju veličinu preduzeća, prednosti vlasništva, produktivnost, sposobnost povezivanja sa poslovnim partnerima, međunarodno iskustvo, afilijacija sa lokalnim vlastima i nivo finansijskog leveridža.

Ključne reči: *SDI, MENA, mikro faktori*

Introduction

FDI was one of the most dominant channels of internationalization in the 1960's. This movement was intensified in the late 1990's due to free trade and higher capital mobility between nations [5]. In this context, developing economies became interesting destinations for FDI since they joined the World Trade Organization. The improvement of transportation and communication systems around the world also reinforced their attractiveness for investors. In addition, the privatization of numerous state-owned enterprises created a surge of FDI in those nations [6].

FDI could be defined as "a movement of capital (and other resources) from a parent corporation in the home country that creates a substantial equity interest in a host country corporation, called a subsidiary" [24, p. 220]. FDI can be classified into four categories: merger and acquisition, joint venture, new plant and others, e.g. plant expansion, increase in equity stakes [33].

A number of Arab countries offered significant incentives to encourage inward FDI. For instance, Algeria allowed foreign ownership in hydrocarbons sector through joint ventures with the national company. Libya enabled foreign investors to hold minority ownership positions in specific sectors [29]. Despite ascending competitiveness of different countries in the region, particularly Gulf States, MENA countries have poor performance in attracting FDI if compared with other developing countries such as East European or Southeast Asian countries [20]. The share of MENA economies in the world's total FDI amount remains relatively low if the region's contribution to world economy is taken into account [25].

Several authors have attributed this inconsistency to the inadequacy of institutional and regulatory systems. Despite financial deregulation in those countries, legal systems still give upper hand to local governments over foreign investors [31]. As such, governmental policies seem to be responsible for the lower rate of investment in MENA countries. The lack of structural reforms toward more openness and credit supply severely reduced private investment. Economic instability also contributed to limiting the prospects of private investments in the MENA region, in particular the fluctuation of gross domestic product (GDP) inflation and interest rates [4].

MENA countries are expected to facilitate business venturing, safeguard contract enforcement [20], and undertake profound institutional reforms in order to create more competitive and safer business environments. As such, MENA economies would be more effective players in the global arena [6].

As research suggests that local investors in the MENA region are less responsive to the aforementioned impediments [29], this study attempts to depict their profile. Propositions will be made to grasp the characteristics of local FDI suppliers within the MENA region. The resulting framework can shed some light on the firm-level factors that encourage those investors despite the institutional and economic situation in other MENA markets. Firm characteristics, such as state ownership and networking capabilities, could potentially provide a more thorough understanding of the specificity of MENA countries as FDI destinations. As a matter of fact, FDI in the MENA region has received less attention from academics contrary to other emerging economies [25].

The paper is organized as follows. Related work is presented in the first section. Research propositions are defined in the next section. Implications for future research and contributions are discussed in the last section.

Literature review

The delimitation of the MENA region varies depending on the study. The World Bank [10] states that the MENA region includes 21 countries: Algeria, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Malta, Morocco, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, the United Arab Emirates, Palestine, and the Republic of Yemen. However, the data for Palestine is not available, so the presentation of data about foreign direct investments (FDI) will include 20 listed countries from the MENA region. Authors tailor their samples depending on the topic and their research aims. For example, Elmawazini et al. [10] studied ten countries from the MENA region. Rugmans and Ebbers included 16 MENA countries in

the list. Salem and Baum [28] studied FDI determinants in the commercial real estate sector relative to eight MENA countries. Therefore, the main purpose of this paper is to shed light, from theoretical perspective, on the microfactors that might determine the FDI inflow into the MENA region countries. Literature fails to offer any deeper insight into this issue. It rather shows the macroeconomic determinants of FDI.

Drivers of FDI in MENA countries

Macroeconomic and institutional factors were largely debated in literature as FDI determinants of inward FDI in MENA economies. Macroeconomic factors pertain to the scope of local economy, government spending [20], balance of payments [32], level of GDP per capita [13], [25], and GDP [4]. Literature shows conflicting results in regard to the effect of natural endowments: positive [20] or negative [25], [35]. Negative influence might be the result of foreign ownership restrictions that countries possessing natural resources usually opt for [25]. The quality of institutional environment was suggested as a major FDI inflow determinant in MENA countries. This is assessed through the degree of transparency, control exerted over money exchange, tax appraisal, expropriation risk and profit repatriation [20]. Openness to trade and freedom to conduct business were also demonstrated as influential FDI determinants in MENA countries. These variables concern the adequacy of regulatory systems and the easiness of venture creation, operating and closing [32]. While country risk had negative effects on FDI inflows into Arab countries [21], political stability, on the contrary, plays a significant role in attracting FDI in commercial real estate sector in Gulf Cooperation Council (GCC) economies [28].Other factors have been discussed in literature as potential determinants of FDI inflows in the region: percentage of enrolment in tertiary education, research and development expenditures, technological infrastructure and labor costs. Domestic investment is deterrent to FDI inflows in Arab countries [21].

Effects of FDI in MENA countries

FDI have several implications in developing economies, such as gains in productivity and efficiency, technology transfer, development of exports and managerial expertise [20]. Technology transfers were conducive to cultural, economic and technological changes in developing countries.

Table 1: Foreign direct investment, net inflows (% of GDP) [34]

Country Name	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Algeria	1.26	0.60	0.51	2.03	1.88	0.94	1.03	1.12	1.57	1.25	1.54	2.00	1.43	1.29	0.72	0.81	0.70	-0.24	1.03
Bahrain	2.90	6.85	4.01	0.90	2.25	4.67	6.58	6.57	15.75	8.08	6.98	1.12	0.61	2.71	2.90	3.04	2.87	-2.56	0.88
Djibouti	0.62	0.60	0.60	0.59	0.58	2.29	5.79	3.13	14.08	23.04	22.79	9.23	3.23	6.38	8.13	19.66	9.63	7.18	..
Egypt, Arab Rep.	1.27	1.17	1.24	0.52	0.74	0.29	1.59	5.99	9.34	8.87	5.83	3.55	2.92	-0.20	1.00	1.45	1.57	2.07	2.44
Iran, Islamic Rep.	0.02	0.03	0.18	0.32	2.74	1.87	1.60	1.28	0.87	0.58	0.49	0.72	0.75	0.73	0.78	0.65	0.48	0.53	0.80
Iraq	..	..	..	..	..	..	0.82	1.03	0.59	1.09	1.41	1.43	1.01	1.12	1.56	2.19	2.04	1.85	0.09
Israel	1.50	3.54	6.08	1.36	1.31	2.62	2.18	3.38	9.35	4.92	4.76	2.22	2.99	3.31	3.50	4.05	1.96	3.79	3.75
Jordan	3.92	1.94	10.79	3.05	2.49	5.36	8.21	15.76	23.54	15.32	12.87	10.13	6.39	5.15	5.01	5.79	6.08	4.27	3.98
Kuwait	0.23	0.24	0.04	-0.32	0.01	-0.14	0.04	0.29	0.12	0.10	0.00	1.05	1.13	2.12	1.65	0.82	0.30	0.25	0.26
Lebanon	..	..	5.76	8.24	6.98	14.24	9.06	12.32	12.27	13.74	14.83	13.54	11.14	7.83	7.09	5.78	6.08	4.76	5.26
Libya	-0.47	-0.36	0.37	-0.39	0.71	0.54	1.08	2.19	3.76	6.94	4.72	2.18	2.39	..	..	..	..	..	..
Malta	7.22	20.77	17.26	9.62	-10.6	16.7	123.1	341.1	370.3	451.7	165.3	16.93	105.8	82.08	36.12	5.03	1.37	28.68	22.17
Oman	0.72	0.26	0.42	0.03	0.54	0.12	0.45	4.95	4.29	7.92	4.85	3.07	2.12	2.40	1.78	2.04	1.59	-3.11	2.54
Qatar	3.39	0.91	1.42	1.68	3.22	2.66	3.78	5.61	5.75	5.90	3.28	8.31	3.73	0.56	0.21	-0.42	0.50	0.65	0.51
Saudi Arabia	2.92	-0.48	-0.99	0.01	-0.32	-0.27	-0.13	3.69	4.86	5.85	7.59	8.50	5.53	2.43	1.66	1.19	1.06	1.25	1.15
Syrian Arab Republic	0.54	1.66	1.40	0.52	0.53	0.73	1.10	1.73	1.98	3.07	..	..	..	..	..	..	..	..	..
Tunisia	2.98	1.52	3.50	2.05	3.41	1.97	1.90	2.21	9.42	3.89	5.80	3.51	3.03	0.94	3.45	2.29	2.15	2.25	1.65
United Arab Emirates	0.34	-1.17	-0.49	1.15	0.09	3.42	6.77	6.03	5.77	5.50	1.60	0.45	3.03	2.04	2.36	2.43	2.68	2.46	2.58
Yemen, Rep.	-3.47	-4.03	0.07	1.57	1.07	-0.76	1.03	-1.80	5.87	4.24	5.78	0.51	0.61	-1.58	-0.04	-0.33	-0.54	-0.04	-2.05
Middle East & North Africa	**1.29**	**0.71**	**1.30**	**0.87**	**1.02**	**1.82**	**2.59**	**4.79**	**6.10**	**5.97**	**4.33**	**3.51**	**3.18**	**1.96**	**1.77**	**1.68**	**1.50**	**1.64**	**1.77**

As such, multinationals helped in reducing the digital gap worldwide [6]. Table 1 presents FDI inflows as percentage of GDP in MENA economies, from 1998 to 2016 [34].

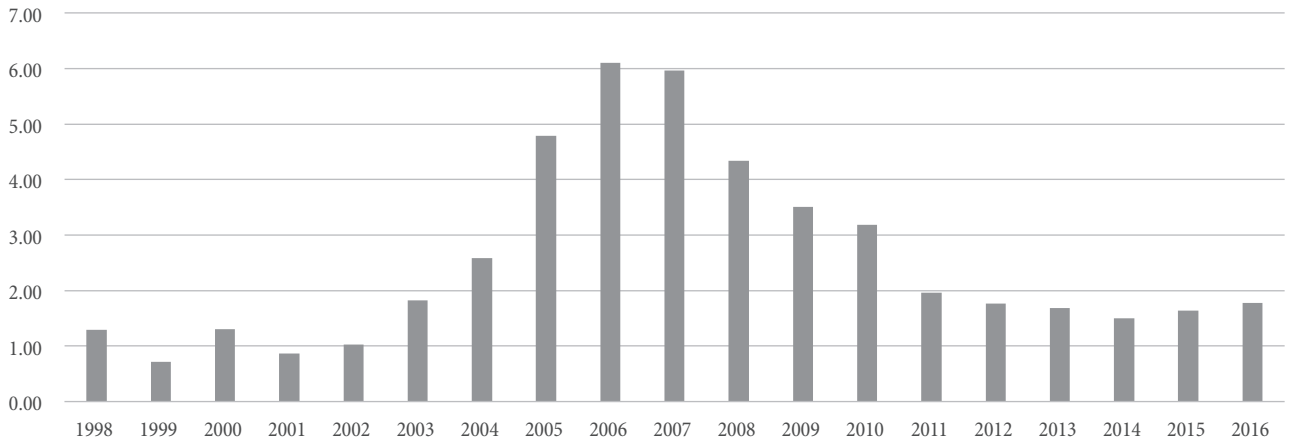
As it can be observed from Table 1 and Figure 1, the growth of FDI began in 2003, after MENA economies left their regression path, which they followed during the 1990's. On the other hand, as it was pointed out earlier, FDI inflow followed the pattern of GDP and GDP growth in particular (Figures 2 and 3).

As regards MENA economies in particular, the results are mitigated. On the one hand, FDI inflows increase merchandise and manufacturing exports in those countries [1]. For example, in the same sense, the role of subsidiaries established by multinationals from developed countries in Tunisia can evolve to embrace the accumulation of new competencies. Some subsidiaries build bigger capacity that allows them to fulfill broader mission in the region [27]. On the other hand, several studies argue in favor of limited FDI effects in the MENA region. Despite their positive role in supporting local employment, FDI inflows did not contribute to economic growth in Saudi Arabia [3]. Nonetheless, FDI has a strong impact on long term economic prosperity in GCC countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) [31]. FDI inflows into MENA economies have no impact on gains of labor productivity. This might be due to the limited technological capabilities and human skills in those countries. In addition, a significant amount of FDI inflows in MENA countries targets non-manufacturing sectors, expected to be less relevant for technology transfers [10].

MENA economic integration and its effects on investment interflows

The signing of various trade agreements within the MENA region, such as the GCC and the Arab Maghreb union (Algeria, Libya, Mauritania, Morocco, and Tunisia), was supposed to prelude intensified cooperation and greater economic integration. Integration prospects were motivated by economies of scale and reduction of industrial duplication between MENA countries. Integration was a response to mounting fears of globalization and its effects on national sovereignty and growth opportunities in the international marketplace [5]. Although countries of the MENA region share common traits related to history, language, business practices and governance systems, they remain significantly different in terms of economic structure and energy endowments [25]. Only Egypt, Jordan, Morocco and Tunisia have competition laws. Dispute resolution is still not effective in several MENA countries [26]. Other factors obstructing economic integration between Arab states were stressed, i.e. government intervention and lack of coordination [12]. Romagnoli & Mengoni [26]

Figure 1: Middle East & North Africa, foreign direct investment, net inflows (% of GDP)[1]



1 Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP.

discussed the missing "deep integration" between MENA countries, which takes into account the interdependencies of financial markets and the standardization of institutions and procedures.

Propositions about firm-level drivers of FDI exchanged within the MENA region

Location-bound macroeconomic and institutional variables seem to play a less determinant role in explaining investments exchanged between MENA countries. Trade agreements were interpreted as potential FDI drivers as they were insufficiently defined and planned. Therefore, local investors might be supported by their own attributes. A set of firm-level factors could justify the decision of local investors from the MENA region to expand their operations in their region. Due to the inexistence of a comprehensive framework, research propositions are argued based on the mainstream literature results regarding firm-level determinants of inward FDI in developing countries.

Horizontal FDI – market-seeking investment – appear to be the dominant type of inward FDI in developing

Figure 2: Middle East & North Africa, GDP (current, US$[2])

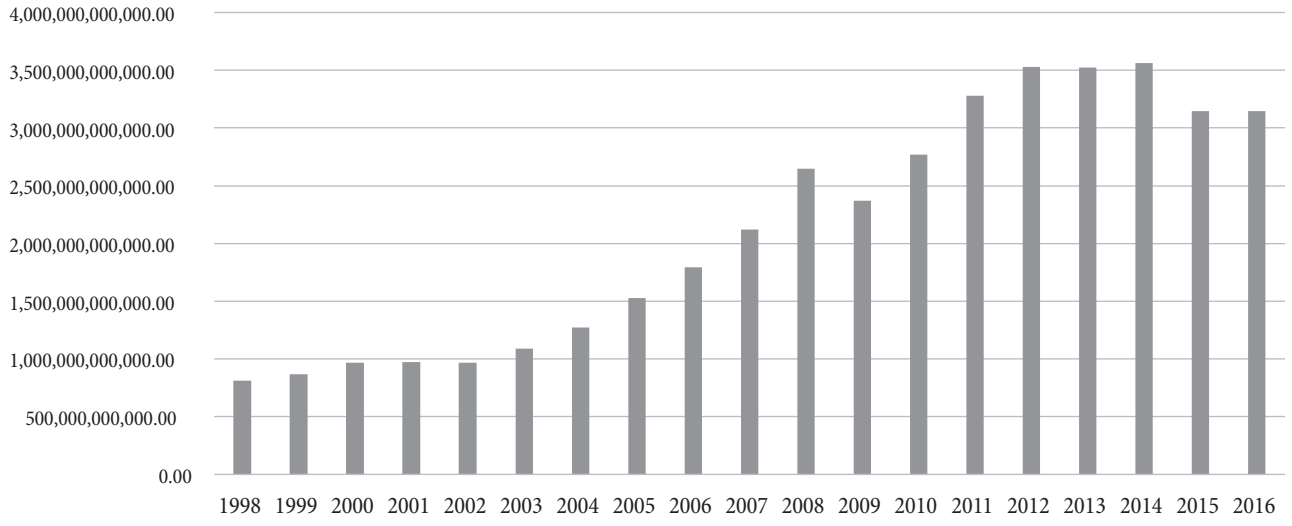
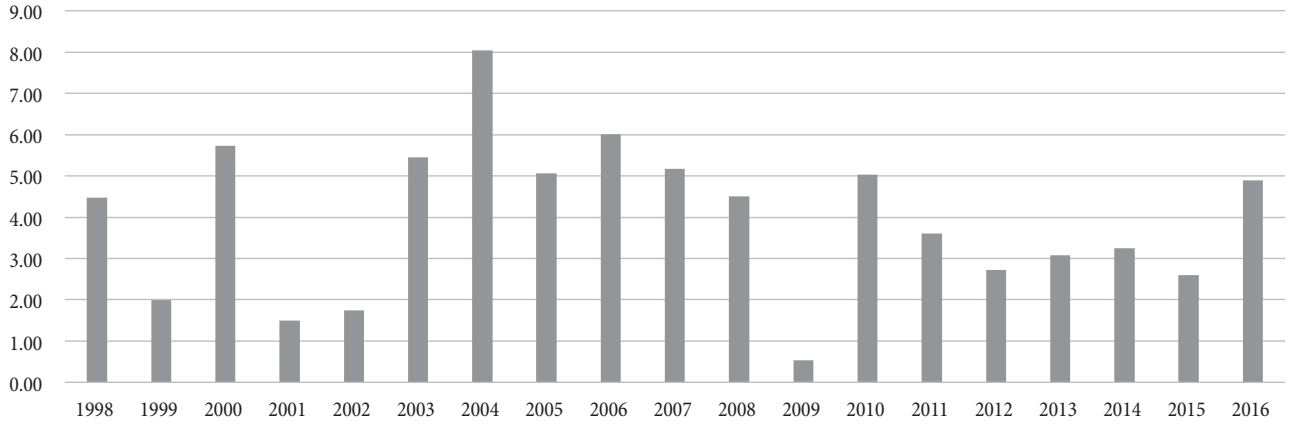


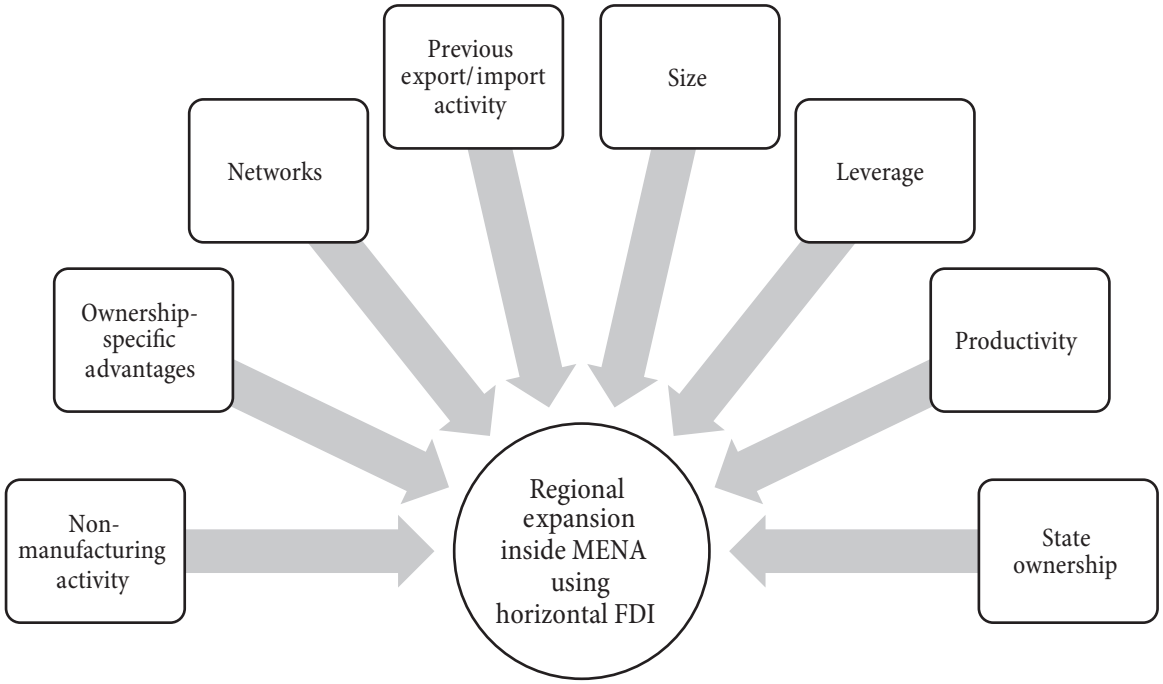
Figure 3: Middle East & North Africa (GDP growth, annual[3])



2 GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are presented in U.S. dollars. Figures for GDP presented in dollars are converted from domestic currencies using official exchange rates for each year. For a few countries where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used.

3 Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

Figure 4: Firm-level factors affecting local investors' decision to invest in other MENA markets



nations, e.g. Chinese privately owned enterprises [14], Malaysian firms [36], and Turkish manufacturing firms [18]. As a matter of fact, economic structure and industrial similarity of MENA countries do not support vertical FDI inflows, which are usually motivated by cost savings and denotes the relocation of specific activities in the value chain [22]. Hence, local investors in the MENA region would be operating in non-manufacturing sectors. They are expected to be mainly service companies that do not rely on any industrial or research activities.

Proposition 1: local investors in MENA economies operate in non-manufacturing sectors and apply horizontal FDI.

Possession of distinctive capabilities is a major determinant of FDI [8], [9]. The resource-based view of the firm posits that a firm will internationalize its operations if it possesses valuable specific advantages. Internationalization would allow the exploitation of homeland-specific advantages in foreign markets [15]. The development of specific advantages enables firms to outperform local competitors in host locations [2]. Ownership-specific advantages represent the most powerful determinants of outward FDI [24]. Location-specific advantages are seen as hygiene factors of international expansion. Four ownership-specific advantages encourage outward FDI intensity, namely technological development, marketing and advertising capabilities, managerial and organizational knowledge, and access to funding. Ownership-specific advantages mostly comprise intangible assets and have distinctive features, i.e. transferability from parent to subsidiary and adaptability to host country environment at low costs. Although those findings have been demonstrated for manufacturing industries, non-manufacturing firms have the potential to create ownership-specific advantages in different areas, such as services, management of information systems and human resources [23].

Proposition 2: local investors in MENA economies possess ownership-specific advantages, especially in marketing and management.

A significant share of FDI is made through alliances in pursuit of profitable synergies overseas [9]. The definition of ownership-specific advantages should be reassessed to account for firm's capability of identifying and integrating valuable knowledge assets worldwide. Information spillovers exchanged between partners facilitate FDI. For instance, foreign investors in India target areas that attracted similar investments from abroad [22]. Furthermore, Chinese firms with international bonds tend to be more active investors in the international marketplace [35]. The

decision of Japanese firms to invest abroad is explained by the information spillovers gained from co-located exporters/investors [30]. Hence, evidence suggests that firm's connections with exporters or investors whose operations were relocated to MENA countries could be a potential driver for FDI decision in those locations.

Proposition 3: local investors in MENA economies are active in networking with other firms that exported/invested into the target MENA market.

International involvement of firms was depicted in literature as gradual. This was explained as a strategy used by firms to overcome barriers related to information asymmetry in new markets [17]. The Uppsala evolutionary model states that knowledge gathered in local markets precedes internationalization. Knowledge accumulation in foreign markets through export in the first stage lowers risk and facilitates commitment of more resources locally. Therefore, previous export activity is likely to encourage firms to increase their involvement in MENA markets achieved through FDI. Although stage models were challenged by the emergence of born-global firms that internationalize upon or soon after their inception, this theory might remain applicable for large firms expanding to the MENA region. Access to knowledge assets may not be sufficient for firms to overcome barriers to entry into those markets. The inclination of French firms to engage in outward FDI is supported by the knowledge gained from previous exporting activity [11]. Regardless of location-bound factors, previous exporting activity into one market stimulates FDI decision in the next year.

Proposition 4: local investors in MENA economies undertake exporting/importing activity into target market prior to FDI decision.

Other firm-level factors are likely to explain FDI decision in MENA economies, such as firm size, leverage and productivity. Firm size has a positive effect on Japanese horizontal FDI outflows. Larger firms may more easily afford scale-independent costs of investment [30]. Similarly, Indian companies operating in pharmaceutical and metals and metal products industries are more likely to invest abroad as their volume of sales increases [19]. Therefore, firm's size might represent an important advantage that could offset investment impediments pertaining to information asymmetry in developing nations. Larger firms usually benefit from significant support from the local government as they represent major employers and capital suppliers.

Proposition 5: local investors in MENA economies are large firms.

Constraints limiting firm's access to financial resources reduce the prospects of foreign investments by Japanese firms. Credit constraints affect their ability to cover the costs of information collection and networking in foreign markets [30]. In the same sense, the financial situation of the funding bank has a positive influence on the decision of Japanese firms to invest in the United States. Any decrease in the credit rating of the investor's main bank makes investment decision a less attractive entry mode [33].

Proposition 6: local investors in MENA economies enjoy sufficient credit supply.

Hyun & Hur [16] demonstrated that South Korean firms achieving high productivity rates are more likely to invest in countries characterized by tougher conditions of exploitation. Similar results were obtained for Japanese firms. Although minor, productivity has a positive impact on their FDI decision [30].

Proposition 7: local investors in MENA economies are characterized by high productivity rates.

The last firm dimension deemed relevant in explaining regional expansion through investment in MENA markets deals with ownership structure. Several studies have stressed state ownership, or state affiliation, as a determinant of investor's ability to moderate investment impediments in risky business environments. Malaysian companies linked with their government are prominent investors in foreign markets, especially in energy sector and financial services [36]. State ownership attenuates Chinese multinationals' concern for expropriation risks overseas. Strong home-host political relations reduce Chinese firms' exposure to expropriation risks. This positive moderating effect is higher for state-owned enterprises. These firms are less averse to expropriation risks in host countries highly dependent on exporting to the Chinese market [7].

Proposition 8: local investors in MENA economies are owned by or affiliated with the State.

Conclusion

This study proposes unveiling of firm-specific variables that could explain regional expansion through FDI inside the MENA region. In this regard, eight propositions were suggested to account for those characteristics, including type of activity, ownership-specific advantages, networking, previous export/import activity, size, leverage, productivity and ownership structure. Firms with those features are probably more capable of adapting to the business environment in other MENA countries. Variables, such as state ownership and size for instance, can allow those firms to influence the business environment in those countries. Cultural and political ties between different countries in the MENA region explain why local investors are less sensitive to barriers to investments. Local governments may use FDI as a strategy to capitalize on their political and economic power in the region. In this sense, specific organizations would be able to take advantage of those conditions, as well as the common cultural and linguistic heritage between MENA nations, to conduct profitable business. Though it lacks practical evidence, this work paves the way for future empirical studies that could test those propositions in different sectors. Moreover, scholars can study the repercussions of FDI decision on the performance of regional investors in the MENA region. As a matter of fact, no study explored to what extent local firms achieve positive results when they invest in other MENA markets.

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INITIAL EFFECTS OF SOLVENCY II IMPLEMENTATION IN THE EUROPEAN UNION

Prvi efekti primene Solventnosti II u zemljama Evropske unije*

Abstract

Solvency II as a new, risk-based regulatory framework for the insurance sector, setting high requirements in terms of capital adequacy, risk management and reporting for insurance companies, has been applied in the European Union as of January 1st, 2016. The paper deals with the analysis of the first effects of Solvency II on the insurers' balance sheet and solvency, based on the published statistical data. Risk margin sensitivity to interest rates, volatility of the capital, high and imprecise disclosure requirements, incompliance with international financial reporting standards and excessive conservatism of the standard approach are identified as key problems in the concept implementation, and possible ways to overcome these are proposed in the paper. It is concluded that continuous adjustment of Solvency II to the current macroeconomic trends is necessary for the purpose of its successful functioning in practice. Therefore, the process of developing this concept, despite the fact that its application has officially started, cannot be considered as terminated, or its methodology and parameters as permanently defined.

Keywords: *insurance, Solvency II, capital, risk margin, IFRS 17*

Sažetak

Počev od 1. januara 2016. godine, u zemljama Evropske unije primenjuje se Solventnost II, kao nov, na rizicima zasnovan regulatorni okvir sektora osiguranja kojim su postavljeni visoki zahtevi u pogledu adekvatnosti kapitala, upravljanja rizicima i izveštavanja za osiguravajuće kompanije. Na osnovu publikovanih statističkih podataka, u radu se analiziraju prvi efekti Solventnosti II na bilans stanja i solventnost osiguravača. Kao ključni problemi primene koncepta identifikovani su: kamatna osetljivost riziko margine, nestabilnost kapitala, visoki i neprecizni zahtevi za obelodanjivanjem, neusklađenost sa međunarodnim standardima finansijskog izveštavanja i preterana konzervativnost standardnog pristupa, i predloženi su mogući načini njihovog prevazilaženja. Zaključuje se da je, u svrhe uspešnog funkcionisanja u praksi, neophodno kontinuirano prilagođavanje Solventnosti II aktuelnim makroekonomskim kretanjima. Stoga se proces razvoja ovog koncepta, uprkos početku njegove primene, ne može smatrati okončanim, niti se njegovi metodologija i parametri mogu okarakterisati kao trajno definisani.

Ključne reči: *osiguranje, Solventnost II, kapital, riziko margina, MSFI 17*

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Introduction

The unified regulatory framework for determining the solvency of insurance companies in the European Union was formally established during the 1970s. In order to appreciate the inflationary impact, Solvency I framework, which made minor changes to the preceding regime, came into force in 2002. In the meantime, new risks have emerged and the effects of certain existing risks have been intensified, but significant progress in the domain of knowledge and instruments that are necessary for risk measurement and management has been made. Over the last two decades, the insurance sector has been exposed to the pressures of pronounced financial market volatility and increasingly frequent catastrophic events that threaten its stability [27, p. 463]. Being characterised by more complex insurance products and investment strategies, intensive consolidation and expansion into new markets and activities, the contemporary business environment of insurance companies poses challenges for supervisory authorities. At the same time, numerous structural shortcomings of the Solvency I concept [8], [24], [30], as well as the failure to recognise the growing role of insurance groups and the convergence in the domain of financial services [32, p. 170], have become limiting factors for further insurance business development, leaving room for regulatory arbitrage between different types of financial institutions and the EU Member States [21, p. 230]. The significantly changed circumstances at the beginning of the 21st century introduced a need for fundamentally different, risk-based approach to insurers' solvency assessment. After 15 years of development, Solvency II, as a new regulatory framework for insurers and reinsurers in the European Union, came into force on January 1st 2016.

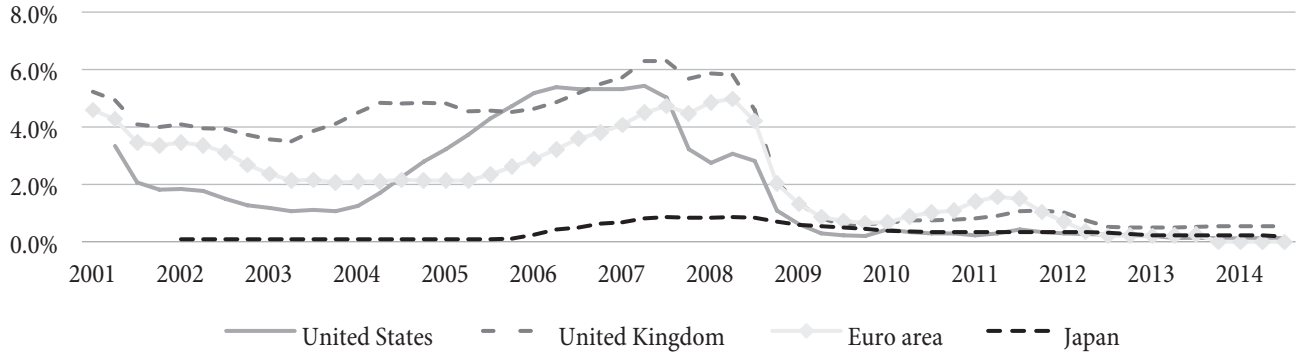
The goal of Solvency II is not to increase a priori the overall level of capital in the insurance sector, but to establish high standards of risk measurement and management, according to which the allocation of available capital in this sector would become more efficient in relation to the existing situation. This ensures better protection of policyholders while strengthening, instead of deteriorating, the financial position of insurers [25, p. 238]. From this primary goal stem other, additional goals of this concept, related to increasing the market competition level, insurers' business transparency and flexibility, strengthening customer trust in the insurance, improving stability of the insurance and the overall financial sector of the EU, as well as the harmonisation of supervision over these.

Despite many years of preparation, it was uncertain how the concept will actually work in practice, and how the stakeholders, primarily investors, will react to it. This paper deals with the initial effects of Solvency II implementation in the Member States of the European Union, while respecting the macroeconomic environment in which it is implemented. Although Serbia is not an EU member, the effects of this concept are also relevant to the domestic insurance market due to the reinsurance business, the presence of insurers belonging to insurance groups based in the EU, and the gradual integration of parts of the EU regulations into the local legal framework as part of the accession process. The aim of the paper is to identify key problems that have emerged in the first year of Solvency II application and to propose possible ways to overcome them.

Macroeconomic conditions in which Solvency II implementation started

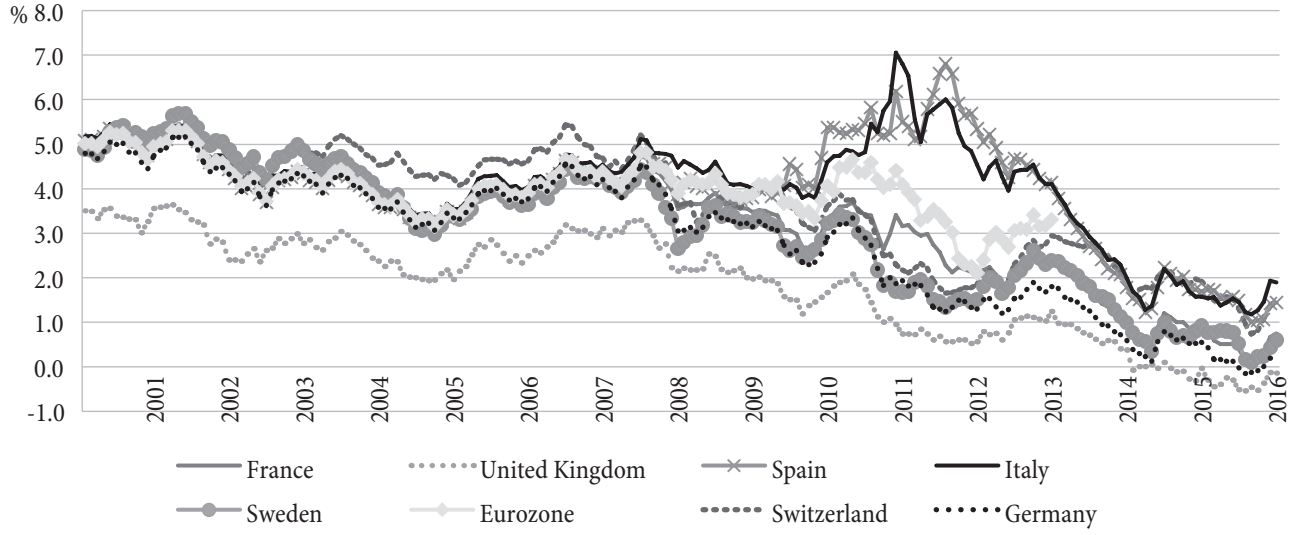
At the time of introducing Solvency II in the EU countries, the macroeconomic environment has been very complex. The key challenges for European insurers in the post-crisis period are modest economic growth, unfavourable investment climate, regulatory changes, and growing frequency and severity of catastrophic events. Along with the beginning of Solvency II application, there has been a heightened monetary and political uncertainty causing capital market instability. In response to the recession that followed the crisis, central banks of leading economies, including the European Central Bank (ECB), have cut benchmark interest rates, along with intervening to keep them at a low level (Figure 1). Such a monetary policy aims at stabilising the financial system and accelerating economic recovery, but it has led to an environment of persistently very low interest rates [20, p. 28], particularly rates on long-term government bonds, reaching a minimum level in 2016 (Figure 2).

Figure 1: Interbank 3-month rates (2001-2016)



Source: Prepared according to [17].

Figure 2: 10-year government bond yields (2001-2016)



Source: Prepared according to [18].

Long-lasting low interest rates affect assets, as well as liabilities of insurers. On one hand, their investment returns are limited, since the fixed-income securities are prevalent in their investment portfolios. On the other hand, the present value of insurance liabilities is increased when lower rates are used for their discounting. Low interest rates pose a particular risk for life insurers, who are faced with the inability to achieve the guaranteed minimum return for policyholders [26, p. 5].

The prolonged period of low interest rates contributed to a rise in prices of risky assets. Stock prices in developed economies recorded a pronounced increase in the recent years, as evidenced by all-time high values of stock market indices (Figure 3). Capital markets in developing countries suffered significant losses during the same period due to the declining commodity prices and accentuated political instability [31, p. 5]. In conditions of increased uncertainty and investors' risk aversion, the financial market becomes more vulnerable. Short periods of illiquidity and large price swings are more frequent, while the correlation of returns of different types of assets has been increased [23, p. 12]. Such volatility of financial markets is an additional risk factor for the investment performance of insurance companies.

In its reports on the financial stability of the (re) insurance sector, the European Insurance and Occupational Pensions Authority (EIOPA) provides a qualitative and quantitative assessment of the risks to which (re)insurers are exposed. Based on a survey of national supervisors, it was estimated that low interest rates are a primary risk for insurers, while equity risk was rated as particularly rising (Figure 4).

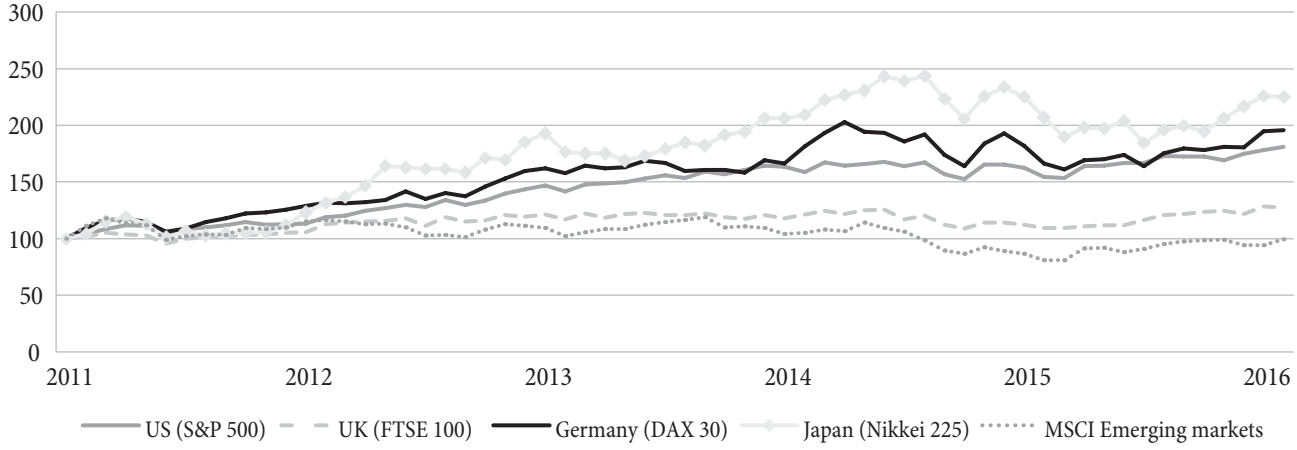
Economic, political and social tensions marked the year 2016 for the European Union. The start of Solvency II

application was followed by a series of events that threatened stability: slow economic recovery and deflation in the eurozone, productivity decline, deepening debt crisis in Greece, British referendum on leaving the EU, migration crisis, tense international relations, terrorist attacks. There are unsettling forecasts that, due to growth of public and private debt and bad loans, a new global financial crisis, such as the one from 2008, could arise. The downfall of interest rates was artificially caused by large liquidity injections into the financial system, particularly in the euro area by the ECB. Since expansionary monetary policy was not followed by growth of the real economy, conditions have been created for the overestimation of certain assets, i.e. for the emergence of financial bubbles, whose burst is a trigger for the crisis. Solvency II is expected to increase the insurers' resistance to the financial crisis and the ability of supervisors to respond in a timely manner. Since the previous financial crisis occurred during the development of the concept, important lessons that have emerged from that crisis have influenced its final form. Therefore, the possible future crisis would be a proper stress test for Solvency II.

Analysis of statistical data on the results of Solvency II implementation in the EU

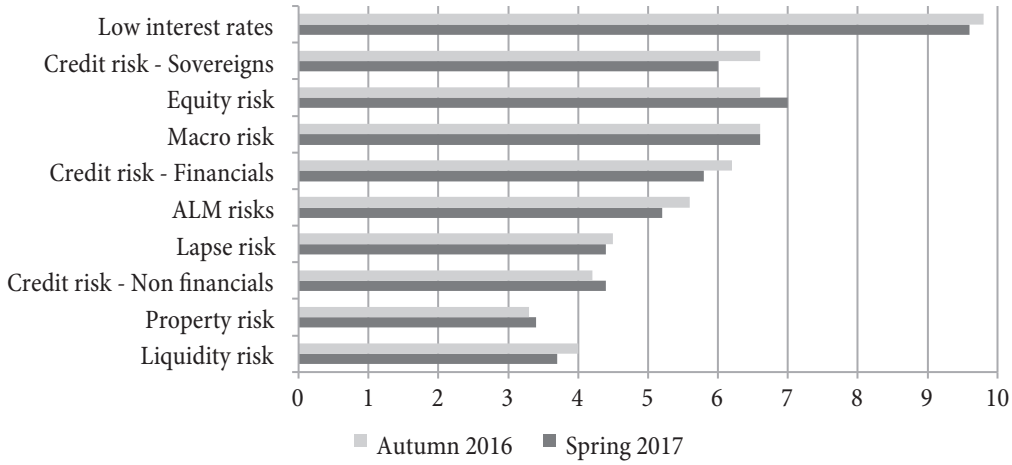
In the second half of 2017, EIOPA published the first set of Solvency II statistics regarding the European insurance sector based on regulatory reporting of almost 3,000 insurance companies [16]. The statistics include

Figure 3: Stock market indices performance (Dec 2011 – Dec 2016)



Source: Prepared according to [19].

Figure 4: Qualitative risk assessment for the EU insurance sector



Note: Risks are ranked according to probability of occurrence (from 1, indicating low, to 4 indicating high probability) and the impact (1 indicating low and 4 indicating high impact). The final estimate is the average value of the product of probability and impact assigned to each risk.
Source: [15, p. 46].

aggregated information on the balance sheet, own funds, capital requirements, premiums, claims and expenses per countries of the European Economic Area (EEA) on a quarterly basis, starting from the third quarter of 2016.[1]

On the basis of these data, it is possible to consider the structure of the aggregate insurers' balance sheet at the EEA level as of December 31st 2016, i.e. at the end of the first year since the introduction of Solvency II. The asset side of the Solvency II balance sheet is split into three segments: investments in bonds, equities, investment funds, real estate, derivatives, etc. (which account for 63.5% of the total assets), assets held for unit-linked and index-linked contracts (with a share of 22.9%) and other assets (Table 1). Observed by countries, investments have the largest share (over 80%) in Germany, Spain, and Croatia. On the other hand, the share of assets held for contracts under which the investment risk in the total assets of insurers is assumed by the policyholder is relatively the largest (about 50% or more) in Luxembourg, Liechtenstein, the UK, Ireland, and Finland.

A detailed breakdown of insurers' investments (excluding unit-linked and index-linked business) at the EEA-level shows that bonds accounted for 61% of the total investment portfolio at the end of 2016 (Figure 5). Thereby, corporate and government bonds are equally

1 In addition to EU Member States, the data cover Norway and Liechtenstein. All data pertain to solo undertakings, since the data for insurance groups have not been published yet.

Table 1: Structure of the insurers' assets per country at the end of 2016

	Investments		Assets held for unit-linked and index-linked contracts		Other assets		Total assets
	Eur mm	%	Eur mm	%	Eur mm	%	Eur mm
Austria	102,945.44	73.8%	19,603.44	14.1%	16,858.94	12.1%	139,407.82
Belgium	244,843.24	75.0%	31,776.92	9.7%	49,879.29	15.3%	326,499.45
Bulgaria	2,293.85	70.6%	57.99	1.8%	896.97	27.6%	3,248.81
Croatia	4,178.12	80.0%	174.93	3.3%	870.61	16.7%	5,223.66
Cyprus	1,734.79	45.3%	1,225.64	32.0%	865.35	22.6%	3,825.78
Czech Republic	12,097.69	70.6%	2,589.71	15.1%	2,450.31	14.3%	17,137.71
Denmark	279,651.36	65.3%	133,035.32	31.1%	15,417.98	3.6%	428,104.66
Estonia	1,008.00	55.5%	630.78	34.7%	177.66	9.8%	1,816.44
Finland	35,711.45	47.2%	34,434.69	45.5%	5,489.41	7.3%	75,635.55
France	2,037,916.14	79.4%	295,054.47	11.5%	234,633.31	9.1%	2,567,603.92
Germany	1,798,693.48	83.1%	100,873.70	4.7%	264,649.53	12.2%	2,164,216.71
Greece	11,116.10	69.7%	2,277.26	14.3%	2,551.48	16.0%	15,944.84
Hungary	4,191.87	49.5%	3,645.93	43.0%	637.24	7.5%	8,475.04
Ireland	76,741.77	22.1%	198,273.73	57.2%	71,534.12	20.6%	346,549.62
Italy	672,752.17	76.0%	139,466.29	15.8%	72,970.24	8.2%	885,188.70
Latvia	347.52	57.8%	50.08	8.3%	203.83	33.9%	601.43
Liechtenstein	2,649.78	9.2%	20,828.50	72.3%	5,329.97	18.5%	28,808.25
Lithuania	665.96	52.7%	463.23	36.7%	134.69	10.7%	1,263.88
Luxembourg	48,583.35	22.7%	114,976.63	53.7%	50,418.98	23.6%	213,978.96
Malta	5,168.03	59.9%	1,234.71	14.3%	2,231.64	25.8%	8,634.38
The Netherlands	272,032.57	53.2%	99,705.77	19.5%	139,241.04	27.2%	510,979.38
Norway	129,563.72	73.7%	25,688.49	14.6%	20,472.81	11.7%	175,725.02
Poland	25,808.33	61.6%	12,193.41	29.1%	3,889.43	9.3%	41,891.17
Portugal	35,273.34	69.1%	11,565.39	22.7%	4,177.49	8.2%	51,016.22
Romania	2,332.10	56.2%	737.31	17.8%	1,083.15	26.1%	4,152.56
Slovakia	4,556.18	69.2%	1,194.56	18.1%	833.83	12.7%	6,584.57
Slovenia	5,585.06	72.1%	1,359.04	17.5%	806.35	10.4%	7,750.45
Spain	246,867.57	82.5%	15,345.22	5.1%	37,109.06	12.4%	299,321.85
Sweden	168,143.77	56.8%	108,407.42	36.6%	19,322.24	6.5%	295,873.43
The United Kingdom	974,697.11	36.0%	1,224,317.27	45.2%	510,259.92	18.8%	2,709,274.30
Total	**7,208,149.86**	**63.5%**	**2,601,187.83**	**22.9%**	**1,535,396.87**	**13.5%**	**11,344,734.56**

Source: [16].

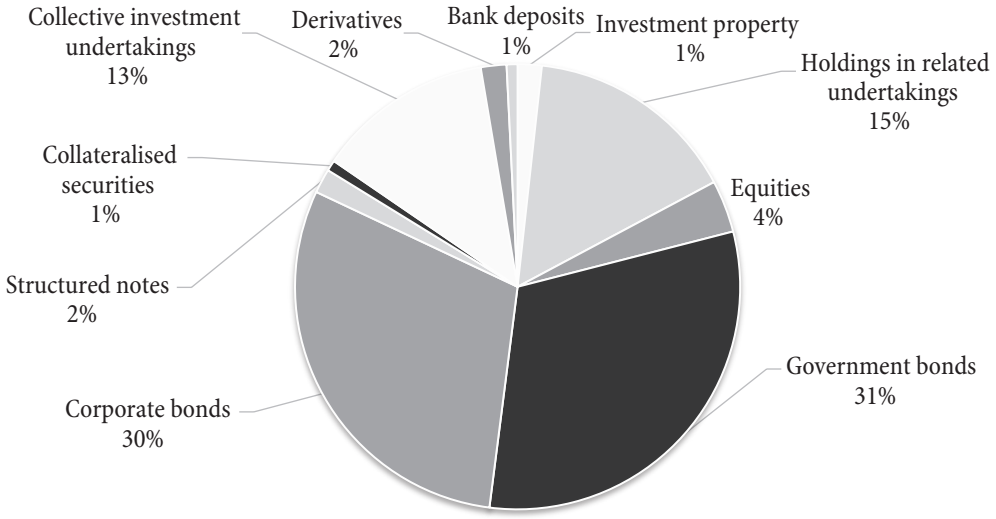
represented in the portfolio. The share of holdings in related undertakings is also relatively high (15.5%).

A comparison with the balance sheet at the end of 2015 reveals that transition to Solvency II did not bring significant changes in the structure of the insurers' assets relative to the terms of Solvency I application. In addition to the increase in the value of assets, there is a greater share of derivatives, loans, as well as of holdings in the related undertakings (Figure 6).

Technical provisions make up 88.4% of the insurers' total liabilities. The dominant part of technical provisions relates to life insurance (50.3%), followed by technical provisions of unit-linked and index linked insurance (27.4%). Technical provisions of non-life insurance (excluding health insurance) account for only 6.5% of the total insurers' liabilities (Figure 7). Comparison with the structure of liabilities prior to the introduction of Solvency II is not possible due to the different way of classification of data, primarily those related to technical provisions (until the end of 2015, the data were classified per business entities (life, non-life and composite insurers), and from 2016 per types of insurance (life, non-life, health, unit-linked and index-linked insurance) and business lines within them).

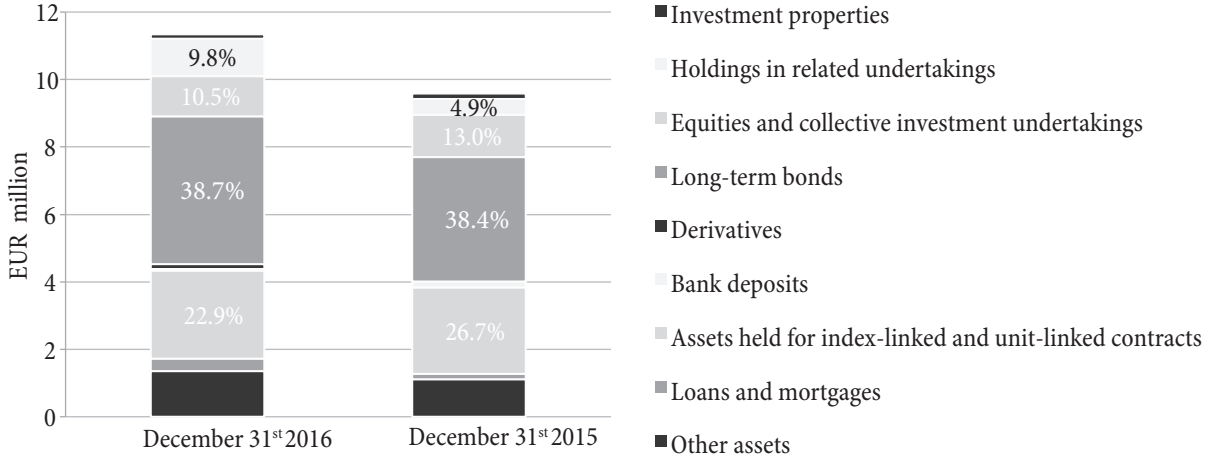
The solvency assessment of an insurer is determined by the ratio between the available and the calculated required capital. The concept of Solvency II distinguishes between two levels of required capital – the Minimum Capital Requirement (MCR) as the lower, and the Solvency

Figure 5: Investment portfolio of insurers in the EEA at the end of 2016



Source: [16].

Figure 6: Structure of assets of insurers in the EEA before and after the beginning of Solvency II application



Source: Prepared according to [16]

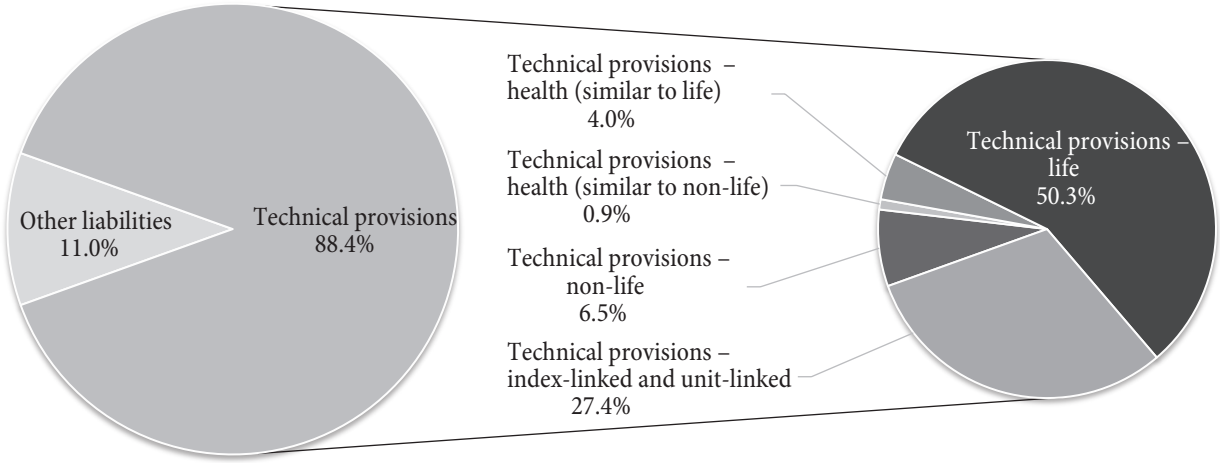
Capital Requirement (SCR) as the higher one. The MCR is the capital "threshold" under which any additional insurer's business activity exposes the policyholders to an unacceptably high level of risk and entails the ultimate supervisory intervention. On the other hand, the SCR stands as the target capital level, which reflects the insurer's risk profile and offers reasonable assurance to policyholders that payments will be made as they become due. The SCR can be calculated by using a prescribed standard formula approach, or by using a company-specific internal model, with prior supervisory approval.

In defining the available capital within Solvency II, the insurers' own funds are classified (into basic and ancillary) and ranked in order to take into account differences in their quality and availability for the absorption of possible losses. In order to be eligible to cover capital requirements, the own funds must meet certain criteria and quantitative limits that Solvency II sets [7, Articles 93-98].

The solvency ratio, as the ratio of eligible own funds and SCR, for the EEA amounted to 2.28 (228%) at the end of 2016, indicating that the European insurance sector was adequately capitalised in relation to the risks assumed. More precisely, this ratio was equal to 217% for life insurance companies, 207% for non-life insurers and 210% for undertakings pursuing both life and non-life business [15, p 32]. At the same time, the eligible own funds were about six times higher than the calculated MCR (Figure 8).

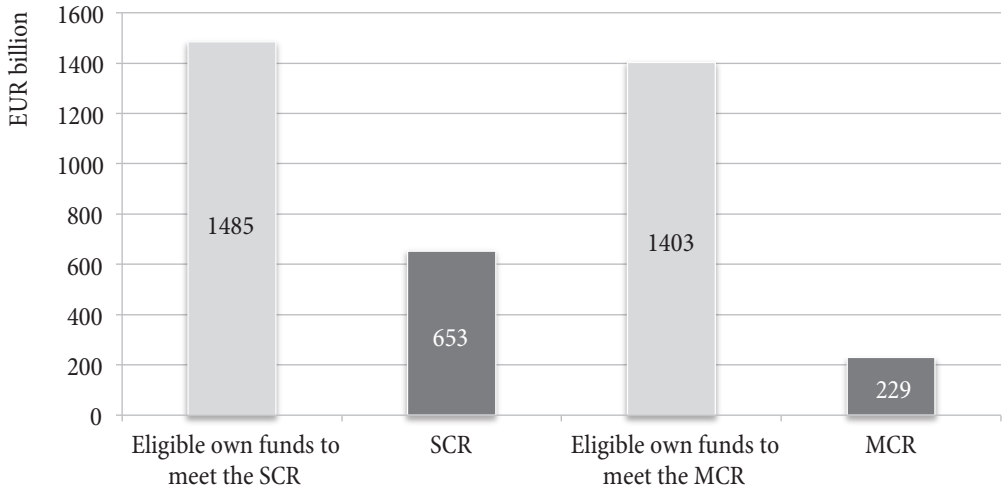
Observed by countries, there are significant variations in coverage of the MCR, while the solvency ratios are

Figure 7: Structure of liabilities of insurers in the EEA at the end of 2016



Source: [16].

Figure 8: Eligible own funds and capital requirements of insurers in the EEA at the end of 2016



Source: Prepared according to [16].

relatively uniform. The lowest weighted average solvency ratio of 1.43 (143%) was achieved in Latvia, while the highest value of this ratio of 3.98 (398%) was recorded in Malta (Figure 9).

The EEA average shows that more than one half of the net basic SCR is composed of market risk, while non-life underwriting risks rank second highest. There are significant deviations in terms of the SCR structure between the countries. The share of market risk ranges from 77% in Austria to 26% in Lithuania. Similarly, the share of non-life underwriting risks varies from 72% in Latvia to 14% in Finland. The solvency capital requirement at the EEA level is reduced by almost one third on average due to the diversification benefit (Figure 10). Observed by countries, diversification benefit is the smallest in Denmark (24%), and the largest in Slovakia (45%).

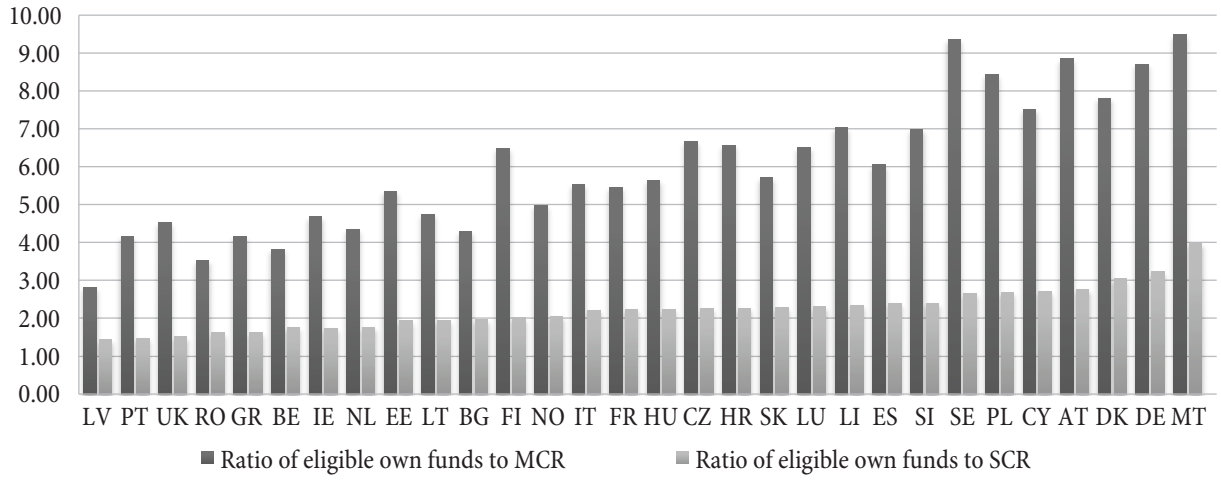
It is interesting to consider the assessment of insurers' solvency through the prism of Solvency II in comparison with the previous regulatory framework, as well as with the expectations that were established based on the last conducted quantitative impact study (QIS5) in the EU.

Measured by the ratio of capital requirement (MCR and SCR) coverage, the capital adequacy of an average European insurer is at a higher level after the first year of Solvency II application, compared to the results of QIS5. On the other hand, under the Solvency I regime, eligible own funds were lower, while the required capital was approximately at the MCR level. Of course, the findings of such comparison should be interpreted with caution (the calculations relate to different years, the sample of companies that participated in QIS5 is narrower than the total number of companies applying Solvency II, and the concepts of Solvency I and Solvency II are based on substantially different postulates, which is why they are not directly comparable).

Areas that require further improvements

The results of stress tests show that the first year of Solvency II application was successful, and that insurers were prepared to face it. The values of solvency ratios at the end of 2016 confirm that European insurers are adequately

Figure 9: Ratio of eligible own funds to MCR and SCR per country at the end of 2016



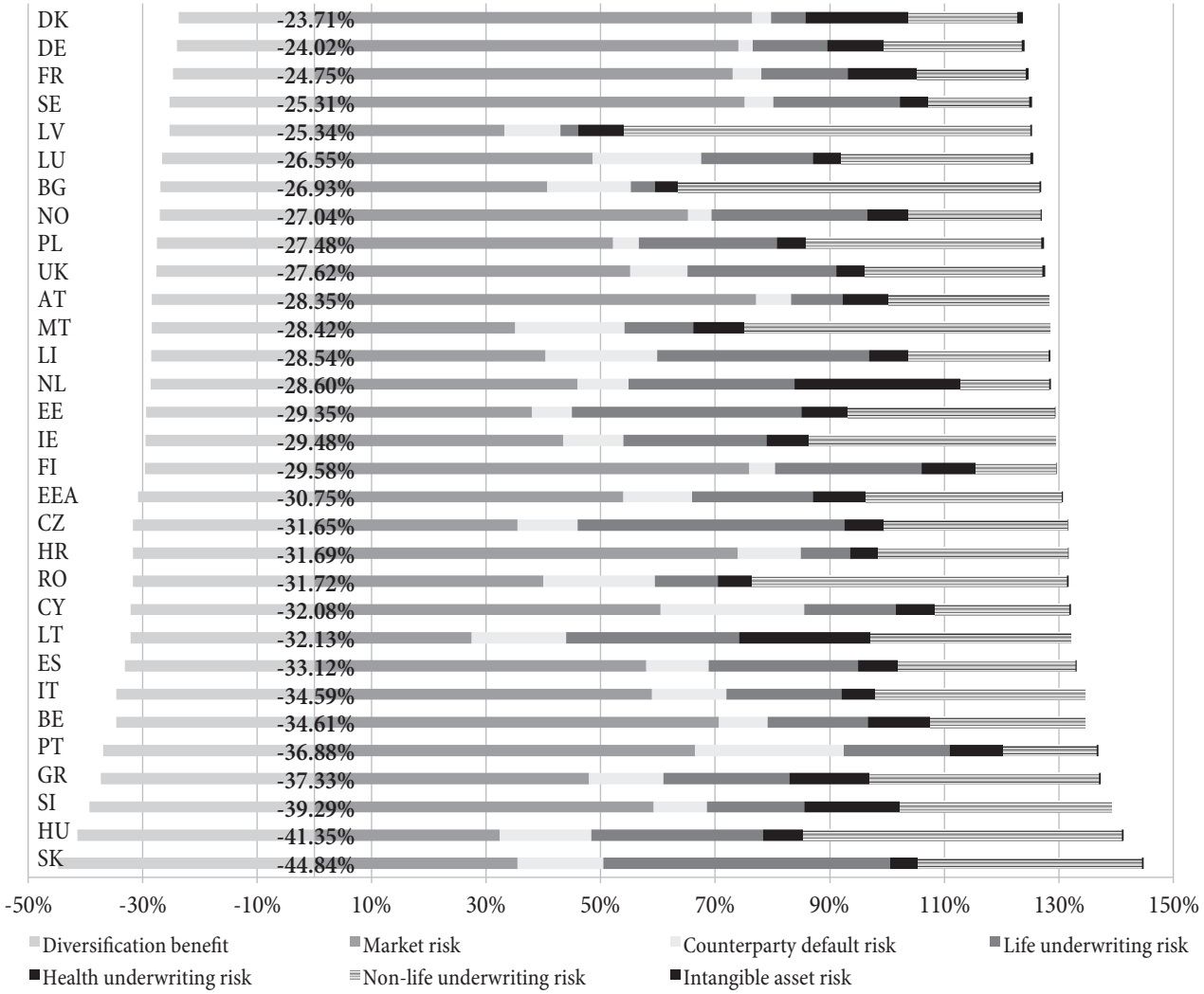
Source: Prepared according to [16].

Table 2: Capital requirements and surplus – Solvency II vs Solvency I and QIS5

	Solvency I (2015)	QIS 5 (2010)		Solvency II (2016)	
EUR billion		SCR	MCR	SCR	MCR
Eligible own funds	1,045	902	861	1,485	1,403
Capital requirement	289	547	185	653	229
Surplus	756	355	676	832	1,174
Ratio of capital requirement coverage	362%	165%	466%	227%	613%

Source: [16] and [11].

Figure 10: Breakdown of net basic Solvency Capital Requirement per country at the end of 2016



Source: [15, p. 49].

capitalised despite the decline in interest rates. EIOPA reported that 100% of companies tested met their minimum capital requirements and 99.98% met the Solvency Capital Requirement [14]. However, it is obvious that several areas require improvements. Changes are necessary to ensure that the new regulatory framework will justify the extensive resources and efforts that have been invested in its development, but also to avoid undesirable incentives for insurers, which could affect the entire European economy. The first review of Solvency II by the European Commission should be completed by December 31st 2018 [4, Recital 150].

The most prominent problematic areas are: risk margin sensitivity to interest rates, focus on capital adequacy while neglecting capital stability, high and vague disclosure requirements within the pillar III, incompliance with international financial reporting standards (IFRS), excessively conservative standard approach, insufficiently precise measurement of certain types of risks (catastrophic risk, currency risk, longevity risk, etc.). Further in the text we consider some of the mentioned problems in Solvency II application and propose possible ways to overcome them.

Risk margin sensitivity

In the Solvency II regime, the risk margin is formed above the best estimate of an insurer's technical provisions. The risk margin is intended to increase the technical provisions to the amount that another hypothetical (re)insurer would require as a compensation for taking on liabilities arising from the portfolio of the given insurer. It is therefore viewed as a "reward" for exposure to risk of future experience being worse than the best estimate assumptions.

The risk margin is determined by using the cost of capital method, i.e. based on the cost of holding capital to cover risks that cannot be hedged. Accordingly, it is regarded as the present value of costs of holding capital in the amount of the SCR for the hypothetical insurer, throughout the entire period until the expiration of the portfolio liabilities. Projected SCR amounts are multiplied by a fixed cost of capital rate *CoC* of 6% per annum and then discounted by using risk-free discount rates. The sum of discounted values over all the covered years $t = 1,2,...$ is the risk margin of the insurance company (*RM*) [12, p. 87]:

$$RM = \sum_{t \geq 0} CoC \cdot \frac{SCR_t}{(1 + p_{t+1})^{t+1}} \quad (1)$$

where:

CoC - cost of capital rate (6%),

SCR_t - projected solvency capital requirement at the end of the year *t*,

p_{t+1} - discount rate.

Sensitivity of the risk margin to interest rates arises because the lower current interest rates reduce the discount rate applied in the calculation, and thereby increase the present value of the future SCRs, or the overall risk margin. This problem is particularly pronounced in countries where a significant part of the insurance portfolio traditionally relates to long-term annuities. That is the case with the United Kingdom, for example. With the drop of interest rates between January and September 2016, the overall risk margin of major UK life insurance companies rose from around GBP 30bn to nearly GBP 44bn. According to the Bank of England's estimates, a 100-basis point reduction in interest rates increases the aggregate risk margin for these firms by around 27%. Conversely, a 100-basis points increase in rates would lower the risk margin by around 20% [29, p. 6]. The extent of the problem of high risk margin is illustrated by the fact that it currently reaches 50% of the total technical provisions of UK insurers, in contrasts with a figure of below 10% in the quantitative impact studies (when market interest rates were higher) [1, p. 46].

Interest-rate sensitive and high risk margin affects the overall balance sheet of the insurer. Methodology for risk margin calculation has been defined in a completely different economic environment. Considering a significant drop in market rates, including negative rates in some markets at some maturities, the cost of capital rate of 6% is excessively high and incoherent with the reality of the cost of capital nowadays. A sensible solution for the problem of high risk margin in a low interest rate environment is to lower the cost of capital rate and to vary it in line with the risk-free rate.

Capital volatility

The impression at the beginning of Solvency II implementation was that insurance companies are mainly focused on meeting the requirements regarding capital adequacy, while its stability was neglected. In itself, this concept introduces additional volatility in the insurer's balance sheet, since assets and liabilities are valued at fair value. More precisely, assets that are valued on the mark-to-market basis cover liability cash flows that are discounted at the risk-free term structure of interest rates. In such conditions, any movement in interest rates is reflected not only on assets, but also on technical provisions of insurers. At the same time, the implicit solvency margin that existed when technical provisions were expressed at their nominal value is eliminated. Therefore, adjustments to the rates used to discount the insurance liabilities (i.e. value adjustment and matching adjustments) [13, p. 16] are designed for products with long-term guarantees in order to increase the balance sheet resistance to artificial fluctuations caused by short-term market movements and thus to reduce systemic risk. The risk-free rates are adjusted upwards, which reduces the present value of insurance liabilities and increases the insurers' own funds.

The variability of the balance sheet, and therefore the capital of the insurer, is becoming more pronounced in unstable macroeconomic conditions. Capital fluctuations reflect the volatility of the financial market. Sensitivity analyses have shown that a drop of 25% to 30% in equity markets can lead to a fall in the Solvency II solvency ratio of as much as 20 percentage points [5]. Insurers are required to hold capital above a certain minimum. Since capital is variable, it may happen that it falls below the set minimum, when it is necessary to provide additional

capital. This issue is especially important from the investors' perspective, because dividend payments are becoming constrained since they affect negatively the solvency ratio.

In accordance with the forward-looking character of the new regulatory framework, the sensitivity of the solvency ratio to market movements deserves special attention. Therefore, it is necessary to develop a more complex system of intervention levels so that unfavourable development could be corrected in a timely fashion. There should be additional points of intervention in addition to the existing two (when a company's eligible capital falls below the SCR or the MCR). A relevant example is the Risk-Based Capital (RBC) model for insurers in the United States, where a number of measures to be undertaken by the insurer or the supervisory authority have been defined, depending on the ratio of the available and calculated required capital [2, p. 64].

High and imprecise disclosure requirements

Along with great technological, systemic and analytical challenges, Solvency II has certainly brought about a significant progress in terms of volume and quality of insurers' data that have become available to stakeholders. Disclosure through the Solvency and Financial Conditions Reports (SFCRs), as part of the pillar 3, which have been published for the first time in 2017, aims to achieve market transparency and foster market discipline. These reports contain both quantitative and qualitative information. The submission date is within 14 weeks following the end of a financial year, and the SFCRs must be available on the company's website for a minimum of 5 years. These reports are expected to increase the harmonisation of information disclosure by insurers across the EU, which will allow comparison of their financial position by all market participants. Insurers are required to disclose information on everything, from external environment through the key business lines, business and investment performance, risk exposure and management systems, assumptions and methodologies for valuing assets and liabilities, required and available capital.

Although most insurers were focused on the first two pillars in the preparation stages for Solvency II, it turns out that the disclosure requirements within pillar 3 are very extensive and diverse. Rather vague rules regarding the SFCRs preparation are the source of confusion for insurers. EIOPA provides general guidelines for their composition and structure, which the insurers are required to fill in at their sole discretion. Significant variations in the quality of the reports published in 2017 were observed due to differences in the interpretation of these guidelines. Consistency of the SFCRs is not achieved, not even within the insurance groups. It is particularly difficult to strike a balance between the regulatory requirements for transparency and the need to protect the confidentiality of information from the competition. Information that was previously confidential is now made available to the public. Thereby, the SFCRs are not the only new reports whose preparation is mandatory within the Solvency II framework (Table 3).

Table 3: Overview of pillar 3 reports within the Solvency II framework

Report	Solvency and Financial Condition Report - SFCR	Regular Supervisory Report - RSR	Quantitative Reporting Templates – QRTs
Audience	Publicly disclosed document	Supervisor only	Supervisor, elements for public disclosure
Frequency	Annually	Every three years	Quarterly (supervisor only) and annually
Contents	It contains quantitative and qualitative information and estimates about the insurer (activities and results, risk profile, principles of valuation of assets and liabilities, capital management, significant events in the previous year) and the market in which the insurer operates.	It contains detailed quantitative and qualitative information on business development, insurer's risk profile, valuation of assets and liabilities. It is structured in the same way as SFCR, but contains information that is either too detailed or too confidential for public disclosure. Unlike SFCR, it also includes projections of the business development in the future.	Electronic reporting sheets with detailed information on the insurer's financial solvency position, including capital requirements. Enable the supervisor to keep pace with the key indicators of the financial health of insurers, as well as to monitor their trends.

Source: Prepared according to [3].

The preparation of thorough and accurate reports in short time frames is a special challenge for insurers. There is a risk that due to the great efforts and time invested in the collection of data and the preparation of reports, the management will not be able to see what the data actually tell about the company and its environment. It is possible that some of the pieces of information requested have not existed so far, so the insurer must provide conditions to generate them. It is also possible that for some pieces of information that already exist, the processes in which they are generated are slow, and have to be accelerated and further automated and rationalised [9, p. 8]. Reporting cycle acceleration demands significant investments in human resources, processes, and technology. In order for the disclosure requirements to be met effectively, the cooperation between the financial, actuarial and risk management functions in the preparation of information is necessary in order to avoid working in "silos" and cost duplication. All three pillars of Solvency II should be included in the integrated reporting system within the insurance company.

(In)compliance with IFRS

Under Solvency II regime, there is a gap between financial and regulatory reporting. At least two balance sheets (according to IFRS and Solvency II) create confusion for their customers, undermining investors' confidence in the insurance sector. Due to differences between Solvency II and IFRS, even the management is faced with the dilemma of selecting the primary metrics in evaluating the performance of the insurance company. Tracking the movement of the insurer's capital position over time is also difficult.

In May 2017, the International Accounting Standards Board issued a new standard, IFRS 17 "Insurance contracts", marking the beginning of a new epoch for insurers' accounting practice. This standard is expected to increase the harmonisation and transparency of reporting, primarily the disclosure, related to (re)insurance contracts. Unlike its predecessor, IFRS 4, which allowed insurers to apply national accounting standards (resulting in many different approaches), IFRS 17 defines clear and consistent rules that should significantly increase the comparability of insurers' financial statements. However, experts are not optimistic, given that IFRS 17 will be mandatory from 2021, as well as having in mind that the standard is quite complex (as a hybrid between book-value and market-value accounting), which will require time for its understanding. A particular issue relates to the costs for insurers arising from the harmonisation of accounting practices with the new standard. It is forecasted that the costs incurred by IFRS 17 will be comparable or higher than the costs of applying Solvency II. According to the European Commission estimates, the cost of Solvency II implementation for the EU insurance sector was between EUR 3 and 4 billion [10]. Of course, those insurers that already apply Solvency II will be in a better position.

The key changes brought by the IFRS 17 relate to insurance liabilities measurement and revenue recognition. The general model that is being introduced for the valuation of insurance liabilities is the Building Blocks Approach (BBA). Under this approach, insurance liabilities are measured at the level of discounted and probability-weighted average of future cash flows expected to arise as the insurer fulfils the contract, increased by an explicit Risk Adjustment (RA) and a Contractual Service Margin (CSM)[2] (Figure 11).

Contractual service margin is measured as the difference between the risk-adjusted present value of expected inflows and outflows at contract inception. If the contract is expected to be loss-making, CSM is negative and recognised in the income statement. Otherwise, if the contract is expected to be profit-making, CSM is positive and recognised as a liability (unearned profit). Therefore, upon initial recognition a contract can be classified as onerous; profitable, with no significant risk of becoming onerous; and profitable, with significant possibility of becoming onerous (remaining contracts). With the subsequent measurement of the Contractual Service Margin and its allocation to profit or loss for the period, the profit has been recognised for the coverage that was provided in that period. Similar to the risk margin,

2 Simplified measurement of liability for the remaining coverage for insurance contracts with short-term coverage is allowed in the form of Premium Allocation Approach (PAA).

the Risk Adjustment under IFRS 17 is the compensation that an entity requires for bearing uncertainty about the amount and timing of cash flows that arise from non-financial risks.

There are multiple similarities between Solvency II and IFRS 17. Both concepts are principle-based instead of rule-based. Within them, assets and liabilities are mainly valued at fair value, which increases the volatility of the balance sheet. In measuring insurance liabilities, expected future cash flows are discounted and adjusted for risk. Offsetting assets and liabilities or income and expenses arising from insurance and reinsurance transactions is prohibited in both concepts. However, as these two regimes have different purposes, it is not rational to expect them to be identical.

The primary goal of Solvency II, as a prudential regulatory regime, is to enhance the level of policyholder protection. Hence, in terms of reporting and disclosure, this concept is focused on the balance sheet and capital requirements needed to provide the solvency of the insurer. On the other hand, IFRS 17 aims to establish uniform accounting standards for (re)insurance contracts in order to increase the transparency and comparability of the insurers' financial statements, which is primarily in the interest of investors. For a financial reporting regime, not only the financial position at the balance sheet date but also the performance in the period is important [28, p. 1]. Therefore, the focus of IFRS 17 is on the income statement and the insurer's available capital.

Hence, there are numerous differences between Solvency II and IFRS 17. Firstly, Solvency II equally applies to all contracts issued by the insurers. However, investment contracts issued by insurers which do not transfer significant insurance risk (and that do not contain a discretionary participation feature) are accounted as financial instruments under IFRS 9, instead of IFRS 17. Next, according to Solvency II, insurance liabilities are classified into homogeneous risk groups, at least at the level of prescribed lines of business. IFRS 17 requires information to be tracked at the level of groups into which contracts are classified according to their expected profitability at inception and the time at which they were written (with each group covering no more than a year of new business). A different way of classifying contracts may result in a higher level of granularity in the tracking of liabilities movement under IFRS 17, which requires additional data and models.

Solvency II defines the curve of the risk-free rates used for the purpose of discounting liabilities in different currencies, while IFRS 17 does not specify either the yield curve or the single discount rate, but only approaches for its derivation (bottom-up and top-down). Solvency II prescribes the method of calculating the risk margin, which is based only on the net of reinsurance position at the entity level. IFRS 17 does not specify the method of calculating Risk Adjustment (RA), which is measured separately for the gross liability (or asset) and reinsurance held, at the level of groups of contracts [28, p. 2].

Within Solvency II, the profit arising from an insurance contract is recognised immediately at contract inception, i.e. with the receipt of the insurance premium. Under IFRS 17, profit recognition is spread over the coverage period by the inclusion of a Contractual Service Margin which is not present under Solvency II. In accordance with IFRS 17, acquisition costs are included in the fulfilment cash flows, resulting in their implicit deferral over time, while in Solvency II there is no concept of deferred acquisition costs [22, p. 16]. Finally, disclosure under IFRS 17 will be even more transparent due to more stringent requirements.

It can be concluded that the differences between the two concepts are primarily related to the recognition and measurement of insurance liabilities, which affects the entire balance sheet. Since the insurers' systems and processes have recently been innovated, it is expected that they can be used as a starting point for the application of IFRS 17. However, the new, stricter and more complex reporting requirements impose further changes to information systems that will enable processing large amounts of data with particular emphasis on their quality and automation of calculations. It is therefore important that insurers design their own reporting systems in a way that maximises flexibility in order to link the requirements for financial and regulatory reporting as much as possible. The synergy space should be sought primarily in the field of data collection and modelling. Therefore, cooperation

of all sectors within the insurance company, in particular of the accounting and actuarial function, is necessary. Similarities between the two regimes should be used as much as possible. For example, there is a high degree of overlapping of cash flows in measuring liabilities (with certain differences in the scope of acquisition and administrative costs), the same discount rates for both metrics can be used in some business lines, risk adjustment can be determined in the same way as the risk margin, and so forth. The differences between the two regimes, on the other hand, are a key landmark for future insurers' systems and processes changes.

Overly conservative standard approach

Since it corresponds to an average insurer, the standard approach for solvency evaluation abounds with different approximations. In order to be uniformly applied, this approach should be simple, but conservative. Consequently, it can result in excessively high capital requirements compared to the real risks of a particular insurer. Further in the text, we shall list some of the many aspects in which the Solvency II concept is excessively conservative.

When determining technical provisions, an insurer is required to neglect real returns on the assets used to cover them, i.e. to assume that all assets are invested at a risk-free rate. Although interest rates are currently low, there is still a possibility of achieving a certain return on the basis of investments in forms of assets such as shares, real estate and corporate bonds. Such an approach results in greater present value of future cash flows needed to settle the obligations towards the policyholders in the future, that is, in larger technical provisions than actually necessary.

When determining the SCR for non-life underwriting risks, earned premium is used as a volume measure for premium risk measurement. The insurers whose premium is adequate are "penalised" with relatively higher capital requirements than those insurers whose premium is underestimated. The standard approach thus creates incentives for insurers to underestimate the premium. The premium risk volume measure should be based on a technical indicator (loss ratio or combined ratio) that reflects the adequacy of premiums in relation to the risks assumed.

Also, the risk-mitigating effects of reinsurance and geographic diversification are not sufficiently taken into account in calculating the SCR for premium risk coverage. Non-proportional reinsurance, as one of the most important risk management instruments used by non-life insurers, is particularly inadequately treated. The risk factor is reduced by 20% for non-proportional reinsurance only for three lines of business: motor vehicle liability insurance, fire insurance and third-party liability insurance [12, p. 256], while the risk-mitigating effects of this reinsurance type are neglected in all other segments of the non-life insurance business. Similarly, the risk diversification effects in the case of performing insurance activities in several countries within a region, although significant, were not taken into account in the standard approach.

The solvency capital requirement for longevity risk in life insurance corresponds to the change in the value of basic own funds in the case of an instantaneous permanent decrease of 20% in mortality rates used for the calculation of technical provisions [12, p. 207]. If the best estimate of future cash flows already included the expected mortality reduction, the "shock rate" of 20% used in this scenario is too high and should be reduced.

As they are based more heavily on data related to a particular insurer, internal models can provide a more accurate picture of its risk profile. Insurance companies will be motivated to use internal models for the purposes of risk measurement and solvency evaluation if higher costs of their implementation can be compensated with relatively lower capital requirements compared to the standard approach. Large companies with great possibilities of risk diversification and mitigation through other risk management methods, whose effects cannot be fully recognised in the standard approach, are primarily interested in the internal models [25, p. 280]. Having in mind the relatively low degree of development of the domestic insurance market, it is not realistic to expect a more significant application of internal models for determining the solvency capital requirement in this

market in the near future. At the same time, the market should be timely prepared for the inevitable forthcoming risk-based regulatory framework for determining the solvency of the insurers, in which quantitative impact studies have a special importance.

Conclusion

Under contemporary dynamic approaches, the solvency of insurance companies is determined on the basis of measurement of risks that threaten their business. The most relevant example is Solvency II, as the new regulatory framework for insurance companies in the Member States of the European Union. The key novelties Solvency II brought to insurers are the explicit recognition of a great number of risks and their interdependencies in the calculation of capital requirements, high standards in terms of capital adequacy and risk management, prudential regulation rather than quantitative investment constraints, the possibility of applying internal models for calculating capital requirements and the shift from rule-based towards principle-based supervision of the insurance sector.

The paper analyses the initial effects of Solvency II implementation on the financial position of the EU insurers. The moment of introducing Solvency II is delicate, considering the complex macroeconomic environment. European countries in the post-crisis period achieve modest economic growth, interest rates are at an all-time low level, and the volatility of financial markets is extremely high. Nevertheless, an analysis of the available data shows that, even in such circumstances, the insurance sector is adequately capitalised in relation to the risks assumed. At the EEA level, most of the total solvency capital requirement is intended to cover market risks, while non-life underwriting risks rank second highest. Compared to the terms of Solvency I application, transition to the new regulatory regime did not cause significant changes in the insurers' balance sheet structure.

At the very beginning of Solvency II implementation, there are obvious advantages, but also areas that require further improvements in order for this concept to be effective and to justify the high investments during its perennial development. In a low interest rate environment and under the current method of calculation, the risk margin is too high, particularly affecting those insurers whose significant portion of the portfolio relates to long-term annuities. Short-term market movements cause the volatility of the balance sheet and therefore of the insurers' capital, thus becoming a source of systemic risk. Insurers are facing high and imprecise disclosure requirements. Insufficient alignment of financial and regulatory reporting generates additional costs for insurers and hinders the assessment of their performance for investors. Exaggerated conservatism of the standard approach can result in excessively high capital requirements relative to the real risks of a particular insurer. Possible ways of overcoming the identified problems in Solvency II application which are proposed in this paper include lowering the cost of capital rate in calculating the risk margin and its variation in line with the risk-free rate; introducing a more complex system of intervention levels, depending on the ratio of available and required capital; the development of a flexible reporting system and the cooperation between all the sectors within the insurance company in generating information and preparing reports. Also, possible adjustments of the standard approach in order to take into account the insurer's risk profile more accurately are being considered.

High costs for insurers generated by Solvency II are ultimately remitted to the policyholders. Therefore, the improvement of this concept is in the mutual interest of both parties. Changes should be directed towards simplifying the concept and eliminating unnecessary bureaucracy, which increases the costs of its implementation. In the turbulent macroeconomic environment, the impact of the many risks could not have been anticipated when defining the concept parameters. The time in which the application of Solvency II started is essentially different from the time in which its development began. It is obvious that the transition to the new regulatory regime would have been easier in an environment with higher interest rates and stable financial markets. For the purpose of successful functioning in practice, it is necessary to continuously adjust the methodology and parameters of Solvency II to the current macroeconomic trends.

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FISCAL DECENTRALIZATION AND LOCAL ECONOMIC GROWTH IN SERBIA

Fiskalna decentralizacija i lokalni privredni rast u Srbiji

Abstract:

In this paper we examine, using a panel data approach with fixed effects, the relationship between the level of fiscal decentralization and economic growth across Serbian local self-governments over the 2002-2011 period. Our results suggest that there is a modest positive impact of fiscal decentralization on local economic growth in that period in Serbia. One of the two observed parameters (employment rates in local self-governments and local self-government investments) was positive in terms of the impact on the increased degree of fiscal decentralization. The substantial increase of local self-government own revenues was predominantly used to increase the number of employees and wages in local administrations, while, at the same time, the number of employees in the private sector dropped. At the same time, own revenue growth had only a slight impact on increase of investments. Based on an empirical analysis, out of approximately 100 million RSD of average annual increase of revenue per local self-government unit in the observed period, only 27,000 RSD on an average was directed towards increase of investments. The issue of the optimal level of fiscal decentralization, as well as the possibilities for increasing own revenues within the current legislative framework, were also discussed.

Keywords: *fiscal decentralization, economic growth, local self-government, Serbia*

Sažetak:

U ovom radu analiziramo, koristeći panel regresiju sa fiksnim efektima, odnos između nivoa fiskalne decentralizacije i ekonomskog rasta u jedinicama lokane samouprave u Srbiji u periodu 2002-2011. godina. Naši rezultati ukazuju da postoji skroman pozitivan uticaj fiskalne decentralizacije na lokalni ekonomski rast u tom periodu u Srbiji. Jedan od dva posmatrana parametara (nivo zaposlenih u lokalnoj samoupravi i investicije lokalne samouprave) koji su korišćeni za dokaz naše hipoteze bio je pozitivan na rast stepena fiskalne decentralizacije. Veliki rast izvornih prihoda lokalne samouprave uglavnom su iskoristile za povećanje broja zaposlenih i plata u lokalnoj administraciji, dok je istovremeno broj zaposlenih u privredi smanjen. Istovremeno, rast izvornih prihoda neznatno je uticao na rast investicija. Na osnovu empirijske analize utvrđeno je da na oko 100 miliona dinara prosečnog godišnjeg rasta prihoda po jedinici lokalne samouprave u posmatranom periodu, svega 27.000 dinara u proseku je odlazilo na povećanje investicija. Pitanje optimalnog nivoa fiskalne decentralizacije kao i mogućnosti povećanja izvornih prihoda u okviru postojećeg zakonskog okvira takođe su bile diskutovane.

Ključne reči: *fiskalna decentralizacija, ekonomski rast, lokalna samouprava, Srbija*

Introduction

The process of fiscal decentralization in Serbia was initiated in 2001, following the onset of political changes. Until then, Serbia was characterized by a high degree of centralization. This process was neither easy nor simple. It is still an on-going process. In the previous seventeen-year period, central and local governments have struggled through different systems and ways of financing local self-governments. One of the reasons of the inconsistent policy towards local self-governments (LSG) were the frequent changes of government in the previous period. These frequent changes of sources of financing of local self-governments impacted the degree of fiscal decentralization in Serbia. Nevertheless, a continual trend of increase in the degree of fiscal decentralization is present, providing us with a sound basis for analyzing its impact on regional economic development. In Serbia there are to levels of government: central and local self-government, this being the foundation on which fiscal decentralization is based on.[1]

Fiscal decentralization resulted in a continual increase of revenue and expenditures of local self-governments in the previous years. Own and shared revenues increased, while the transfer system was systematically defined for the first time. The increase of local self-government revenues enabled increase of investments and the renovation of the neglected communal infrastructure, renovation of schools, as well as better equipment of local administrations. Naturally, depending on the local government, these investments were more or less successful, resulting in some local self-governments experiencing an economic boom in this period. However, in 2009, as a result of the financial crisis, there was some wandering in implementing changes of the local self-government financing system, which directly influenced the degree of fiscal decentralization. The search for an adequate system of financing local self-governments, assuring an even regional development, continues to this day.

When compared to other OECD countries, Europe and the Western Balkans region, Serbia is a greatly decentralized country. The share of own revenues of local self-governments in the overall consolidated revenues is by far above the European average [9, p. 59]. Serbia ranks alongside the traditionally highly decentralized countries, such as Germany, US and Switzerland. This fact indicates that the process of fiscal decentralization in the previous years showed results, at least when taking into account the trends of revenue levels of local self-governments. On the other hand, the share of expenditures of local self-governments is below the level common for European countries, which calls into question the success of the entire process [9, p. 59]. The structure of these expenditures, with expenditures for personal earnings and subsidies dominating, shows that fiscal decentralization was not used for development of local self-governments, but rather for satisfying short-term (principally political) goals of local elites [9, p. 61].

In order to empirically prove the above statement, in this paper we tested the hypothesis that fiscal decentralization (and revenu growth due to fiscal decentralization proces) has a positive impact on local economic growth measured throught local employment level and investment in local infrastructure. However, the absence of an adequate theoretical basis and unique standpoint of the economics science relating to the impact of fiscal decentralization on local economic growth presents a great challenge. The conclusions of a large number of studies in this field are diametrically opposite (some of which were performed for the same countries in the same time period), ranging from conclusions that fiscal decentralization has a positive impact on economic growth, to conclusions that it does not impact, or that it negatively impacts growth.

At the same time, a direct relationship between fiscal decentralization and economic growth is difficult to ascertain. As a result, in order to prove the basic hypothesis, we are going to test two auxiliary hypotheses that have been defined based on decentralization of revenue and decentralization of expenditures of local self-governments:

- Hypothesis H1– Fiscal decentralization positively impacts employment growth at local level

1 Serbia also has two autonomous provinces, but not covering whole territory.

- Hypothesis H2– Fiscal decentralization positively impacts increase of investments of LSG

After reviewing key theoretical and empirical studies that have analyzed the relationship between fiscal decentralization and regional economic growth, a detailed summary of the methodology used for analysis is presented. Further along, the findings and conclusions are discussed. Open issues and proposals for some future studies are also mentioned.

Literature review

Starting with the pioneer analysis presented by Tiebout [41], several theories have been developed in an attempt to explain the relationship between growth and fiscal decentralization. According to the theory of fiscal federalism, for example, fiscal decentralization results in an efficient allocation of resources, which might possibly contribute to increased rates of economic growth [22], [25], [41]. Increased efficiency is achieved with greater mobility of taxpayers as this makes it easier for them to choose the combination of tax expenditures that best suits them [41, p. 424]. This basically means that fiscal decentralization impacts economic growth if there is fiscal competition between lower levels of government.

Prud'homme [29], [30], however, argues that the advantages of decentralization in terms of increased allocative efficiency are not as obvious as claimed by the standard theory of fiscal federalism. At first glance, decentralization has its advantages, however, on the other side there is the risk of expenditure growth, less efficiency in ensuring public services for citizens and probably increases inequality and macroeconomic instability. Tanzi [38], [39] concludes, after analyzing the capacity of the tax administration at the national and local level and the quality of the system of public expenditure management, that in a number of countries fiscal decentralization even aggravated the process of stabilizing and reducing structural fiscal deficit.

Spahn [36, p. 6], on the other hand, argues that decentralization does not necessarily jeopardize macroeconomic stability. According to him, empirical studies neglect the fact that local levels often operate in an unstable macroeconomic environment, and thus their behavior reflects adaptable, but not necessarily unstable budget performance [36, p. 6].

Shah [35, p. 51] also concludes that, contrary to common opinion, decentralized fiscal systems offer more potential for improving macroeconomic management than centralized fiscal systems. One of the reasons for this which he cites is that decentralized systems require greater transparency in the roles of different actors and decision makers [35, p. 51].

Bahl and Linn [4, p. 393] argue that only in the case of a relatively high level of per capita income decentralization becomes "attractive" to taxpayers in the sense that its benefits may be fully taken advantage of, and without greater problems or deficiencies which can sometimes outweigh the benefits.

Rodríguez-Pose and Krøijera [32] analyze the relationship between levels of fiscal decentralization and economic growth in 16 countries of Central and Eastern Europe over the period from 1990 to 2004. They use GDP per capita PPP as a dependent variable, and three independent fiscal decentralization variables: 1) subnational expenditures, as a percentage of total expenditures, 2) tax revenue as a percentage of total subnational revenues and grants and 3) transfers to subnational governments from other levels of government as a percentage of total subnational revenues and grants [32, p. 18]. They test model using fixed effects panel regression. They conclude that total expenditure and transfers to lower levels of government are negatively correlated with the economic growth of a country [32, p. 29]. On the other hand, taxes collected at the subnational level indicate a certain positive correlation with national growth rates (this influence is, in fact, very small according to the findings of these authors) [32, p. 30]. According to them, this results from the fact that lower levels of government use own sources better, responding better to local demands and promoting greater economic efficiency [32, p. 30]. However, the authors emphasize that long-term effects vary depending on the type of decentralization undertaken in each of the countries studied [32, p.30].

Zhang and Zou [45] hold that different measures of fiscal decentralization seem to have a positive and

sometimes even a significant impact on regional economic growth in India. Lin and Liu [21] also conclude that fiscal decentralization has a positive and significant impact on the economic growth in China. On the other hand, this is in contradiction to the conclusion that fiscal decentralization leads to slower growth. In the case of China, this was determined by Zhang and Zou [46]. In the case of the United States of America, the same findings were arrived at by Davoodi, Xie and Zou [15]. Finally, Davoodi and Zou [14] came to an identical conclusion analyzing a large number of developing countries and developed countries. In contrast to all studies mentioned, Woller and Phillips [42] failed to find a statistically significant relationship between fiscal decentralization and economic growth using panel data from developing countries.

The reason for such diametrically opposite findings is primarily the outcome of using different levels of disaggregation of revenues and expenditures for different levels of government. For example, Davoodi, Xie and Zou [15], Davoodi and Zou [14], and Woller and Phillips [42] concentrate on the role of aggregate spending of different levels of government, while Zhang and Zou [45], [46] take their analysis a step further observing the impact of the structure of public expenditure by sectors of different levels of government on the economic growth. Finally, Lin and Liu [21] use the marginal revenue retention rate as a measure of fiscal decentralization (defined as the percentage of revenue which the lower levels of government retain for themselves). Using different data levels in researching one occurrence in the same territory and over the same time period resulted in completely different conclusions.

The next topic we need to discuss is whether we can assume the existence of a direct relationship between decentralization and economic growth? Oates [26] intuitively argues that the assumption that fiscal decentralization promotes higher economic efficiency is logically linked to economic growth. Accordingly, investments in the infrastructure and the social sector, in line with the specifics of regional or local development established at these levels, will probably prove more efficient in enhancing economic development than the central government policies which may ignore these differences [26, p. 238]. The principal question is why, for example, 1 million Euros invested in infrastructure or education at the regional or local level should result in higher growth than in the case of the same amount being invested from the national level. A direct influence, as Oates points out, is that lower levels of government can make public expenditure more efficient, i.e. they can better respond to the needs and desires of taxpayers because they are more familiar with their preferences. In this way, lower level government expenditure is more in the function of economic growth than expenditure defined at the national level [26, p. 238].

Naturally, the direct relationship between decentralization and growth may head in a completely different direction if the measures and policies introducing fiscal decentralization are inefficient. The same applies to efficiency of decentralization. It may be higher or lower depending on the ways of carrying out the policy of decentralization. It is also dependent on the capacity of a local self-government to adjust its policy to local priorities and the ability to generate innovations in providing of public services [31, p. 32]. There is, however, little empirical evidence to support these arguments. In their work, the authors mentioned evaluate the horizontal link between devolution and regional economic growth. Results obtained show that, contrary to expectations, the degree of decentralization is in most cases irrelevant for economic growth, and when it is relevant, as in the cases of Mexico and the US, then this relationship is negative, i.e. a higher degree of decentralization leads to lower efficiency and lower growth [31, p. 32].

Bird stresses the importance of clearly understanding the goals and context of fiscal decentralization in any country before embarking on an analysis of the process itself [8, p. 211]. His assumption is that the primary goal of decentralization is improving efficiency, concluding that there can also be other goals as well [8, p.208]. Bearing in mind this starting point, his entire discussion is limited to two key issues of public financing resulting from fiscal decentralization: assignment of a portion of revenues, i.e. defining own local revenues and design of transfers [8, p. 211].

From the standpoint of efficiency, Bird argues that local revenues must be oriented towards maximizing

their benefits. To the extent that local public services are financed from fees paid by those using these services, the previous claim should be correct. Therefore, if public revenue collected in one territory is used to improve the quality of services delivered to citizens in that territory, this is can be qualified as efficient decentralization. As for transfers, Bird argues that they are not only necessary in practice, if local self-governments are responsible for significant expenditures, but that they can be used to a great degree for equalization of capacities of local self-governments. However, he goes on to suggest that such transfers should always depend on local expenditure performances. Otherwise, there would be dissipation of resources [8, p. 211].

Some empirical studies analized the impact of local government decentralization level on economic growth. Nelson and Foster [23] and Foster [16] use similar measures of decentralization (both revenues and expenditures) to analyze two different indicators of growth, population and income. The results shows that central-city population share is positive, but not significant in the population regression, but is negative and significant in the income regression. Their measure of special-district fragmentation generates a negative and significant correlation with income growth, but a positive and insignificant correlation with population growth. Differences across these two measures of economic growth may be related to compensating differentials. For example, locations with more favorable government structure (e.g. decentralized local governments) may attract residents which subsequently drive down wages [23].

Stansel analized the link between local decentralization and local economic growth during the 1960-1990 period in the U.S.A. The model examines two dependent variables as a proxy of economic growth: growth of population and growth of real per capita money income [37, p. 59]. For fiscal decentralization measure he used both revenue and expenditure indicatiors. His study shows evidence "of a strong positive relationship between local decentralization and local economic growth" [37, p. 55]. Overall, the empirical work focused on local governments has prouved decentralization impact on economic growth, but the results depends on measures of decentralization and economic indicators.

In conclusion, it should be stated that past empirical studies have not fully proven a direct relationship between fiscal decentralization an economic growth. However, some of these studies have shown that under certain conditions this direct relationship does exist, but that it is not fully defined and that it depends on the case at hand. Even if there is no direct relationship between fiscal decentralization and economic growth and development, or if this relationship is hard to prove, it would seem that a potentially indirect relationship does exist. Decentralization, especially fiscal decentralization, influences other economic dimensions which, in turn, directly influence growth and development. For example, Seyfried [34, p. 22] examines the relationship between employment and economic growth in the ten largest states in the world. He concludes that economic growth has a significant impact on employment, but for some effects to be fully felt there is a time lag.

Data and methodology

The scope of our empirical analysis is the impact of the degree of fiscal decentralization on economic growth in local self-governments in Serbia over a period of 10 years, from January 1, 2002 to December 31, 2011. This is a period of constant gradual increase of the degree of fiscal decentralization resulting from objective factors (local tax collection rate increase, expanding the local tax base, establishing a system of local tax administrations, etc.). In late 2011, amendments to the Law on Local Self-government Financing enabled significant increase of the degree of fiscal decentralization, which brought about a significant "breakpoint" in the time series data. A year later, there was also another significant break point in the series data due to the repeal of the fee for use of construction land, which was one of the most significant sources of revenue in large towns. Therefore, we have limited our analysis to the period ending with 2012 in order to establish a base for further examination and comparison with results obtained after the structural changes[2].

Acording to World Bank [43] there is a wide range of potential fiscal decentralization indices. For the purpose

2 For more details about fiscal decentralization in Serbia see [19].

of out analisys, we will use own, shared and transferred revenues of local self governments as independent variables. Those variables are very often used and tested in literature. Akai and Sakata concluded that "definition of fiscal decentralization is important in relation to the effect of fiscal decentralization on economic growth" [1, p. 93]. The also agreed that "the standard approach to measuring the fiscal decentralization is to make use of accounting measures such as revenue or expenditure" [1, p. 95]. Similar conclusions are given by Rodríguez-Pose and Krøijer [32], and by Thornton [40]. All of those studies used both revenues and expenditures indicators for fiscal decentralization level. But, for the purpose of our analisys where it isn't our goal to analyze what influenced local growth, but to investigate does local authorities used revenues growth, resulted from fiscal decentralization, to support local growth, we chose to use only revenues accepting all potential risks of that analysis.

Each of the independent variables in its own way indicates a certain degree of fiscal decentralization. Thus, for example, higher own revenue or its increase over time shows a higher degree of fiscal decentralization or its increase. Conversely, a higher level of transfers shows a lower degree of fiscal decentralization as in that case local self-government is financially more dependent on funds from the central budget. For easier following of the model, own revenue is marked D^1, shared D^2, and transfers D^3.

The data used in the analysis originate from several sources. A source of fiscal revenues and expenditures of local self-governments was primarily the Ministry of Finance of the Republic of Serbia, the Treasury Administration. Another source of data was the Ministry of Finance, the Budget Sector. By combining data from the Treasury Administration and the Budget Sector, we obtained data on own revenues of local self-governments, shared revenues and transfers over the period from 2002 to 2011[3].

As a dependent variable, whose level and movement should be an indicator of the degree and dynamics of economic development of local self-governments, several variables were used. The first is the annual average number of employees in each of the local self-governments. Economic growth has a positive and significant impact on employment growth (see, e.g. conclusions given by Seyfried [34]) and taking in consideration that GDP on local level is not available, we will use number of employees as proxy. The source of employment data at the local level is the Statistical Office of the Republic of Serbia (SORS).

Based on the employment data, the following dependent variables were formed: total number of employees, number of employees in the private sector and the number of employees in local administrations (not including the armed forces and the police). The number of employees in the private sector includes employees in local companies founded by the local self-governments as there is no precise information on the number of employees in individual companies. Also, the number of employees in local administration includes employees in education and in health care.

The second dependent variable is the size of the investment in local infrastructure. Economic growth is highly influenced by investment (see, for example, [2], [3], [10]). On the same time, Zhang gives detailed report on local level investment influence on economic growth taking China as example [44]. Those conclusions can be useful starting point for our analisys.[4]

Our goal is to apply these chosen dependent variables to examine the indirect relationship between fiscal decentralization and regional economic growth. Dependent variables in our case show in different ways the level of economic growth in individual local self-governments. So, for example, the trend of the number of employees shows the level of economic activity in a particular local self-government. The higher the number of employees, the

3 Not included in the analysis were grants because grants are sporadic with a low share in total revenue. Not included were also data on funds received through borrowings as these are not of a systematic character, and policy of borrowing of local self-governments often changed over time which could give the wrong picture in the course of analysis. Also, both types of data, grants and credits, are mostly unreliable or missing, and in most cases there is no precise information as to what these funds were used for.

4 The drawback of this dependent variable is that relevant data relating to the size of the investment at the level of the local self-government unit are available only from 2005. Nevertheless, in view of the number of local self-governments observed (145) and the seven-year period for which there are available data, we have quite enough data for relevance of using this variable in the analysis.

higher the economic activity in that local self-government, and indirectly the growth.[5]

On the other hand, data on the size of investments in fixed assets show the investment capacity of a local self-government, and indirectly, the level of economic growth in that municipality. Investments in one period present the foundation for economic growth in another period. This will reflect in higher revenue growth of local self-governments. Local self-government investments are primarily directed at building local infrastructure and in general enhancing the quality of services provided by that local self-government. Municipalities with better local infrastructure, better quality of services (e.g. a more efficient system of issuing construction permits) and a stimulating local tax policy have managed to attract greenfield and brownfield investments, which primarily impacted the increase of own revenues of those local self-governments.

After analyzing the data and selection of dependent and independent variables, we approached defining the model. We will try to run "informal growth regresion" based on Barro [7] which main idea is to simply choose a different variables and see how that works in growth equation. The choice of variables is based on the results of analysis of Neuhaus [24]. We use a regression model based on those of Levine and Renelt [20] and Rodríguez-Pose and Krøijer [32]. The following form of model was used:

$$Economicgrowth_{it} = \beta_o + \beta_1 D^1_{it} + \beta_2 D^2_{it} + \beta_3 D^3_{it} + u_{it} \quad (3.1)$$

where:

D^1_{it} - own revenue in the local self-government *i* in the year *t*,

D^2_{it} - shared revenue in the local self-government *i* in the year *t*,

D^3_{it} - transfers in the local self-government *i* in the year *t*,

$\beta_o, \beta_1, \beta_2, \beta_3$ - coefficient on independent variables

u_{it} - statistical error of the model

As we already mentioned, there is no data for economic growth on local level in Serbia and we will use as proxies for economic growth empolyment and investment on local level. Starting from that point, two models were evaluated with the aim to test the set hypotheses.

Model 1: $Employment_{it} = \beta_o + \beta_1 D^1_{it} + \beta_2 D^2_{it} + \beta_3 D^3_{it} + u_{it}$ (3.2)

Model 2: $Investments_{it} = \beta_o + \beta_1 D^1_{it} + \beta_2 D^2_{it} + \beta_3 D^3_{it} + u_{it}$ (3.3)

where:

$Employment_{it}$ is number of employees in the local self-government *i* in the year *t*

$Investment_{it}$ is size of investments in fixed assets in the local self-government *i* in the year *t*,

A good dataset is crucial for estimating the effects of fiscal decentralizacion on economic outcomes. Analysys

5 We also tested the number of employees in local self-governments in terms of indicators of paid personal income taxes. Income tax is paid according to the place of residence, which presents more precise data than the number of employees in a given municipality. Theoretically, it is possible that a significant number of employees from one municipality works in a neighbouring municipality. Statistical employment data would in that case register an increased number of employees in that municipality, but the impact of such an increase on the economic growth of that municipality would be small, as everyone lives (and spends) in the neighbouring municipality. However, our analysis shows that the results are almost identical, which indicates low mobility of the work force in Serbia.

Table 1. Summary statistic of data base

Variables	No. of observations	Average	St.dev.	Min	Max
Own revenues	1,450	3,978	24,813	27	396,954
Shared revenues	1,450	4,499	23,967	48	352,985
Transfers	1,450	2,029	7,151	96	151,441
Investment	938	2,643	20,174	0	295,399
Employment	1,450	13,270	49,834	541	628,366
Employment, private sector	1,450	10,386	38,824	296	501,083
Employment, public sector	1,450	2,884	11,168	150	171,635

Table 2. Correlations

	Own revenues	Shared revenues	Transfers	Investment	Employment
Own revenues	1.00	-0.16	-0.62	0.10	0.19
Shared revenues		1.00	-0.57	0.06	0.12
Transfers			1.00	-0.09	-0.23
Investment				1.00	0.13
Employment					1.00

shows that if panel data are available, they are good for country/regional analisys of fiscal decentralization [27, p. 66]. Also, where data are used for same country, previos analisys shows that different level of development of regions in that country do not metter [27, p. 66]. Starting from that point, all data relating to individual local self-government units and time were observed as a panel, and calculated in EUR, using the average annual rate for that year, in order to avoid the effects of inflation. Panel is strongly balanced. Table 1. provides summary statistics for all the variables.

We first tested autocorrelation in panel data using Wooldridge test, and results shows that data does not have first-order autocorrelation (Prob>F=0.25 for Model 1 and 0.44 for Model 2). Then, we tested heteroskedasticity (Table 3). Modified Wald test for groupwise heteroskedasticity in FE regression model shows that heteroskedasticity is present for both dependent variables (employment and investment). On the other side, Breusch and Pagan LM test for random effects shows present of heteroskedasticity for Model 1 (employment) but not for Model 2 (investment). Finaly, taking in consideration that in our panel, N is biger than T (N=1.450, T=10), we tested cross-sectional dependence using test of Pesaran [28]. Results shows no presence of cross-sectional dependence in our panel.

Table 3. Heteroskedasticity tests results

Variables	Modified Wald test	BP LM test
Employment	1.9e+09 (0.000)	255.58 (0.000)
Investment	1.1e+08 (0.000)	2.30 (0.13)
Employment, private sector	5.9e+0.7 (0.000)	219.98 (0.000)
Employment, public sector	3.3e+0.8 (0.000)	225.63 (0.000)

Taking in consideration presence of heteroskedasticity, recent literature dealing with the estimation of heterogeneous panels (Baltagi, Bresson and Pirotte [5], Baltagi, Jung and Song [6]) suggests that the choice of an appropriate model is sensitive to specifying the correct source of heteroskedasticity (see also Bresson, Hsiao and Pirote [12]). Havin that in mind, and starting from Hoechle [18], in our analisys we will start using fixed effects linear panel regression with robust standard error.[6] In the case of presence of heteroskedasticity, and using robust model, we are enabled to use standard Hausman test in order to test the difference between random and fixed effects. But we can use Test of overidentifying restrictions (fixed vs random effects). Significant P-value (Table 4) suggest that we should use fixed effects in the regression of Model 1. Regarding Model 2, and having in mind that RE model don't have heteroskedasticity, and that FE model shows it, we are unable to compare those models using this test. Instead, we will present results of both methods and comment on it.

Table 4. FE vs RE effects

	Sargan-Hansen statistic	
	Chi-square	P-value
Employment	96.089	0.000
Employment, private sector	61.947	0.000
Employment, public sector	160.404	0.000

Finally, for the purpose of our analysis it is also useful to look at whether there are an differences in the trends of fiscal decentralization in towns and municipalities over the observed period. Municipal and township governments are defined by Law on local self-goverments. They typically have similar powers and perform similar functions.

Results and discussion

The results of all regressions are presented in Table 5. All coefficients on independent variables are statistically significant at the 5% level (exept var "transfers" in Model 1, employment). R-Squared values are relatively small, except for regression with investment as dependent variable.[7] Values for F statistic also shows that our model is relevant, and that all coeficient are different than zero.

6 It is also possible to use FGLS regression. But that method is infeasible if the panel's time dimension T is smaller than its cross-sectional dimension N (which is almost always the case for microeconometric panels). Also, FGLS is valuable under the assumption that all aspects of the model are completely specified. If the covariances within panel are different from simply being panel heteroskedastic, then the FGLS will be inefficient and the reported standard errors will be incorrect (for more details see e.g. [18]).

7 It should be clear that R-square in panel data models is not simple that we obtain from OLS estimators, and they are based on correlations between the actual Y_{it} and its predicted values from the regression equation.

Table 5. Regressions results

Variables	Employment*	Employment private sector*	Employment public sector*	Investment (FE) *	Investment (RE) **
Own revenues	-0.105 (0.080) [0.000]	-0.142 (0.072) [0.049]	0.036 (0.009) [0.000]	0.788 (0.066) [0.000]	0.721 (0.026) (0.000)
Shared revenues	0.865 (0.116) [0.000]	0.731 (0.134) [0.000]	0.133 (0.033) [0.000]	-0.644 (0.243) [0.009]	-0.269 (0.030) [0.000]
Transfers	0.005 (0.055) [0.925]	0.259 (0.063) [0.000]	-0.254 (0.037) [0.000]	0.837 (0.177) [0.000]	0.767 (0.055) [0.000]
Const.	9,786.424 (403.622) [0.000]	7,133.967 (371.845) [0.000]	2,652.459 (51.159) [0.000]	474.301 (598.621) [0.429]	-1,098,685 (178.131) [0.000]
R-Squared	0.459***	0.458***	0.232***	0.635***	0.627****
F- value	462.79 (0.000)	369.95 (0.000)	265.72 (0.000)	11,315.62 (0.000)	13,870.68 (0.000)

Note: * FE (robust standard error); ** RE GLS: *** Within: **** Between.

First, we will start from the assumption that higher number of employees at local self-government level means a higher standard for the citizens, higher consumption and a higher local GDP. The assertion regarding the possible contribution of fiscal decentralization on employment growth is additionally enhanced by analyzing the financial effect of such employment on the local self-government budget, i.e. in terms of the amount of paid personal income tax in a given local self-government unit. In order to draw a precise conclusion on the impact of fiscal decentralization on employment, and indirectly on the economic growth of local self-governments, in addition to total employment we are also analyzing employment in the private sector and employment in local administration at local self-government level. The results of regression of Model 1 from (3.2) are presented in Table 5.

The coefficient on the variable D^1 (own revenues) is negative, indicating that the total number of employees in local self-governments declined over the observed period, in spite of the increased degree of fiscal decentralization. Such a relationship between the total number of employees at local level and own revenues could be interpreted in several ways. First, this could be interpreted in light of the general decline of the number of employees in Serbia over the observed period. However, we must note that reasons for the decline of the number of employees in the previous period are not correlated with the degree of fiscal decentralization, therefore, this reason cannot be considered a prevailing one. Second, it is a realistic assumption that local self-governments, or at least the majority of them, have not been systematically using own revenue growth, to contribute to creating new jobs at local level, primarily in the private sector. This is supported by the lack of programs for creating new jobs and reducing unemployment at the level of local self-government units in Serbia. All such programs are at the central level.

On the other hand, the increase in shared revenue contributed to an increase in employment in local self-governments. This suggests, on the one side, that revenue growth of local self-governments did have some impact on increasing employment in local self-governments. However, this result should be taken with reservation as a great portion of shared revenue constitutes personal income tax relating to persons with residence in the territory of the local self-government. Therefore, more employees means more personal income tax paid, and in turn more shared revenue. As a result, these two variables are greatly correlated, hence the results arrived at were expected.

The result, therefore, indicates that the process of greater fiscal decentralization and the number of employees at local self-government level have developed independently of one another. In other words, the growth of own revenue and thus a higher degree of fiscal decentralization have not contributed to increased employment at local self-

government levels, quite the contrary. Employment trends in this period have also been affected by a number of other factors which have nothing to do with fiscal decentralization. However, this does not diminish the result which, let us restate, testifies to the fact that local self-governments failed to efficiently use the substantial growth of own revenues.

In order to take a step further with the analysis of the relationship between fiscal decentralization and employment at local level, we are going to observe only the number of employees in the private sector at the level of individual local self-governments. Using the model from the relation (3.2) we are going to test the relationship between own revenues, shared revenues and transfers of local self-governments and the number of employees in the private sector over the observed period. Results are presented in Table 5.

The first conclusion is that all coefficients on the independent variable are statistically significant, as well as that the model itself is statistically significant. In addition, a negative coefficient on the variable D^1 indicates that own revenue growth over this period is in negative correlation to the increase of employment in the economic sector in local self-governments. This result also indicates that a higher degree of fiscal decentralization did not result in changes of the policies that are within the competence of local self-governments, and which could bring about economic growth and creation of new jobs in the private sector in the previous period.

The next step is analyzing the relationship between fiscal decentralization and employment in administration at local level which is defined as the number of employees at local self-government level whose earnings are budget funded. Panel regression provided us with the results presented in Table 5.

Coefficients on all independent variables are statistically significant. Coefficient on the variable D^1 (own revenue) is positive, which indicates that the total number of employees in local self-governments increased over the observed period with the increase of the degree of fiscal decentralization. This result is particularly interesting for the pursuit of a suitable economic policy of the central government towards local self-governments. Namely, a conclusion that can be drawn from such a result is that local governments have used the increase of fiscal revenues resulting from fiscal decentralization to increase employment in local administration, while employment in the private sector has declined in the same period. A similar conclusion applies to shared revenues, which only accentuates our conclusion[8].

Contrary to this, it is interesting to note that the growth of transfers had an opposite trend in relation to increase of employment in administration at local self-government level. One explanation could be that municipalities with a larger share of transfers in total revenues are poorer, therefore, by definition, employment is lower in those municipalities and better controled by central government. Also, local self-governments with a higher growth of own and shared revenue have a lower share of transfers in total revenues. Therefore, the logical assumption is that transfers and number of employees in administration have their own trends.

The general result of this part of the analysis is that over the period from 2002 to 2011, the increase of the degree of fiscal decentralization, measured through growth of own revenue of local self-governments, was accompanied by a decline in employment at local self-government level. It may be concluded that measures of fiscal decentralization were not a good response to the general drop in employment in the observed period. It could be asserted that the increase of fiscal decentralization failed to produce a more significant impact on the economic development in the previous period, and that it did not contribute to the increase of general employment, however, it most certainly did contribute to the increased number of employees whose earnings are budget funded.

Supporting this assertion is the fact that the increased degree of fiscal decentralization, measured through own revenue growth of local self-governments, had a positive impact on the increase of employment in administration at local self-government level. Therefore, the increase of

8 Intuitively we can assume that a similar conclusion applies to earnings in local administration, i.e. that they have increased in this period along with the increase of the degree of fiscal decentralization. However, due to a lack of adequate data, we are not in a position to empirically test this claim.

revenue over time was used by local self-governments to increase the number of employees whose earnings are budget funded, while employment in the private sector dropped.

It must be said that this result is also partially dependent on the increase of the number of employees whose earnings are budget funded which is the result of the transfer of certain competencies from central to local level (e.g. property tax collection) and due to the fact that some new competencies were created at local level (e.g. communal police). Nevertheless, this fact does not minimize the significance of the result that shows a lack of fiscal responsibility at LSG. The same trend continued after 2012 when, after assigning a major portion of income taxes to local self-governments, employment and earnings increased at local level.[9]

Another aspect of our analysis is to establish the indirect impact of fiscal decentralization on the economic growth of local self-governments, by analysing the trends in terms of the size of investments in fixed assets. By definition, the category of investments in fixed assets at local self-government level includes investments of local self-governments in buildings and construction works (including all local and communal infrastructure) as well as investments in machines and equipment. The flow of investments to fixed assets at the local self-government level should show us how much a local self-government invests in future development, as infrastructure is crucial in attracting investments and creating new jobs. We are starting with the assumption that higher own revenue created by the local self-government will lead to higher investments in fixed assets. With the panel regression of the model in relation (3.3) we arrived at the results which are presented in Table 5.

All coefficients on independent variables are statistically significant. Coefficient on variable D^1 (own revenue) is positive, which means that increase of the degree of fiscal decentralization had a positive impact on local economic growth measured through investments. Shared revenues of local self-governments have a negative impact on investments in fixed assets by that local self-government, while transfers have positive impact. The general conclusion is that the increase of own revenues resulted in higher investments at the local self-government level mainly from own sources.[10] However, we also need to analyse how an increased degree of fiscal decentralization impacted the increase of investments in municipalities, as well as in towns, in order to determine any possible specific characteristics. The results show that municipalities invested less in infrastructure with the increase of the degree of fiscal decentralization, compared to the average for all local self-governments. On the other hand, with increased fiscal decentralization and increased own revenues the towns increased investments in fixed assets. This increase in investments is still not at the expected level, but it is about four times higher than in the case of municipalities. Therefore, with own revenue growth by one unit over the period from 2002 to 2011, towns in Serbia increased investment funds on an average approximately four times more than did municipalities. Such a result is in accord with intuition as in the observed period towns developed economically, and particularly in terms of infrastructure significantly more than was the case in municipalities. On the other hand, municipalities are very heterogeneous (wealthier or poorer, larger or smaller, situated in the proximity of main roads or further away from the main roads, etc.) while the towns (with the exception of Belgrade) are to a large degree similar.

Conclusion

It has beenzempirically demonstrated that in the past decade fiscal decentralization has not significantly contributed to increasing total employment at local level. In general, this is primarily the result of lack of interest of LSG to invest important portion of their growing revenues into creating new jobs in private sector. Such investment could be implemented in two ways. The first way is through direct subsidies to business entities, which certainly isn't the best way, although, unfortunately, it is often exercised

9 We also tested panel data separately for towns and municipalities, in order to create more homogeneous sample, but the results are similar, i.e. own revenue growth did not contribute to increasing employment both in towns and municipalities in Serbia.

10 Same conclusions are obtained from RE regression results (Table 5).

in countries in transition. Another, more efficient way to encourage creating new jobs is to improve the business environment, shorten the time required for obtaining various permits, lower the costs, etc. This would ensure inflow of new investments which makes this method economically sustainable. However, with of course few exceptions, local governments have mostly neglected this segment and left it entirely to the decisions of the central government.

On the other hand, as the degree of fiscal decentralization increased, so did the number of employees in local administration. In almost all local self-governments, the number of employees whose earnings are budget funded increased more than double over the period from 2002 to 2011. Such a trend also has two explanations. First of all, with the process of fiscal decentralization, local self-governments were given new competencies, transferred from the central government. New competencies implied new employees (e.g. transfer of property tax collection to local self-governments required setting up a local tax administration, which resulted in an increase in the number of employees in connection with this). Second, revenue growth based on an increased degree of fiscal decentralization is not accompanied by an adequate growth of expenditure for such competencies at local level. Local self-governments took advantage of this and redirected the resulting surplus revenue to increasing employee earnings, expenses for purchase of goods and services and subsidies to local business entities. Thereby, this kind of behaviour was more pronounced in towns than in municipalities, primarily because towns had relatively more significant own revenue growth.

Therefore, these two results clearly indicate that fiscal decentralization and own revenue growth of local self-governments have not contributed to the increase of employment and indirectly the economic growth of local self-governments in the previous period. It is clear that for various reasons local policies could not influence the growth and development trend of an economy and that there was a great number of decisions that were made exclusively at central level. However, the only category that increased over time along with the increase of growth of fiscal decentralization is employment in administration at local self-government level. This is something that local policies directly influenced and are, therefore, the ones responsible for such a result. One of the first measures of a central state, aimed at stopping irrational spending of funds at local level, is limiting the possibility of spending surplus funds of local self-governments in an irrational and unproductive way.

Empirical analysis also showed that fiscal decentralization in Serbia had a positive, although relatively small, impact on increase of investments at local level. It is a fact that a number of local self-governments used own revenue growth over time in order to invest more in local infrastructure and to improve the quality of local services. Local self-governments which realized on time the importance of these investments managed to attract significant investments locally. Those investments have contributed to the creating of new jobs and indirectly to growth of own, as well as shared revenues of those local self-governments.

However, we must point out here that the impact of own revenue growth on investments is very small. Empirical analysis indicates that the increase of own revenue of local self-governments of 50 billion RSD (which presents the nominal cumulative growth over the period from 2002 to 2011) resulted in increase of investments locally of only 43 million RSD. In other words, as a result of own revenue growth in the past ten years, local self-governments increased investments by an average of approximately 4 million RSD annually or approximately an average of 27,000 RSD annually per local self-government. Meanwhile, local self-government revenues, observing an average for one local self-government unit over a period of one year, increased more than 100 million RSD. If we add to this grants and local self-government borrowing, the result is even lower.

Intuitively, it was evident that towns were in a position to better use own revenue growth and significantly increase investments. Empirical analysis shows that towns were four times more successful in this, i.e. that with the growth of own revenues they allocated on an average four times more funds for investments than did the municipalities. However, such a result is still considered modest. In nominal values, investments per town increased by an average of approximately 28,000 RSD annually as a result

of own revenue growth. At the same time, municipalities increased investments by merely 7,000 RSD annually, in spite of very high revenue growth in the period observed.

The fact of the high degree of fiscal decentralization [9], as well as the empirical analysis which indicates that fiscal decentralization did not contribute to increase of employment, as well as the relatively small positive impact of fiscal decentralization on the increase of investments, opens several dilemmas to be considered by the creators of the economic policy in Serbia.

The first issue concerns the optimal level of fiscal decentralization in Serbia and how it could be reached. An answer to this question is not simple. Both, in economic theory and practice, there is no consent on subject of the optimal level of fiscal decentralization in one country. What is certain for Serbia is that the level of decentralization is already high enough and that the next step should entail regulating the present state of affairs in order to increase efficiency of utilization of assets at local level. A systematic analysis of the effects of amendments of the Law on Local Self-government Financing in the past several years needs to be carried out. Such an analysis should serve as the basis for a new law on local self-government financing.

According to our estimate, there is no need to further increase the degree of fiscal decentralization in Serbia, but only to regulate the existing system in order to ensure its sustainability. In reference to this, it is necessary to fully implement, as soon as possible, the Law on Public Property which provides for local self-governments to become owners of property. In order to make municipal governments take responsibility for their decisions, in particular the ones regarding fiscal policy, we feel it is necessary to consider introducing bankruptcy of local self-governments with all the consequences on the functioning of local self-governments which such a result entails.

The second issue which is of significance for economic policy makers in Serbia is how to increase, within the existing legislation, own revenues of local self-governments. That is an important subject not only due to the rising number of requests by local self-governments because of a lack of investment funds, but also because of the need to suspend a large number of parafiscal fees which are in effect at local level.

On the other hand, the existing system is not fully utilized. There is most area to work with obviously within the property tax which is still very low. There are some significant deviations and great differences between property tax revenue levels per capita in the observed local self-governments. In conclusion to our analysis it may be said that some municipalities have managed to better "handle" the situation and create an efficient system of property tax collection, while others find themselves only at the beginning of this process. One of the reasons for this is the lack of an adequate data base of constructed buildings in local self-governments, which is the basis for collection of this tax. Therefore, the first step would entail that the local self-governments make an inventory of the taxpayers' property which would increase the scope of the tax, which, in turn, would result in own revenue growth without raising the tax rates. The second step would be to amend the methodology for tax calculation, from property value assessment to the types of tax incentives. By carrying out reforms in this area, local self-governments would secure significant funds which could be used for increasing investments in infrastructure and improving the quality of services at local level. Finally, we must point out that this is a very broad topic and that it deserves a detailed analysis, which we will leave for some future papers and research.

The third, although not the last, issue opened by our analysis concerns the influence that politics have on this process. Namely, so far the process of fiscal decentralization has been closely linked to decentralization of political influence, with the establishing of regions and the tendency to use such politics to win over the sympathy of voters in order to achieve some political goals. Our conclusion is that fiscal decentralization must be founded on plain economic criteria and must be the result of precise analyses. Ad hoc changes of legislation in order to satisfy certain political options, is not contributing to an even regional development as it maintains a high degree of uncertainty in the system and in the process itself. This uncertainty will result in local governments using funds resulting from the increased degree of fiscal decentralization exclusively for short-term, one-time projects (increasing earnings, hiring new employees in government administration,

etc.), and not for key investment projects, the results of which are expected medium term (e.g. construction of a metro, bridges, etc.).

Finally, it must be noted that this analysis was performed taking into consideration all the limitations that were set before it. This relates primarily to limitations and difficulties to obtain data, then the lack of clear economic policies at local self-government level, frequent change of the categories of revenue that make up own and shared revenues of local self-governments, as well as a vast heterogeneity of local self-governments as the basic units of fiscal decentralization in Serbia. Taking into consideration all these limitations, the greatest contribution of this paper, in our opinion, is to draw the attention of economic policy makers, primarily in fiscal policy, to the significance of a systematic and analytical approach to the fiscal decentralization process and the importance of making decisions relating to the methods of financing local self-governments based on facts and effects. Only in this way it is possible to contribute to optimally using the potential positive effects of the impact of fiscal decentralization on regional economic growth in Serbia.

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LIMITATIONS ON LIABILITY FOR LOSS CAUSED BY A BREACH OF BUSINNES CONTRACTS - FROM THE PERSPECTIVE OF THE SERBIAN LAW ON OBLIGATIONS*

Ograničenja odgovornosti za štetu zbog povrede privrednih ugovora - Iz perspektive srpskog Zakona o obligacionim odnosima -

Abstract

This paper aims to analyse the rules concerning the limitations on liability for the loss arising out of business contracts from the perspective of the principle of full compensation as the general principle of the Law on Obligations (Law of Contracts and Torts) and its limitations by way of the foreseeability rule. Special attention is given to the rules of the Law concerning the proportionate reduction of damages in cases when the aggrieved party contributed to the occurrence or increase of the loss, and when the aggrieved party, as a result of the breach of contract, received certain benefit in addition to the loss suffered. Given that contractual liability may apply only if no circumstances that exclude it have occurred, the paper provides a careful analysis of the rules of the Law relating to the exemption of liability, as well as contractual clauses on the exclusion and limitation of liability in terms of their validity and legal effects. The analysis of these rules is followed by their general evaluation in the final considerations.

Keywords: *liability, limitation, loss, breach of contract, Law on Obligations*

Sažetak

Predmet rada predstavlja analiza pravila o ograničenju odgovornosti za štetu proisteklu iz privrednih ugovora sa stanovišta principa potpune naknade kao opšteg principa Zakona o obligacionim odnosima i njegovog ograničenja putem pravila predvidljivosti. Posebna pažnja posvećena je pravilima Zakona o srazmernom sniženju naknade u slučajevima kad je poverilac doprineo nastanku ili uvećanju štete i kad je za dužnika, usled povrede ugovora, pored štete nastala i izvesna korist. Kako ugovorna odgovornost može postojati samo ako nisu nastupile okolnosti koje je isključuju, u radu su posebno analizirana pravila Zakona o oslobađanju od odgovornosti, kao i ugovorne klauzule o isključenju i ograničenju odgovornosti sa stanovišta njihove punovažnosti i pravnih dejstava. Analiza pomenutih pravila praćena je njihovom opštom ocenom u okviru zaključnih razmatranja.

Ključne reči: *odgovornost, ograničenje, šteta, povreda ugovora, Zakon o obligacionim odnosima*

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Introduction

The contract must be binding on the contracting parties the same way as any law. This is one of the fundamental principles of the contract law (*pacta sunt servanda*), and a breach of contract triggers the breaching party's liability for damages. In the theory of the law of obligations, this type of liability is designated as contractual liability [12, pp. 199ff.], [28, pp. 991ff.], [27, pp. 437-535], [10, pp. 23-51]. For the aggrieved party to exercise the right to damages under contractual liability, it is necessary: 1) that one of the contracting parties has breached the contract; 2) that the aggrieved party, as a consequence of the breach of contract, has suffered loss that can be compensated under the law applicable to the contract, and 3) that there are no circumstances that may exclude the liability of the party in breach of the contract. In this respect, one of the most important issues relates to the scope of damages and the limitations on contractual liability.

In business contracts, the limitations on liability for the loss caused by a breach of contract are normally established by the agreement of wills of the contracting parties, which include the appropriate clause into the contract. In this regard, the contracting parties are free, within the limits of public policy, mandatory regulations and fair practices, to exclude or alter the rules of contractual liability as provided by the law. On the other hand, when this issue has not been provided for in the contract, or if the relevant contractual clause is null and void, the contract is governed by the regulations applicable to contractual liability. Since most disputes arising from business contracts are essentially a matter of contractual liability and the scope of damages, knowledge and proper understanding of the basic solutions of the Law on Obligations governing these issues are of particular importance for Serbian companies.

The purpose of this paper is to analyse the rules concerning the limitations on liability for the loss arising out of business contracts from the perspective of the full compensation principle as the general principle of the Law on Obligations (I) and its limitations by the foreseeability rule (II), as well as the rules on the reduction of damages in special cases (III). Given that contractual liability may apply only if no circumstances that exclude it have occurred, the paper provides a careful analysis of the rules of the Law relating to the exemption of liability (IV), as well as contractual clauses on the exclusion and limitation of liability in terms of their validity and legal effects (V). The analysis of these rules is followed by their general evaluation in the final considerations (VI).

Full compensation of loss as a general principle

The Law on Obligations sets forth a general rule for the recovery of damages for breach of contract specifying that: "A creditor shall be entitled to damages for the effective loss suffered and the lost profits, which at the time of entering into contract should have been foreseen by the debtor as a possible consequence of the breach of contract, in the light of the facts which at the time were known or should have been known to him." (Article 266, Paragraph 1).

The principle of full compensation provided under the Law on Obligations, whereby damages consist of the effective loss and lost profits, is widely recognised in the comparative law. Thus, for example, this principle is adopted in German, Austrian, French, Italian, Portuguese and Dutch laws, and in a large number of other national legal systems. Furthermore, this principle is also adopted in the sources of the uniform contract law: UN Convention on Contracts for the International Sale of Goods from 1980 – CISG,[1] (Article 74) [19, pp. 96-117], [20, pp. 571-604], [21, pp. 271-289], [26, pp. 1057-1087], [7, pp. 990-1011]. The UNIDROIT Principles of International Commercial Contracts (Article 7.4.2) [29, pp. 266-269] and the Principles of European Contract Law – PECL (Article 9:502) [24, pp. 438-441]. This principle derives from the idea of full compensation for the loss. According to this principle, the aggrieved party must be placed in the same financial position as they would have been in had the contract been performed in full. To that effect, the aggrieved party who has suffered loss due to a breach of contract is entitled to claim damages both for the effective loss and lost profits. A better understanding of this rule requires an answer to

1 For further details on the CISG and its application in the Serbian legal system, see [16, pp. 414ff.].

three fundamental questions: What is the meaning of a breach of contract? What does effective loss imply? and What do lost profits imply?

Only the loss caused directly or indirectly by a breach of contract may be recoverable. A breach of contract exists in case of failure to perform contractual obligations. This non-performance may be full – when the contractual obligation is not performed at all, and partial – which occurs in several cases: when contractual obligation is performed only in part, when the obligation is performed, but not as envisaged by the contract (for example, late performance or defective performance), and in case of performance of only one or two of a number of undertaken obligations [15, pp. 298-299]. In that regard, Serbian law is completely in line with the solutions offered by modern sources of the uniform contract law, which adopt the concept that the term "non-performance" includes all forms of defective performance, as well as full non-performance. Thus, for example, under the UNIDROIT Principles, non-performance is a failure by a party to perform any of their obligations under the contract, including defective performance or late performance (Article 7.1.1). The PECL contain a similar rule (Article 8:101). A claim for damages may be raised independently or concurrently with other remedies for breach of contract, such as the claim for contract performance, for reduction of the price or for avoidance of the contract.

Effective loss (*damnum emergens*) within the domain of contractual liability may be defined as a reduction of the aggrieved party's assets by a breach of contract. In the practice of business contracts, effective loss may consist, for example, of the costs one contracting party has incurred in preparing to perform their own contractual obligations, while the other party failed to perform their obligations, which led to avoidance of contract. The effective loss for the buyer may, for example, consist of the amount of damages they were obliged to pay to their own buyer because, due to the breach of contract by the seller, they were unable to perform the obligation of delivery of goods. By the same token, if a building contractor fails to complete the construction of business premises on time, thus causing the employer to take a lease on other business premises and pay the rent, the amount of the rent will be their effective loss [8, p. 607]. Speaking of contracts of international sale of goods governed by the CISG (providing under Article 74 for full compensation principle), direct loss is often measured by the difference between the value to the injured party of the performance that should have been received and the value to that party of what, if anything, was actually received [7, pp. 995-996]. In cases where the aggrieved party undertakes measures to be placed in the same position they would have been in had the contract been properly performed, the aggrieved party is entitled to recover the costs of those measures, provided that they were reasonable. To that effect, where a seller unjustifiably delays delivering the goods and the aggrieved buyer undertakes reasonable measures to overcome the temporary loss, the aggrieved buyer may be entitled to recover the expenses they incurred in overcoming the loss of the benefit of performance.[2]

On the other hand, lost profits (*lucrum cessans*), within the context of contractual liability, are the profits the aggrieved party would have made had the debtor delivered performance as contracted. Unlike the effective loss, which implies a reduction of the existing assets, lost profits cover any increase in the assets that would have occurred in the foreseeable future under normal, regular circumstances, but was prevented due to the breach of contract by the other contracting party. In Serbian law, the aggrieved party is entitled to damages for lost profits caused by a breach of contract if three requirements have been met: 1) that the loss in the form of lost profits is certain. In that regard, it does not suffice for the aggrieved party to have merely planned and assumed profits arising under the contract; the profits need to have been certain,

2 The CISG commentators [7, p. 996] provide the following example. The contract provided for the sale of 100 tons of grain for a total price of $50,000 FOB. When delivered, the grain had more moisture in it than allowed under the contract description and, as a result of the moisture, there had been some deteriorations in quality. The extra cost to buyer for drying the grain was $1,500. If the grain had been as contracted, its value would have been $55,000, but because of the deterioration caused by the moisture, after it was dried the grain was worth only $51,000.

Contract price	$50,000
Value the grain would have had if as contracted	$55,000
Value of grain as delivered	$51,000
Extra expenses of drying the grain	$4,000
	$1,500
Loss arising out of the breach	$5,500

i.e. to have been reasonably expected in the regular course of things as profits from the contract concluded. For example, for the seller, lost profits would be the regular margin they would have achieved by selling the goods to buyers, had the goods been delivered to them by the manufacturer in accordance with the contract [8, p. 609]; 2) that there are elements which may serve as a basis for determining the amount of lost profits, which means that the aggrieved party needs to prove the value of the loss suffered in the form of lost profits. However, lost profits need not be calculated with mathematical precision, as such a calculation may not be possible; in such cases it would be unfair to leave the aggrieved party without a remedy. Therefore, lost profits need only be established with reasonable certainty [7, p. 998]. In that regard, lost profits may also be future loss, i.e. a loss that did not yet occur at the time of calculating the compensation, but will rather occur later on. The aggrieved party will be, as a rule, entitled to compensation for future loss providing that such loss is certain and that the aggrieved party may prove its amount as explained above; 3) that lost profits would not be contrary to the applicable regulations and fair business practices, which means that the loss of profit that would have been generated through inadmissible actions or a breach of contract does not enjoy judicial protection in Serbian law. The loss of profit, as a rule, not only envisages the net profit, but also fixed costs (the so-called general expenses) on a pro rata basis. The loss of profit needs to be reduced by the expenses that would have been incurred when generating this profit [26, p. 1073]. The amount of damages is assessed based on the value of loss at the time of the court decision, not at the time when the benefit was not actualised. It should be noted, however, that the degree of the debtor's fault is irrelevant for assessing the amount of damages in Serbian law [22, pp. 80ff.]. In business contracts practice, a typical example of lost profits is the profit which the buyer could have generated in a resale, but which they have lost due to the seller's breach of contract. Also, it includes losses resulting from the inability to keep a business running caused by the breach of contract, as well as many other cases where the above requirements have been met.

Foreseeability rule as a limitation of the principle of full compensation

The foreseeability rule, emanating from French law[3] and the English leading case Hadley v. Baxendale (contemplation rule),[4] limits the extent of damages to the loss which the party in breach foresaw or ought to have foreseen at the time of concluding the contract. The foreseeability rule has been incorporated into a large number of national legal systems [19, pp. 101ff.], as well as into the sources of uniform rules of contract law: the CISG (Article 74), the UNIDROIT Principles (Article 7.4.4) and the PECL (Article 9:503). The limitation of liability to a foreseeable loss is justified by numerous arguments [25, p. 23] suggesting, among other things, that this rule enables the parties to consider and take into account, already at the time of concluding the contract, the potential financial consequences arising from a breach of contract [14, p. 490] and to prevent possible liability, and that the foreseeability rule allows for a fair and reasonable allocation of risk [26, p. 1001].

Under the foreseeability rule adopted in Serbian law, the debtor is liable only for the loss which at the time of entering into the contract he should have foreseen as a possible consequence of the breach of contract, in light of the facts which at the time were known or should have been known to him (Law on Obligations, Article 266, Paragraph 1). This solution of the Serbian Law, based on the full compensation principle and the principle of limitation on liability by the foreseeability rule, is in line

3 Although the notion of foreseeable loss is often associated with common law, it is worth noting that the legal framework for this term was embedded in French law. Already in the 16th century, Dumoulin formulated the rule whereby in determining the scope of damages, an account must be taken of the foreseeability of loss at the very time of concluding the contract. The foreseeability rule was recognised in French theory, therefore the Civil Code adopted the rule stating: "*Le débiteur n'est tenu que des dommages et intérets qui ont été prévus ou qui pouvaient être prévus lors de la conclusion du contrat, sauf lorsque l'inexécution est due à une faute loured ou dolosive.*" (Articles 1231-3). For further details on the foreseeability rule in French law, see [27, pp. 437-440].

4 A landmark case from 1854, setting the rule for the foreseeability of loss in the English law – contemplation rule. This rule was subsequently further interpreted in Victoria Laundry (Windsor) Ltd. v. Newsman Industries, Ltd. (1949). For further details on these cases, see [12, pp. 200ff.], [1, pp. 821ff.], and [3, pp. 571ff.].

with the modern solutions adopted in comparative law with regard to this issue.[5]

Foreseeability is generally determined by using an objective criterion (*in abstracto*). The decisive question in this regard is what an average person in the shoes of the debtor and aware of the circumstances at the time of concluding the contract should have foreseen as a possible consequence of a breach of contract. The determination begins with the appropriate standards (due care of *bonus pater familias*, prudent businessman, prudent professional)[6] whilst taking into account the circumstances of each particular case. When it comes to business contracts, the required standard of care is that of a prudent businessman as a higher level of care involving greater expert and professional liability in contract performance. The burden of proof that the loss was unforeseeable lies with the debtor. However, in addition to the objective criterion, the determination of foreseeability may also employ the subjective criterion (*in concreto*), which considers the consequences of the breach that the particular debtor should have foreseen in particular circumstances. This is particularly the case where the aggrieved party has drawn the debtor's attention to certain specific or exceptional circumstances that are objectively unforeseeable. The burden of proof in such cases rests with the aggrieved party [8, p. 613].

The relevant moment for determining foreseeability is the time of concluding the contract. It is thus irrelevant, for the purpose of limitations on the debtor's liability, whether or not the debtor, after this point in time, became aware of some specific circumstances or additional risks that may cause greater loss than might have been foreseen in the ordinary course of things. With regards to the degree of probability required to determine the foreseeability of loss, a loss that normally occurs due to a breach of contract of a particular type is deemed to be foreseeable. Conversely, such losses that only exceptionally occur due to a breach of contract of a particular type are not considered to be foreseeable within the meaning of the rules of the Law pertaining to the limitations on contractual liability [8, p. 615].

Under the foreseeability requirement, only the loss itself must have been foreseeable at the time of concluding the contract, not the breach of the contract which constitutes the basis for the damages claim. Within these considerations, the domestic doctrine and court practices hold that this requirement relates to the type of loss, not to its amount [10, p. 353]. Thus, for example, in a case from domestic court practice, the claimant performed certain construction works based on a contract with the employer, and he hired the respondent as the subcontractor. Due to the delay in work performance, the claimant was obliged to pay to the employer the liquidated damages in a sum higher than usual. Given that the said delay was caused by the respondent subcontractor, the claimant sought from the court to enjoin the respondent to compensate him for the amount of the liquidated damages he had paid to the employer. The court dismissed this claim as unfounded, maintaining that the respondent, having entered into the contract with the claimant, assumed the obligation to compensate the claimant for the loss the claimant would have incurred due to the respondent's delay in contract performance. The respondent, consequently, assumed the normal risk arising out of such contractual relationship; he did not assume any increased risk, in the sense of the risk related to the claimant's recovery of the liquidated damages paid by the claimant to the employer (Decision of the former Supreme Commercial Court, Ref No Sl. 1682/72).

On the other hand, views on this issue differ in international court and arbitral practice [19, pp. 105-107]. Thus, in a contract on international sale of goods, the buyer needed to take out a loan to make an advance payment to the seller. However, due to a breach of contract by the seller, the buyer was rendered unable to repay the loan on time and, as a result, had to pay additional interest on the sum in arrears. Deciding on the buyer's claim for damages filed against the seller, the District Court of Kuopio (Finland) held that the seller could not foresee the interest rate on the sum in arrears in the buyer's country (Lithuania), considering that it essentially differed from interest rates in Western Europe, and awarded damages

5 For differences between the solutions of the Serbian Law on Obligations and the CISG regarding the foreseeability rule, see [19, pp. 118-120].

6 See Article18 of the Law on Obligations.

to the buyer by reference to the rate which, in the court's opinion, would be foreseeable to the seller.[7]

In Serbian law, limitations of contractual liability to a foreseeable loss apply only to those cases where the loss was not caused through intent or gross negligence of the debtor. Conversely, if the loss occurred as a result of fraud (*fraus*), intentional non-performance (*dolus*) or gross negligence (*culpa lata*), the foreseeability rule does not apply. In this respect, the Law on Obligations provides that, in the event of fraud or intentional non-performance, as well as non-performance due to gross negligence, the aggrieved party is entitled to claim from the debtor the compensation for the entire loss caused by the breach of contract, regardless of the debtor not being aware of the special circumstances that brought about the loss (Article 266, Paragraph 2).

Rules on reduction of damages

In addition to the full compensation principle and its limitations by the foreseeability rule, the Law on Obligations provides for special rules on reduction of damages concerning substitute transactions, mitigation of loss and loss attributable to the aggrieved party.

In certain cases, in addition to loss, the aggrieved party may acquire certain benefit as a result of a breach of contract (for example, in case of purchase for cover in the context of Article 525 of the Law on Obligations). Taking this into account, the Law contains a rule providing that: "Should in the course of a breach of an obligation, in addition to loss, a profit be obtained for the creditor, it shall be taken into account to a reasonable degree in determining the amount of damages." (Article 266, Paragraph 3). This way, the Law has given courts the freedom to decide, taking account the circumstances of each particular case, whether or not the benefit acquired by the aggrieved party should be deducted from the loss suffered due to the breach of contract. This was also the guiding principle in adopting the solution for the contracts in international sale of goods provided in CISG. It says that, if a contract is avoided and if, in a reasonable manner and within a reasonable time after avoidance, the buyer has bought goods in replacement or the seller has resold the goods, the party claiming damages may recover the difference between the contract price and the price in the substitute transaction, as well as any further damages recoverable under the Convention (Article 75). The UNIDROIT Principles (Article 7.4.5) and the PECL (Article 9:506) provide for similar solutions for substitute transaction.

On the other hand, the Law adopts a rule on the aggrieved party's obligation to mitigate the loss due to a breach of contract. According to this rule: "A party claiming a breach of contract shall take all reasonable steps to mitigate the loss caused by such breach, since otherwise the other party may request reduction of damages." (Article 266, Paragraph 4). The failure to mitigate the loss may arise either because the aggrieved party incurs unnecessary or unreasonable expenditure or because they fail to take reasonable steps which would result in the reduction of loss or in offsetting gains [24, p. 445]. Thus, for example, if the buyer has refused, without justification, to accept the goods which are the subject of the contract, they shall be liable to compensate the seller for the costs of storage for such goods (Article 326, Paragraph3 of the Law on Obligations). If the storage of goods requires expenses not commensurate with their value, the seller may sell them in accordance with Article 333, Paragraph1 of the Law. If the seller was able to sell the goods to a third party, but failed to do so, thus incurring costs of storage incommensurably higher than the value of the goods, the buyer shall not be held liable to reimburse the seller for such costs, because the seller failed to take steps to mitigate the loss. Domestic court practice holds that the buyer who has refused, without justification, to accept the goods sent by the seller, shall be obliged to keep or deliver such goods to a public storehouse for keeping. The buyer may not return the goods to the seller unless they have received instructions from the seller to that effect, otherwise they shall not be entitled to a recovery of the costs of transport [8, p. 618].

An almost identical rule about the aggrieved party's obligation to mitigate the loss is contained in the

7 Decision 95/3214 of November 5th 1996 (Butter case) quoted in [25, p. 116]. Available at http://cisg3.law.pace.edu/cases/961105f5.html.

CISG, providing that: "A party who relies on a breach of contract must take such measures as are reasonable in the circumstances to mitigate the loss, including loss of profit, resulting from the breach. If he fails to take such measures, the party in breach may claim reduction in the damages in the amount by which the loss should have been mitigated." (Article 77). The comments to the Convention, provided in the context of applying this rule in international court and arbitral practice, give the example that a party may be obliged to take legal actions against governmental acts, e.g. against seizure of goods, which make it difficult or impossible for the other party to perform the contract. Where non-conforming goods are delivered, the buyer may be obliged to remedy the defect in order to prevent the defect from spreading and to avoid consequential losses, or to replace defective goods needed for running the production, or they may also be obliged to grant their customers a price reduction in order to prevent an increase of loss resulting from their customers avoiding the contracts, etc. [26, p. 1007]. UNIDROIT Principles (Article 7.4.8) and PECL (Article 9:505) also contain a rule on mitigation of the loss.

Finally, the Law sets forth a special rule for such cases where liability for the loss is borne in part by the aggrieved party. According to this rule: "In case of a fault of a creditor or a person under his responsibility, for the ensuing loss, or for the extent of such loss, or for making the debtor's position more difficult, the damages shall be reduced proportionally." (Article 267). While the above provision of Article 266, Paragraph 4 of the Law covers the creditor's conduct following the breach of contract by the debtor, this rule governs those cases where the creditor, through his conduct prior to the breach, contributed to the occurrence of the loss. The principle lying at the heart of this rule is that the creditor cannot recover the resulting loss to the extent that he contributed to the non-performance by his own act or omission [24, p. 444]. In the practice of business contracts, the creditor may contribute to the loss in different ways. Thus, for example, the domestic practice holds that the consignor who delivered the goods by rail contributed to the loss if he had loaded the goods onto the wagon with a defect that could have been observed even on a cursory inspection, or that the aggrieved party were themselves partly liable for the loss if they had entrusted the construction work to a person whom they knew, or must have known, had they exercised ordinary care, to be lacking relevant skills [8, p. 622]. The UNIDROIT Principles provide for similar rules on this issue: "Where the harm is due in part to an act or omission of the aggrieved party or to another event for which that party bears the risk, the amount of damages shall be reduced to the extent that these factors have contributed to the harm, having regard to the conduct of each of the parties." (Article 7.4.7), and likewise the PECL: "The non-performing party is not liable for loss suffered by the aggrieved party to the extent that the aggrieved party contributed to the non-performance or its effects." (Article 9:504).

Exemptions from liability under Article 263 of the Law on Obligations

The comparative law has widely recognised the principle whereby the debtor is released from liability in cases where performance has become impossible for reasons not attributable to the debtor or due to an impediment beyond his control [4, pp.75ff.].

Although the solutions of different national legal systems show differences within this general principle, [24, pp. 383-384], it is possible to pinpoint certain features common to the countries of the civil law system.[8] These are reflected in the requirement for the impossibility which excludes liability for non-performance, which means that: a) the impossibility of performance is a consequence of an external event beyond the contracting party's sphere of influence and control, and it could not have been foreseen, avoided or overcome; b) it is a subsequent impossibility, given that the impossibility that occurs at the time of concluding the contract as a rule causes the contract to be void (*impossibilium nulla obligatio*); c) it is an objective impossibility of performance, meaning that it does not suffice that the contracting party alone cannot perform the obligation, it has to be an obligation that cannot be performed objectively; d) the impossibility occurred during the term allowed for contract performance, i.e.

8 For this issue in the common law system, see [19, pp. 63-67].

before the party affected by the impossibility fell into delay. Otherwise, if the impossibility should occur after the party falls into delay, they shall be held liable to the other party for the loss, even if the impossibility did not arise through their fault [17, pp. 429ff.].

In Serbian law, release from liability for loss due to a breach of contract is provided in Article 263 of the Law on Obligations stating that: "A debtor shall be released from liability for loss upon proving that his inability to perform the obligation, or his delay in performing the obligation was due to the circumstances occurring after conclusion of the contract which he was unable to prevent, remove or avoid.". In order for the impossibility of performance to lead to a release from liability under Article 263 of the Law, the non-performing or late-performing party must prove: 1) that fulfilment of their contractual obligation at the time performance was due, was impossible, and 2) that the impossibility arose from circumstances that occurred after conclusion of the contract, which they were unable to prevent, remove or avoid.

In order to trigger release from liability, the impossibility, both in fact and law, must meet certain requirements. Thus, the impossibility must be full, given that the Law provides for special rules in case of partial impossibility (Article 138) and must be permanent because temporary impossibility, as a rule, does not lead to the extinguishment of the obligation, but rather to postponement of its performance. The impossibility must occur following the conclusion of the contract (subsequent impossibility), because the Serbian law takes the traditional position that impossibility which exists at the time of concluding a contract (initial impossibility), as a rule, causes the contract to be void (*impossibilium nulla obligatio*). In order for the debtor to be released from liability for loss, there has to be objective impossibility, which means that nobody, and not just the debtor, can fulfil the specific obligation.[9] The impossibility must occur before the performance becomes due; the debtor shall also be liable for partial or full impossibility of performance, even without being at fault, if the impossibility occurred after their falling into delay, for which they are held liable. However, the debtor shall be released from liability upon proving that the subject matter of performance would have perished by accident even if they had fulfilled their obligation on time.[10]

The Law requires that the impossibility should arise from the circumstances that occurred after concluding the contract, when the debtor was unable: a) to prevent – for example, if the seller, due to an economic embargo on the country of the buyer, is unable to deliver the goods to the buyer; b) to remove – for example, if the seller is unable to transport the goods by rail due to the destruction of a section of the railway caused by fire, he is obliged to use an alternative transport route and thus perform his contractual obligation; or c) to avoid – for example, if the manufacturer of goods is unable to make delivery due to a ban on import of the material required for production, they are obliged to use other materials available in the market [9, p. 594]. An analysis of these rules shows that the Law, unlike the uniform rules and the corresponding solutions of numerous other national laws, does not explicitly provide for the requirement of unforeseeability of the occurrence of circumstances that lead to the impossibility of performance. Based on a strict interpretation of the Law, a debtor shall be released from liability for damages even in case when they were able to foresee, at the time of concluding the contract, the occurrence of circumstances leading to the impossibility of performance, provided that they were able to prevent, remove or avoid such circumstances. Still, in this regard, it is necessary to take into account the general rule of the Law concerning the limitation of liability for loss by the foreseeability rule, provided in Article 266 of the Law.

Under the exemption rule adopted in the CISG: "A party is not liable for a failure to perform any of his obligations if he proves that the failure was due to an impediment beyond his control and that he could not reasonably be expected to have taken the impediment into account at the time of conclusion of the contract

9 This position is widely accepted in the doctrine of the Serbian Law on Obligations, as well as in court practice. See [23, p. 520]. However, certain authors take the view that distinguishing between subjective and objective impossibility is not relevant in Serbian law. Briefly about these views and criticism thereof in [9, pp. 590-592].

10 Article 262, Paragraphs 4 and 5 of the Law.

or to have avoided or overcome it or its consequences." (Article 79.1). The above rule of the Convention has made a significant impact on the corresponding solutions in other sources of uniform contract law, and in particular on the UNIDROIT Principles (Article 7.1.7) and the PECL (Article 8.108), which contain similar rules on exemption from liability. Similar solutions are also envisaged in the Force Majeure Model Clauses produced by international organisations.[11] These rules, therefore, may be considered as the general principle of exemption from liability accepted in the sources of uniform contract law. According to this principle, in order for a debtor to be released from liability for non-performance, the following requirements need to be fulfilled: a) that non-performance was due to an impediment beyond the debtor's control; b) that the debtor could not have foreseen the impediment at the time of concluding the contract; and c) that the debtor could not be reasonably expected to avoid or overcome such impediment and its consequences. The differences between the said principle of uniform rules and the corresponding solutions of national laws should be viewed in light of these requirements.[12]

In the practice of international commercial transactions, the following events and circumstances are usually defined as cases of Force Majeure: a) natural phenomena and disasters such as earthquake, hurricane, storm, fire, frost, shipwreck, epidemic, thunder/lightning, tsunami, flood, landslide, avalanche; b) armed conflicts such as war, war preparations, civil war, blockade, military operations of all types, revolution, coup d'état, insurrection, military mobilisation, invasion, civil commotion, civil disobedience; c) labour and social conflicts and problems which usually include certain external events of overwhelming proportions beyond the control of the contracting parties, such as general strike, strikes at national, regional or city level, industrial strike, general labour disturbance, lockout, union strike, occupation of factories; d) act of authority (*Le fait du Prince*) such as economic embargo, import or export ban, ban on foreign currency transactions, amendments or adoption of new laws, decrees and other regulations.[13]

Contractual clauses excluding or limiting liability

In business contracts, liability for a breach of contract is normally established by the agreement of wills of the contracting parties in appropriate contractual clauses. The contracting parties are free, within the limits of the public policy, mandatory regulations and fair practices, to provide for different modalities of contractual liability. These range from the exclusion of contractual liability, through its limitations, to the extension of contractual liability to cases which, under the rules of the applicable law, trigger no liability. The rules of the applicable law on exclusion and limitation of contractual liability apply when this issue is not governed by contractual clauses, or when the relevant contractual clauses have been affected by nullity. [18, p. 237].

Clauses excluding or limiting liability have been the object of much suspicion and guarded views in comparative law, being a deviation from the general rules on liability for damages arising from fundamental moral values and categories. One of the underlying principles of the law on obligations in comparative law is the principle of prohibition against causing loss, whereby any person causing loss to another must compensate such loss. Any departures from this principle may upset the delicate balance of rights and obligations of the parties, thus creating a high degree of legal uncertainty in contractual relations. Still, based on the freedom of contract principle, it is widely recognised that the parties, by mutual agreement, may exclude or limit liability for damages. Consequently, the clauses excluding or limiting liability, although subject to significant restrictions, are in general valid in most legal systems [6, pp. 383ff.].

In comparative law, there are different solutions for the validity and/or effectiveness of the clauses excluding or limiting liability. With regard to the sources of uniform rules of contract law, the UNIDROIT Principles provide that a clause limiting or excluding one party's liability for

11 See ICC Force Majeure Clause 2003, available at: https://iccwbo.org/publication/icc-force-majeure-clause-2003icc-hardship-clause-2003/. Detailed analysis of this Clause in [2, pp. 117ff.]. In that respect, see also the ITC Model Clause (International Trade Centre) in [13].

12 Detailed analysis in Perović, J. Standardne klauzule [19, pp. 68-76].

13 For further details, see [6, pp. 443ff.].

non-performance or which permits one party to render performance substantially different from what the other party reasonably expected may not be invoked if it would be grossly unfair to do so, taking into consideration the purpose of the contract (Article 7.1.6). On the other hand, the PECL expressly prevents the application of the clause excluding or limiting liability if it would be contrary to good faith and fair dealing to invoke it (Article 8:109). Consequently, "if to invoke the clause is found to be contrary to good faith and fair dealing, the exemption clause will not operate (whether it is treated as null, void or unenforceable)." [24, p. 388]. The validity of the exclusion or limitation clauses is not governed by the CISG; in principle, it is subject to the applicable domestic law. However, in determining the validity of these clauses in a contract governed by the CISG, the principles of the CISG are to be taken into account [26, p. 1023].

Speaking of domestic laws, express rules concerning the exclusion or limitation clauses are contained, for example, in the Swiss Code of Obligations (Article 100),[14] German Civil Code (Article 276), Italian Civil Code (Article 1229), Spanish Civil Code (Article 1102), Civil Code of Québec (Article 1474), American Uniform Commercial Code, under which a valid disclaimer requires special wording, (Articles 2–316, 2–719),[15] and others. In contrast, civil codes in some other domestic laws, such as the French and Belgian law, do not provide for express rules about this type of clauses, and the issue of their validity is settled in court practice.

The Serbian Law on Obligations contains detailed rules on the limitations and exclusion of liability. According to these rules, the parties cannot agree in advance to exclude debtor's liability for intent (*dolus*) or gross negligence (*culpa lata*). The court may, upon request of the interested contracting party, invalidate even the contractual provision on the exclusion of liability for simple negligence, should such agreement be the result of the debtor's monopoly position or generally of an unequal position of the contracting parties. The provision defining the highest amount of damages is valid unless such amount is in obvious disproportion to the loss, and unless the law provides otherwise for the particular case. Finally, in case of limiting the damages, the aggrieved party is entitled to full compensation when the impossibility of performance occurred as a result of the debtor's intent of gross negligence (Article 265). Cases where the exclusion or limitation of liability clause is contained in the general terms and conditions of the contracts of adhesion raise special concerns. Under the Serbian Law on Obligations, the provisions of the general terms and conditions are null and void if contrary to the very purpose of the contract concluded or fair business practices (Article 143, Paragraph 1). Additionally, the court may deny the application of certain provisions of the general terms and conditions which preclude the other party from raising objections, or deprive the party from their rights under the contract or the time limits allowed, or are otherwise unfair or excessively strict towards such party (Article 143, Paragraph2). Finally, the *contra preferentem* rule ought to be taken account, stating that any ambiguous clause of the contracts of adhesion should be interpreted by the court in favour of the party that entered into the contract of adhesion supplied by the other party (Article 100).

Analysis of the solutions offered in comparative law with regard to the clauses excluding or limiting liability leads to the conclusion that there are different criteria of validity and/or effectiveness of these clauses. In that regard, some sources of law expressly reject the application of clauses excluding or limiting liability if they would be contrary to good faith and fair dealing, some disallow clauses considered to be "unreasonable" or "grossly unfair", some require special wording for the validity of disclaimers, while some provide that liability may not be excluded in case of intent, whilst other extend this limitation to gross negligence.

In practice, the clauses excluding or limiting liability are often imposed by the economically stronger party, thus placing the other party in an unfair position. The party benefiting from the agreed exclusion or limitation of liability would often exercise less care in performance of their contractual obligations than that which would normally have been applied in the absence of such a clause. In extreme cases, such clauses may allow for total non-

14 For this issue in the Swiss law, see, for example [11, pp. 195ff.].

15 In that respect, see [5, p. 251].

performance of the obligations by the party to whose benefit they operate, leaving the other party with no recourse to claim damages or significantly limiting the scope of such a claim. As a rule, the limitation clauses, and in particular the exclusion clauses, carry a risk of non-performance of contractual obligations and may create uncertainty in contractual relationships, therefore contractual parties need to devote special attention to this issue.[16]

Conclusion

The Law on Obligations, as a general rule in the field of contractual liability, adopts the full compensation principle, whereby the aggrieved party must be placed in the same financial position as they would have been in had the contract been performed in full. The operation of this principle is limited by the foreseeability rule, requiring that the debtor be liable only for the loss which at the time of entering into contract they should have foreseen. Still, the limitation to the foreseeable loss does not apply if the loss occurred as a result of fraud, intentional non-performance or gross negligence, when the debtor is obliged to compensate for the entire loss. On the other hand, the Law contains special rules on proportionate reduction of damages in cases when the aggrieved party themselves contributed to the occurrence or increase of loss, and when the aggrieved party, due to a breach of contract, received certain benefit in addition to the loss suffered. Under the broadly recognised principle in comparative law, the debtor is not held liable for loss when requirements for release from liability provided by the law or the wills of the contacting parties have been met. In this context, the paper analyses the rules of the Law on Obligations governing the exemption of liability which apply unless the contracting parties have provided otherwise in the contract. When it comes to the contractual provisions on exemption and limitation of liability, the fundamental question relates to the validity and the effects of the exemption clauses, and the paper examines both the basic solutions of the Serbian Law and the solutions offered in comparative law. A comparative analysis of the above rules of the Law and the corresponding solutions in comparative law shows that, with respect to these issues, the Serbian Law largely reflects the views accepted in the sources of the uniform contract law which may be considered as expressions of contemporary tendencies in this field. In terms of the general conclusion, the following statement can be made: the Law on Obligations, with regard to the rules on liability for loss due to a breach of contract, and in terms of its solutions in their entirety, can rightfully be classified among the modern and successful codifications of the law of obligations. Although based on the principle of party autonomy, the contracting parties are free, within the limits of public policy, mandatory regulations and fair practices, to change or exclude the rules of this Law, they need to be carefully acquainted with them so as to be able to select the best solutions to be applied to their contract.

16 For more details on clauses excluding and limiting liability, see [19, pp. 95-135].

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LAW ON PROFESSIONAL REHABILITATION AND EMPLOYMENT OF PERSONS WITH DISABILITIES THROUGH THE LENS OF SERBIAN EMPLOYERS

Zakon o profesionalnoj rehabilitaciji i zapošljavanju osoba sa invaliditetom kroz objektiv srpskih poslodavaca

Abstract

The position of persons with disabilities in the labour market and the right to work as one of the basic human rights, guaranteed by the Constitution of the Republic of Serbia and international conventions, are frequent subjects of discussion in academic literature and research of the non-governmental sector. Since the adoption of the Law on Professional Rehabilitation and Employment of Persons with Disabilities (hereinafter: the Law) in 2009, there has been a significant shift in employment of this vulnerable social group in the Serbian labour market. The aim of the research was to review the effects of the implementation of the Law from the business perspective, through the attitudes and challenges employers face. A survey involving companies from various sectors and sizes was conducted, and the results were cross-referenced with the findings from interviews with selected employers and representatives of state administration. As a result, numerous obstacles were detected among employers regarding the misunderstanding as to how the Law should be applied, along with the imbalance between the needs of the labour market (demand side) and the number and quality of employable persons with disabilities (supply side). In conclusion, recommendations for potential improvement of the Law and its approximation to realistic possibilities and needs of the business sector have been outlined. Thus, employers would get a sense of ownership over this important social inclusion measure in the labour market and, at the same time, benefit from the hiring of workers with disabilities who tend to be a strong motivating factor amidst the general population of employees.

Keywords: *persons with disabilities, employers, employment of persons with disabilities, Law on Professional Rehabilitation and Employment of Persons with Disabilities, social inclusion, Serbia*

Sažetak

Položaj osoba sa invaliditetom na tržištu rada i pravo na rad kao jedno od osnovnih ljudskih prava garantovano Ustavom Republike Srbije i međunarodnim konvencijama su česta tema diskusije u akademskoj literaturi i istraživanjima nevladinog sektora. Nakon usvajanja Zakona o profesionalnoj rehabilitaciji i zapošljavanju osoba s invaliditetom (u daljem tekstu: Zakon) u 2009. godini, došlo je do značajnog pomaka u zapošljavanju ove osetljive društvene grupe na tržištu rada u Srbiji. Namera istraživanja bila je razmotriti učinke sprovođenja Zakona iz perspektive poslovnog sektora, kroz stavove i izazove sa kojima se suočavaju poslodavci u praksi. Sprovedena je anketa u kojoj su učestvovala preduzeća iz različitih sektora i veličine, i rezultati su ukršteni sa nalazima iz intervjua s izabranim poslodavcima i predstavnicima državne uprave. Kao rezultat, otkrivene su brojne prepreke kod poslodavaca u pogledu nerazumevanja kod načina primene Zakona, zajedno sa disbalansom između potreba tržišta rada (strana tražnje), i broja i kvaliteta osoba s invaliditetom podobnih za zapošljavanje (strana ponude). U zaključku, date su preporuke za potencijalno poboljšanje Zakona i njegovo približavanje realnim mogućnostima i potrebama poslovnog sektora. Na taj način, poslodavci bi dobili osećaj vlasništva nad ovom značajnom merom socijalnog uključivanja na tržištu rada, uz istovremenu korist od angažovanja osoba sa invaliditetom koji mogu da budu jak motivacioni faktor među zaposlenima.

Ključne reči: *osobe sa invaliditetom, poslodavci, zapošljavanje osoba sa invaliditetom, Zakon o profesionalnoj rehabilitaciji i zapošljavanju osoba sa invaliditetom, društvena inkluzija, Srbija*

Introduction

Persons with disabilities (PwD) are, more than their non-disabled counterparts, likely to experience disadvantage, exclusion and discrimination in the labour market [12], [24]. As a result of these experiences, they are disproportionately affected by both unemployment and underemployment [27]. The predominant view in the past was that this was closely interrelated with physical, intellectual and mental impairments of the persons concerned [42], [45], but it is today recognised that many of the disadvantages they face and the fact that they are often excluded are rather the result of the reaction of society to that impairment [40], [43].

Serbia has been no exception to this phenomenon, where a vast majority of persons with disabilities have been experiencing significantly lower employment rates in comparison to the general population, along with limited job opportunities and restricted access to career advancement possibilities [15], [32]. According to the last census, around 8% of the total population in Serbia has some form of disability [33, p. 20], while the Report of the Commissioner for the Protection of Equality estimated the presence of close to 10% of persons with disabilities in the general population [38, p. 7]. When it comes to employment of persons with disabilities in Serbia, according to the data of the National Employment Service (NES), in March 2017 there were 15,882 registered unemployed PwD (including about 5,000 temporarily incapacitated persons) out of whom 39.2% were low-skilled workers, 54.4% had high school qualifications, and only 6.4% were college/university graduates (NES interview, April 7, 2017). Unlike the general population of Serbia whose predominant source of income is salary, followed by pensions, two thirds of persons with disabilities have pension as their main source of income (61.7%), around one fifth of them belong to the category of dependants (20.5%), whereas very few of them have a salary as their main source of income (6.8%) [33, p. 78]. The concept of employment of persons with disabilities prior to 2009 relied on the assessment of the loss of their working capacity (rather than on their remaining capacity and skills for work) and centred on the sheltered workshop employment concept of PwD, instead of employment of this vulnerable group in the open market. Outdated job classification list for certain profiles of persons with disabilities (such as the persons with visual and hearing impairments) and the growing interest of civil society organisations of PwD in employment of their members have also contributed to the awareness that some legislative changes in this area are necessary.

Prohibition of discrimination against persons with disabilities is enshrined in Article 21 of the Constitution of the Republic of Serbia [8], as well as in the Law on Prevention of Discrimination against Persons with Disabilities. This law, aligned with the Acquis Communautaire of the European Union (EU), details the protection system for persons with disabilities and introduces measures to promote equality of treatment in employment and occupation, as well as social inclusion [10]. It has been complemented by the midterm inclusion objectives detailed in the Strategy on Improving Handicapped Persons Position in the Republic of Serbia [41], but the major step was made by the adoption of the new Law on Professional Rehabilitation and Employment of Persons with Disabilities [28] introduced in 2009 (hereinafter: the Law), which introduced a quota-levy system that was intended to contribute to the increase in the number of employed persons with disabilities. The adoption of the Law represented the first step in the development of a comprehensive policy framework for the promotion of employment of persons with disabilities, as envisaged by the International Labour Organisation (ILO) Convention No. 159 - Vocational Rehabilitation and Employment, Disabled Persons [22], ratified by the Government of Serbia in 2000. Furthermore, the Law was complemented by a number of bylaws that were needed in order to ensure that the legal provisions translate into concrete procedures for introducing persons with disabilities into open employment. Those bylaws included the criteria for the assessment of individuals' capacity to work, the development of standards for the implementation of employment and vocational rehabilitation measures, the organisation of staff development programmes for employment service personnel, the establishment of indicators to monitor the performance of employment offices and the design, monitoring and evaluation of targeted active labour market programmes. The quota-

levy system introduced by the Law, with a flat 2% quota for each enterprise with more than 20 employees, was designed in line with equivalent legislation from the EU member countries, while some of the countries in the region (e.g. Croatia) introduced a variable quota in their legislation a few years later [30]. The Law also offered a new definition of disabled individuals (Article 3): "a person with disabilities shall be the person suffering permanent consequences of bodily, sensory, mental and psychiatric impairment or sickness which cannot be eliminated by any treatment or medical rehabilitation and faced with social and other limitations affecting his/her working capacity and possibility to find or retain employment and who does not have the possibilities or has reduced possibilities to be included in the labour market or apply for employment on equal terms with other persons". Finally, the Law aimed to introduce a case management approach implemented by the National Employment Service for assisting persons with disabilities in finding work [33, p. 70]. To this end, the new organisational structure of NES adopted in 2008 envisaged the establishment of a Centre for Vocational Rehabilitation and Employment of PwD and the assignment of counsellors who would work exclusively with them in local offices.

Despite the existing legislation, there can be a discrepancy between what is required by the law and what is expected from employers and their actual hiring practices. In other words, the legislation aimed at improving accessibility and providing opportunities for persons with disabilities in the workplace could generate uncertainty, while providing little guidance about how to implement the requirements in practice [18]. At the very commencement of implementation of the Law, it appeared that the two most relevant stakeholders, the disabled job seekers and the employers, also required assistance in adapting to the new situation in the labour market [15]. The Law itself represented an outreach towards the market-based employment of persons with disabilities, but the introduction of the quota created serious challenges for employers who then needed job seekers from this vulnerable group with adequate (or nearly adequate) skills. The lack of a transparent database of job seekers with disabilities that would contain their qualification structure, combined with the payment of the introduced levy in line with the Law, left many employers with a dilemma whether such a quota-levy system represented yet another burden for employers or an important step towards a meaningful inclusion of persons with disabilities in the labour market.

Finally, after launching several public initiatives which only in 2016 resulted in employment of 1,900 persons with disabilities, the number of the unemployed in the National Employment Service registry was notably reduced. Nevertheless, in 2016 there were only 670 subsidies and 25 refunds of the workplace adjustment costs granted to employers who employed persons with disabilities (NES interview, April 7, 2017). A sustainable inclusion of persons with disabilities in the labour market necessitates a mind shift towards the understanding of benefits of diversity and the business situation. Employment of persons with disabilities should not be motivated only by the intention to comply with the Law, but also by the conviction that diversity hiring practices represent a sensible business move. Thus, quotas have proven to be controversial because employers would often rather pay a fine than fulfil the statutory mandates, and organisations of persons with disabilities consider them to be undermining the value of workers with disabilities [3, p. 27], [15], [14]. Therefore, corporate social responsibility (CSR) and diversity management often represent key drivers of decent employment of persons with disabilities among employers.

Methodology

During a two-month period (March-May 2017), a comprehensive survey of the business sector in Serbia was conducted in order to examine the attitudes of employers about the current Law on Professional Rehabilitation and Employment of Persons with Disabilities. For that purpose, the research question "What are Serbian employers' attitudes towards the Law on Professional Rehabilitation and Employment of Persons with Disabilities?" was included in the survey, with the aim of examining the following:

- The reasons for the chosen method of implementation of the Law;
- The challenges and key obstacles in applying the Law in practice;

- Employers' level of satisfaction with the existing legislation.

The conducted research consisted of three phases, as follows:

Phase (1): Desk research in order to examine current legislation in Serbia, international policy framework, academic literature and national studies from the non-governmental sector. At the same time, the mapping of potential sources for recruiting research participants was carried out, resulting in the following selection of sources:

- Business associations willing to distribute the survey to their members[1];
- Large employers in Serbia with 1,000 or more employees (from the Serbian Business Registers Agency);
- Socially responsible companies: the members of the Responsible Business Forum and the United Nations Global Compact in Serbia, as the two most prominent CSR organisations in the country;
- Employers awarded for sound employment practice by NES (since 2012);
- Companies for vocational rehabilitation and employment of PwD [35];
- Companies mentioned in the media as good examples in employing persons with disabilities (collected through the press clipping service and Google organic search).

Phase (2): Quantitative research: distribution of an electronic survey to the mapped companies (≈250), which resulted in 67 responses from companies of varying size and ownership and belonging to different sectors (response rate: 26.8%). The survey consisted of ten questions, four of which were related to the research sample, while the remaining six focused on the implementation of the Law and present practices in the recruitment of persons with disabilities. The target group with the surveyed employers included human resources (HR) managers (large, medium-sized companies), accommodation counsellors (companies for vocational rehabilitation of PwD) and general managers/owners (small companies). The possibility of submitting responses anonymously was offered in order to avoid bias or embellished answers. Large (41.8%), private and foreign-owned companies (40.3%) with a relatively balanced sectoral distribution dominated the resulting sample, with the exception of banking and finance sector which accounted for one fifth of all participants (22.4%). The reasons for that should be sought in the fact that foreign companies in Serbia are predominantly large employers whose advanced international corporate culture of inclusion and equal employment rights present in their strategies was brought to Serbia, along with their goals and philosophies that explicitly guide their organisational policies [40]. Hence, the banking sector in Serbia has been recognised as one of the leaders in CSR, conducting many activities in the field of social inclusion [13].

Phase (3): Qualitative research: in-depth interviews with ten selected companies chosen from the survey, which were selected based on the following criteria (and/or):

- Five companies which employ persons with disabilities on a full-time or part-time basis and five that do not have such a practice;
- Different sectors;
- Large or medium-sized employers;
- Inclusive corporate culture demonstrated in the survey responses and willingness to take part in the interview.

The companies participating in the interviews employ the total of 23,138 employees, out of which 272 employees have officially disclosed their disability to their employers. Furthermore, a summary of the obtained results was made on the basis of the information gathered through parallel interviews with the selected Government representatives (the Ministry of Labour, Employment, Veteran and Social Affairs – Sector for the Protection of PwD;, NES, the Commissioner for the Protection of Equality), used for the collection of relevant data.

Results of Law implementation: Disability-inclusive policies and practices

Crucial barriers to employment of persons with disabilities can be overcome by means of the disability-inclusive HR policies and practices, which are integrated into the

1 Foreign Investors Council (FIC), German-Serbian Chamber of Commerce, National Alliance for Local Economic Development (NALED), Serbian Association of Employers

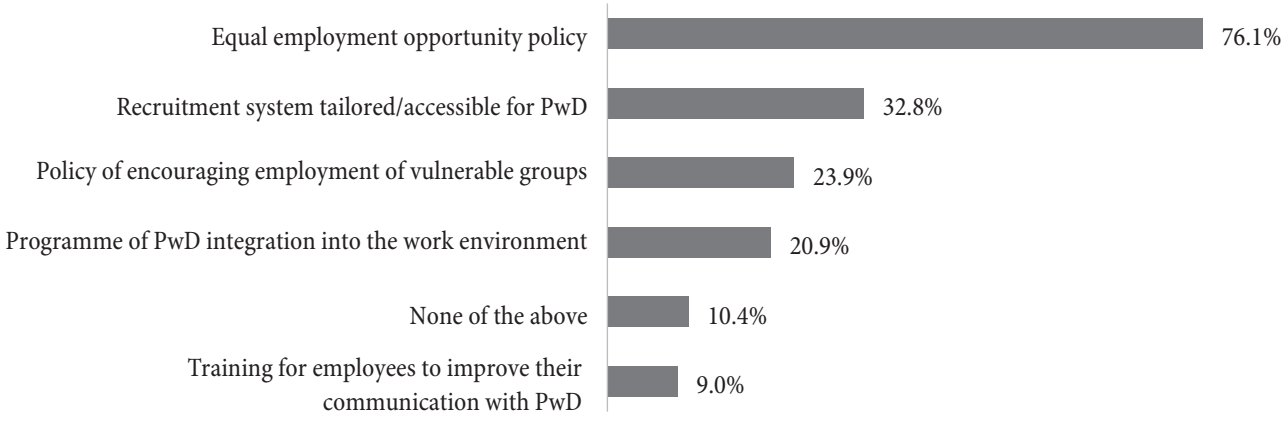
elements of employment process: hiring and recruitment, accommodation and accessibility, and retention and advancement [9, p. 2]. Consequently, when it comes to strategic documents and activities to encourage workplace inclusion, due to a bigger share of large, foreign and privately owned companies in our survey, the policy of offering equal employment opportunities to job seekers is prevailing (Figure 1). In addition, about one third of the surveyed participants believe they have a system in place suitable for the recruitment of persons with disabilities, and one quarter have stated that they have an HR policy which encourages employment of vulnerable groups and the programme for their integration into the work environment, e.g. a designated office or a person to address the accommodation issues [14]. In some large foreign-owned companies, we have recorded the use of more than four inclusive policies and practices, as opposed to small companies which mostly do not have any of the listed policies and practices, predominantly due to economies of scale and the fact that HR activities are the responsibility of the owner [26].

Although two thirds of the surveyed participants employ persons with disabilities (later shown in Figure 2), only 10% of them offer disability awareness trainings to their managers, supervisors or front-end personnel, with the aim of improving the work process and communication with persons with disabilities. The reason behind this could be the lack of dedicated service providers (NES or some other disability accommodation provider), which could offer, in addition to selection and recruitment, a full range of supporting services , such as counselling on flexible schedules (e.g. flexitime, part-time, telecommuting/ teleworking), job modifications, performance appraisals, etc. Thus, in practice, the disabled workers' accommodation process can also include the provision of equipment, transportation and vocational training for gaining new skills [25, p. 7].

In response to legal obligations, the majority of surveyed participants prefer to abide by the Law in some of the prescribed ways, rather than the quota system. Namely, two thirds of them employ disabled persons (full-time or part-time), less than one fifth purchase products and services from companies for vocational rehabilitation and employment of PwD, and slightly more than one fifth subsidise the salaries of vocational rehabilitation companies (Figure 2). Finally, one third of surveyed participants contribute to the state budget based on the quota-levy system.

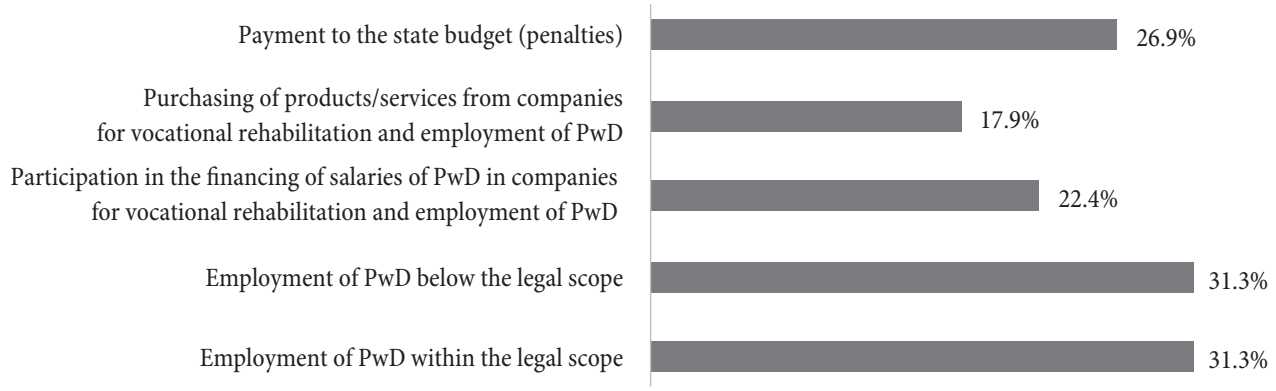
Subsequently, the respondents were asked to further elaborate on their applied method of abiding by the Law. In companies that employ persons with disabilities (full-time or part-time), inclusive corporate culture is the dominant reason (Figure 3). In that context, a corporate culture that fosters stronger workforce integration and opens up to latent diversity potentials, a culture that is built on clear normative grounds and honours the differences as well as the similarities among individuals could be considered inclusive [37]. Thus, we could conclude that the Law itself did not represent the only impetus for the employment of persons with disabilities, since a lot of participants stated

Figure 1: Strategic policies and procedures for the promotion of inclusive work environment



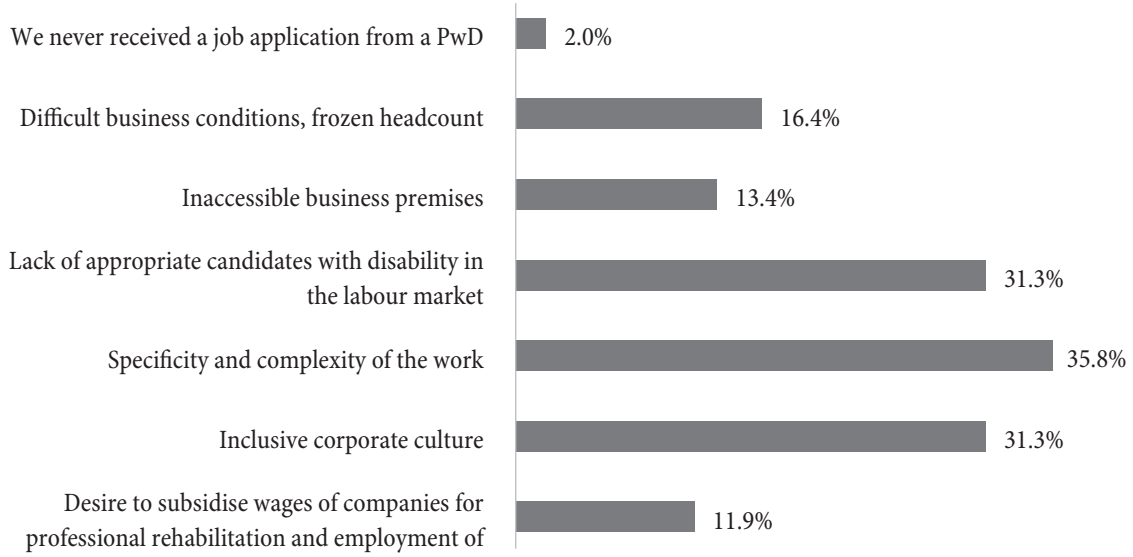
Q: Does the company you belong to implement strategic policies and procedures for the promotion of an inclusive work environment? Multiple answers (n=67)

Figure 2: Method of implementation of the Law on Professional Rehabilitation and Employment of Persons with Disabilities



Q: How does the company you belong to respond to the obligations prescribed by the Law?
Single answer (n=67)

Figure 3: Reasons for the chosen method of Law implementation

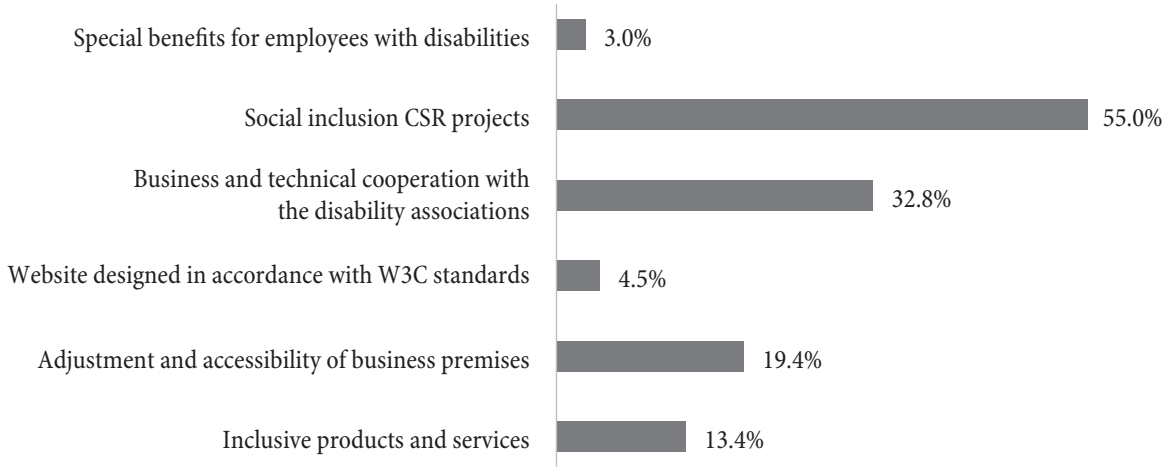


Q: What are the reasons for the selected method of abiding by the legal obligations? Multiple answers (n=67)

they would employ them regardless of the Law or that they used to employ workers with disabilities even before its adoption. The group of employers that do not employ persons with disabilities believe that the biggest barriers to employment lie on the supply side – in the skills and preparation of potential employees with disabilities rather than in HR policies and practices [14, p. 196]. This group of employers highlighted the issues of sectoral or business specificities (e.g. work in a factory, frequent business travels) and the lack of appropriate candidate profiles in the labour market (e.g. in the sectors of financial services, IT/ICT, creative industries). Moreover, a number of respondents mentioned the problem of their inability to adapt their business premises to persons with physical impairments, which makes it difficult to employ them. Finally, small and some of the medium-sized companies underlined complex environment for doing business which currently hinders their growth and workforce development [39].

In addition to fulfilling their legal obligations, the respondents from our survey often support vulnerable social groups in other ways (Figure 4). Over a half of them actively implement CSR projects in the domain of social inclusion, while one third have established cooperation with the associations of persons with disabilities in the field of mentoring and work integration of their members through which they are improving the inclusiveness of their own corporate culture. Some advancement practices were also reported, such as the adjustment of their working hours and

Figure 4: Other social inclusion projects besides employment



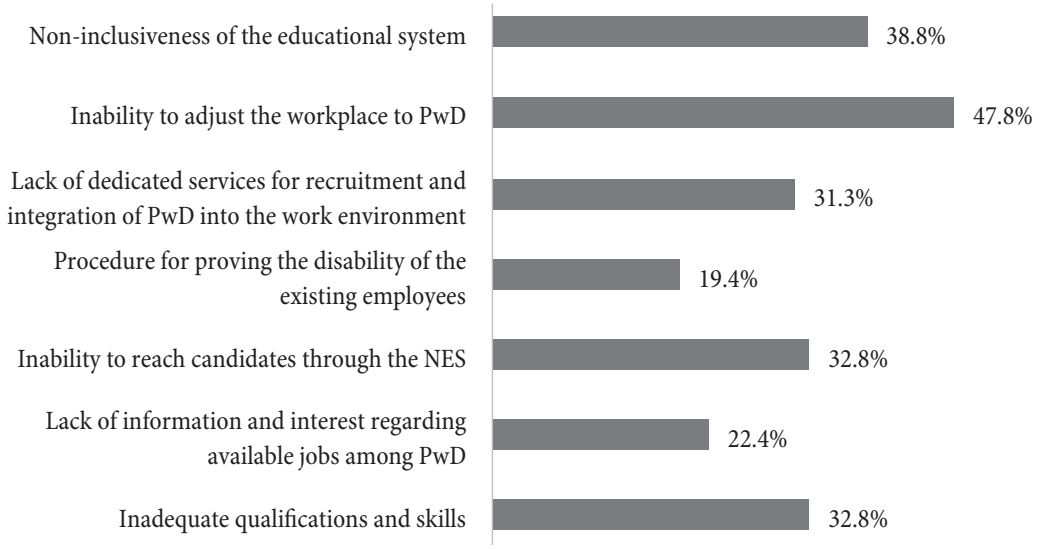
Q: Besides abiding by the legal obligations, does the company you belong to support PwD in other ways? Which ones? Multiple answers (n=67)

annual leave and positive discrimination in staff hiring and firing policies. These findings are similar to the findings of the research of the Cornell University Employment and Disability Institute [9, p. 5], which showed that the companies applying flexible work arrangements in practice are offering special career planning and development tools for employees with disabilities, conducting the disabled staff surveys and encouraging the staff to confidentially disclose disability. Nevertheless, despite the fact that 60% of the surveyed participants in our research employ persons with disabilities on a part-time or full-time basis, only one fifth of them have business or service areas built under the universal construction and design principles according to which the built environment, everyday objects, public and business services, culture and information must be accessible and convenient for everyone in the society to use, and responsive to the evolving human diversity [11]. Furthermore, only a negligible number of the surveyed companies offer inclusive products and services that can be accessed, understood and used to the greatest extent possible by all people regardless of their age, size, ability or disability [6]. The same applies to websites adjusted according to the Web Accessibility Initiative Standards (W3C) [44], through which the content is accessible to the blind and visually impaired persons. This finding is similar to the findings of international studies [12], [31] which showed that the majority of employers adopted a formal policy regarding disability recruitment, but most devoted very little effort to it in terms of developed disability-targeted recruiting methods and changes to their applications or website to improve accessibility.

A half of the surveyed employers stated that the aforementioned inability to adapt their business premises and work processes due to the specific nature of certain sectors and their operations being performed in leased business premises represents the main challenge to inclusive employment (Figure 5). Those obstacles are certainly legitimate, but one should also look at accessibility from a broader perspective, where accessibility is not related only to the disability issue. The culture of an accessible organisation promotes an open environment that encourages, invites and recognises creativity and innovation. Accessible organisations are the ones that offer opportunities to all who want to participate and add value to the organisation, including persons with disabilities [1].

Another important challenge that stands out is the lack of skilled candidates – a problem generated by the education system to which 40% of the surveyed employers referred as not inclusive at all and one third as mismatched in relation to the labour market needs. Lower educational attainment limits both current and future employment opportunities, especially in the light of the fact that many of the fastest growing occupations worldwide require the equivalent of an associate's degree or higher [3, p. 16]. Thus, we compared these findings with the data from the national census in 2011, which pointed to a high percentage of persons with disabilities with no access to the education system: two thirds of

Figure 5: The main challenges for the employment of persons with disabilities



Q: In your opinion, what are the main challenges for the employment of PwD? Multiple answers (n=67)

registered persons with disabilities have incomplete or completed primary education only (66%), one third have a high school degree (27%), while a negligible number of them have a college or university degree (3.4%) [33, p. 72]. Although the education reform has commenced by the adaptation of new regulations with the aim of embedding inclusion of persons with disabilities in the mainstream education system [39], the percentage of those who have never attended school is still very high. Moreover, one third of the surveyed participants responded that the low employability of persons with disabilities made it difficult for them to reach candidates through NES, which, according to them, needed to provide integrated accommodation services to employers. Finally, major employers often face barriers in proving the disability of their current employees. Namely, the disability assessments made by the Centre for Vocational Rehabilitation and Employment of PwD are in a fair number of cases not precise enough and do not show what the assessed person can and cannot perform at work [32].

Finally, the surveyed participants were asked to evaluate the Law on the Likert Scale (from 1 to10, with 1 as the lowest and 10 as the highest score). The current Law on Professional Rehabilitation and Employment of Persons with Disabilities received a grade of 5, which clearly showcased lower satisfaction with the current legislation.

Current legislation: One size does not fit all

For the purpose of a deeper consideration of the ways in which the Law is implemented and the challenges employers are facing in practice, the questions for the in-depth interviews with selected business representatives were structured around the most frequent topics from the past academic studies related to employers' acceptance of persons with disabilities: relevant regulations versus practice, disclosure, accommodation, relationship building and engagement of disability organisations, usage of information and support for employers, as well as hiring practices [18, p. 143].

Common for all the interviewed participants was a lot of confusion over the proper application of the Law and misunderstanding of its opportunities in practice, i.e. the interpretation of cases when businesses operate through several legal entities within the system, the treatment of the leased workforce, the possibility to combine employment with procurement from companies for vocational rehabilitation and employment of persons with disabilities, etc. Thus, the business sector interprets the Law at its own discretion, as there is no single supervisory and advisory institution acting as a focal point. Namely, the Ministry of Labour, Employment, Veteran and Social Affairs is in charge of the application of the Law, NES handles employment and incentives, Tax Administration

supervises application of legislations in the field and the Commission of the Pension and Disability Insurance Fund is in charge of the assessment of disabilities.

In line with the studies which pointed out that disability organisations can meet the needs of employers in a best way possible and connect them to the disabled job candidates who are a good fit for the position they are trying to fill [17], [18], [24], when it comes to recruitment the interviewed employers are primarily referred to associations of persons with disabilities rather than to the institutional hub, i.e. NES. Employers believe that the candidates who can be reached through associations are of higher quality, and that associations can provide them with integrated services – advice on accommodation, assistance in future work, development of personal working methods and evaluation of effectiveness. Although NES conducts a lot of activities aiming to support employment of persons with disabilities (at the time of our research eleven state programmes for the support of the employment of PwD were active), the interviewed employers were neither aware of them, nor have they ever been contacted in relation to the implementation and possible challenges concerning the Law. Therefore, we could conclude that the dialogue between NES and employers was incomplete. Other research also revealed that employers find the programmes offered by the public service system unclear or are unaware of them or are discouraged by the lack of coordination among various providers soliciting job opportunities for the disabled people, thus perceiving disability employment service providers as lacking the skills required for effective operation in the business arena [19]. It has been increasingly recognised that the system needs to develop more business-focused approaches which concentrate on understanding employers' needs and carefully match job seekers with the demands of the workplace [21, p. 239]. That issue could be offset by the introduction of account managers, who would act as liaisons between NES and its clients and determine the clients' needs. NES was also criticised for not having a unified database of employment opportunities for the disabled job seekers, segmented, for example, by their places of residence, disability level, qualifications or skills. The access to this kind of information would be particularly helpful to small businesses without HR capacity or to employers with strong local presence.

In order for persons with disabilities to have equal chances of being considered for employment, employers must recognise that the current hiring practices have to be adaptable and accessible to persons with disabilities, who might need accommodation of workplaces and facilities [18, p. 141]. For the majority of the interviewed companies, the recruitment process itself, although considered inclusive, in practice implies a mere addition of one sentence in job placement ads stating that the company guarantees equal rights to all applicants, without discrimination, with a slight deviation from the standard procedure in the candidate selection process. For example, deaf people are interviewed in writing or by using an online questionnaire. The use of the Braille alphabet, accessible business premises highlighted in job placement ads, adapted websites and the use of induction loops in business premises and conference rooms are rare or unprecedented in practice in Serbia. When it comes to the cost of adjustment of business premises to the needs of employees with disabilities, we have not recorded any case of reimbursement of expenses to employers which the Law foresees. The interviewed companies which do not employ persons with disabilities emphasised that many business premises where they operate cannot be made accessible, because those are leased properties or are found in inaccessible locations that would require significant investments. However, as employers are starting to recognise the costs associated with hiring persons with disabilities [23, p. 141], in practice interviewers who employ them started using specially designed tables, chairs, computer equipment or optimising their business processes, but under their own expenses.

The interviewed respondents employing persons with disabilities stated that they are hard-working and dedicated and that they would recruit more persons with disabilities if they found suitable candidates. Similar results were obtained by other authors [20], [43], indicating that if employers are willing to accommodate employees with disabilities, they benefit from it through opportunity to retain high-quality employees, an increase in profitability, workforce diversity and reduced turnover. Thus, in contrast

to myths and stereotypes, employer ratings have indicated that workers with disabilities have average or above-average performance, safety records, and attendance [42, p. 2].

Within the interviewed companies, a large number of disabled employees perform duties and tasks which do not require sophistication (warehouse, courier service, customer service). That is hardly surprising given the fact that PwD job seekers with higher education registered by NES account for only 6% of their total number. However, we have also recorded a few cases of specialised positions occupied by PwD, for example in digital marketing, HR and finance. Employees with disabilities are socially integrated in all aspects of company's functioning, from training to team events. We consider social integration to be successful when an employee with a disability is accepted as a full member of the group by all colleagues and supervisors, since acceptance is an essential component of social integration at work [43, p. 464]. Finally, some of the interviewed employers have stated they have a special fund dedicated to improving the quality of work and skills of their peers with disabilities or that they annually examine their satisfaction and, on that basis, carry out relevant improvements, such as enhancing their participation in management meetings.

We confirmed again that the procedure for assessing the disability of existing employees, which they describe as "long, bureaucratic and unpleasant", presents a significant burden for the interviewed employers. The problem is particularly evident in the countryside, where the process is longer, which causes both employees and HR managers to often give up in order not to expose their colleagues to inconveniences. Particular problems exist when it comes to proving mental disability of employees, where the process is indiscreet and often declined by employees due to their fear of dismissal or prejudice by their environment. Based on that, we have estimated that the actual number of employees with disabilities in the Serbian business sector is higher than the one in official records. Associations of disabled persons share the same opinion, characterising the assessment of the work capacity as superficial and formal and not able to identify the real capabilities and potentials of persons with disabilities. As the main way to improve the work capacity assessment they see the Commission of the Pension and Disability Insurance Fund dismissing the dominant medical model of assessment in favour of the work ability evaluation, simulated in the real work environment [4], [14].

The amounts that businesses contribute to the state budget for each unemployed person with disabilities based on the quota-levy system are considered to be high, especially for large employers. Hence, the business sector is very keen to receive the information on how these funds are being spent and allocated. The same question was raised by the Youth with Disabilities Forum [14, p. 2], which stated that a big problem for the employment of persons with disabilities is the lack of transparency of the state budgetary funds which should be used for employment, vocational rehabilitation of persons with disabilities, related incentives and programmes, since they could not find out how much funds in total had been collected from the business sector. Transparent information about the use of those funds would make companies in Serbia stop considering the Law a parafiscal burden, but rather an important element of social inclusion of persons with disabilities in the labour market.

Finally, besides the quota-levy system, the Law also envisages the option of purchasing products and services from companies for vocational rehabilitation and employment of persons with disabilities. However, this is rarely applicable in practice, as the interviewed participants are not familiar with their offers or are occasionally using them for small-scale procurements due to their incapacity to respond to market needs [34].

Results

Authors Gilbride, Stensrud and Vandergoot [19, p. 133] specify several characteristics of employers who are open to hiring persons with disabilities, which include work culture issues, job match issues, employer experience and support issues. Work culture issues refer to the openness of employers to diversity and the equal treatment of the disabled and non-disabled employees, job match issues focus on the capabilities of an employee instead of on his/her impairments, and employer experience and support issues concern the ability of employer to manage and

supervise a diverse workforce. Based on that, we have cross-referenced the classification of the cited authors (based on key characteristics of employers who are open to employment of PwD) with our research findings, by matching them with survey questions (Table 1).

The characteristics of employers and job seekers with disabilities clearly indicate a multiple-ground lack of readiness for matching the demand and supply side of the labour market when it comes to this vulnerable group. Employers' awareness of how employees with disabilities could actually contribute to the work ethic, motivation and productivity of the remaining workforce seems to be poor. Employers are apparently focused on the short-term objectives of sustaining their businesses in an environment which can hardly be labelled as business-friendly, which is why only some of them who perceive the employment of persons with disabilities as a matter of corporate social responsibility resort to hiring this vulnerable group. At the same time, poor qualification structure of job seekers with disabilities clearly requires a drastic shift towards the creation of inclusive policies, which would involve better education and mechanisms for transition from the education system to the open labour market.

Conclusions and recommendations

The results of this research provide useful information for policy makers and employers on what challenges should be tackled through improvement of the existing Law on Professional Rehabilitation and Employment of Persons with Disabilities. Extensive research conducted by the non-governmental sector in Serbia focused on the barriers at the supply side of the labour market for persons with disabilities, whereas our research findings focused on the views and positions of employers – the demand side. The existing legislation and the overall business climate do not provide sufficient incentives for employers that could instigate greater and better employment of job seekers with disabilities. Our findings have shown that employers need a better insight into why and how the hiring of employees with disabilities would benefit their businesses. They also require transparency in the implementation of social inclusion measures, support in the entire process of employment and accommodation of workplaces, and a level playing field for the fulfilment of legal obligations prescribed by both the state and non-state actors in this area. Examples of practices we want to

Table 1: Matching of key characteristics of employers who are open to employment of disabled workforce with the research findings

Issues in employment of persons with disabilities through the lens of employers	Survey questions	Conclusions
work culture issues: *openness of employers to diversity and equal treatment of the disabled and non-disabled employees*	Does the company you belong to implement strategic policies and procedures for the promotion of an inclusive work environment?	Despite recorded disability inclusive policies and practices, the demand side needs more education, support in the integration process and open dialogue with the National Employment Service.
	Besides abiding by the legal obligations, does the company you belong to support persons with disabilities in other ways?	Strong commitment to CSR and diversity management shows solid framework for a decent employment of persons with disabilities through enhancing the Law by introducing more options for employers.
employer experience and support issues: *the ability of employer to manage and supervise a diverse workforce*	How does the company you belong to respond to the obligations prescribed by the Law?	In the absence of the workforce consisting of persons with disabilities who possess adequate skills, we resort to other options of Law implementation.
	What are the reasons for the selected method of abiding by the legal obligations?	The current supply-side employment model ignores variables related to employer demand as predictors of employment outcomes.
job match issues: *focus on the capabilities of an employee instead of on his/her impairments*	What are the main challenges for the employment of persons with disabilities?	Additional efforts devoted to inclusive education are needed, together with a "one-stop shop" disability accommodation service by the National Employment Service and account management service offered to large employers.
	Could you evaluate the flexibility and application of the Law from the perspective of employers?	Neither disability associations nor employers are satisfied with the current legislation: more flexibility (adjustment to sectoral specificities) and transparency (allocation of the funds collected from the quota system) are necessary.

encourage in Serbia both with employers and legislators could include:

- Appreciation of sectoral and location differences and specificities by, for example, the introduction of sectoral quotas;
- Development of an electronic database of employable persons with disabilities, kept up to date and segmented according to employers' needs;
- Education and training of employers in order to overcome the existing barriers and accessibility issues that have remained within existing procedures and hiring approaches, thereby underlying the importance of top management commitment to disability inclusion as a part of diversity;
- Stronger initiatives for and incentives to requalification /retraining of employable persons with disabilities and introduction of new/reviewing of existing profiles in special schools according to the labour market needs;
- Enhancing the Law by introducing more options, such as scholarships for disabled students, offering pro bono services to organisations for the disabled (e.g. from creative industries and law offices), partial deduction of the quotas based on procurement from companies for vocational rehabilitation and employment of persons with disabilities;
- Multi-sectoral strengthening of the sustainability and capacities of companies for vocational rehabilitation and employment of persons with disabilities and the obligation to include them in state procurements, where possible.

In order to successfully increase employment rates for persons with disabilities, which often results in improved quality of life of these individuals, continued research on employers' perceptions and needs and on development of related interventions is necessary. Given the role these factors play in contributing to employment outcomes, the traditional supply-side approach, without taking into account organisational behaviour, employers' needs and the shifting labour market, is no longer adequate for achieving employment outcomes for persons with disabilities. Thus, recommendations for future research would be to further examine the demand side of the labour market with sectoral specificities and attitudes, which could help in identifying the largest or fastest growth areas of employment opportunities, as employers are less risk-averse in sectors and occupations where the demand is high and the supply of qualified workers is low.

This research has had certain limitations, amongst them the sample size due to a poor response rate and non-representative sample of firms, so the obtained results should be regarded with caution. However, we consider the poor response rate also a research result which points out that the research topic is a sensitive issue among HR managers in Serbia, which they are reluctant to discuss.

It was not possible to find out, either through desk research or from the interviewed participants belonging to the state sector, the total amount paid into the state budget through the quota-levy system. It would be interesting to compare this amount for the year 2016 with the amount granted to state programmes and incentives aimed to boost employment and work integration of persons with disabilities. This finding would clearly point out whether the Law itself is used for boosting employment of vulnerable groups or as an alternative way to force the business sector to contribute to social welfare. Finally, it was not possible to provide exact figures for matching the supply and demand side of employable persons with disabilities due to the lack of official statistics.

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THE ROLE OF TRADE FACILITATION FOR TRADE ENTERPRISES IN THE CEFTA 2006 REGION — GREAT EXPECTATIONS AFTER THE BALI MINISTERIAL CONFERENCE OR JUST A GREAT CHANCE?*

Uloga procesa olakšavanja međunarodne trgovine u radu spoljnotrgovinskih preduzeća regiona CEFTA 2006 — velika očekivanja ili samo velika šansa?

Abstract

The aim of this paper is to explore implementation of measures and existing obstacles from the trade facilitation (TF) domain in the CEFTA 2006 countries. Besides the overall importance and the role of the TF for global economy, as every region has its own specificities, authors of this paper have tried to give an overview from the micro aspect, especially important for small and medium-sized enterprises in the export/import sector. These enterprises are faced with many barriers when participating in the trade process, mostly connected with the lack of customs clearance efficacy (efficiency) and with less effective work of other border agencies. The lack of procedures and their inconsistency in implementation, duplication of procedures, requesting unnecessary documents and their mutual non-recognition, as well as deliberate extension of the process duration continuously cause the loss of goods quality and quantity, and decrease the motivation for dealing with trade. It is obvious that the period of new chances for the world trade has arrived after the Trade Facilitation Agreement (TFA) had been adopted in 2013, as the first agreement since the creation of the WTO, and the first one after almost two decades of its work. But how it really works for an individual trade enterprise, especially when it is situated in the CEFTA 2006 region, will be illustrated in this paper in the example of the trade facilitation issue in auto-parts and beverages sectors.

Key words*: trade facilitation, administrative non-tariff barriers, small and medium-sized enterprises, CEFTA signatories, auto-parts sector, beverages sector*

Sažetak

Cilj ovog rada jeste istraživanje primene mera, kao i postojećih prepreka iz oblasti olakšavanja međunarodne trgovine u regionu CEFTA 2006. Pored ukazivanja na opštu važnost oblasti olakšavanja međunarodne trgovine za svetsku privredu, a s obzirom na to da svaki region karakterišu i određene specifičnosti, autori ovog rada su pokušali da prikažu ovu temu sa mikro aspekta, koji je od posebne važnosti za spoljnotrgovinska preduzeća, koja su uglavnom iz kategorije malih i srednjih preduzeća. Ova preduzeća se suočavaju sa mnogim barijerama tokom učestvovanja u realizaciji spoljnotrgovinskih poslova, a koje su povezane sa nedovoljnom efikasnošću prilikom obavljanja carinskog postupka, kao i sa nedovoljno efektivnim radom ostalih službi čije su aktivnosti povezane sa radom carinske službe. Nedostatak procedura, njihovo različito primenjivanje, dupliranje, zatim, zahtevanje nepotrebnih dokumenata, kao i njihovo međusobno nepriznavanje i namerno produžavanje trajanja samog procesa, stalno izazivaju gubitak robnog kvaliteta i kvantiteta i umanjuju motivaciju za obavljanje spoljnotrgovinskih poslova. Novi period u razvoju međunarodne trgovine nastupio je nakon što je 2013. godine usvojen Sporazum o olakšavanju međunarodne trgovine, kao prvi sporazum usvojen nakon stvaranja Svetske trgovinske organizacije, i ujedno i prvi sporazum nastao nakon gotovo dve decenije njenog rada. Sa makroekonomskog aspekta, to je očigledno. Ali, šta se dešava kada je u pitanju pojedinačno posmatrano spoljnotrgovinsko preduzeće, koje se nalazi u regionu CEFTA, pokazaće se ovim radom na primeru primene mera iz domena olakšavanja međunarodne trgovine u sektorima trgovine auto-delovima i trgovine pićem.

Ključne reči: *olakšavanje međunarodne trgovine, administrativne necarinske barijere, mala i srednja preduzeća, potpisnice CEFTA, sektor auto-delova, sektor pića*

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Introduction

After decades of negotiations under the auspices of GATT, when the significant decrease of tariff barriers was agreed, new instruments, mostly non-tariff barriers, appeared as the main source of trade distortion.

Over the last decades, the decline of transportation costs and the reduction of tariffs as a main trade barrier have opened up the markets, but overall trade costs remain the greatest obstacle for global output and trade. They are partly provoked by the existence of administrative non-tariff barriers in the world trade. Administrative non-tariff barriers are mainly provoked by inefficient work of customs administrations, with two main reasons behind it. The first reason could be found in the deficiency of the trade capacity, mostly defined through weaknesses in infrastructure and connected to the work of customs administrations. The second reason could be found in the fact that a customs administration with its representatives deliberately applies some unnecessary measures which discourage trade activities, especially on the import side. Consequences are supply chain barriers, trade volume decrease, or at least, the trade volume increase, but below the potential levels.

It has already been examined and noted that trade costs, beside capital accumulation, demographic factors, natural resources and technology, are the main factors which will determine future trade development directions. These costs are not negligible. In comparison with the negative impact of tariffs, the results of contemporary research have pointed out that these trade costs in developing countries were equivalent to a very high tariff, as the imported product is faced with the 219% ad valorem tariff. This equivalent is significantly lower in the case of high-income countries with 134% ad valorem tariff, although it is an unnecessary cost for international traders [15, pp. 4-7]. The first aim of this Agreement is the intention of its proposer and creator to reduce total trade costs by the implementation of TF measures, for streamlining trade flows in trade across borders domain.

Many countries have recognized the need for existence of one globally accepted and implemented agreement which would be the basis for transparent legislation in member countries, for standardization and harmonization of procedures and their simplification, revenue control with impact on reduction of corruption. After the Ninth Ministerial Conference of the World Trade Organization (WTO) had finished with the adoption of a new, long-awaited Trade Facilitation Agreement, some new opportunities for the world trade growth were noticed. The Bali Conference, held in December 2013, had, as the main positive result, the adoption of the Agreement's final text. The base of its structure was found in the attempt to clarify and improve important aspects of three GATT 1994 Articles. These articles are: Article 5 (Freedom of Transit), Article 8 (Fees and Formalities) and Article 10 (Publication and Administration of Trade Regulation). Through their improvement and widening of some aspects of technical assistance and support for trade capacity building, a new agreement was born. After almost a decade of negotiations, which started in 2004, a Trade Facilitation Agreement, the first multilateral trade agreement under the auspices of WTO, was concluded.

Some expectations after its implementation extend to trade costs decrease of 14% in low-income countries, about 15% in lower middle-income countries and more than 13% in upper middle-income countries [21].

One definition of the trade facilitation is the World Trade Organization`s definition, defining the TF as the process to "clarify and improve relevant aspects of Articles V, VIII and X of the GATT 1994 with a view to further expediting the movement, release and clearance of goods, iincluding goods in transit" [19]. As the common definition of the TF does not exist, most analyses have a limited scope on only three mentioned GATT Articles. A broader definition would include Rules of Origin and Sanitary and Phytosanitary Standards. Individually, treaties can differ making some distinctions concerning the TF scope. Some of them started with the customs reform, simplification of documents and procedures and with inter and intra-border cooperation. A broader scope of the TF began to encompass risk management and risk analysis, post-release verification and audit, advance rulings, appeal procedures, a single window concept, authorized economic operators, release of goods. Transit aspects became an inseparable element of the Regional Trade Agreements (RTAs) where

at least one of the signatories was a landlocked country, especially if it was a developing country at the same time.

The main aim of the Trade Facilitation Agreement is simplification, standardization and harmonization of the movement, release and clearance of goods. The world was ready for its implementation, starting from 22 February 2017, when the Agreement entered into force with its ratification carried out by two-thirds of the WTO members. Besides the need for standardization and harmonization of trade procedures, in many countries, especially in developing countries, the lack of technical capacity has appeared. This capacity is necessary for the implementation of trade procedures, and deficiency of the assets for development of a technical capacity has been the main reason for implementation of non-tariff, especially administrative non-tariff barriers.

Expectations of this Agreement are widely arranged, but they should not be over ambitious: modernization of customs administrations is individually determined, because one strategy does not have to be appropriate for all countries` customs administrations. The Agreement should determine mutual principles, and the intensity of its implementation depends on needs, the achieved level of development at that moment and disposable funds for capacity building, for every member country separately.

As a vast amount of administrative non-tariff barriers still decelerate trade flows in developed, as well as in developing countries, expectations of the TFA implementation are ambitious and continuously growing. The amounts of documents to be filled and costs to be paid, provoked by unnecessary documentation requirements, lack of transparency and duplication of documents mark a long-term increase and have distorted trade flows intensively during the last few decades. The most affected by this phenomenon are small and medium-sized enterprises (SMEs), as the most common category of the trade issue. Moreover, we have to take into account that these enterprises are the source of GDP, with more than 60 per cent. Some analysts consider these obstacles to be a more convincing reason as to why their participation in international trade is less than expected, compared to the other trade limiting factors, traditionally known as tariff barriers [20].

The role of SMEs in international trade could be increased, especially after full implementation of TF measures. One of the reasons is the fact that burdensome trade procedures are notified as the main obstacles for SMEs as potentially dominant subjects in the world export. Transnational corporations versus SMEs are in a more favorable position because of their flexibility and possibility to overcome these burdensome procedures. In situations when export procedures need more and more time to be completed, larger firms appear more dominant [15, p. 8].

Literature review: Role of trade facilitation measures in the trade costs reduction

Many scientists have shown the importance of some TF elements for an export performance increase. In addition to the factors of export performance increase such as regulatory quality and access to finance, on the list there are some elements of the TF. They include customs efficiency as the main element of the TF process and the quality of infrastructure, which is partially an element of the customs efficiency. These conclusions were made after the empirical research about the causes of the phenomenon indicated that between 1950 and 2006 the volume of international trade grew three times faster than GDP [12, p. 2].

The importance of TF for the trade issue, mostly observed through infrastructure and institutional quality determinants of export performance, was noticed by Francois and Manchin in 2007, after the research using panel data for the period 1988-2001. They referred to the influence of TF on the trade flow increases, which, in their opinion, was considerably higher than the improvement of the conditions for access to the market. They pointed out that, in the case of developing countries, creators of the trade policy and participants in trading, should insist more on investments in facilitating trade, instead of improving conditions for market access [6, pp. 1-22].

One OECD research assessed, using the sample of 107 countries at all development levels, the impact of TF measures on the trade costs decrease and trade volume increase [7, pp. 1-96]. As the earlier research papers have verified, with respect to OECD countries

only and using all disposable TF indicators, that the TF measures had a potential to reduce trade costs by 10%, further steps have been oriented towards estimation of the TF measures' impact individually [9, p. 6]. This was an expected research direction, because it was obvious that some TF measures had more evident impact on trade than others. It could be an important direction sign for institutions and governments for funds orientation towards the implementation of measures which could produce more positive effects. According to the results of the research, based on the sixteen TF indicators, constructed by different areas for TF negotiations and future articles of TF Agreement, the measures with the most obvious impact on trade costs decrease are different for different countries' development levels. For low-income countries, the highest potential for trade costs decrease can be achieved by measures such as harmonization and simplification of documents with an approximately expected decrease of 3%, and of 2.3% by use of automated processes. For lower-middle income countries, the first mentioned measure could contribute with a reduction of costs by 2.7% and streamlining of procedures by 2.2%. For upper-middle countries, what is mostly expected are measures which will contribute to a trade costs decrease of 2.8%, with the streamlining of procedures, and of 2.4% with the implementation of automated processes and risk management. Unlike the study from 2011, with an assessed decrease of trade costs by 10% in the case of OECD countries, in new research papers from 2013, it was assessed that a trade costs decrease could reach even 13.2-15.5% for different development levels of observed countries [7, p. 6]. Further research work of OECD experts confirmed the positive role of TF measures for country's integration into a concept of global value chains, which has become a modern way of financing for production, for trading and for finding its own place in the global economy. Measures from the TF group of measures, which contribute to a better predictability and which influence the speed of movement across borders for goods, are: implementation of advance rulings, transparency of fees and charges, the process of automation and streamlining of borders procedures and controls. The research results showed that very modest improvements concerning these measures of only 0.1% could contribute to an extremely intensive increase of trade in value-added, between 1.5-3.5% for imports of value-added and 1-3% for exports [8, p. 21].

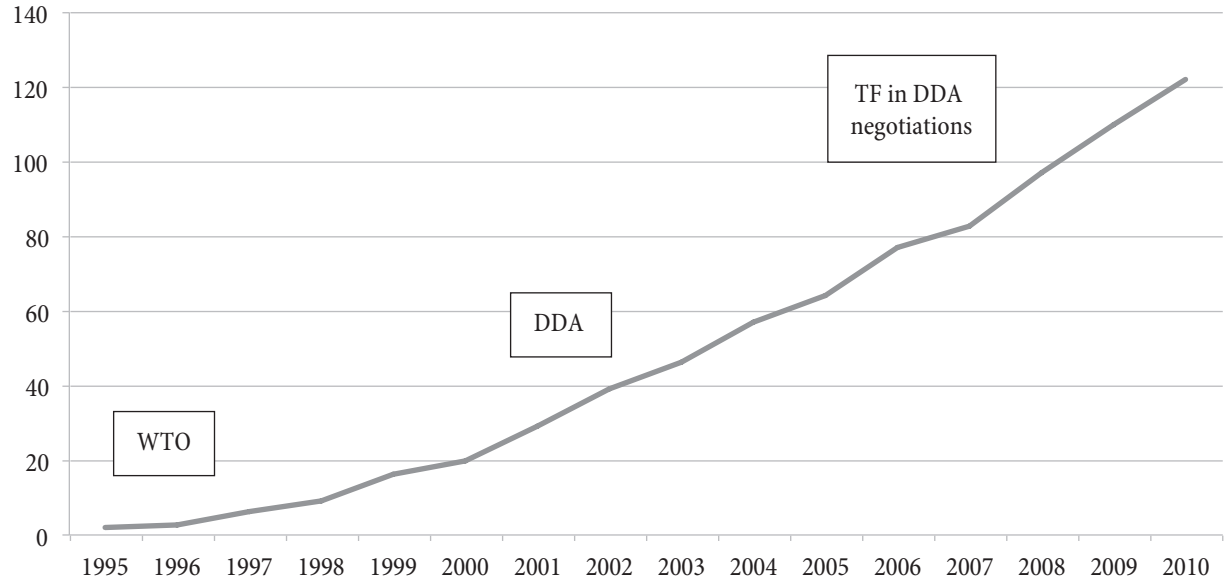
All these research achievements in confirming the TF role concerning the trade volume increase and trade costs decrease are pieces in a trade mosaic. Given the fact that this field of research has been defined for the first time at the beginning of the new century, it offers a completely different view on trade in past and it could certainly be a source for future improvements, especially after many hidden obstacles become illuminated.

The role of trade facilitation in Regional Trade Agreements

The increase of Regional Trade Agreements (RTAs) has been obvious during the last decade. The WTO RTAs include all sorts of agreements except the multilateral ones, which are under auspices of the WTO. In this way, the WTO sees bilateral agreements also as RTAs. The increase of number of RTAs with TF elements is related to the year 2004, when the TF became a part of the Doha Development Agenda. Customs procedures, as the first important element of RTAs with the TF, developed from simplification and harmonization of trade documents to processes which need a high level of automation for their normal functioning, as, for example, risk management, appeal procedures, post-audit, advance rulings. The most frequent requests in the TF field are in the field of complete automation process and its inseparable parts as paperless trading connected with electronic transactions. These parts of the automation process are included in many RTAs, and they are based on electronic filling of documents, transfer of trade-related information and electronic versions of documents [14, p. 5].

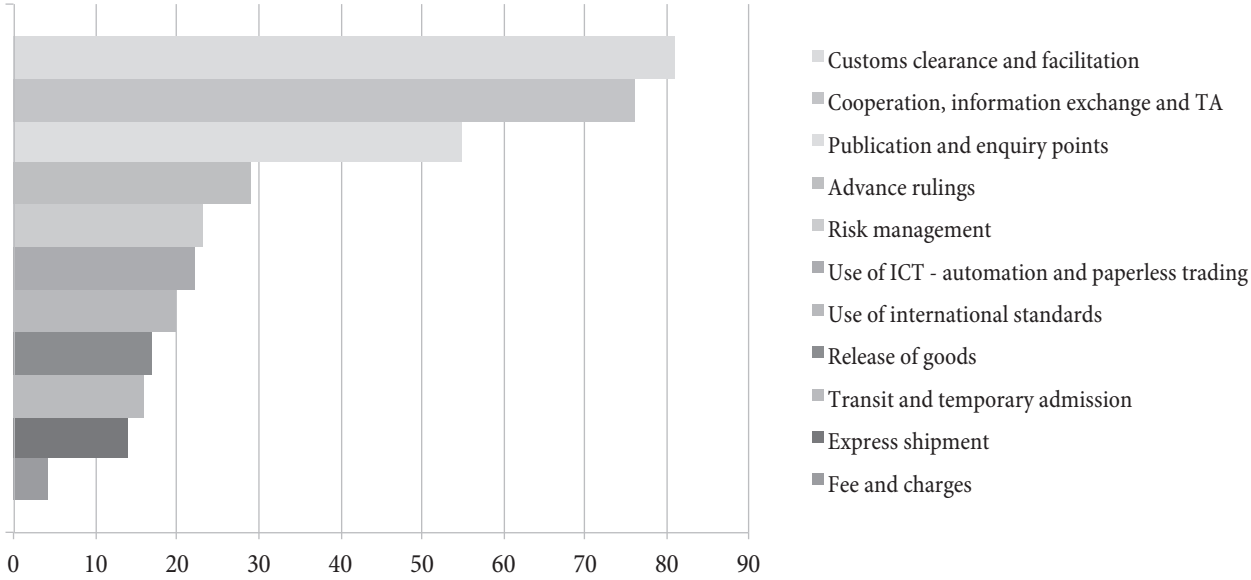
Many documents are used in international business in their electronic version, and that significantly accelerates all elements of the trading process. The documents that usually appear in this form are also the most commonly used documents in the realization of foreign trade transactions. These are: bill of lading, invoices, letters of credit, insurance certificates.

Figure 1: Increasing number of RTAs with customs and other trade facilitation measures



Source: [14, p. 4]

Figure 2: Breakdown of "WTO-like" trade facilitation measures contained in RTAs



Source: [14, p. 5]

The opinion of UNCTAD experts confirms strong correlation between WTO and RTAs TF commitments. The initial point in these relations is the year 2004, when TF aspects were included in the Doha Development Agenda (Figure 1). Before that year, the TF components had been included in RTAs and they had served as basic components for the first WTO Draft Negotiating Text. After the start of negotiations, under the auspices of the WTO, new TF provisions became an inseparable part of new RTAs which were concluded after the 2004 [14, p. 6].

According to UNCTAD data, by 2011 trade facilitation standards and recommended best practices had become a part of many RTAs, but some of the TF elements appeared more often in RTAs than others. Customs clearance and facilitation appeared in 81 agreements, but fees and charges in only 4 agreements (Figure 2).

In 2016, for the first time, all WTO members have managed to be a signatory of one RTA in force at least, after the notification of the RTA between Mongolia and Japan [17].

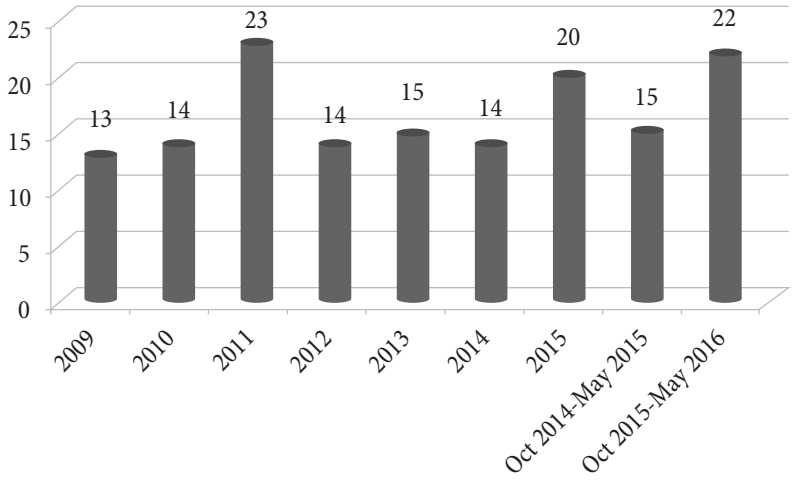
Trade-restrictive measures vs. trade facilitation measures

Trade policy trends have become a very common issue for the WTO`s trade monitoring reports. The main problem in monitoring and evaluating the effects of trade policies implementation is determining the real data of new trade-restrictive measures implementation. These measures are heterogeneous in character and mainly have a protective purpose, as for example the increase of existing export or import tariffs, many quantitative restrictions, technical and administrative non-tariff barriers. During the period October 2015-October 2016, an increase of 154 newly introduced measures was the highest from 2009, except for the peak in 2011 [16, p. 66]. Data for the last observed period indicate that the average number of new measures, with a trade restrictive character, of 22 new measures per month, is the period with the most intensive introduction of trade restrictive measures in the last decade (Figure 3).

At the same time, some positive changes have happened, mostly shaped after the Trade Facilitation Agreement adoption and after implementation of numerous measures aimed at facilitating trade flows. The dynamics of TF measures introduction is similar to the introduction of trade-restrictive measures, with a prevailing and evident increase of trade facilitating measures after the TFA adoption in 2013 (Figure 4).

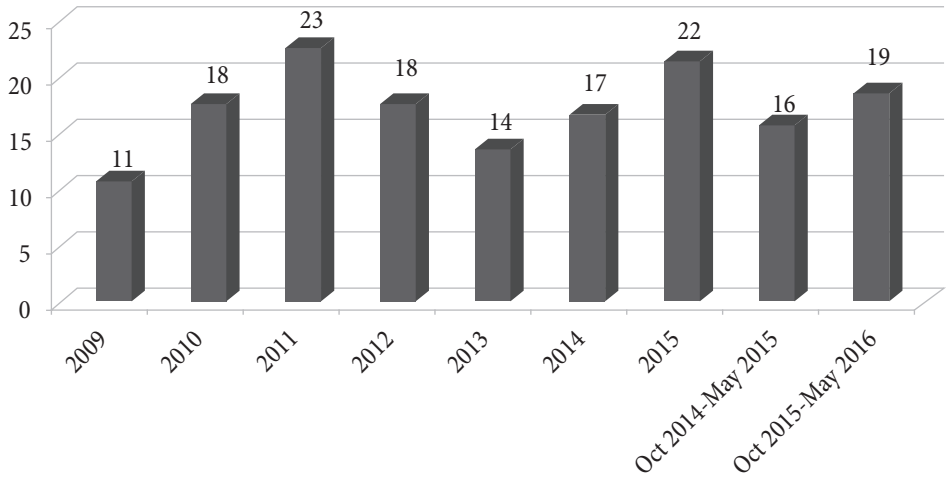
By looking at the WTO data, the list of TF measures is a little longer than usual, and besides the decrease of

Figure 3: Trade-restrictive measures, excluding trade remedies (average per month)



Source: [16, p. 66]

Figure 4: Trade-facilitating measures, excluding trade remedies (average per month)



Source: [16, p. 67]

tariffs, it refers to many non-tariff barriers, not only to administrative non-tariff barriers. These include the elimination of quantitative restrictions, simplifications of customs procedures, elimination of trade taxes. During the October 2015-October 2016 period, WTO member countries introduced 132 measures from the TF list, with a monthly average of 19 new TF measures [16, pp. 66].

Although the character of these TF measures is facilitating by nature and opposing trade-restrictive measures, we can conclude that during the last observed period, their number is lower than the number of newly introduced trade-restrictive measures.

CEFTA market access barriers for auto-parts sector and beverages sector, as observed by importing and exporting enterprises

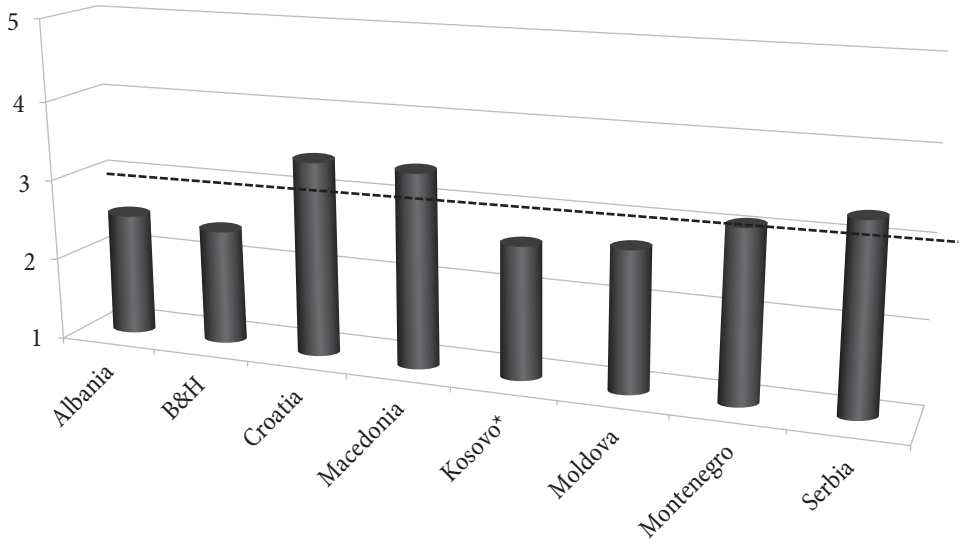
The main positive factor important for the further success of the TF implementation process in developing countries is the fact that developing countries will be provided with necessary technical assistance for trade capacity building. In addition, the dates for their implementation will be determined as part of the special and differential treatment for these countries. The negative element will be the fact that CEFTA 2006 countries are considered to be developed countries.

Intra-CEFTA trade recorded an increase during the 2010-2015 period, although the export values were still less than €5 billion. The value of the region`s trade has increased compared to 2015 and a proportion of trade partners remained almost unchanged during these years. The region is still more importing from the EU, as its main trade partner, than it is exporting.

Trade facilitation has an important place in the development agenda of developing countries, especially if they are landlocked developing countries. Within the list of Aid for Trade priorities, trade facilitation is positioned in a group of 12 priorities, as one of the main three aid priorities for 65 % of developing countries, and even for 77% of landlocked countries [15, p. 9]. Considering the fact that the majority of the CEFTA signatories are landlocked countries, these data indicate the TF importance in this region, too.

An OECD research from 2012 showed that most countries from the CEFTA region were implementing some measures called administrative non-tariff barriers, measures which are not facilitating trade and which have negative and a trade-distortive impact on trade flows. It is shown that there are some differences in the intensity of their implementation, among signatory countries. Countries that are more advanced in implementing all provisions for EU accession such as Serbia, Montenegro, Macedonia and Croatia, in the course of that research still a signatory of CEFTA, used more administrative non-trade barriers in intra-CEFTA trade. It happened before 2013 and the adoption of the Trade Facilitation

Figure 5: Overall scores for dimension: administrative barriers to trade



Source: [11, p. 81]

Agreement. Also, it could be expected that, following some technical and financial help for implementation of some TF measures, in the next few years, the picture will not be the same (Figure 5).

According to Nora Neufeld, during the 1970s, about 14% of the total number of RTAs contained some of the measures of the TF, and one decade later this data changed by 50% and reached even a high 92% during the 1990s. Part of these agreements with at least some components of TF, was around 95%. Therefore, almost every RTA started containing these elements, which indicated an increase of the interest to implement some of the measures in the TF domain [10, pp. 6-7].

Implementation of the TFA in CEFTA 2006 region varies depending on these countries' status — only Macedonia, Albania and Montenegro are WTO members. As the rest of the countries are included into the process of becoming a member of the WTO, it was not necessary to wait with the TFA obligations. CEFTA parties concluded negotiations on adopting an Additional CEFTA Protocol 5 on Trade Facilitation [4]. Furthermore, the TFAs were seen as an opportunity to increase intra-CEFTA trade. All CEFTA signatories, although some are, and some are not members of the WTO, have undertaken a self-assessment, individually, estimating in that way their own compliance with the TFAs` issues.

The results of the project "Addressing Market Access Barriers in Selected Supply Chains" for all CEFTA 2006 signatories pointed out the importance of the two sectors that had the greatest potential to increase intra-CEFTA trade.[1] In order to improve such trade, many barriers to trade in this part of the world needed to be removed. These barriers were first required to be notified in order to propose measures for their reduction until their abolition. The barriers to trade that exporters and importers are faced with during the realization of international business are burdensome. Besides those, trade includes many stakeholders like: distributors, producers, freight forwarders, associations, insurance companies and chambers of commerce. They mostly had complaints in the field of the business environment, although the list of complaints could for the most part be defined as the trade facilitation field, through the content of the Trade Facilitation Agreement. These barriers are: customs procedure delays, complicated and double documentary requirements, inconsistent application of rules and regulations, lack of transparency and inter-agency cooperation [1, p. 3]. The authors of the Project pointed out the greatest importance of the auto-parts sector for Serbia, Bosnia and Herzegovina and Macedonia compared to the modest significance of this sector for Albania, Montenegro and Kosovo*.[2]

Importers in Serbia pointed out further problems:

- Working hours of the customs offices, mostly referring to the working hours during the weekends;
- Producers had a problem with delays in customs clearance of spare parts for machinery;
- Large number of documents and agencies and documentation requirements, provoking customs clearance delays.
- Lack of knowledge of implementation of the EU, CEFTA, or other Free Trade Agreement regimes, provoking arbitrary application of laws and a lack of predictability.

Exporters of the auto-parts sector from Serbia pointed out problems in:

- Customs working hours;
- Changes in regulation which are mostly referring to the use of free trade zones and services of freight forwarders [1, p. 6].

In Bosnia and Herzegovina, the main problems concerning their importers in the auto-parts sector are connected with machinery spare parts, mostly from Germany. Actually, freight forwarders asked for original invoices and certificates of origin for the implementation of the preferential treatment based on origin. They waited for the complete submission of documents before starting their part of the trade process. They also had problems with a long wait for spare parts which were held up for 72 hours at the Sarajevo customs. They have problems with complex documentation and problems with customs

1 The project "Addressing Market Access Barriers in Selected Supply Chains" was implemented by International Trade Centre and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. National organization meetings have been organized in all member countries between June 8th and June 19th, 2015.

2 *- As a separate customs territory under UNSCR 1244.

administration because of a wrong tariff number, frequently given by freight forwarders. Problems with customs administration's confusion in the implementation of different treatments of products from EU, CEFTA and other FTAs zones, same as in Serbia. Exporters from Bosnia and Herzegovina have a deficiency of accredited laboratories, i.e. a lack of infrastructure.

Importers in Macedonia are faced with cumbersome customs procedures, lack of predictability and transparency, concerning the time needed for completion of customs procedures, problems with interpretation of the origin of raw materials, delays, especially imports from China, because these products need to pass through inspection, although they meet all proposed standards. Macedonian exporters face many obstacles, but problems connected with TF issues are problems concerning export to Egypt, which requires additional documents from their Embassy and payments for them, and export to the USA, asking for additional documents from the Chamber of Commerce.

Some Albanian importers and exporters` problems are different in character compared to Serbia and B&H. Their problems connected with the TF issue are: long duration of customs procedures, a lack of transparency and predictability caused by the Albanian government decisions without explanations, and the inability to access statistical data. Their exporters report a lack of technical capacity on the labor market, which is an advantage for previously mentioned countries.

The beverages sector, mostly referring to wines and beers, is a second sector chosen for this analysis and a second sector considered to be a factor for strengthening regional integration. Countries from the region are faced with similar problems, and the majority of problems could be classified as a trade facilitation issue. These include: inconsistent behavior of customs administration, problems with customs officers who are not fully informed about elements of different trade regimes and different trade agreements, working hours of the customs administration, inspections for every consignment, no risk management implementation, mutual non-recognition of SPS certificate and the quality certificates, short validity periods for received certificates, delays in receiving results from laboratories. Certificates issued by different laboratories in the region are not always recognized by all CEFTA signatories, even if they are listed on the EU Official Journal for certified laboratories for wines, and also double testing is required. Customs clearance often depends on the efficacy of agencies whose work is connected to the work of customs officers, more than on the efficacy (efficiency) of customs officers. The whole customs clearance procedure is finished in a moment when all documents and certificates are signed, and in this region, this could last as long as 30 days, provoking thereby delays, new costs for proper storage of wines. The results of this Project pointed out that the main obstacle in intra-CEFTA trade is mutual non-recognition of certificates, causing an unnecessary increase of additional (double) costs, especially burdensome for the existence of small and medium-sized enterprises (SMEs) [2, pp. 3-21].

Development of the regional framework, with a wide list of barriers to market access and with a list of recommendations in a situation when each signatory country has some specific problem, was a long process to find a common denominator. It was done by analyzing the market access barriers from two aspects — non-tariff measures and trade facilitation, in use within the CEFTA territories.

For both sectors, concerning the first field of non-tariff barriers, the main defined problem was double testing, a common problem for all signatories. It is followed by high excise duties, which were noticed in Bosnia and Herzegovina, Albania and Kosovo*. The other measures are radioactivity tests in Montenegro and a labeling problem in Serbia, B&H and Macedonia. Trade facilitation aspects covered a wide range of different issues and few of them are integrated in the TF Agreement, so in the Articles of that Agreement some recommendations and future steps could be found. The most frequent problems that traders are faced with are delays in the customs clearance process, a lack of transparency, especially when new laws and directions are adopted and implemented, and too detailed inspections, even when the trading partner is well-known [3, pp. 5-6].

Measures for improvement are mostly related to new concepts for modernization and reforms of the customs administration, based on risk management, post-clearance

audit, advance rulings, pre-arrival processing. These issues are a part of the following TFA Articles [18, pp. 3-16]:

Article 1 — Publication and availability of information

Article 2 — Opportunity to comment, information before entry into force and consultations

Article 3 — Advance rulings

Article 6 — Disciplines on fees and charges imposed on or in connection with importation and exportation and penalties

Article 7 — Release and clearance of goods

Article 8 — Border agency cooperation

Article 10 — Formalities connected with importation, exportation and transit

Suggestions of the Project authors rely on a majority of issues which are a part of the TFA Articles: Advance rulings, Pre-arrival processing, Post-clearance audit, Authorized economic operators (AEO), Single window (SW) [18, pp. 3-16]. This list of TF measures that are rated as measures with the greatest impact for the TF advancement in the CEFTA region was prepared as a TF self-assessment by the CEFTA representatives. They pointed out the importance of these measures, which were used as the basis for determining the level of the individual implementation of these TF measures by each CEFTA country. Self-assessment has shown that Macedonia is the most advanced in implementation, followed by Montenegro, Serbia, Albania, as advanced in this implementation and with Bosnia and Herzegovina and Kosovo*, lagging behind the rest (Table 1).

During 2015, it was found that CEFTA parties complied with 60% of the TFA provisions fully, 18% substantially and 14% partially [3, p. 39].

Table 1: CEFTA categorization of selected TF measures

TF	AL	BA	MK	ME	RS	KS*
Advance rulings	B	C	A	A	B	C
Pre-arrival processing	B	C	A	C	B	B
Post-clearance audit	A	C	A	B	B	B
Authorized economic operators	B	C	A	A	A	B
Single window	C	C	A	C	C	C

Source: TF Self-assessment by CEFTA parties, 2015-2016, according to [3, p. 67].

Recommendations for finding some of the solutions for the increase of intra-CEFTA trade are often based on the role of the regional body with the influence to put a pressure on all CEFTA signatories to fully respect all that was agreed on by CEFTA 2006. This is especially important for the mutual recognition of certificates used in intra-CEFTA trade and is obligatory for all signatories of that Agreement. As all CEFTA signatories are signatories of the same agreement which is a Free Trade Agreement establishing a free trade area, it is expected that each signatory should realize export to other CEFTA signatories in the same way as it does with the export to EU.

Through the Decision of the Joint Committee of the Central European Free Trade Agreement, No. 7/2014 — Establishment of the Committee of Trade Facilitation, adopted in Skoplje on 21 November 2014, all CEFTA signatories established a working group — Committee of Trade Facilitation, pointing out, in that way, the importance of different TF provisions for the region and pointing out, at the same time, the necessity for a serious approach to this challenging issue. This was a step to increase the interest for the implementation of TF obligations at a regional level. After 2013 and the adoption of the TF Agreement under the auspices of the WTO, a real challenge was the moment of its implementation at the regional level. Through this Decision, CEFTA created one body for addressing all issues connected with TF "with a view to reduce costs caused by the inefficient types of clearance procedures, while balancing trade facilitation with the increasing requirements for safety and security measures in the international and regional supply chain" [5]. The Joint Committee is a body established with the aim to intensify and realize cooperation in the field of the TF and to find and define legislative instruments at the regional level, to facilitate trade flows at the regional level.

Measurement of the trade facilitation implementation rates by United Nations in 2015 has shown that this level is highly correlated with the level of development measured by GDP. More developed economies mainly record a higher grade of implementation. There are some exemptions in both directions: Qatar is the economy with a high level of GDP and a low level of TF implementation, about 66.8%. Contrary to them, we have the example of Ecuador, achieving 81% that represents a higher level of the implementation [13, p. 8].

Since CEFTA 2006 signatories have a GDP per capita in 2014 at an average level lower than $10,000, therefore, expectations for a high level of implementation should not be realistic. At the same time, intensification of projects and consultations for the TF implementation at the regional level further confirm stronger future relevance of this issue than it is at present.

Conclusion

Trade Facilitation Agreement opens many fields for research and activities, but, each enterprise, each country, and region, have their own specificities. Five TF instruments used in the assessment of this paper are chosen as the most representative for trade volume increase in this region. Although it is marked that SMEs are expecting the most results after their implementation, we can conclude that their level of implementation is different in different CEFTA 2006 signatories. Among all TF instruments, the implementation of the single window is the slowest in this region, but the expectations of its implementation results are very high in the trading world. By establishing the TF Committee for CEFTA 2006, institutional conditions for further development and implementation of TF provisions are fulfilled.

Although this issue has a priority for the trading community, concerning the fact that the TFA is the first WTO Agreement that emerged from the Bali Round, it cannot be expected that these measures will solve all the problems in the trading world. This could especially be true for the CEFTA region. However, it could contribute to some economic developments, though it would not be realistic to expect that it is sufficient to solve all other regional problems, especially those that are not economic in nature. Unquestionably it will make a serious contribution.

Many important steps have been achieved during the last decade concerning the full implementation of CEFTA 2006 Agreement. This paper focused on TF measures and their implementation at the regional CEFTA 2006 level. The assessment of application of TF measures, based on two analyzed sectors, auto-parts and beverages sector, should be a good starting point for the trade policy creators in these countries. This assessment shows that many possibilities and burdens are still present in this field. Investing in some of the proposed TF instruments could contribute to trade volume increase in this region. In this way, they would overcome burdens caused by deficiency of trade infrastructure and decrease the impact of inefficient work of customs administration.

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THE IMPORTANCE OF EU PRE-ACCESSION FUNDS FOR AGRICULTURE AND THEIR INFLUENCE ON COUNTRY'S COMPETITIVENESS*

Značaj EU pretpristupnih fondova za poljoprivredu i njihov uticaj na konkurentnost zemlje

Abstract

IPARD is the fifth component of the Instrument for Pre-Accession Assistance (IPA) of the European Union (EU) established in 2006. The implementation of IPARD Programme started in late 2009, and an in-depth analysis of its utilization is missing. Official annual reports on the implementation are available at the managing authority website, but for a better insight additional research is needed. The main goal of this paper is to assess the impact of IPA funds on the country's competitiveness considering data on funds specifically intended for agriculture (IPARD), and their impact on the export of agricultural products to beneficiary countries. In addition, analyses of available data on starting a business and trading across borders, and their correlation with data on absorption of IPA funds, were used to determine the importance of EU pre-accession funds for the country's competitiveness. This research is based mainly on the available data of EU statistics and Doing Business reports of the World Bank. Other sources of information are from the Agricultural Payments Agency, Ministry of Finance and Treasury Administration of the Republic of Serbia. The authors consider that this paper is contributing to the knowledge base regarding the structure of IPARD Programme and EU funds available to candidate countries in general. The conclusions reached can help improve the implementation of IPARD funds in Serbia in the future, since the conclusions indicate the main problems that are affecting the absorption of the programme funds.

Keywords: *IPA funds, IPARD, agriculture, competitiveness*

Sažetak

IPARD je peta komponenta instrumenta za pretpristupnu pomoć (IPA) Evropske unije (EU) ustanovljena 2006. godine. Implementacija IPARD programa je počela krajem 2009. godine i stoga nedostaju dublje analize njihovog korišćenja i realizacije. Zvanični godišnji izveštaji o realizaciji dostupni su na sajtu upravnih organa EU, ali za bolji uvid potrebna su dodatna istraživanja. Glavni cilj ovog rada je da se oceni uticaj IPA sredstava na konkurentnost zemlje uzimajući u obzir i podatke o sredstvima koja su posebno namenjena za potrebe razvoja poljoprivrede (IPARD) i to sa stanovišta njihovog uticaja na izvoz poljoprivrednih proizvoda u zemljama korisnicima. Pored toga, analiza podataka o pokretanju biznisa i prekograničnoj trgovini, kao i njihova korelacija sa podacima o apsorpciji IPA fondova, korišćena je da se utvrdi značaj EU pretpristupnih fondova za unapređenje konkurentnosti zemlje. Sprovedeno istraživanje zasniva se na raspoloživim podacima EU statistike i Doing Business izveštaja Svetske banke. Drugi korišćeni izvori informacija vezuju se za Agenciju za agrarna plaćanja, Ministarstvo finansija i Upravu za trezor Republike Srbije. Autori su mišljenja da ovaj rad značajno doprinosi unapređenju znanja o strukturi IPARD programa i EU fondovima koji stoje na raspolaganju zemljama kandidatima. Izvedeni zaključci na osnovu dobijenih rezultata istraživanja, kao i iskustva drugih zemalja u okruženju, treba da posluže kao primer za bolju i uspešniju implementaciju IPARD sredstava u Srbiji u budućnosti, jer se fokusiraju na glavne probleme sa kojima se zemlje korisnice susreću u procesu apsorpcije navedenih sredstava.

Ključne reči: *IPA fondovi, IPARD, poljoprivreda, konkurentnost*

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Introduction

The Common Agricultural Policy (CAP) supports the creation of market principles, sustainable growth of the agricultural sector, increase in environmental benefits and contributions to the general public goods of the European Union (EU). The new CAP adopted in 2013 by the Agreement on Reform of the Primary Policy contributes to a more efficient and more competitive EU. The total amount foreseen by the EU's financial framework for the period 2014 to 2020 is 362.787 billion Euros (European Commission, Brief No. 5: "Overview of the CAP reform 2014-2020", Agricultural Policy Perspectives Briefs, Brussels, December 2013, p. 3, according to DG Agriculture and Rural Development). The beginning of the CAP reform process is caused by the budget constraint and pressures of globalization (The MacSharry reform package from 1992). The result of reform processes is the competitiveness and sustainability of the agricultural sector of the countries of the present and future EU member states.

A new Instrument for Pre-Accession Assistance (IPA) was established by the European Council Regulation no. 1085/2006, replacing all previous pre-accession funds: PHARE, ISPA, CARDS and SAPARD. The major change introduced by IPA compared to previous pre-accession instruments is the necessity to establish an institutional framework for the use of pre-accession funds, like the structure of the EU Cohesion Fund, the structural funds, and to implement the CAP. The Instrument for Pre-Accession Assistance for Rural Development (IPARD) aids potential candidate countries in strengthening democratic institutions, sustainable development of the agricultural sector and rural areas, implementation of the acquis in the field of the CAP.

The analysis provided in this paper shows the impact of IPA funds on the country's competitiveness through two indicators: starting a business and trading across borders. Also, the analysis uses data to assess the utilization of IPARD funds and the impact thereof on the export of agricultural products in beneficiary countries. The dependence of exports of agricultural products and funds allocated through IPARD was done through regression analysis. In the rest of the paper, the absorption capacity of EU funds and influence on the competitiveness are examined. The last part of the analysis is dedicated to Serbia and examines the importance of IPARD funds for agricultural sector development extenuating the problems Serbia will be confronted with during IPARD implementation process.

Literature review

The analysis carried out in the new EU member states shows that the use of EU structural funds is one of the most important instruments for economic development. Problems of limited possibilities of absorption of resources from EU funds are related to poor absorption capacity at the level of the local government [20]. The efficiency of the administrative services depends exclusively on the ability to coordinate the project participants [2]. The use of structural funds is provided to the countries of Central and Eastern Europe, if they have established an appropriate coordination structure before using the funds. The consequences of a stable coordination structure are the modification of the paradigm of hierarchical, legalistic, centralized and inefficient planning. The goal is to create a more responsible, inclusive, networking method of coordination, regardless the outcomes are not always in line with expectations. The structure, functioning and efficiency of coordination of national systems are the basis of the high absorption capacity of EU funds [6], [12]. The structure of IPA funds is "designed to mirror the Structural Funds" of the EU [21]. The Multi-Annual Indicative Financial Framework (MIFF) defines the allocation of funds for each IPA component and for each beneficiary country. The European Commission identifies priorities in a three-year EU enlargement strategy and proposes a MIFF.

There are findings that the experiences of the countries which have already had an opportunity to use similar funds, primarily the IPARD funds, are indicative. From 2007 to 2012, Croatia, Macedonia and Turkey received the support of €30, €65 and €650 million, respectively, which is about four-fifths of the total support intended for rural development. The largest part of these funds was used for investments in agricultural farms (39%), investments in the development of processing and marketing (26%), as

well as in development and farm diversification (20%). A considerably smaller amount of funds was used for other measures (≤ 5%). Namely, all three countries directed the largest amount of the funds towards Axis 1 - the improvement of efficiency and reaching of the EU standards, around 70%; for Axis 2 - the environment and the Leader approach, only between 2-5% of the funds was used, depending on the country, whereas for Axis 3 - the development of the rural economy, 23% of the funds was used. The rest of the funds were spent on the measures of technical support (around 2%). In comparison to the other two countries, Croatia spent the largest part of the funds on Axis 3, Macedonia on Axis 1, and Turkey on Axis 2 [11].

Research methods and data

The hypotheses of research are justified by the application of many methods of quantitative and qualitative analysis. The survey monitors the impact of IPA funds on the competitiveness of the country through the following indicators: starting a business and trading across borders. The ranking of economies on the ease of starting a business is determined by sorting their distance to frontier (DTF) scores for starting a business. These scores are the simple average of the DTF scores for each of the component indicators. The DTF score shows the distance of an economy to the frontier, which is derived from the most efficient practice or highest score achieved on each indicator. The trading across borders indicator set records the time and cost associated with the logistical process of exporting and importing goods every year. It is assumed that each economy exports the product of its comparative advantage (defined by the largest export value) to its natural export partner—the economy that is the largest purchaser of this product. An economy's DTF is reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 represents the frontier. For example, a score of 75 in 2017 means an economy was 25 percentage points away from the frontier constructed from the best performances across all economies and across time.

Data on funds allocated to IPARD funds and their impact on the export of agricultural products to beneficiary countries in the period 2007 – 2013 were analyzed using the statistical software Minitab. The correlation between the two variables, i.e. the strength and direction of association between them, has been interpreted. Minitab offers two methods of correlation: the correlation between the moment of the Pearson product and the Spearman ranking correlation. Pearson's correlation (also known as r) is the most common method, and measures the linear relation between two variables. The values of the correlation coefficient r range from -1 to 1. If the values obtained are closer to -1, then this represents a strong negative relation. The values closer to 1 mean that a strong positive relation between the variables is strong. Correlation coefficient equal to zero indicates that there is no correlation. The P-value indicates the statistical significance of the analysis if its value is less than 0.05 (5%).

The research explains the dependence of export of agricultural products on funds allocated to IPARD funds through a regression analysis in Minitab. Dimensional representativity is the standard error of regression (s) and the determination coefficient (R sq). S is measured in the units of the response variable and represents the standard deviation of how far the data values fall from the fitted values. The lower the value of S, the better the model describes the response. R2 is the percentage of variation in the response that is explained by the model. The higher the R2 value, the better the model fits data. R2 is always between 0% and 100%. A standard error indicates how much data deviates from the arithmetic mean. The lower value of the standard error (S) indicates a better model and that the histogram data is more uniformly distributed. The first number in the equation of regression is a section on the ordinates – a constant. It corresponds to the average estimated value of the dependent variable when the independent variable value is zero. The coefficients b1 and b2 correspond to the average change in the expected value of the dependent variable for the unit change of the independent variable. They are called regression coefficients.

The absorption capacity of EU funds and influence on the competitiveness

In 2006, the EU Council adopted a Regulation introducing a simpler framework for the use of financial assistance

to developing countries. The new instrument for pre-accession assistance, already mentioned IPA, combines the pre-accession instruments of the past: PHARE, SAPARD, ISPA and CARDS. The main goal of the IPA is to provide support in the process of reforms that the European integration process requires and prepare countries to use resources from the EU funds when they become full members. The beneficiary countries of IPA funds are divided into two categories:

1. Candidates for EU membership and
2. Potential candidates for EU membership.

The EU IPA programme is intended exclusively for already planned and elaborated projects that contribute to the achievement of EU strategic goals, and whose priorities are set in EU strategic documents. The similarity between pre-accession funds and the Cohesion Fund, which is intended only for EU member states, is in line with objectives, principles and means of asset management. The priorities of both funds are convergence, regional competitiveness, reduction of unemployment rates and European territorial cooperation. The components of IPA funds during the period 2007 – 2013 are:

1. Assistance to transition and institution building
2. Cross-border cooperation
3. Regional development
4. Development of human resources
5. Rural development.

In the coming period (2014–2020), the components will relate to policy areas. The European Commission sets out the funding priorities of a five-phase cycle model: programming, identification, formulation, implementation, and evaluation and revision. IPA for the period 2007 – 2013 was provided for the countries that were EU candidates at that time (Iceland, Macedonia, Montenegro, Serbia, Turkey and Albania) and then for potential candidates (Bosnia and Herzegovina and Kosovo). Table 1 presents a comparative overview of IPAs from period I (2007 – 2013) and period II (2014 – 2020), as well as the coverage of the sectors they cover.

The novelty introduced by IPA II through the increased impact of financial and technical assistance is a priority given to achieving the reform goals by linking pre-accession assistance with the EU's internal policies. The benefits of the new IPA are: simpler programming and implementation, the flexibility of allocating assistance within different policy areas, and the introduction of two levels of strategic planning in place of multi-year strategic planning. IPA II is in line with the EU 2020 Strategy that promotes smart, sustainable and inclusive development. Table 2 gives an overview of the spending of IPA I funds in the seven-year cycle from 2007 – 2013.

Table 2 clearly shows that all the countries observed have or have had the growth of resources as they are approaching EU membership. The largest recipients of

Table 1: IPA component headings and policy areas according to IPA I and IPA II periods and their sector coverage

Component name (according to IPA I 2007-2013)	Name of policy area (according to IPA II 2014-2020)	Sectors covered
Transition assistance and institution building (IPA 1 component)	Transition process and capacity building (TPCB)	Public administration reform Public finance management Judiciary and internal relations Human rights and minorities
Regional development (IPA 3 component)	Regional development	Traffic Energy Environment Private sector development Competitiveness and innovation
Human resources development (IPA 4 component)	Employment, social policy and labour development	Education and human resources Workforce and employment Social policy
Rural development (IPA 5 component)	Agriculture and rural development	Agriculture Rural development
Cross-border cooperation (IPA 2 component)	Regional and territorial cooperation	Regional cooperation in the mentioned areas-sectors. Territorial cooperation: no.

Source: [3].

Table 2: Overview of spending of IPA funds in the period 2007 – 2013 (in millions of EUR)

Country	2007	2008	2009	2010	2011	2012	2013
Albania	61.0	70.7	81.2	94.1	94.4	94.5	95.3
Bosnia & Herzegovina	62.1	74.8	89.1	105.3	107.4	107.8	108.8
Croatia	142.2	146.0	151.2	153.5	156.5	156.1	93.5
Macedonia	58.5	70.2	81.8	91.6	98.0	101.8	113.2
Kosovo*	68.3	184.7	106.1	67.3	68.7	68.8	71.4
Montenegro	31.4	32.6	34.5	33.5	34.1	35.0	34.5
Serbia	189.7	190.9	194.8	197.9	201.8	202.0	208.3
Turkey	497.2	538.7	566.4	653.7	779.9	860.2	902.9
Multi-beneficiary programme	129.5	137.7	188.8	141.7	186.2	176.2	177.2

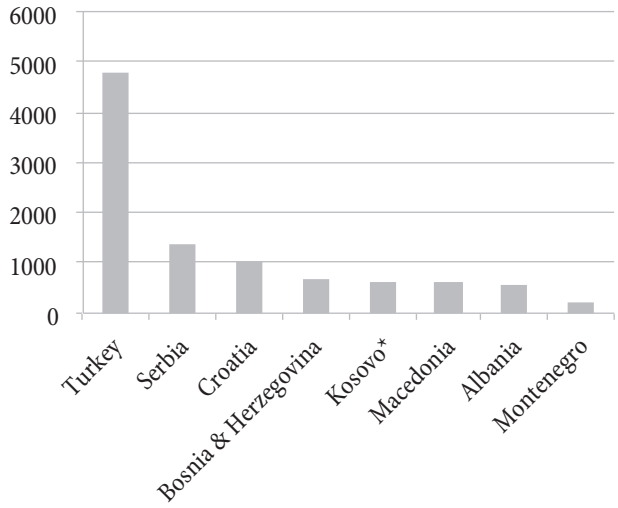
Source: [10].

IPA funds were Turkey, Serbia, Croatia (observed in 2012, 2013 was a sharp decline due to joining the EU in 2014 and termination of IPA funds), followed by Macedonia and Bosnia and Herzegovina.

Figure 1 clearly shows that in the period 2007 – 2013, Turkey implemented most IPA funds with a share of 48% in the total funds invested by IPA, followed by Serbia with 14% and Croatia with 10%.

The indicator Starting a Business in the period 2007 – 2013 shows that IPA funds beneficiary countries (Table 3) Macedonia and Albania in the observed period significantly increased the level of development of advanced economies. Macedonia has made the most progress in this indicator, because in 2007 it achieved 32% of the performance of the best economies, and in 2013 it was only 8%.

Figure 1: Overview of allocated IPA funds 2007 – 2013



Source: The authors' adaptations based on [10].

Table 3: Positioning by Starting a Business criteria from 2007 – 2013 by DTF

Country /Starting a Business - DTF	2007	2008	2009	2010	2011	2012	2013
Albania	69.04	68.21	82	87.24	87.29	87.6	90.19
Bosnia & Herzegovina	51.19	52.55	51.39	53.7	54.67	60.85	63.36
Croatia	79.35	81.76	81.88	82.32	84.03	84.34	84.34
Macedonia	68.68	77.94	82.73	88.55	90.28	90.28	92.02
Kosovo*	0	0	0	65.53	61.7	62.44	74.15
Montenegro	75.56	75.63	76.63	82.06	88.52	90.01	90.04
Serbia	77.89	78.03	78.26	87.15	86.67	86.69	88.8
Turkey	85.07	85.94	87	87.17	86.77	87.61	87.62

Source: The authors' adaptations based on [25].

Table 4: Positioning by the Trading across Borders criteria from 2007 – 2013 by DTF

Country /Trading across Borders - DTF	2007	2008	2009	2010	2011	2012	2013
Albania	69.08	69.77	69.69	72.1	72.22	72.26	72.41
Bosnia & Herzegovina	67.33	67.74	69.42	69.6	68.81	69.35	69.55
Croatia	68.24	70.54	71.47	71.97	72.21	72.01	72.25
Macedonia	68.06	68.37	71.93	73.44	73.86	74.12	74.43
Kosovo*	0	0	0	60.87	61.15	61.61	66.71
Montenegro	74.91	75.56	75.37	75.9	79.2	79.35	79.22
Serbia	65.89	67.8	67.79	69.5	70.26	70.52	71.24
Turkey	57.33	69.9	69.84	71.29	71.75	72.22	72.3

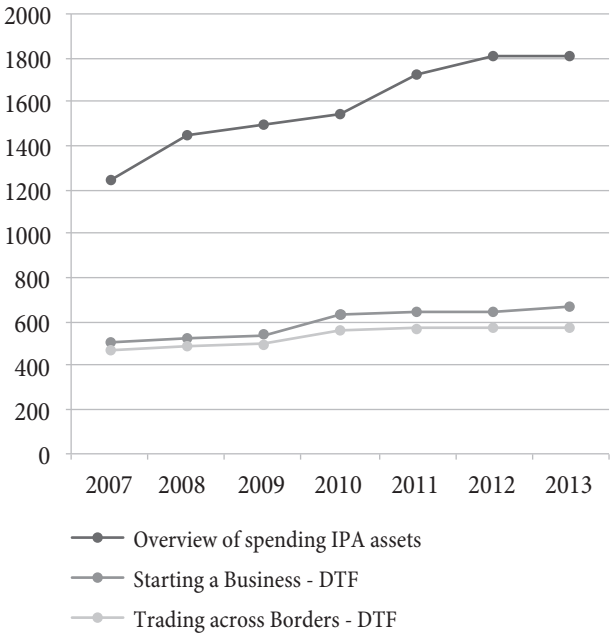
Source: The authors' adaptations based on [25].

The trend of spending IPA funds, the movement of starting a business and trading across borders indicators show the same tendency (Figure 2). By investing IPA funds in the country's economy, performance improves the country's competitiveness in the foreign market in all segments.

Although IPA II aims to promote smart and inclusive development, agriculture remains an important segment of financing. As already mentioned, the IPA fifth component, IPARD, refers to assisting candidate countries in strengthening and developing the agricultural sector and rural areas. Therefore, it is important for these countries to make the most of their use of agriculture and to benefit from entry into the EU such as (1) a larger market, (2) raising product competitiveness, not at the level of primary production but at the level of processing, and (3) more subsidies from the EU budget.

When we speak about IPARD funds, it is important to emphasize that Special Accession Programme for Agriculture and Rural Development (SAPARD) is the first system development programme in agriculture and rural development designed for potential accession candidates. It has been created for a group of 10 candidate countries for a period 2000 – 2007, and later it was adjusted to the new and unique pre-accession assistance framework in the financial period 2007 – 2013 and renamed to IPARD. The experience of countries that have implemented SAPARD shows that only the Czech Republic, Slovakia and Slovenia have succeeded in accrediting everything they have envisioned in the plan within the duration of the programme. The rest of the countries were less successful (although this is a speculative estimate, since the number of accredited measures is not an indicator of success). Estonia and Hungary have both accredited 6 out of 9 measures, in Lithuania 7 out of 8 measures have been accredited, and in Latvia 7 out of 9, Poland has accredited 6 out of 7 measures, Bulgaria 9 out of 11 measures, Romania 10 out of 11 measures, and Croatia only 2 out of 4 envisaged measures. Croatia is the only candidate country that had implemented both, SAPARD and IPARD. For one SAPARD programme year, Croatia had about three and a half years, after which it could use IPARD. During the SAPARD, the agencies were accredited in mid-2002, except for Hungary which was late and received accreditation in September 2003. Bulgaria had the lowest percentage of used resources and the highest level of frauds, but was the first one to accredit the agency. In none of the countries the approval of resources for the beneficiaries had started before the mid-2002, while the highest number of projects was approved in 2003 and 2004. The first payments started later in the process. It is generally estimated that almost all states had been very successful in implementing SAPARD. The utilization of funds was 99%; only in Latvia it was lower (95%). This estimation excludes Bulgaria and Romania, because the average value of the completed projects in these two countries was almost five times higher than the average value for EU-8. The main reason for this was the increasing number of rural infrastructure projects, especially in Romania, and such projects demand more time. The previous experience with SAPARD has shown that with each round of EU enlargement, the degree of utilization of pre-accession programme for assistance to agriculture decreased. There are two main reasons for this. The first one is poorer preparation of candidates, low absorption capacity. The second is a more demanding procedure which had, in cases of Bulgaria and Romania in the final years of implementation, already been somewhat

Figure 2: Movement of spending of IPA funds, starting a business and trading across borders 2007 – 2013



Source: The authors' adaptations based on [10], [25].

tightened. The more complex procedures with IPARD were experienced by Croatia, Macedonia and Turkey. Table 5 presents allocated funds from IPARD I, by years, for the three mentioned countries.

From the above data it is noted that the most defined funds were for Turkey, then for Croatia, and the least for Macedonia. In fact, Croatia's participation in IPARD funds was 16%, Macedonia 8%, while Turkey's commitment was the highest, 76% of total funds. It was interesting for authors to observe the value of exports in the same period to see if there is a certain correlation between the allocated IPARD funds and increased agricultural production. In other words, in the following section, it is examined how the contribution of IPARD funds grows exports and thus impact on competitiveness. Table 6 summarizes the export of agricultural products in the period 2007 – 2014. It took one year more so as to actually be realistic to follow the real effect of invested funds. In agriculture, it is not possible to see the current effects of invested funds, but it takes at least one season to see the results.

Exports of agricultural products in Croatia and Macedonia recorded mainly upward trend, while growth in Turkey is significant. In order to measure the strength and direction of the association of two variables, we used the Pearson method, which shows for all three countries a positive correlation between two factors: IPARD funds and agricultural products exports in the period 2007 – 2013 (Table 7).

In addition, the study shows that the analysis is statistically significant, because the P-Value for the countries observed is less than 0.05. The link between the investment of resources from IPARD funds and the export of agricultural products is statistically significant. It is important to point out that strong positive correlation has been expressed in the countries of Macedonia and Turkey, unlike Croatia, where there is a lower Pearson

Table 5: Annual allocation of funds under IPARD for the period 2007 – 2013 (in millions of EUR)

Countries/Year	2007	2008	2009	2010	2011	2012	2013
Croatia	25.5	25.6	25.8	26	26.5	27.268	27.73
Macedonia	2.1	6.7	10.2	12.5	16	19	21.02
Turkey	20.7	53	85.5	131.3	172.5.	197.89	212.63

Source: The authors' adaptations based on [10].

Table 6: Export of agricultural products 2007 – 2013 (in millions of EUR)

Countries/ Year	2007	2008	2009	2010	2011	2012	2013	2014
Croatia	2.6	2.7	2.7	2.7	3	3.1	3.1	3.4
Macedonia	0.9	0	0.9	1	1.2	1.2	1.3	1.2
Turkey	18	21.5	21.2	23.8	28.5	30.2	33.6	35.6

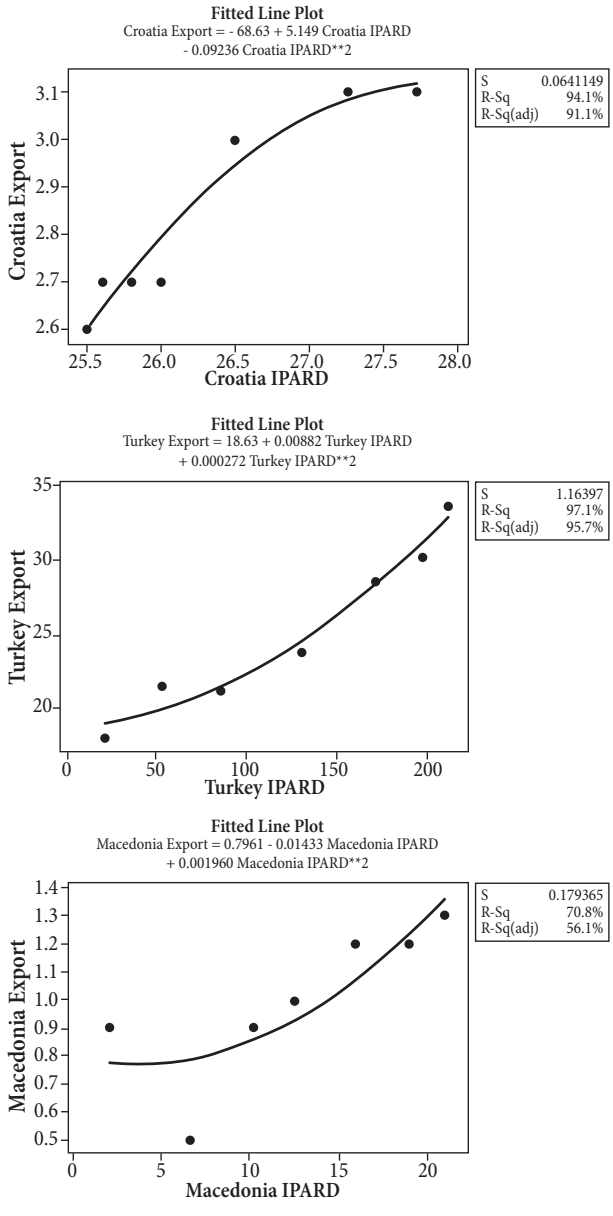
Source: The authors' adaptations based on [23].

Table 7: Correlation of IPARD funds and export of agricultural products 2007 – 2013

Countries	Pearson correlation	P-Value
Croatia	0.889	0.008
Macedonia	0.926	0.008
Turkey	0.970	0.000

Source: The authors' own calculation based on software Minitab.

Figure 3: Regression plot IPARD - Export of agricultural products 2007 – 2013



Source: The authors' own illustration based on software Minitab.

correlation, which indicates a positive relationship between the correlation factors. The results obtained are confirmed by the facts that Croatia did not have a large absorption capacity of the IPARD funds [27].

The impact of IPARD funds on the export of agricultural products can be seen through the analysis of regression equations for selected countries (Figure 3). The export of agricultural products is a dependent variable, and resources received from IPARD funds are independently variable, which explains the movement of exports to a large extent (which can be seen using R Sq - Coefficient of Determination). The greater this coefficient is, or closer to 1 (100%), it shows a good/high explanation of export dependent variables. The justification of the regression equations shows us the coefficients of determination, which are above 50% for all three countries. Turkey has been identified with a correlation coefficient of 97.1%, which shows the great dependence of exports of agricultural products on IPARD funds. The research proves that Turkey has made maximum use of the EU funds with great efforts [1].

Importance of agriculture sector and IPARD funds: Case of Serbia

The previous analysis showed that IPARD is a very good programme which can help the agricultural sector in a candidate country and contribute immensely to the sustainable development of the rural areas in the broadest sense. The results and experiences showed that the most successful part of the SAPARD and IPARD programmes was preparation of member countries for using resources intended for rural development when they become members. Table 8 shows allocation of funds from the EU budget for rural development in the pre-accession period as well as the accession period. The conclusion is that the EU allocates large funds directed toward rural development, which are on average 8 times higher upon joining the EU than in the pre-accession period.

Serbia has a big advantage in using IPARD funds, because it has experiences, analyses and recommendations from other countries. For the Serbian economy, the agricultural sector plays a very important role. Its importance is primarily reflected in contribution to the country's gross domestic product (GDP). The share of agriculture in GDP is around 8% on average during the last 10 years (EU-27 average is less than 3%), while it accounts for 12-13% of GDP with food industry included. According to Statistical office data, agricultural land in Serbia totalizes around 5 million hectares, of which arable land, orchards and vineyards account for 70%, and meadow and pasture make remaining 30%. This means that Serbia has 0.46 hectares of arable land per capita, which is two times more compared to the EU average. The only problem with land is the high fragmentation of the land stock. Average arable land per family holding is 4.5 ha, and that is well below the European average. Also, according to the data of the statistical office, it is interesting to notice that around half a million people are employed in agriculture, which is 19.4% of the total employed in 2015 (this employment

Table 8: Annual EU funds for rural development (in millions of EUR)

State	Upon joining the EU EAFRD (A)	Candidate status SAPARD/IPARD (B)	Ratio A/B
Slovenia	130.856.104	8.883.586	14,7
Czech Republic	408.215.193	30.929.235	13,2
Croatia	333.000.000	25.952.571	12,8
Slovakia	285.272.583	25.638.615	11,1
Hungary	551.441.627	53.346.376	10,3
Poland	1,914.132.594	236.469.929	8,1
Romania	1.269.406.054	193.297.615	6,6
Estonia	103.390.979	17.014.373	6,1
Lithuania	252.256.299	41.816.078	6,0
Bulgaria	412.851.343	74.124.833	5,6
Latvia	150.624.786	30.627.834	4,9
Total: EU-11	5.811.447.563	738.101.045	7,9

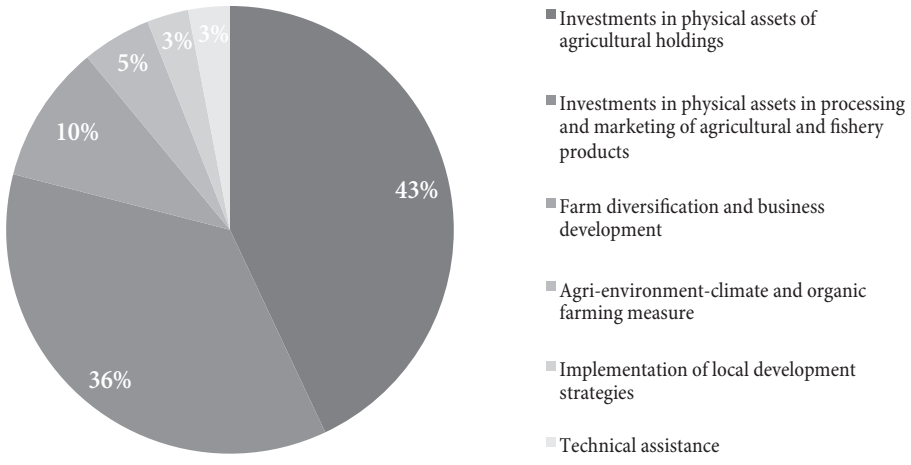
Source: [24].

is being influenced by seasons; seasonal workers regularly drive employment up from May until September). The total value of the agricultural production was estimated at €4.7 billion in 2016, out of which 67% relates to crop farming, and 33% to livestock production. In terms of trade, agriculture is one of the most important export sectors in Serbia. For certain fruit products, such as raspberries, Serbia is among top producers and exporters worldwide. On the other side, in the production of sour cherries, it holds the 7th position, while in corn production it positioned itself as the 10th corn exporter globally. All these data confirm considerable contribution of the agricultural sector to the total economic value added and employment in Serbia. Also, the most important trade partner for Serbia is the European Union (EU), followed by CEFTA countries. Although trade is expanding, the structure of import is more versatile in comparison to export structure. Agricultural production in Serbia is mostly organized in a traditional manner with low level of applied technology and insufficient areas with irrigation systems. Primary and low value-added products are prevailing in production and exports, and that is one of the main indicators of relatively low development level. Because of that, there is room for improvement, and according to some estimates, Serbia has capacity to produce three times the amount of food it does today.

Bearing in mind the importance of agriculture for Serbia, it is particularly important to have the national measures which would be complementary to IPARD. IPARD will not solve all the problems in villages and agriculture, and therefore the focus should be on what is important and what can be implemented during the designated programme period. The current financial cycle for IPARD is the period 2014 – 2020, under which Macedonia, Turkey and Serbia can use the IPARD funds (plus potentially, but not at this time, there will be included Albania, Bosnia and Herzegovina and Kosovo). Through this cycle, the European Commission set aside €175 million (in addition to this amount, the Serbian government will add €55 million) to support Serbia's agriculture and rural sector, to improve competitiveness of the agro-food sector and increase food-safety, as well as alignment with EU standards. More precisely, Serbia's IPARD 2014 – 2020 programme is built around six measures presented in Figure 4. The first measure is investments in physical assets of agricultural holdings (43% of the IPARD 2014 – 2020 allocation); the second one is investments in physical assets in processing and marketing of agricultural and fishery products (36%); the third is about farm diversification and business development (10%); the fourth is dedicated to agro-environment-climate and organic farming measure (5%); the fifth measure is about implementation of local development strategies (3%) and the last, sixth is about technical assistance (3%).

In Serbia, the programme was expected to begin in late 2016, but the main precondition to start using these funds is that Agricultural Payments Agency be accredited. The implementation of the IPARD programmes cannot be initialized before the involvement of the accredited bodies in their implementation, and the subsequent accreditation of the measures in the programme. When

Figure 4: Serbia's IPARD 2014 – 2020 programme allocation



Source: [14].

Croatia became the candidate country in 2004, they wanted to take advantage of the possibility to use the resources in the financial period 2000-2006, which meant withdrawal of funds by 2009. They succeeded in signing the financial agreement by January 2006, approved the programme by February, and accredited two measures and the paying agency by June. Croatia has shown that it is possible to complete the entire process in less than a year and a half. Serbia had the same opportunity in the mentioned financial cycle (2014 – 2020), but unfortunately, it failed to get accreditation and funds have not been withdrawn. However, according to recent statements coming from the competent Ministry officials, a repeated audit by the Directorate General for Agriculture (DG AGRI) was carried out in the third week of November 2017 to see whether the country would finally receive accreditation. In the past ten years or so, Serbia has sold its agri-food products in markets with which it has had some form of international economic ties, whether natural (geographic proximity) or based on trade agreements with specific countries or groups of countries. The key markets for domestic products (all sectors, including agri-food) include the EU, with which the Stabilization and Association Agreement (SAA) was signed in 2008; the Central European Free Trade Association (CEFTA) region, more specifically its member countries, as well as Russia, Belarus, Kazakhstan; and Turkey, with which Serbia has also entered into free trade agreements [18, p. 63].

Now, Serbia is waiting for the list of preliminary recommendations by auditors and its finalization is expected by the end of December. The audit opinion regarding the trust in the management of the IPARD II programme can be expected at the end of January next year or early February. If all current findings are resolved, signing of the IPARD II Financial Agreement can be expected in February 2018. The first call for the IPARD II programme was expected at the end of 2017.

Problems with IPARD in Serbia

As stated in the previous paragraph, progress towards actual IPARD 2014 – 2020 implementation was hampered by delays in setting up the required operational structures. As the European Commission's Progress Report on Serbia from 2014 noted, major recommendations included the relocation of the IPARD Agency from Šabac to Belgrade and the related recruitment and training of staff needed for successful implementation of the programme. Also, according to the report of DG AGRI auditors, the Agriculture Payments Agency (APA) needs to conduct several key activities to obtain approval to function as a part of the operational structure, responsible for implementation of the IPARD programme. These activities primarily relate to the establishment of an adequate legal framework (by adopting the proposal of amendments to the Law on Agriculture and Rural Development), as well as to the technical aspects of the building where APA is located, regarding fulfilment of ISO Standards 27001 and 27002. Besides that, APA needs to establish proper reference price database, as a tool for control of the reasonableness of the costs made by IPARD beneficiary, and to sign a Memorandum of Understanding with technical bodies responsible for control of national and EU standards on the farm and investment of IPARD beneficiaries.

Recent months have brought considerable progress on most pending issues. First, the relocation of APA from Šabac to Belgrade has taken place and APA has begun with its self-assessment. In addition, the work on defining national standards for animal welfare, public health, environmental protection and safety at work is underway in collaboration with the relevant technical bodies. Second, staff recruitment has gathered pace, yet more time will be needed to complete the process. At this stage, 86 staff positions at APA have been filled, out of 170 foreseen. Similarly, of the 24 posts assigned for rural development, only half have been filled so far. Third, draft Memorandums of Understanding on the relationship between the various IPARD-associated bodies and APA have been drawn up. Three issues now remain critical. First, there should be established and continued commitment to the work on IPARD. Second, permanent recruitment and training should be developed, as well as broader preparations on the actual implementation of IPARD should be introduced. The recruitment process is a key to the finalization of the IPARD accreditation process and the preparation of the wider environment, especially the beneficiaries and rural

finance institutions, for the actual absorption of IPARD funds remains crucial.

Conclusion

Analysis showed that better absorption of EU funds leads to improved performance that raises the competitiveness of the country. Unfortunately, the previous experience with SAPARD has shown that with each round of EU enlargement, the degree of utilization of pre-accession programme for assistance to agriculture decreased. Also, all three analyzed countries (Croatia, Macedonia and Turkey) have a positive correlation between the two factors: IPARD funds and export of agricultural products. As a final research result, analysis showed that IPARD is a very good programme which can help the agricultural sector in a candidate country and contribute to the sustainable development of rural areas.

Concerning the case of Serbia, agricultural production, trade and prices are becoming more and more affected by global and regional trends, since Serbia is increasingly integrating with other European economies. Openness creates more opportunities for exports, at the same time increasing competition coming from the EU importers. Current competitive position of the agricultural sector can be assessed as positive but fragile. The country has weaknesses and constraints that need to be gradually eliminated. Experience with delays in implementation of CARDS and IPA has shown the need to ensure that projects do not become obsolete because of late implementation. Experience has shown that the preparation of the project is a complex process and that the risk of project implementation depends only on the preparation of the project itself.

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COMPETITIVENESS OF INDUSTRY IN COUNTRIES ON DIFFERENT LEVELS OF DEVELOPMENT DURING THE 1970-2015 PERIOD

Konkurentnost industrije zemalja različitog nivoa ekonomske razvijenosti u periodu 1970-2015.

Abstract

The paper investigates the shifts of competitiveness of industry in 212 countries measured by the amount of manufacturing value added per capita during the period from 1970 to 2015. Thereby the countries are classified in three groups: a) highly industrialised economies (51 countries), b) emerging industrial countries and economies (33 countries), and c) the least developed economies (46 countries) and other developing economies (82 countries), making a total of 128 countries. The obtained results show that productivity in industry of the developed countries is four times higher than the average productivity of the world industry, which is a specific confirmation of their competitive superiority. These results are also in accordance with the thesis that on a high level of gross domestic product per capita, the improvement of competitiveness of industry is predominantly based on the creation of capabilities.

Keywords: *industry, capacity of industry, value added of industry, industrial productivity, competitiveness of industry*

Sažetak

U radu se istražuje kretanje konkurentnosti industrije 212 zemalja u svetu merene iznosom dodate vrednosti industrije po stanovniku u periodu 1970-2015. Pritom su zemlje svrstane u tri grupe: a) visoko industrijalizovane privrede (51 zemlja), b) privrede u procesu industrijalizacije (33 zemlje) i c) najmanje razvijene privrede (46 zemalja) i ostale privrede u razvoju (82 zemlje), ukupno 128. Dobijeni rezultati pokazuju da je produktivnost u industriji razvijenih zemalja skoro četiri puta veća od prosečne produktivnosti svetske industrije, što je svojevrsna potvrda njihove konkurentne superiornosti. Ovi rezultati su takođe u skladu sa tezom u ekonomskoj teoriji da se na visokom nivou bruto domaćeg proizvoda po glavi stanovnika unapređenje konkurentnosti industrije dominantno temelji na stvaranju sposobnosti.

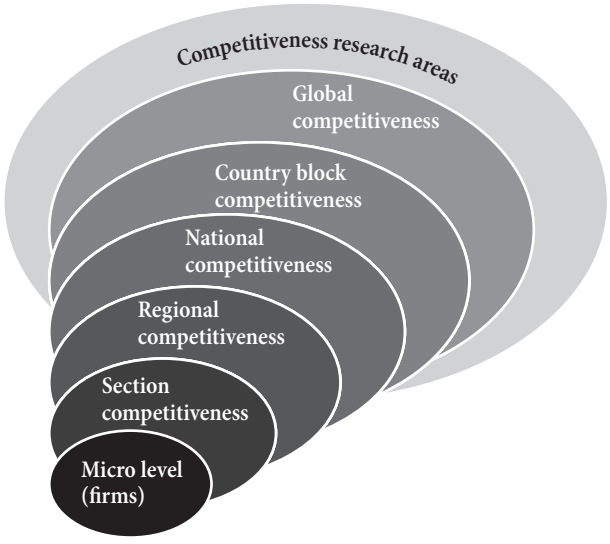
Ključne reči: *industrija, kapacitet industrije, dodata vrednost industrije, industrijska produktivnost, konkurentnost industrije*

Introduction

Competitiveness is one of the most often used expressions in economic theory. In short, competitiveness speaks of the capability to achieve success in markets where the participants who have built the available knowledge and capabilities in products and services meet. Competitiveness is a multidimensional phenomenon and as such is necessarily present at the level of the enterprise, specific industry or country as a whole. The level on which it is investigated is an important aspect in the consideration of the concept of competitiveness [1], [7], [9] (Figure 1).

A number of economy analysts think that the phenomenon of competitiveness has a status of "the natural law of capitalist economy" [7]. Others, however, argue that the context of competitiveness can be identified with the category of productivity, hence it is basically only a different name for measuring the rate of output goods and services per unit of input factors [8]. We think that the category of competitiveness is contextually more abundant in comparison to the category of productivity, and that it is a cumulative expression of numerous aspects and business factors [4]. This fact is especially emphasised by the process of growing globalisation. In the global economy, which is characterised by a pronounced trend towards the increase of network of economic protagonists, to be competitive is increasingly less an issue of existence of absolute advantage in manufacturing certain goods, and growingly more of the market position and relationship towards the competition.

Figure 1: Different levels of competitiveness



Source: [8, p. 279].

There is no generally accepted theory of competitiveness. The perception of competitiveness is most often perceived as ranging from the basic level of enterprise to international (global) competitiveness. The existing studies on competitiveness are focused on various categories of analysis, such as competitiveness of an enterprise, sector, region, country, regional economic communities, international competitiveness (global competitiveness, external competitiveness). A number of authors argue that in the current conditions of production, the basis for competitiveness in the greatest number of countries is presented in the structure and development of their respective industries [15, p. 118].

Competitiveness is undoubtedly one of the most complex indicators of success of the industry. It implies more effective and efficient business in this sector in comparison to other competitors, which is followed by market success, without protectionism and subsidies [10], [11]. Competitiveness of industry is often perceived on the basis of efficiency of exploiting production factors (labour, capital, energy, raw materials). Although cost competitiveness determines the efficiency of using all factors of production, the intensity of use determines the significance of particular factors in the production and development of competitiveness. For example, costs of labour per unit are a good indicator of industrial competitiveness, because they arise from the production process, include the largest component of expenses and show to what extent total expenses of labour participate in the generated productivity, i.e. the newly-formed value.

The achieved level of manufacturing value added illustrates the size of its potential, while the change of this potential speaks of the intensity of industrialisation or deindustrialisation. The level of industrialisation of a country is calculated when the value added, produced in the sector of industry, is observed in relation to the number of the population. Increase of productivity is of vital importance for the improvement of competitiveness of industry. Industrialisation which is followed by permanent rise in productivity provides for the development of contemporary economy. By increasing the competitiveness of industry, its

role and significance in economic development of certain countries improve. Although the share of industry in gross domestic product has been decreasing in the most developed countries, productivity of industry still increases, which is what continues to secure a central role for industry in modern-day economy. Technological changes alter the nature of industry, thus increasing its productivity and improving competitiveness [4].

The subject of this paper is an analysis of competitiveness of industry in 212 world countries, classified in three groups depending on the achieved level of economic development during the 1970-2015 period. The amount of value added per capita generated in this sector is taken as an indicator of industry competitiveness. We think that value added per employee or value added divided by working hours in industry could be a more precise indicator. However, these data are not available for most countries worldwide.

Speaking of quantifying competitiveness of industry, productivity and export are the most frequently analysed variables [2, p. 733]. However, although the indicator of competitiveness is indisputably a significant indicator for an enterprise or industry, export competitiveness is proof of its international competitiveness [12]. Certain pieces of research which deal with the analysis of competitiveness of particular sectors of industry also use relative process in the respective industry as an indicator related to one or more foreign competitors, therefore, in that case, price competitiveness of the country in a specific industry is taken into consideration [12].

The aim of this research is to answer the question of whether the industry of the leading economies of the world, with high levels of GDP per capita, is still more competitive in relation to the emerging industrial countries by analysing the shifts of productivity in the global industry during the period from 1970 to 2015.

The paper is divided in five sections. After the Introduction, the second section introduces theoretical starting points of the authors of this paper, according to which the development of capability is a vital determinant for improving industrial competitiveness in contemporary conditions of production. The third section presents data on economic development and the size of industrial capacities of the countries grouped according to the level of industrialisation from 1970 to 2015. In addition, this section includes the dynamics of industry competitiveness measured by the value added of the industrial sector per capita during the same time interval. The obtained results are discussed in the fourth section. Finally, the fifth section presents the concluding observations.

Building capability with the aim of creating competitive advantages of industry in contemporary business conditions

Relevant research shows that in the last thirty years, differences between industrialised and fast-growing countries that are in the process of industrialisation gradually decreased, and that the leading emerging countries have already caught up with the industrialised countries in their industrialisation process in terms of the degree of their economic development [3]. Faced with a decrease in competitiveness of its industrial sector, the European Union has taken a whole series of measures aimed at termination of such tendencies. Table 1 presents a survey of some of the measures and activities for improving competitiveness of industry in the EU countries.

Table 1: Strategies for achieving competitiveness according to the level of economic development

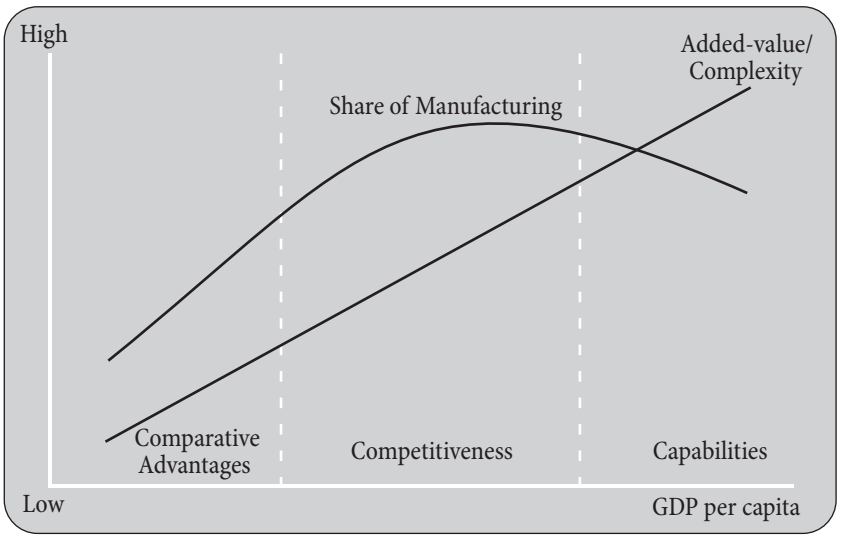
Grades of economic development of a country	Factors	Emerging countries	Countries in transition	Developed countries
Basic factors	Factor conditions based on	Resources	Production	Knowledge
	business	Protectionism	Efficiency	Competitiveness
	Similar and accompanying industries	Basic infrastructure (roads, harbours etc.)	Industrial clusters	Regional integration
	Conditions of demand	Quantity	Quality	Sophistication
Human factor	Labourers	Cheap	Motivated	Trained
	Politicians	Simplification	Support and regulation	Advisory role
	Entrepreneurs	Risk exposure	Efficiency growth	Creation of values
	Experts	Operational	Managing	Strategic

Source: [11].

Productive and technological capacities of countries which are on various levels of economic development are different. In the early stage of economic development, comparative advantages were emphasised in the development of industry, whose sources were permanent (e.g. natural resources) or temporal (cheap labour). The growth of the gross domestic product (GDP per capita) brought about a change in the relative share of the industry sector in its generation. More precisely, on lower levels of economic development, relative growth of industry was first included in the generation of GDP, and later its share decreased. In this stage of economic development, the development of industry was focused on improving its competitiveness by creating capabilities (Figure 2).

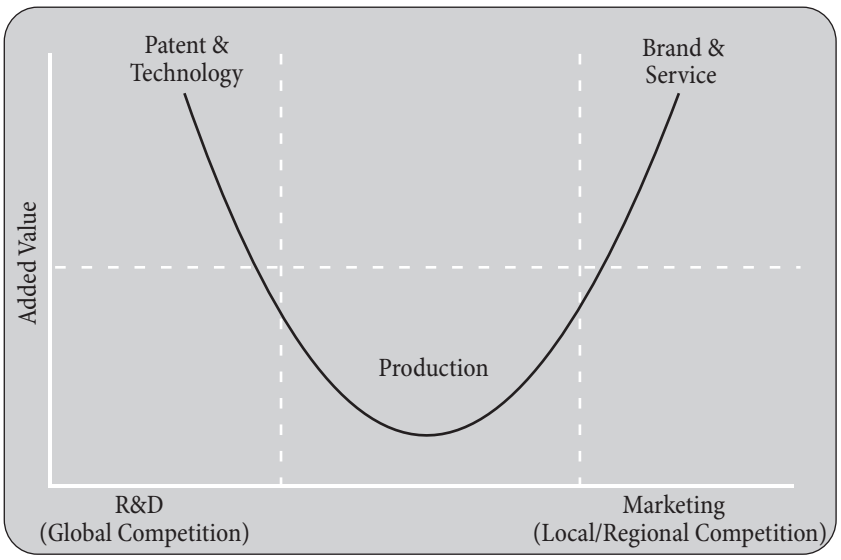
The strategy of improving competitiveness of industry in the present conditions of production implies a change in the significance of particular activities in the global value chain. The activities that precede direct product manufacturing (research, development, patent protection) gain in significance, as well as the activities that follow this process (product marketing and branding). In short, capabilities are in the function of creating key competitive advantages. In these activities of the value chain, relatively high levels of value added are concentrated in the industry sector in the leading economies of the world (Figure 3).

Figure 2: Transition towards manufacturing capabilities



Source: [5, p. 8].

Figure 3: Generic smiling curve in the value chain



Source: [5, p. 9].

New forms of competitiveness emerge which, being different segments of the value chain, require various capabilities. In this stage of economic development in certain countries, industrial production is relocated from the economically most developed to the emerging industrial countries, especially to large developing countries in Asia. However, it should be noted that these stages of the global value chain become relatively standardised and are characterised by relatively low rates of yield in comparison to the yield rates of the activities that precede direct production (e.g. activities of research and development, design) and follow the process of direct production (e.g. marketing and logistics).

Since technological complexity, structure of employees and development of particular structures within an industry significantly differ among countries, it is possible to classify the countries according to the complexity of technological structure of industry, i.e. depending on the achieved level of industrial development.

Research

There is a great difference between developed, industrialised countries (countries with a developed economy, high level of income, great physical and financial capital, a great number of highly specialised workers, high standard of living of the population, etc.) and emerging countries (countries with non-developed industry, poor standard of living, etc.), as well as between the emerging countries themselves in terms of the level of development of industrial capacities and industrial competitiveness (emerging industrial countries, although with lower standard of living and less developed industry and income in comparison to the developed countries, are significantly ahead of other developing economies).

Production and technological capabilities of countries in different stages of economic development vary. Technological complexity, structure of employees and leading sub-sectors of industry differ significantly from one country to another. All of this makes the comparison between countries more difficult and points to the need for identifying comparable countries which are in the same developmental stage, i.e. for classifying together the countries with similar productive/technological structures.

The basic criterion for classifying countries by the degree of industrial development in this paper is the level of manufacturing value added per capita [6]. Depending on the level of manufacturing value added per capita and the amount of GDP per capita measured by parity of purchasing power, four groups of countries were formed [14]:

- Industrialised economies (51 countries)[1]
- Emerging industrial countries (33 countries)[2]
- The least developed countries (46 countries), and
- Other developing economies (82 countries).

Statistical thresholds and other criteria which define each group of countries according to their level of industrial development are presented in Table 2. Input data for the assessment of competitiveness of the global industry for the 1970-2015 period are taken from the UNCTADstat database [13].

The applied methodology of classifying countries around the world provides for comparative analyses of growth and structure of the industrial activities, identification of the leading industrial countries, countries that are being industrialised the most, as well as those which are experiencing a slowdown in the process of their industrialisation. The basic aim of this selection is to create relatively homogenous groups of countries with mutual characteristics defined by the provided impartial criteria.

Each of the four groups of countries meets the following conditions for research and statistic follow-up:

- Clear method of aggregation for follow-up of changes in total economic growth and structure is established;

1 Industrialised countries and economies: Andorra, Aruba, Australia, Austria, Bahrain, Belgium, Bermuda, British Virgin Islands, Canada, Cayman Islands, Hong Kong, Macao, Taiwan, Czech Republic, (Czechoslovakia), Denmark, Estonia, Finland, France, French Polynesia, Germany (German Democratic Republic and Federal Republic of Germany), Greenland, Hungary, Iceland, Ireland, Israel, Italy, Japan, South Korea, Kuwait, Latvia, Luxembourg, Malaysia, Malta, the Netherlands, New Caledonia, New Zealand, Norway, Portugal, Qatar, Russian Federation, San Marino, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, the Soviet Union, the United Arab Emirates, Great Britain, USA.

2 Emerging industrial countries and economies: Argentina, Belarus, Brazil, Brunei, Bulgaria, Chile, China, Columbia, Costa Rica, Croatia, Cyprus, Greece, India, Indonesia, Kazakhstan, Mauritius, Mexico, Oman, Poland, Romania, Saudi Arabia, Serbia, South Africa, Surinam, Thailand, Macedonia, Tunisia, Turkey, Ukraine, Uruguay, Venezuela.

- International comparison is provided in order to identify the leading countries and group of countries, as well as those that are in a slowdown;
- The grounds for statistical analyses are provided by using basic and advanced methods such as calculation of the mean value on an aggregate level, the size of the discrepancy, identifying exceptions etc. [14, p. 8].

Economic development and size of industrial capacity and industrial potential of the countries classified by the level of industrialisation in the 1970-2015 period is presented in Table 3.

In 2015 in the global industry, the value added of 10,175 billion US dollars at constant 2005 prices was generated, which was the highest manufacturing value added ever. The industrialised countries still dominate the world's industrial production (88.5% in 1970, and 62.9% in 2015). The share of these countries in the value of the world's industrial production decreases as a result of lower growth rate of industrial production in comparison to the emerging industrial countries.

Besides the fivefold growth of manufacturing value added in the 1970-2015 period, the developing countries increased their slowdown in comparison to the emerging industrial countries and modestly decreased their slowdown in comparison to the industrialised countries (Figure 4).

High growth of manufacturing value added led to a sustainable economic growth in many developing countries, i.e. in emerging industrial countries. Industrial production not only creates the products necessary for domestic consumption and export, but also provides new technologies for other sectors of the economy such as agriculture, transportation and services, thus instigating economic growth.

Long-term stable growth of manufacturing value added enables the emerging industrial countries to engage

Table 2: Statistical thresholds and other criteria which define each group of countries according to the level of their industrial development

Groups of countries	Statistical measure	Number of countries
1. Industrialised economies	Manufacturing value added per capita (adjusted) ≥ 2,500 or GDP per capita (PPP) ≥ 20,000	51
2. Emerging industrial countries	2,500 >Manufacturing value added per capita (adjusted) ≥1,000 or GDP per capita (PPP) ≥ 10,000 or Share in the global manufacturing value added ≥ 0.5%	33
3. The least developed economies	Based on the official UN list	46
4. Other developing economies	Other (except the least developed economies)	82

Note: Calculation of thresholds is based on the data on manufacturing value added in 2005 expressed in current US dollars.
Source: Authors, according to [14, p. 8].

Table 3: Economic development and size of industrial capacity and industrial potential of the countries classified by the level of industrialisation in the 1970-2015 period*

	1970	1980	1990	2000	2010	2011	2012	2013	2014	2015
Gross Domestic Product (GDP) - at constant 2005 prices in US dollars (billions)										
World	15,771	22,893	31,253	41,204	53,113	54,627	55,839	57,109	58,561	60,093
Industrialised economies	13,032	18,939	26,156	33,384	39,361	40,083	40,595	41,148	41,931	42,788
EIEs	1,524	2,721	3,329	4,794	7,176	7,520	7,766	8,023	8,202	8,403
LDCs and other countries	3,423	1,234	1,768	3,026	6,576	7,023	7,478	7,939	8,428	8,902
Manufacturing value added (MVA) - at constant 2005 prices in US dollars (billions)										
World	2,634	3,699	4,943	6,666	8,806	9,147	9,330	9,560	9,866	10,175
Industrialised economies	2,314	3,102	4,112	5,132	5,956	6,087	6,094	6,145	6,276	6,408
EIEs	240	467	672	1,342	2,535	2,727	2,894	3,054	3,213	3,377
LDCs and other countries	80	130	159	191	314	333	343	360	377	390
Manufacturing value added per capita (MVApc) - at constant prices in US dollars										
World	715	833	931	1,088	1,271	1,304	1,315	1,331	1,358	1,384
Industrialised economies	2,243	2,759	3,400	4,495	4,910	4,990	4,972	4,992	5,078	5,163
EIEs	128	202	239	406	690	735	773	808	843	878
LDCs and other countries	103	130	123	114	154	160	161	166	170	172

Source: Prepared by the authors based on data of UNCTADstat [13].
* In further research, the least developed countries based on the official UN list (46) and all other developing economies (82) are observed as a single group.

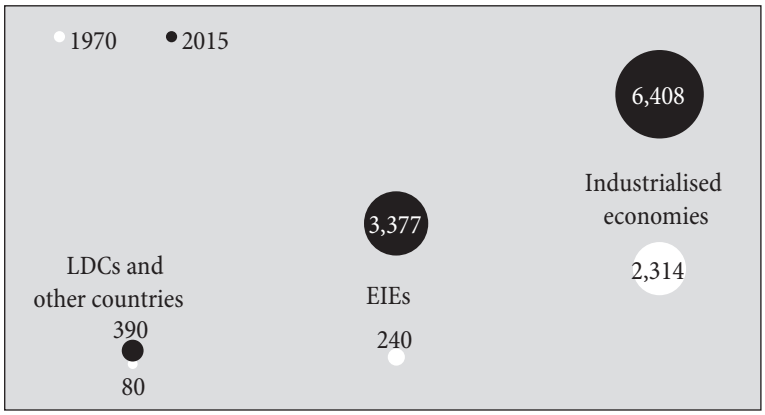
more labourers in their industrial activities, to increase export of products and services and thus to increase their income. Emerging industrial countries increased their manufacturing value added 13 times (from 240 to 3.37 billion US dollars at constant 2005 prices) in the 1970-2015 period, whereby, measured by the average real annual growth rate, the manufacturing value added (6.1%) and economy as a whole were expressed through the increase in GDP (4.9%).

The result of a high growth rate of manufacturing value added in the emerging industrial countries is the quadruple increase of their share in generating the global manufacturing value added from 9.3% in 1970 to 33.2% in 2015, thus decreasing their slowdown in comparison to industrialised and at the same time economically most developed and richest countries in the world.

The industrialised countries that generated 5,163 US dollars of manufacturing value added per capita (at constant 2005 prices) exhibited the greatest industrial potential in 2015. Industrial productivity of industrialised countries is nearly four times higher than the global average (1,384 US dollars per capita), nearly six times higher than in the emerging industrial countries (878 US dollars per capita), and more than 30 times higher in comparison to other developing countries and the least developed countries (172 US dollars per capita).

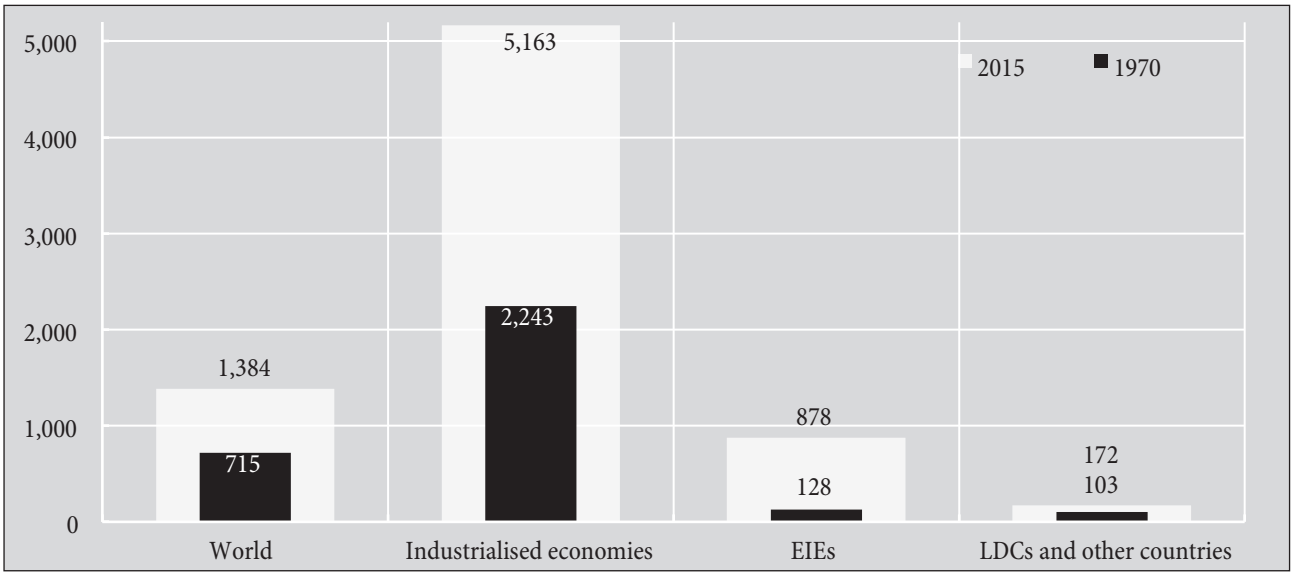
Productivity of the global industry and countries classified accordingly from 1970 to 2015 is presented in Figure 5.

Figure 4: Capacity of the industry sector in the observed countries in the 1970-2015 period



Note: The size of the circles shows gross value added at constant 2005 prices in US dollars in billions.
Source: Prepared by the authors based on data of UNCTADstat [13].

Figure 5: Productivity of the industry sector in the countries from 1970 to 2015



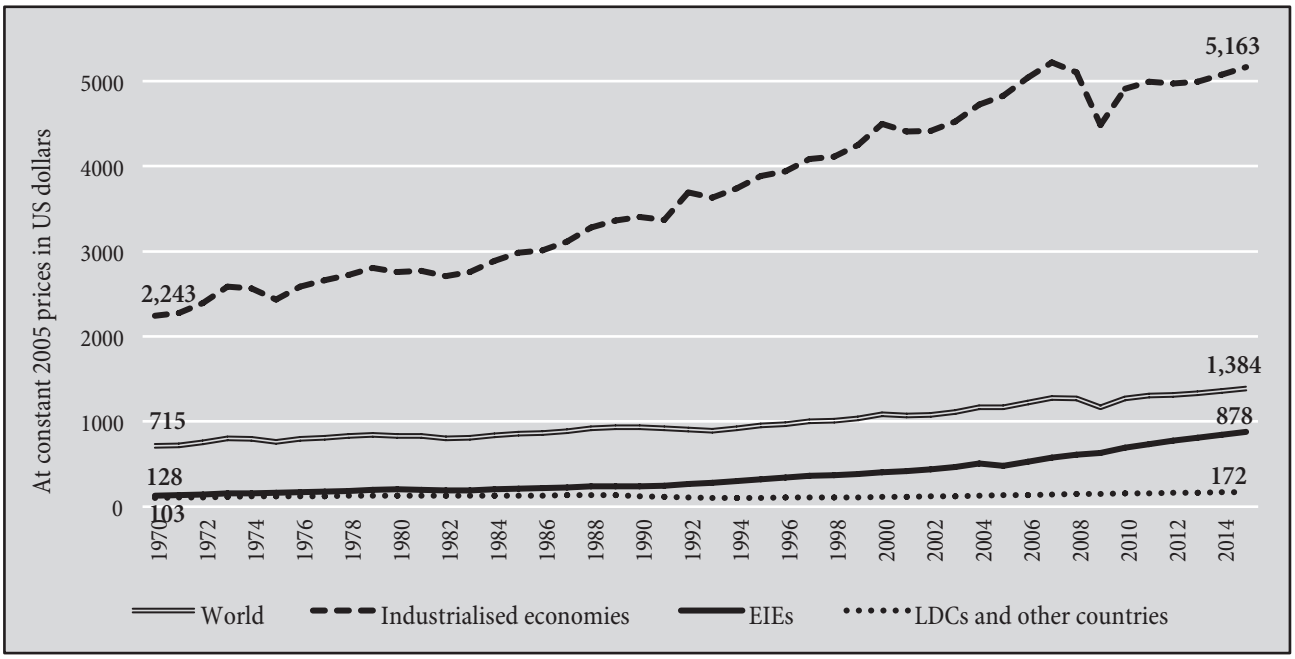
Source: Prepared by the authors based on data of UNCTADstat [13].

The shifts in productivity, as well as its dynamics for four groups of countries in the 1970-2015 period, are presented in Figures 6 and 7, respectively.

Based on Figure 8, it is possible to asses the differences in productivity in the industry sector of the industrialised countries and those which are in the emerging stage of industrialisation.

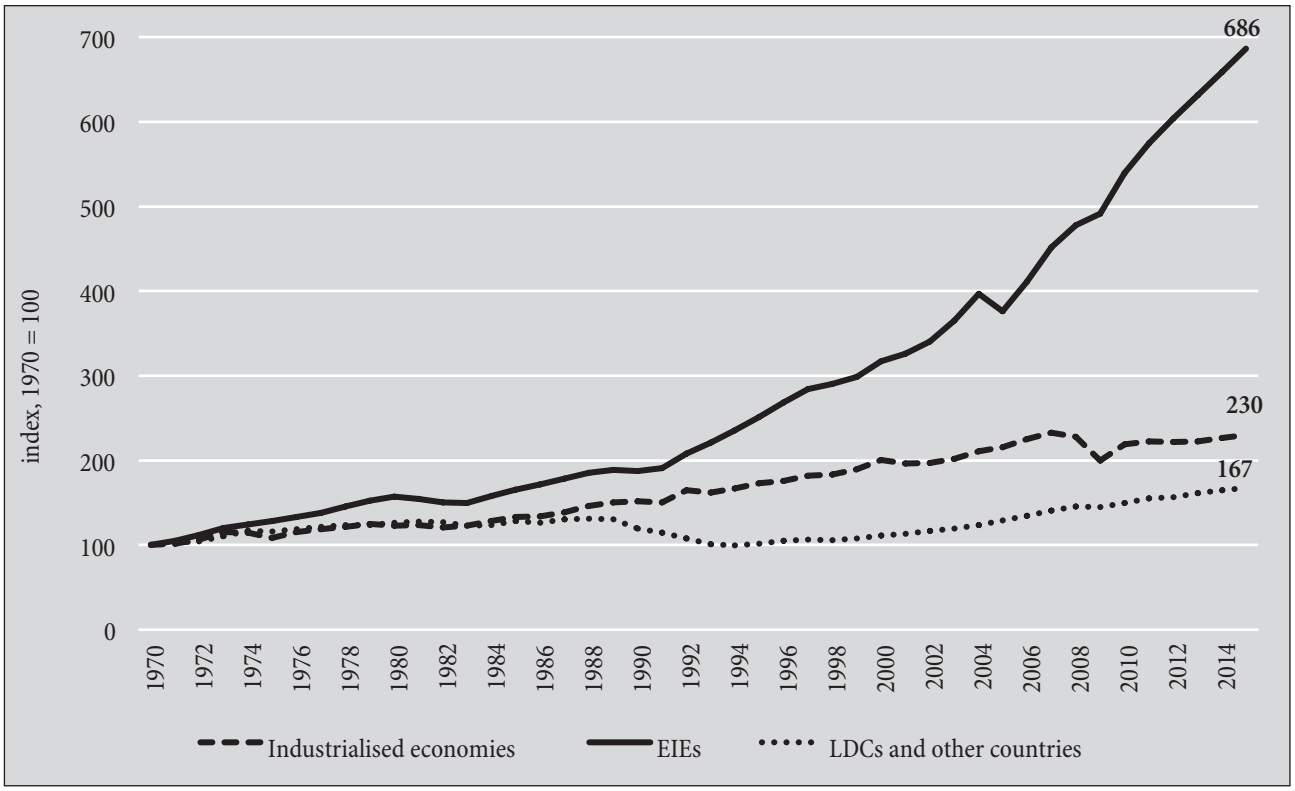
Additionally, graphic interpretation is provided for the trends of shifts in competitiveness of the world industry, especially for industries in the three groups of

Figure 6: Shifts in productivity of industry in the 1970-2015 period



Source: Prepared by the authors based on data of UNCTADstat [13].

Figure 7: Change of productivity in the industry sector in the countries according to the level of industrialisation in the 1970-2015 period



Source: Prepared by the authors based on data of UNCTADstat [13].

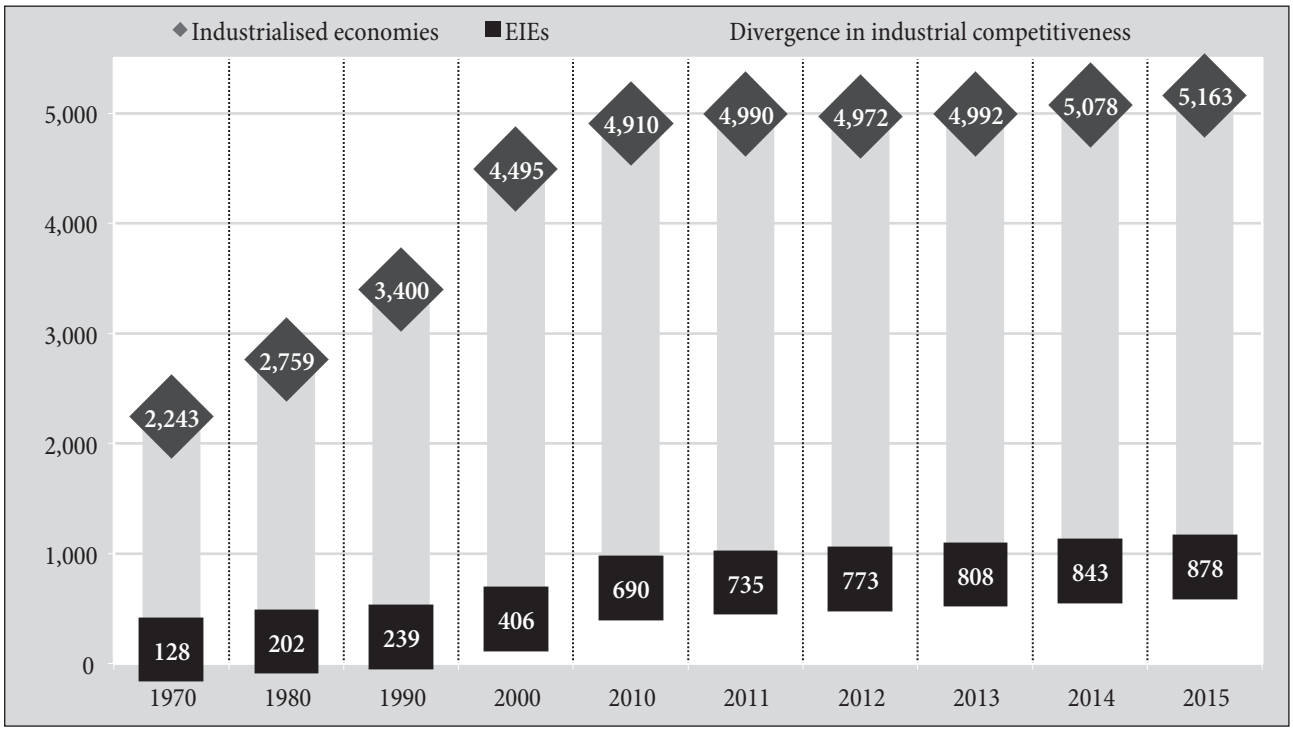
countries quantified by the indicator of manufacturing value added per capita in the 1970-2015 period (Figure 9).

Results and discussion

In examining the results of the previously analysed research, the following statements can be made:

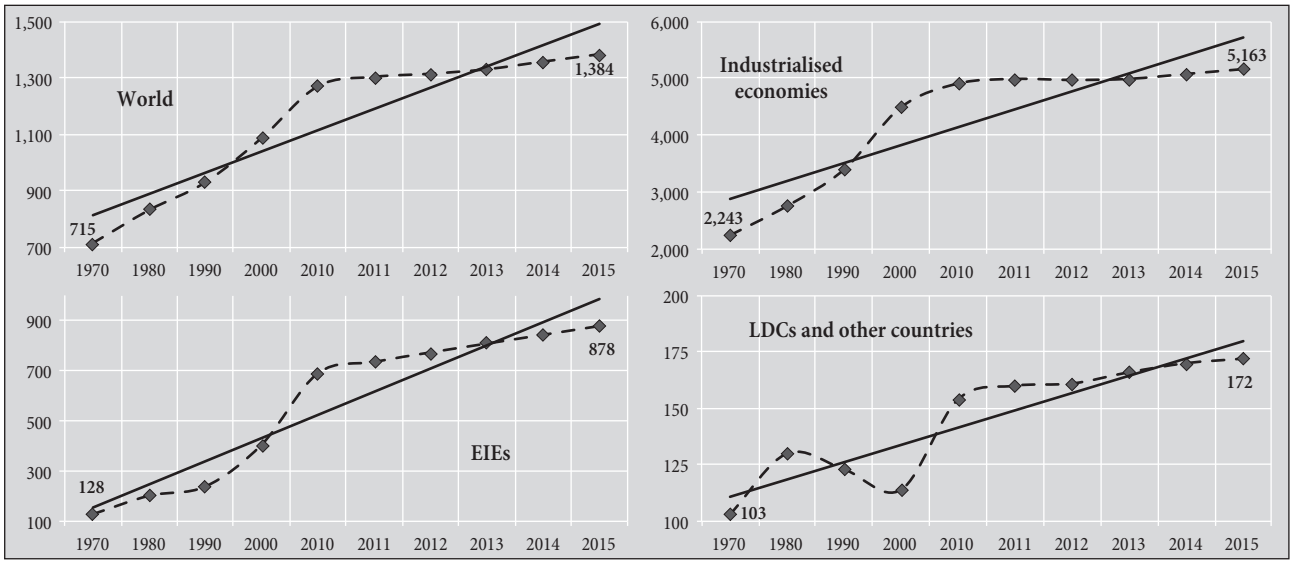
First, industrialised countries possess the greatest industrial capacities which are twice as large as the industrial capacities of the emerging industrial countries and 16 times larger than the industrial capacities of the least developed and other countries. Owing to the growth of manufacturing value added (3 times higher in comparison to that in 1970), the industrialised countries still dominate the global industrial production. However, this domination has continually been decreasing over the last four decades owing to strong industrial development of the emerging industrial countries, which increased

Figure 8: Productivity of industry in the countries according to the level of industrialisation from 1970 to 2015



Source: Prepared by the authors based on data of UNCTADstat [13].

Figure 9: Trends of competitiveness of industry from 1970 to 2015



Source: Processed by the authors based on data of UNCTADstat [13].

their industrial capacity 14 times (in 1970, the industrial capacity of industrialised countries was 10 times higher than the capacity of the emerging industrial countries, and even 29 times higher than that of the least developed and other countries).

Second, the countries that based their economic development mostly on the development of industry recorded the highest economic growth (emerging industrial countries). They increased their GDP nine times in the 1970-2015 period, unlike the industrialised countries, which recorded a threefold increase during the same time period, and the least developed and other countries which increased their GDP five times. A somewhat slower growth of industry in comparison to the growth of total economy in the industrialised countries shows that owing to the development of science, technology and high technological industry, these countries gradually managed to diversify the sources of economic growth through the development of services with high value added. The development of complex services which generate high value added enables these industrialised countries to develop faster in comparison to the growth of industrial capacities. Faster growth of services in relation to the industry leads to a decrease in the share of industry in generating gross domestic product. In the literature, this phenomenon is called (mature deindustrialisation) deindustrialisation and it is characteristic of the highly developed industrialised countries.

Third, the decrease of share of industry in the structure of GDP over the last thirty years is not characteristic of industrialised countries only. This phenomenon is present in less developed countries, as well, i.e. in countries with lower GDP per capita. In those countries, the decreased share of industry in generating GDP is called premature deindustrialisation. Unlike the mature deindustrialisation, which need not be a negative phenomenon (since it occurs in a situation when industrial capacities are developed close to technological maximum), premature deindustrialisation is harmful since it occurs when the income per capita and the level of industrialisation are too low, the benefits of the growth-enhancing effect are less expressed and low-productive informal services with small potential of growth are developed instead of highly productive industry. Due to these factors, premature deindustrialisation poses a threat to sustainable economic development of those countries.

Fourth, although most industrialised countries are in the stage of mature deindustrialisation, the productiveness of these countries increases in comparison to the global average and the least developed and other developing countries. However, productivity of their industrial production is relatively lower in comparison to the emerging industrial countries. More specifically, in 1970, productivity in the industry sector in these countries was three times higher than the global average, 22 times higher than in the least developed and other developing countries, and 18 times higher than industrial productivity in the emerging industrial countries.

Fifth, growth of industrial competitiveness of industrialised countries is a result of faster productivity growth in this sector (2.3 times in the 1970-2015 period) in relation to the global average (1.9 times) and the least developed and other countries in the region (1.7 times). However, the emerging industrial countries increased the productivity of industry 6.9 times in the observed period, thus succeeding in increasing their industrial competitiveness and decreasing relative slowdown in comparison to the industrialised countries (from 18 times in 1970 to six times in 2015).

Sixth, in 1970, industrial competitiveness of industrialised countries was by 2,115 USD higher than the competitiveness of the emerging industrial countries. In addition, although industrial productivity in the emerging industrial countries increased relatively faster in comparison to the industrialised countries, the absolute difference in the level of industrial competitiveness increased with time in favour of the industrialised countries (due to high starting point), and in 2015 it amounted to 4,285 USD. However, since the emerging industrial countries considerably strengthened their industrial competitiveness, the changes in absolute differences of industrial productiveness between industrialised and emerging industrial countries are significantly slower. If the current long-term trends continue, it can be assumed that the absolute difference in the amount of generated value added per capita will decrease in favour of the emerging industrial countries in the near future.

Seventh, a significant slowdown which is still present in the least developed countries and other countries, as well as in the emerging industrial countries (although these countries achieved strong growth of industrial productivity in the previous decades), in terms of industrial competitiveness in relation to the industrialised countries, points that the convergence in industrial development is a difficult, complex, slow and uncertain process.

Eighth, industrialised countries record the greatest competitiveness of the industry sector expressed by the indicator of productivity (5,163 USD per capita in 2015). It is four times higher than the global average (1,384 USD per capita), six times higher than in the emerging industrial countries (878 USD per capita) and 30 times higher in relation to the least developed and other developing countries (172 USD per capita).

Ninth, the trend of shifts in competitiveness of the world industry was changeable in the period from 1970 to2015. The trend of growth of competitiveness was obvious in the period from 2000 to 2012. It was followed by a decrease in competitiveness of the world industry as a result of pronounced decrease of competitiveness in economically developed countries, and a somewhat lower decrease of competitiveness in the emerging industrial countries. Deviations of real competitiveness from the observed trend line of the global industrial economy were especially pronounced in 2015, with a tendency to be even more pronounced in the upcoming period. Thereby, deviations of real competitiveness from the trend line are the highest in the group of economically most developed countries, which specifically speaks of a decrease in their leading positions in relation to competitiveness of the industrial sector of the developing countries.

Conclusion

Leading economies of the world, i.e. countries with high levels of GDP per capita are still more competitive in the domain of industry in comparison to the emerging industrial countries. However, over the last forty-five years, owing to the continuous increase in their share in industrial value added, the emerging industrial countries improved their relative position in generating total value added in the industrial sector in comparison to the industrialised countries.

Although in terms of their competitiveness of industry they still lag significantly behind the economically most developed countries, the emerging industrial countries are notably ahead of other developing countries and are gradually catching up with the most developed countries in terms of the level of industrial competitiveness.

Starting from the role and significance of industry for economic development, employment, new employment, creation of value added, improvements in standard of living and strengthening competitiveness, it is necessary to point to the need for improvement of its competitiveness. Improvement of industrial competitiveness through a transformation of industrial structure is possible only by a significant growth of business and investment activities of enterprises which base their business on high technologies, knowledge and innovations, i.e. amount and quality of investment in fast-rising, innovative, export-oriented and technologically intensive enterprises.

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