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UNDERSTANDING GEOPOLITICS BEYOND REALISM: SECURING ACCESS TO FARMLAND IN THE GLOBAL AGE

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ABSTRACT

The processes of globalization bear the potential to shake up seriously rigid state-centric realist geopolitical approaches within International Relations, in general, and in terms of securing access to arable land in particular. Accordingly, instead of reproducing homogenous geographical models and power instruments, attention in the article has been paid to complex analytical patterns of space, social life and statecraft in light of critical geopolitics. Practically speaking, a multidimensional empirical analysis of the augmented demand for agricultural land worldwide and in Africa after 2008 has been proposed – following the paradigms of “human emancipation” and “sustainable development”. Methodologically, interdisciplinary incentives from critical geopolitics, development studies, economic studies and sociology have been incorporated. The text concludes that globalization and geopolitics, for that matter, are not to be conceptualized as something between states in the spirit of realism but as directly interwoven with or transcending their social and political structures. It thus underlines the reflexive nature of geopolitics reminding that geopolitical actors play a dual role of extracting information about their surrounding milieu and simultaneously shaping its articulation.

KEYWORDS: globalization, geopolitics, agricultural land, food sovereignty, Africa, International Relations.

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INTRODUCTION

Globalization is characterized by growing deterritorialization. As such, it also results in some very uneven repercussions on different social groups within and across states, as well as practical demands for justice, ecological balance and equal participation on a communal and transnational level (Castells 2004; Held et al. 1999; Jones 2010; Sassen 2006). In this way, it poses a major historical challenge to state-centric geopolitical concepts within International Relations (IR), closely related to the theory of realism. The latter has traditionally underlined the geopolitical preponderance of the “exclusive sovereign rule over a bounded territory” in the name of “pursuing reasons of state backed by diplomatic initiatives and, ultimately, by coercive means” (Held & McGrew 2008, p.7).

By contrast, the current article strives to further the debate on the critical understanding of geopolitics beyond and beneath nation-states (Agnew 2015; Klinke 2009; Scott 2009; Strandsbjerg 2013) in the respective academic field. Concretely speaking, the text undertakes a multifaceted empirical reconstruction of social constellations around large-scale transcontinental acquisitions of agricultural land so that pressures of governmental and non-governmental nature for global environment and local producers can be exposed. Counterreactions on this and transnational level are delineated. Special attention is paid to securing land access on the African continent. Respectively, the article pleads for a demystification of non-differentiated nation-state categories in IR, as well as “a (methodological A/N) reframing of the agrarian question to embrace a broader set of relations around rights, social reproduction and sustainability” (Mann 2014, p.3).

What role do state, transnational and global actors play in processing or incorporation of arable land? Where does civil protest against some of these developments start? What potential does the global age (Albrow 2007) therefore unveil for critical evaluation of a geographical terrain and its inhabitants?

Here, geopolitics is understood to communicate the “social reproduction of the mechanisms of power within the acting political system and economics in various spatial formations” (Böhme 2008, p.5). In this framework, it is conceived as an interpretative “reading of the geographical and political characteristics of a certain territorial space and the interrelation between the two” (Ibid. p.6). It is assumed to be an integral part of the construction of identities of “oneself” and “others”, of

prioritization of solutions or of detection of potentials for social change. Consequently, “instead of understanding humans and states as victims of geography and geopolitics, they are its source” (Klinke 2009). Accordingly, geopolitical projections are reckoned to be based upon changing material and non-material prerequisites (Mamadouh 1998). Among the first rank topography, geographical location, natural environment, climate, raw materials, number and social structure of the population, domestic political landscape, external political influences and involvements, economic and financial conditions and socio-economic and socio-political ties between ruling elites or populations. The second group encompasses ideological predispositions, socio-cultural bonds, normative ethical perceptions or identity models.

However, it is considered beyond the scope of this text to go into all details of the IR debate on geopolitics. Neither is its ambition to exhaust the role of critical thought in these discussions. No wholesale theoretical framework is being proposed for conducting geopolitical analysis in the given area of studies, either. The intention of the following exposé is first and foremost to reveal realist deficits in respect of conceptualizing space, statecraft and (counter) power relationships from the perspective of globalization. In place of their one-sided nation-state oriented reconstruction a multidimensional illustration of these categories is laid out by means of a concrete case study. Thus, future research endeavors in favor of critical geopolitics within IR, both theoretical and empirical, can be supported.

In practical terms, the above issues will be addressed through the analysis of the augmented demand for agricultural land worldwide and in Africa after 2008, of the problem of the right to own, control and share farmland and of the excessive speculation with food prices on the global financial markets. It is assumed that these three elements particularly bring to light the deficiencies of realism to critically dissect and catch the subjectivity in articulating arable land spaces in the global era. In order to approach its subject, the present manuscript draws on interdisciplinary incentives from critical geopolitics (Agnew 2015; Klinke 2009; Scott 2009; Strandsbjerg 2013), development studies (Bommert 2012; Deininger & Byerlee 2011; Keyman 2014; Kress 2012), economic studies (Bass 2013; Borrás et al. 2014; Foodwatch 2013, 2014) and sociology (Albrow 2007; Castells 2004; Held et al. 1999; Jones 2010; Sassen 2006).

A PARADIGMATIC SHIFT

On a whole, the influence of globalization on geopolitical analyses in IR can be summarized under four headings: 1. an increasing incorporation of a variety of actors, networks, influences and rivalries, along with the state; 2. a reassertion of transnational and space conceptual orientations instead of national and territorial ones; 3. a tendency towards complex interpretations of intermingling of local and global contexts in various global geographical spaces; 4. a growing critical investigation of global asymmetries across and within state boundaries (Brown 2010; Czempiel 2002; Roach 2008; Rosenau 2003; Glocalism).

With regards to handling natural goods, globalization has directed the attention of critical geopolitical analyzers within IR towards the possibilities of fulfillment of an emancipative and sustainable human development in the name of building a resilient communal life. Following Ken Booth, emancipation is to be defined as “the freeing of people (as individuals and groups) from those physical and human constraints which stop them carrying out what they would freely choose to do” (Booth 1991 cit. in Buzan & Lene 2010, p.206). The notion of sustainable development, for its part, has come to signify the accumulation of capacities for strengthening the biological, climate, social and economic equilibrium on Earth (Vereinigung deutscher Wissenschaftler n.d.).

In the case of guaranteeing an emancipative and sustainable access to farmland the notion of food sovereignty has come to the fore. The term, initially coined by the small-scale farmers’ movement Via Campesina, refers to the democratic right of the populations to define their own food systems while maintaining biodiversity. Food and farmland are not to be instrumentalized as an item of massive trade to the detriment of their nutritional purpose (Local Food Rules n.d.).

The bottom-up concept of food sovereignty was put forward in the mid 90s also as a counterweight to the top-down geopolitical discourse of food security. According to critics, food security traditionally has sought to “ensure that a sufficient amount of safe food is produced without taking into account the kind of food produced and how, where and on what scale it is produced” (Choike n.d.). Here, in many cases the focus has been laid on highly industrialized, commercialized and specialized agriculture and livestock breeding (Mann 2014, pp.22-32). Consequently, trade liberalization has favored concentration of land ownership and large-scale production. It has also

resulted in soil exhaustion and deteriorating living conditions of small and medium-size farmers.

Food security has been characteristic of the development policy of the majority of governments and international institutions, such as the Food and Agricultural Organization (FAO) and the UN Environment Programme, as well as of the corporate sector. In addition to Via Campesina, the idea of food sovereignty has been supported by the International Planning Committee for Food Sovereignty (IPC), single governments (Bolivia, Ecuador, Mali, etc.) and associations of small and medium holder farmers. Nevertheless, due to active non-governmental campaigns there has been a slight convergence of the expectations associated with the two concepts in the last few years in favor of food sovereignty. The contents of some documents are emblematic for this trend. In 2014, FAO and IPC established together “Common Priority Themes for a Collaborative Work in the Fight against Hunger and Food Insecurity”. The UN Committee on World Food Security (CFS) adopted its “Principles for Responsible Investment in Agriculture and Food Systems”. In 2016, FAO formulated its “Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security”.

AUGMENTED DEMAND FOR AGRICULTURAL LAND

In the beginning of the 21st century over 70, for the greater part developing, countries were in position to trade in arable land. Moreover, the majority of their inhabitants have been earning their living through small and medium-size family farming or cattle breeding (Deininger & Byerlee 2011, p.XIV). As a result of local and international developments they have been exposed to infringement of rights (Global Witness 2015), grave poverty (The World Bank 2015), ecological and climate atrocities. Correspondingly, global cultivation of land has been marked by disproportionate investments and/or relations of disparity or nontransparency.

In 2008, the transcontinental purchase and lease of large-scale arable plots started thriving. While the previous years' expansion of agricultural land averaged 4 million hectares, in 2009 the large-scale farmland transactions reached 56 million hectares. More than 70% of cropland deals took place in Africa (Deininger & Byerlee 2011, p.XIV). Owing to contesting traditional (non-codified) and legal (state sanctioned) norms concerning land tenure, high corruption rates and internally and

externally induced violence on the continent, many of the bargains took the shape of “landgrabbing” (Kress 2012, p.16).

The mounting demand for agricultural land touches upon important fundamental, structural and immediate factors. All transcend the state-centric realist thinking within IR. The fundamental reasons pertain to the growth of the world population, particularly in Africa (UN News Centre 2013), the relative limited fertile terrains on the planet, the diminishing natural resources because of climate change, the depletion of fossil fuels and freshwater supplies. The structural elements, in turn, can be explained by way of four variables. First, a variety of crises have intertwined during the first two decades of the new century: food crisis, climate crisis, financial crisis, energy crisis, rising world inequality, democratic deficits in reaching global decisions, competition for resources and markets within and between traditional and newly emerging capital hubs (Borras et al. 2014). Second, a model of energy-expensive growth and extensive food consumption has been spreading from the North to Asia, Latin America and Africa. Third, the WB, a direct sponsor of ruling administrations and large-scale agrarian projects, has failed to introduce in its land policy for many years any criteria beyond its pragmatic Doing Business Index. Fourth, the long-run pattern of liberalization of international trade with agricultural goods has instigated strong tendencies for its corporativization. As a result, millions of tonnes of food waste have been generated in the industrialized world, and own production in the least developed regions has decreased. The global spike of food prices in 2008 can be cited as an immediate cause. Then, the price of wheat went up 130%, of soya 87%, of rice 74%, of corn 31% (BBC 2008). Riots broke out in almost 40 countries. In 2009, the number of chronically undernourished people reached one billion (Kress 2012, p.15).

Accordingly, states which had already been suffering the effects of resource scarcity, not least because of their own path of industrialization, and could afford it financially, like Saudi Arabia, Qatar, South Korea, China or Japan, sought to provide for their food security and socio-political tranquility irrespective of the floating global market prices. Financial investors that were in search for new profits after the mortgage meltdown of 2007 were striving, together with agrarian and food processing corporations, to position themselves firmly in the business of dealing with tillable land. In the meantime, the predictions for peak in the production of easily accessible oil and the compensatory measures envisioned to forestall global warming, such as emission

trade, started transferring into a competition for planting biofuels or woods in third countries.

The investors have been pointedly interested in commodification of local natural resources and their export. The logic of land management began exceeding the purpose of providing nutrition. In 2014, state-owned ventures generated 10% of total foreign investments in land, 90% came from the private sector (Der globale Wettlauf 2014). Often, foreign donor governments have favored agricultural companies, established under their law, in case of delivering development aid. In 2016, the top ten investing territories were the USA, Malaysia, Singapore, United Arab Emirates, UK, Brazil, China, India, Canada and the Netherlands (Land Matrix n.d. a). In Africa, cropland has been leased for tens of years, not seldom at prices much lower than in other parts of the world. In March 2008, the Nile Trading and Development Inc., registered in Texas, USA, appropriated 600,000 hectares of community land in South Sudan for 49 years. The same year, the Korean Daewoo Logistics Corporation and the government of Madagascar secretly tried to conclude an agreement for a 99-year-lease of half of the arable land of the country for the cultivation of corn and oil palms, which eventually led to the fall of the government. In 2012, the authorities in Liberia provided a Malaysian corporation with 220,000 hectares' land for 63 years (Keyman 2014).

In 2014, solely 9% of newly acquired agricultural land were used explicitly for cultivation of food-crops, 32% were utilized for non-food crops, 16% for interchangeable crops (depending on technological capacities and economic returns) and 42% for crops for multiple uses – food, feed, fuel, industrial material (Borras et al. 2014, pp.2-6). As a matter of fact, more than half of the rented or purchased arable areas in the world today are being used, at least partially, for the production of agro fuels.

On the other hand, there have been plenty of protest campaigns of local producers and NGOs against local governments and foreign investors, supported by transnational solidarity networks. They are to remind us of the practical inseparability of global food provision along national borders and of the tendentious absence of affected populations during the planning of many of the incoming mega agricultural projects. The deprivation of small family farmers and herds of their nutritive autonomy habitually forces them into poverty, urbanization or exile. Even where small growers became part of large-scale public-private partnerships with foreign investors, local

food prices used to jump. In that case, traditional agricultural production was absent from local markets and instead redirected for export purposes. At the same time, food shortages needed to be compensated through supplies from neighboring locations. In order to reach their economic goals, the new big investors have relied repeatedly on monocultures, synthetic fertilizers and diversion of water resources towards their plantations. All this causes environmental harms, soil erosion and degradation, loss of biodiversity, climate damages, water insecurity and health problems for plants, animals and humans. These occurrences fall far short of the expectations of local and transnational solidarity communities for sustainable investment in agriculture and food systems. Even more so, when it comes to the right of ownership, control and sharing of cropland.

THE RIGHT TO OWN, CONTROL AND SHARE AGRICULTURAL LAND

The right to work arable land may take different juridical, social, economic and political shape in separate regional contexts. Nevertheless, the current state of affairs on the African continent in this regard is particularly telling for the complex imprint globalization lays upon geopolitics beyond realism.

Nearly half of the population in this part of the world is engaged in agriculture to ensure its livelihood. The portion of farms smaller than 2 hectares stands at over 80% (Oxfam 2014b, p.5). Simultaneously, African and foreign governments and private investors have been assigning priority to mega agrarian undertakings which encompass tens of thousands of hectares of arable land. Two illuminative examples of large-scale public-private agrarian partnerships in Africa are the projects New Alliance for Food Security and Nutrition, under the auspices of G-7, and Grow, supported by the World Economic Forum (Oxfam 2014a). As a result, native populations remain the leading financier of their farming.

In many instances, the new mega projects have been implemented without informing properly the local producers. Often, the day-to-day technical coordination between them and foreign investors has not been arranged. Neither has been the issue about future presence of small farmers on domestic, regional and international markets. In recent times, their existence has worsened on the basis of the requirements of the WB and the IMF for abrogation of national subsidies for home-grown production and reorientation towards export economy. Thus, local populations have found

themselves exposed to the instability of the global markets and the importation of agricultural products at dumping prices. Nowadays, the 51 least developed states are “net importers of foodstuffs and suffer under chronic budget deficits” (Bass, 2013 p.17).

This situation has been aggravated by the instrumentalization of the complex nature of relations of ownership, control and traditional sharing of agricultural land in the majority of African countries. Besides, in considerable number of instances, land reform in the past was implemented half-way or aborted. Seen in a historical perspective, the economic developments on the continent have led to the formation of a dual, strongly polarized agricultural model (Keyman 2014). During colonial period, large-scale plantations were enhanced and native inhabitants resettled to waste regions. The colonial administration was named a custodian for land matters. After decolonization, the system of prioritizing large-scale use of cropland was succeeded – to the disadvantage of traditions of collective land sharing among indigenous communities (Ibid.).

Today, the adjudication of land rights is predominantly under the control of African governments. In 2003 only between 2% and 10% of the cropland in Sub-Saharan Africa belonged formally to family owners (Ibid.). In the words of Elinor Ostrom, co-winner of the 2009 Nobel prize in economics, the newest uncertainties in relation to large-scale purchase or lease of tillable plots and the concentration of land possession on the continent can be interpreted as an interplay between two discourses: the one of the unconstrained private property, and the one of the common goods (Ostrom cit. in Bommert 2012, p.30).

Indicative of the mounting tension between growing crops for foreign markets and securing domestic consumption is the situation in South Sudan. In May 2016, the country was in sixth place in the world for concluded land deals (Land Matrix n.d. b), whereby small-size agriculture, fishing and cattle breeding represent the backbone of the economic subsistence of 95% of the population. Five of the top ten target countries for land acquisition (Congo, The Democratic Republic of the Congo, Mozambique, Papua New Guinea, Sudan) are among the countries with lowest Human Development Index (Malik & Jespersen 2014, pp.18-19). This kind of contradictions has underpinned a whole bunch of local and transnational protest activities and movements: IPC, the Landless Workers’ Movement, the Landless Peoples’ Movement of South Africa, the

activities of the Mukayama Payam community in South Sudan, etc. Organizations like Oxfam have insisted even on replacing the phrase “access to land” with the wording “exercise of secure and equitable land rights” (Oxfam 2015) as an international standard.

Gradually, the non-governmental campaigns have induced certain reactions on official level. As mentioned earlier, FAO and CFS changed their priorities towards responsible treatment of tenure and land investments. The UN Agenda for Sustainable Development postulated the “doubling of agricultural productivity and incomes of small-scale food producers by 2030, in particular women, indigenous peoples, family farmers, pastoralists and fishers, through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment” (UN GA 2015). These international organizations, together with the non-governmental sector, have declared the principle of “free, prior and informed consent” of local citizens to any undertaking concerning agricultural land as an irrevocable precondition for their sustainable development. Land-owners, foreign governments and private investors are reminded of their obligation to respect human rights.

However, not all of the demands formulated under the sign of food sovereignty have found their place in the positions taken by official institutions. Among them are a demand for regulation of global trade relations, including the corporativization and financialization of food chains and the immense food waste. There is also an appeal for adequate provision of access to land in urban regions. Overall, protester groups are calling for treating land questions primarily as a matter of culture and global equality, and not as a lack of technical or financial capacities. There are still no clearly developed global sanctioning mechanisms in the area, either.

EXCESSIVE SPECULATION WITH FOOD PRICES

The necessity of transcending realist thinking and applying complex global geopolitical analysis with respect to food sovereignty and sustainability is narrowly related to the socio-economic and political consequences of excessive global speculation with food commodities. These consequences could be compared symbolically to a “shift since the outset of the 21st century from marginalization of agricultural labor towards amplifying the power of the anonymous forces of the

financial and energy markets” (Bommert 2012, p.9). In this sense, the spike in food prices in 2008 and 2011 has provoked a rethinking of the financial conditions for generating added value on existential food products.

Earlier in the 90s, the agricultural prices on the world market were staying relatively calm. During the discussed period, more and more local and regional markets started removing trade barriers between them. The augmented exchange of agrarian produce and by-products intensified the dispersion of price volatility from one stock market to another. In parallel, restrictions were laid down on the risky behavior of hedge funds, banks and other financial institutions regarding over-the-counter trade deals with agricultural commodities which run independently of the standardized and centralized stock exchanges (Investopedia). From that moment on, the share of financial speculation on the agrarian markets has risen from 30 to 80% (Teevs 2013). Consequentially, the conventional speculation with agricultural goods, which still serves for sustaining real production processes, was superseded, at least partly, by the excessive financialization (financial instrumentalization) of these processes (Bass 2013). After 2007 this tendency was precipitated by the subprime mortgage crisis and the redirection of capital resources towards new, primarily financial, goals.

A survey done for the organization Foodwatch among 180 long-time merchandisers, brokers and analyzers from Germany and financial centers in Chicago, New York, London, Tokyo, New Delhi, Shanghai, Dubai and Abu Dhabi shows that three out of four people working on stock exchange “believe that financial speculation directly influences the price of food” (Foodwatch 2014). Two years after the jump of agricultural prices in 2011, four German banks, two of them among the four biggest bank institutions in the country, openly declared their decision to abstain from speculation with agricultural commodities: Commerzbank, Landesbank Baden-Württemberg, Landesbank Berlin, DZ Bank (Foodwatch 2013). The DZ Bank underlined the necessity for strict financial regulations. So far, there are no universal international regulation rules in place corresponding with the globalization of the agricultural markets.

In addition, excessive speculation with food prices has been accompanied by existing and anticipated rising influences between the energy and agrarian markets. As alluded to earlier, we have been witnessing a growing use of biofuels in the last

years. The importance of petroleum products for large-scale agriculture should not be underestimated, either. Besides, continuing regional and global consolidation and privatization of the agrarian business will most probably stimulate further the volatile financial transactions with regards to farmland production. Three quarters of the global grain trade is under the control of private American corporations (Bass 2013, p.16).

CONCLUSION

It was no later than 2008 that the access to farmland turned into one of the most salient questions of global peace and development. As such, it is to serve as an illustration of the indivisibility of nutritional production and consumption today along strict national-territorial lines in the spirit of realism. In fact, it is to be deciphered as a compound interlocking of (counter)power factors on communal, national, transnational and global level.

Under these circumstances, foreign business and state interests have been in position to gain lucrative possession, taxation and trade prerogatives in Africa. Local administrations, in turn, have been bolstered in their (corrupt) power grip on a transnational and trans governmental basis. The instrumentalization of borderless financial tools has been influencing the domestic agrarian relations worldwide, and vice versa. At length, the flourishing of large-scale, often ecologically, legally and socially tricky, industrial agriculture has been stimulated. By contrast, the food sovereignty and long-term natural, social and economic sustainability of thousands of people on the continent have been put into question. Indeed, historically formed social divisions in nutritional reproduction have been cemented on a glocal basis.

These stratified land and food relations across borders have brought about various types of discourses – partly colliding and partly overlapping. On the one hand, a large number of local producers and their families, (transnational) NGOs and protest groups have been defending the right to food sovereignty and cultural and environmental sustainability on Earth. Their stance has been supported more and more by single governments and international organizations, such as FAO and UNDP, otherwise sticking to the state-centric paradigm of food security. In many cases, foreign donor governments, private investors and institutions like the WB and IMF have underlined the importance of market's efficacy of transnational land

undertakings. Moreover, land acquired by foreign investors has been used for non-food purposes or unspecified benefits for the indigenous populations.

In sum, this article has shown that the convolutions of global competition for land resources are drawn up by factors weakening the realist territorial approaches in IR. A versatile critical examination thereof has been proposed – following the paradigm of enduring and emancipative existence of each person and community on our planet. Instead of reproducing homogeneous geographical models and top-down power instruments, attention has been oriented towards broader analytical patterns of space, social life and statecraft.

In other words, globalization necessarily brings us beyond interpretations of geopolitics in terms of indivisible (inter-)state behavior. In an interconnected world, states' policies can have specific asymmetrical communal and transborder repercussions, while at the same time be determined by transnational and trans-governmental correlations. Globalization and geopolitics, for that matter, are not to be articulated as something between states but as directly interwoven with or transcending their social and political structures.

Thus, this exposé underlines the reflexive nature of geopolitics. It reminds that geopolitical actors play a dual role of extracting information about their surrounding milieu and simultaneously shaping its articulation. In that sense, one of the most substantial tasks of geopolitics in the contemporary era consists of conveying the complex asymmetrical nature of glocalization, as well as the deficient theoretical constructs in IR. On that ground, practical steps towards more land and food emancipation are to be taken on all levels of world politics, otherwise, it remains unclear how a world population of soon more than 9 billion people, with highest population growth in the poorest, often land rich countries, can strategically cope with a model of large-scale, wasteful, socially and environmentally detrimental agricultural production.

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CURRENT STATE AND TRENDS FOR REACHING CIRCULARITY OF MATERIALS IN SELECTED COUNTRIES FROM THE BALKAN REGION

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ABSTRACT

The main objective of the paper is to evaluate the activities undertaken and results achieved so far for reaching the targets of green economy and its component - circular economy in R. Macedonia, Serbia, Slovenia and Croatia by studying the resource productivity, total waste generation, waste intensity and recycling rate, as one of the leading indicators for the circulating behavior of the materials. Also, an attempt to calculate the values of a recently suggested potential composite indicator for assessing the progress of circularity has been made.

The results show that Slovenia and Croatia have higher resource productivities than R. Macedonia and Serbia. Similar results were obtained for the total waste intensity and recycling rates of the municipal waste. Although it was observed that the largest amounts of waste were generated in Slovenia due to the more intensive economic growth, at the same time Slovenia showed the lowest waste intensity (far below 1) implying that decoupling of waste generation from economic growth is more intense than that in the other investigated countries. The composite circularity indicator for R. Macedonia, and particularly for Serbia, has very low values due to very low recycling rates of the municipal waste (below 1%), lower GDP per capita and on the other hand very high CO₂ emissions. As expected, the highest values of the circularity indicator were obtained for Slovenia implying that Slovenia is the most efficient in terms of energy and materials use.

It can be concluded that the transition towards a circular economy in the investigated countries is taking place and the changes are more pronounced for the case of Slovenia, where as Croatia, and especially R. Macedonia and Serbia are lagging behind.

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JEL CLASSIFICATION: Q01, Q53, O44, P18, P48

INTRODUCTION

Natural resources are fundamental for the economy and human welfare. They provide raw materials, energy, food, water and land, as well as environmental and social services. Appropriate management with the natural resources and their efficient use is very important for the economic growth, environmental quality and sustainable development. Contrary, the waste generation is a source of pollution and at the same time loss of resources in the form of materials and energy.

In recent decades the use of many materials has been rising, but at the same time, many valuable materials contained in the waste continue to be disposed of and are potentially lost for the economy. Therefore, the sustainability of natural resource use and the negative environmental impacts associated with their production, consumption and end-of-life management has become one of the major concerns nowadays.

The main purpose in the circular economy is to reduce the adverse interactions between the economy, the environment and its natural resources by decoupling of resource use and environmental impact from economic activities; tracking material flows and measurement of resource efficiency and waste reduction which on the other hand will enable more efficient usage of goods by taking into consideration the repairing and reusing processes (EASAC¹, 2016). The transition to a more circular economy means maintaining the value of products, materials and resources for as long as possible and minimizing the waste generation, and thus contributing to develop a sustainable, low-carbon, resource efficient and competitive economy (EC, 2015). The aim of the Circular Economy Package, launched in 2015, is by using the new technology information to stimulate the transition towards circular economy which will boost global competitiveness, foster sustainable economic growth and generate new, green, jobs (EC, 2015a).

¹ European Academies Science Advisory Council

The key aspect of the circular economy is to change the existing production and consumption patterns by reducing the consumption of natural resources and increasing consumption of recovered and recycled resources which, on the other hand, is closely related to overall decrease of greenhouse gas emissions and waste generation intensity. The accomplishment of previous will provide resource decoupling (using less resources per unit of economic output) and impact decoupling (reducing the environmental impact of any resource used) (Fig. 1) and generate wellbeing of future generations, thus contributing to sustainability (UNEP², 2011; Niazi, 2015).

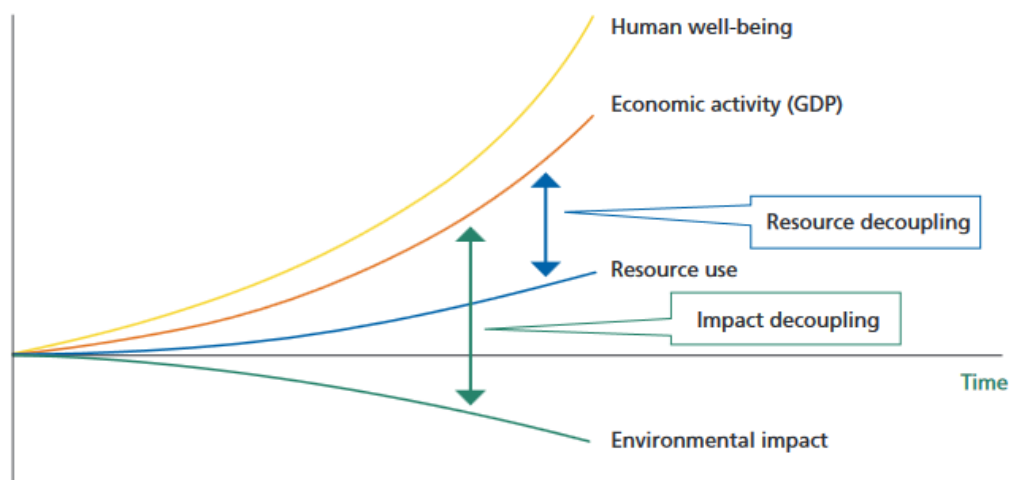


Fig. 1. Decoupling resource and impact decoupling (UNEP, 2011)

It is widely recognized that resource efficiency and waste management play central role in the circular economy and hence their assessment of particular importance.

In practice, the circular economy implies reducing the waste to a minimum. When a product reaches the end of its life, its materials are kept within economy wherever possible. They can be productively used again, thereby creating further value. Measures leading towards a circular economy include reusing, repairing, refurbishing and recycling existing materials and products. What used to be considered as “waste” can be turned into a valuable resource (EPRS³, 2016).

² United Nations Environment Programme
³ European Parliamentary Research Service

The main measures on EU waste policy are thoroughly described in the Circular economy package (EC, 2015a) which contains an action plan with a list of proposed legislative measures in the area of waste management, and also concerns the sustainable production and consumption and innovation processes in the context of the circular economy and development of framework for monitoring the circular economy based on the existing indicators used in the linear economy. According these legislative proposals on waste policy a new waste management targets by 2030 should be met in terms of increasing the share of municipal waste prepared for reuse and recycling to 65%, increasing the share of packaging waste prepared for reuse and recycling to 75% and limiting municipal waste landfill to 10%. Statistics report that that although the municipal waste represents only 10 % of total waste generated in Europe it is one of the most polluting categories of waste and presents the category with the highest potential for environmental improvement through better management (EC-JRC⁴, 2016).

Achieving the new set of waste management targets would lead to reduced health and environmental problems but also create availability of metals, and other resources from reuse and recycling.

Whereas the concept of circular economy is easy to understand, quantitative indicators to measure its performance and asses the circularity of economies, materials and material cycles, value chains and product life cycles still need to be developed (Tisserant et. al. 2017, EMF⁵ 2015). One of the critical questions in the circular economy is how to measure its performance since its objectives substantially differ from those in the linear economy. There are a variety of proposed indicators, or sets of indicators, for evaluating the transition to a circular economy based on already existing linear economy indicators. Some of these indicators focus the attention on the green growth and resource productivity (OECD⁶, 2014; World Bank, 2016); then there is a set of key environmental indicators for assessing the achievement of sustainable development goals and calculating the environmental performance index (UNEP,2013; UNDP⁷, 2016); a set of indicators for evaluating the corporate sustainability (GRI⁸,

⁴ European Commission-Joint Research Centre

⁵ Ellen MacArthur Foundation

⁶ The Organisation for Economic Co-operation and Development

⁷ United Nations Development Programme

⁸ Global Reporting Initiative

2016); a set of indicators for tracking the material flow (Eurostat, 2017); indicators for assessing the resource efficiency (EURES⁹, 2014) and material circularity indicators (EMF, 2015a).

The aim of this paper is to evaluate the current state and trends for reaching some of the targets of the circular economy by studying the resource productivity, waste generation, waste management and the resource productivity in the context of a circular economy transition.

The paper consists of several sections. In the first section a brief description of the indicators chosen for assessing circularity of the materials in the four chosen countries from the Balkan region will be given. Because of its crucial role in the total waste management process the municipal waste will be in the focus of this paper. Therefore the municipal waste performances of the investigated countries will be reported in the second section. The third and fourth section will refer to the methodology used and discussion of the obtained results, where as the conclusion remarks will be given in the last section of the paper.

1. CIRCULAR ECONOMY INDICATORS USED WITHIN THE PAPER

In common the circular economy indicators are based on several assumptions:

- They should be created based on information from existing databases of linear economy indicators
- They should take into account the whole lifecycle of the product
- They should comply the main EC objectives concerning the circular and green economy
- They should create a base for development of final CE indicators (Smol et al. 2017)

The indicators used in this work are being selected based on the very close interrelationship of the concept of circular economy with both, the waste management and the resource efficiency. According the Ellen MacArthur Foundation (EMF, 2015a) the initial approach to circular economy indicators is based on the existing metrics of:

- Resource productivity
- Circular activities (through recycling rates and eco-innovation indexes)

⁹ EU Resource Efficiency Scoreboard

- Waste generation (per GDP output and per capita)
- Energy and greenhouse emissions (energy consumption per unit of GDP, renewable energy use and greenhouse gas emissions per GDP output)

The *resource productivity* is noted as lead indicator for measuring the principle EU objective of improving economic performance while reducing pressure on natural resources (EC, 2015a; Melece, 2016; Smol et al., 2017). It is a policy indicator which relates the Gross Domestic Product (GDP) to the main material flow indicator Domestic Material Consumption (DMC) (expression 1) and measures the total amount of material directly used in economy, by businesses, government or by households (Eurostat, 2017).

$$\text{Resource productivity} = \frac{GDP}{DMC} \quad (1)$$

Sustainable resource use is likely to contribute to increased resource productivity, i.e. greater output or value added per unit input of resources. By improving the resource productivity the environmental constraints might be reduced and greater welfare delivered, especially in the countries where natural resources and materials play a strategic role in the economic structure.

In order to move towards circular economy many countries have included the issue of efficient management of natural resources in their respective national strategies documents and have launched initiatives to promote waste prevention and policies for sustainable materials management (COM 2014, 297; EC Horizon 2020, 2016; OECD Guide, 2008). The most commonly proposed and used waste management indicators, within the EU and national strategies and action plans, are the waste generated per capita, the waste intensity and the recycling rate of the municipal waste (Melece, 2016; Smol et al. 2017; EASAC 2016; Haupt et al. 2016; Vassilis et al. 2015).

The *waste generation* is intimately related with the growth in production and consumption. Within this paper it is used not only as indicator but also as input for calculating the *waste intensity* as follows:

$$\text{Waste intensity} = \frac{\text{Total waste generated}}{GDP} \quad (2)$$

The values of the waste intensity enable assessment of the effectiveness of a certain environmental policy (Vassilis et al. 2015) and provide information if decoupling between the waste generation and economic growth exists.

The *waste recycling rate*, commonly used for evaluating the waste management process, on one hand, and the development of a sustainable method for recycling and obtaining secondary raw materials and/or energy/heat by using its calorific value of the waste, on the other hand, is of crucial importance when circularity is concerned.

However, all indicators related to materials (some of them mentioned in the text above) should not be observed in isolation from the other key indicators which reflect the non-linear behavior of the economy, but should be combined in such a way that would reflect the circularity clearly. It may be achieved by using an expression that would include positive evolution indicators at the nominator (a positive circularity trend if they increase) and negative evolution indicators at the denominator (a positive circularity trend if they decrease).

One possible aggregated combination of several key linear economy indicators, proposed by EASAC (EASAC, 2016), integrates the energy productivity, GDP per capita, rate of recycling and carbon dioxide emissions according formula (3):

$$\text{Composite indicator of circularity} = \frac{GDP}{TPES} \frac{GDP}{\text{population}} \frac{\text{Recycle rate}}{CO_2 \text{ emission}} \quad (3)$$

where TPES refers to total primary energy supply and the ratio GDP/TPES determines the energy productivity. As it can be seen from expression (3) the values of the proposed composite indicator of circularity would increase if the energy productivity, GDP per capita and recycling rate increase and the carbon dioxide emissions decrease. Hence, higher values of this composite indicator would mean higher energy and materials efficiency with lower CO₂ emissions, and would imply a more efficient transition towards circular economy.

2. MUNICIPAL WASTE

Municipal waste is collected and treated by, or for municipalities. It covers waste from households, including bulky waste, similar waste from commerce and trade, office buildings, institutions and small businesses, yard and garden, street sweepings, contents of litter containers, and market cleansing. The waste from municipal sewage

networks and treatment, as well as municipal construction and demolition is excluded (OECD). A joint OECD/Eurostat definition reports that municipal waste includes the following types of materials: paper, paperboard and paper products, plastics, glass, metals, food, garden waste, and textiles.

The municipal waste is of great importance because of its wide reaching impacts. It is one of the most polluting categories of waste and because of its mixed composition and very high potential for environmental improvement through better management municipal waste is a challenge to treat (EC -JRC, 2016). The municipal waste of higher calorific value can be used as a substrate in waste to energy plants to generate electricity or heat by incineration and advanced thermal technologies. Due to its heterogeneous origin, it is also suitable for composting (Menard et al. 2004) In the following text, a brief elaboration of the implemented policies and municipal waste performances of the countries included within this paper is presented.

2.1. R. Macedonia's municipal waste performance

The fundamental documents setting the general framework for rational and sustainable waste management in R. Macedonia are the Law on Waste Management of 2004, the National Waste Management Strategy (NWMS) for the period 2008–2020 and the National Waste Management Plan (NWMP) of 2009-2015. The Producer and/or importer responsibility principle entered into force in January 2010. Some of the main points in these documents are harmonization of national legislation with EU directives, building-up of institutional capacity and legislations, implementation of the respective regulations and increase of education and public awareness.

The intention of the proposed economic and financial instruments, included within the National Waste Management Plan is to improve the existing management of waste in the country and to direct the individual waste streams to the material and energy recovery processes whereas the smallest possible amount of the stabilised residues shall be disposed of in landfills. Priority financial /economic instruments, which shall be introduced in the first period, are mainly usage of differentiated waste management fees and additional (earmarked) surcharges for non-compliant municipal landfills, earmarked import taxes on specific chemical and hazardous goods, incentives for usage of biodegradable waste for electricity production, introduction of different organisation forms according to the 'producers responsibility' and assuring adequate payments, establishment of the earmarked investment and remediation funds,

financial assistance for the waste management projects from the State budget and provision of payment warrantie.

According the legislative framework the first legal entity for the treatment of packaging waste in R. Macedonia was registered in 2011. Since then several other similar private companies appeared in the market.

The tasks and responsibilities in the waste management field in practice are split among several institutions with the dominant role of the Ministry of Environment and Physical Planning and municipalities (MOEPP). Due to the decentralization process in the country, a substantial part of these responsibilities regarding the waste management are delegated to the municipalities. They are responsible for “organizing the collection, transportation and disposal of municipal wastes; deciding on the location of waste management facilities; issuing local regulations on waste management; financing and supervising dump/landfill closures and termination of waste management facilities, defining the fees and finance the work of the Communal Public Utility. The establishment of non-hazardous and inert waste landfills is also the responsibility of the municipalities” (NWMP, 2008).

With reference to municipal waste, the generation of municipal waste went hand in hand with the economic growth by 2012, while 2012 was marked by fall in the economic growth, but increase in generated municipal waste. This situation might be a result of improved process of collection of data and information on municipal waste, namely receipt of comprehensive and precise data on the quantity of generated municipal waste (MOEPP).

The dominant method in managing municipal and other non-hazardous waste in R. Macedonia is disposal to legal landfills, which corresponds to 99.6 % of the total amount of municipal solid waste generated in 2015. The remaining 0.40 % of municipal waste is recycled or composted. The collection systems of municipal waste cover approximately 77 % of the national population (Cvetkovska, 2011).

The analysis of the composition of the municipal waste, carried out for the needs of the National Waste Management Plan of FYR Macedonia, revealed that municipal waste in FYR Macedonia contains a considerably high amount (about 62%) of biodegradable waste. This biodegradable fraction consists mainly of food waste and green waste (26%), and additionally wood (2.7%), textiles (2.6%), paper and cardboard (11,9%). The fine mixed particles fraction (<10 mm), which is equal to

30.9%, contains approximately 60 % biodegradable organic materials (NWMP, 2008). Therefore, out of this 30.9 % a percentage of about 18.5 % can be added to the biodegradable content. Conclusively, the final content of biodegradable waste in the MSW composition of FYR Macedonia is about 62 % and taking uncertainty into account, this percentage could be placed safely somewhere between 60-65 % (EEA¹⁰, 2013a).

2.2. Slovenia's municipal waste performance

The most relevant acts related to waste management in Slovenia are the Environmental Protection Act (adopted in 2004), the Decree on the Landfilling of Waste (adopted in 2006), and the Decree on Waste (adopted in 2011). Other relevant legislation may be grouped in several clusters: legislation concerning different sorts of waste, legislation on waste management and legislation on monitoring emissions from waste treatment.

The Slovenian landfill tax was introduced in 2001, when the Decree on environmental tax for environmental pollution caused by waste disposal was adopted. All landfill operators of landfills for hazardous, non-hazardous and inert waste are obliged to pay tax for the disposal of waste. The landfill tax is paid by the landfill operator. Until 2010, the collected tax went into the state budget; after October 2010 the landfill tax revenue from municipal landfills goes to municipalities and the revenue from industrial landfills to the state budget (EEA, 2013b).

The municipal waste management in Slovenia is a responsibility of the local communities – municipalities. Landfilling is performed within municipal public services and is permitted at non-hazardous waste landfills that are local public service facilities and/or public infrastructure facilities. The latest available data show that about 39% of municipal waste is landfilled and 12 % are composted (Eurostat 56/2016). The recycling percentage has been growing in recent years and has reached 54.3% in 2015 which is 5.3 percentage points more than the recycling rate in the previous year. Treatment methods vary between different categories of waste. Paper and cardboard account for the highest proportion of recycled municipal waste (38%), followed by food waste (25%), plastics (10%), glass (9%), inerts (6%), metals (5%), bulky waste (3%) and waste electrical and electronic equipment (2%). Categories with

¹⁰ European Environment Agency

low recycling rates, including inter alia wood, textiles, garden waste, batteries and other hazardous waste, account for the rest (EEA, 2013b).

2.3. Croatia's municipal waste performance

The adoption of the Waste Act in 2004, the Waste Management Strategy of the Republic of Croatia from 2005 and the Waste Management Plan of the Republic of Croatia from 2007 are the legislative basis for waste management in Croatia for the period 2007-2015.

The Waste Management Plan of the Republic of Croatia represents the legislative basis for waste management in Croatia for the period 2007-2015. Within the framework for preparing of the Plan is included the Waste Management Strategy of the Republic of Croatia existing legislation and EU guidelines.

The Strategy regulates the management of different types of waste in Croatia from their generation to final disposal, with the underlying objective to establish an integrated waste management system organized in accordance with current European requirements and standards.

Also the Environmental Protection Programmes and Energy Efficiency Fund (EPEEF) was established in 2004. is a fund established by a decision of the Government of Croatia in order to ensure additional resources for financing projects, programmes and similar undertakings in the field of preservation, sustainable use, protection and improvement of the environment (EEA, 2013c).

Among the introduced environment taxes in Croatia the Charges for environmental waste land include municipal waste charges and/or hazardless technological (industrial) waste and hazardous waste charge. Municipal waste charges and/or hazardless technological (industrial) waste are charged and paid based on the quantity of waste disposed at landfill. Hazardous waste charge is charged and paid based on the quantity of produced, but unprocessed or unexported waste and based on waste characteristics. These two charges are charged to legal and natural persons disposing waste at landfills (Hodzic and Bratic, 2015).

The latest available data show that about 83% of municipal waste is landfilled, 15% are recycled and 2% are composted (Eurostat press release, 2016). The separately collected municipal waste consisted mainly of bulky waste (38 %), organic waste (20 %), and paper (8 %) in 2010 (EEA 2013c).

Statistics say that 45 % of municipal waste can be reused/recycled and that is why Croatia should be even more involved in recycling. Furthermore, the reuse of packaging material is greatly encouraged in Croatia because of the tax system imposed on producers and importers of packaging waste. Otherwise the reuse of packaging material such as glass bottles is not reported in SEE¹¹. It seems that most of the refillable glass bottles have been replaced by one-way-plastic-bottles in recent years.

2.4. Serbia's municipal waste performance

The basic document for the waste management in Serbia is the National Waste Management Strategy for the period 2010–2019 adopted in May, 2010. The key principles in this strategy are: sustainable development, waste management hierarchy, precaution, regionalization, the most optimal environmental option, “Polluter pays” and “Producer responsibility”. The last two principles, “Polluter pays” and “Producer responsibility”, which seem to be so simple, logical and fair, are in fact the most difficult to implement, even in developed countries. The implementation of those principles is not simple because it implies the existence of effective control mechanisms, the necessary economic and social assumptions, and lack of political influence – which is usually not the case (Popovic et al, 2013). Because of the lack of implementation of the national policy and integrated system of waste management there is a lack of information and it is hard to estimate the waste volume in the Republic of Serbia.

Most of the household and commercial waste is collected by public municipal companies, but there are also several private companies collecting municipal waste. In general, the waste is not sorted at the source, but collected in the same waste bins. The house-to-house collection system is implemented in specific parts of the municipalities where the structure consists mostly of individual houses. A certain amount of waste stream which is not controlled is the waste that ends on open, illegal dumps, which are formed on inappropriate area, along the roads, rails, river flows etc.

In Serbia there is no landfill tax, but it is proposed as such in the Waste Management Strategy. However, a system of service charging allows a tax on waste disposal to landfills (EEA, 2015)

The city of Belgrade decided to solve the issue of waste management through a public-private partnership in the environmentally most modern and safest way, which

¹¹ South Eastern Europe

would also allow for the production of renewable heating and electric energy. Therefore, a public-private partnership tender for the Vinca landfill was launched in May 2017. Only one bid was submitted and for the time being of writing this paper there was no available information about the final solution of the Call.

Statistics show that the largest part of the collected municipal waste in Serbia is landfilled (99%) whereas only 1% is recycled. (Eurostat press release, 2016).

Concerning the morphological analysis of the municipal waste in Serbia there are no detailed, reliable studies. However the latest available data on the waste composition showed that at the national level, organic waste takes 49,76 % of total municipal waste, plastics take up 12.73%, paper and cardboard contributes by 13.57%, whereas metals, leather, textiles, glass and fine waste particles account to 23,94 % (Anthouli et al, 2013).

3. METHODS

Data used in this paper are collected from national statistics of the investigated countries, peer reviewed literature, reports, the Eurostat and OECD databases, the European Environment Agency (EEA), the International Energy Agency (IAE) and other secondary online sources.

The research was performed for four countries from the Balkan region, two EU (Slovenia and Croatia) and two non-EU (R. Macedonia and Serbia), in order to compare the activities undertaken in terms of circular economy and the results achieved so far. The investigation was performed for the period 2009-2015 since for the years before relevant data, concerning the selected indicators, for R. Macedonia and Serbia do not exist or are mostly estimations rather than actual data based on real analyses on the field.

Data for the following indicators were collected:

- Resource productivity (Eur/kg) extracted from the Eurostat
- Waste generated (kg/capita) extracted from the Eurostat (for Slovenia, Croatia and Serbia), and the State Statistical Office of R. Macedonia (for R. Macedonia)
- recycling rate of municipal waste (%), extracted from the Eurostat (for Slovenia, Croatia and Serbia), and the Ministry of Environment and Physical Planning of R. Macedonia (for R. Macedonia)

The waste intensity (kg/USD PPP) and the composite indicator of circularity (US dollars per capita per tonne of oil equivalent) were calculated using the following data:

- GDP weighted by purchasing power parity (PPP USD) collected from Trading Economics.
- Total Primary Energy Supply (TPES) (million toe¹²) collected from the OECD and the International Energy Agency databases
- CO₂ emissions (million t CO₂) collected from the International Energy Agency database

In order to transform some of the data per capita, as requested in respective calculations, the population data were also collected from the OECD database.

The comparison analysis and the assessment of the current state and circularity trends in the studied countries were performed utilizing the total productivity, total waste generated, waste intensity, recycling rate of municipal waste and the composite index of circularity.

4. RESULTS AND DISCUSSION

The results obtained for the resource productivity (Fig. 1) show that among the investigated countries Slovenia and Croatia have greater outputs/ value added per unit input of resources, with average values of the 1.289 and 1.027 Eur/kg, for the period 2009-2015, respectively. Slovenia has the highest resource productivity which is 3 to 4 times more than resource productivities of R. Macedonia and Serbia. A slight increase of Macedonia's resource productivity can be observed in the period from 2012 to 2015, where as in the case of Serbia the changes are negligible.

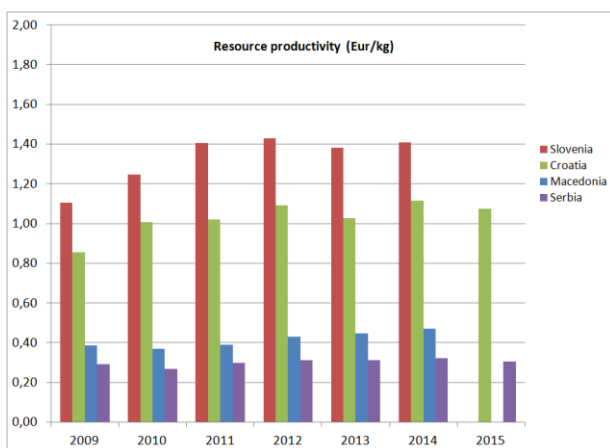


Fig. 1. Resource productivity

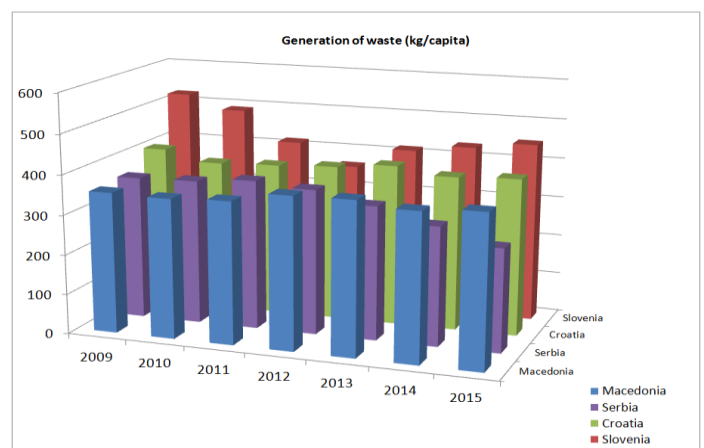
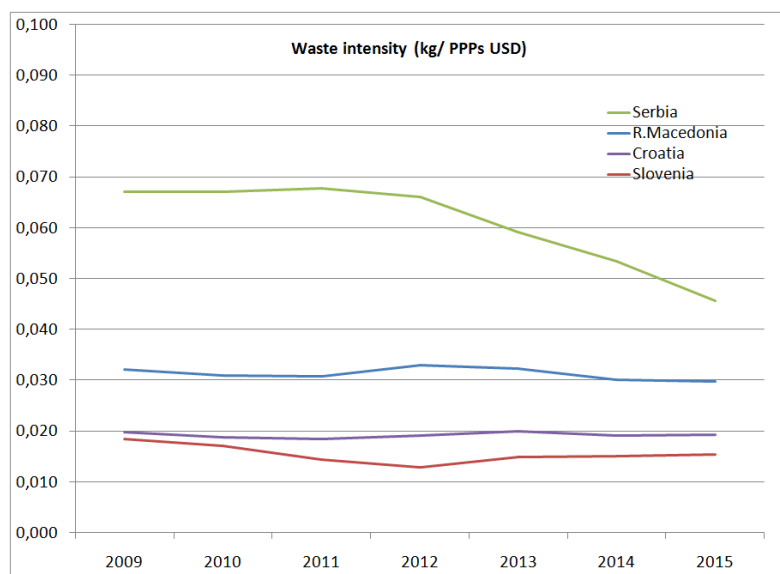


Fig. 2. Total waste generation

¹² Tonnes of oil equivalent

Concerning the waste generation, the results show that due to higher economic growth, more developed consumption and higher purchasing power of the general population Slovenia generated much higher amounts of waste per capita (with average value of 441 kg/capita) compared to Croatia, Macedonia and Serbia where the average values of the generated waste from 2009 to 2015 are 392, 371 and 337 kg/capita, respectively (Fig.2). On the other hand, the values obtained for the waste intensity (waste generated per unit of GDP) (Fig.3) indicate that although the amounts of generated waste are the largest, the waste intensity in Slovenia is the lowest (far below 1) implying that decoupling of waste generation from economic growth is more intense. R. Macedonia and Croatia show similar patterns of the waste intensity with Slovenia, almost constant but with slightly higher values, although still in the range where decoupling waste generation from economic growth is possible (Fig.3). In the case of Serbia the waste intensity is the highest with no pronounced changes from 2009 to 2012 when a sharp decrease in the intensity is noticed, probably due to the significantly reduced amounts of the total waste generated from 2012 to 2015.

Fig. 3. Waste intensity evolution



The results presented in Fig. 4 indicate that throughout the investigated period the recycling rates were generally increasing in all observed countries and that Slovenia shows significantly higher values of the indicator particularly when compared to Macedonia and Serbia where the rate of recycling is still up to 1%. The obtained data imply that Slovenia is on the track to fulfill the EU target for recycling 65% of municipal waste by 2030, and even go beyond it, since in 2015 Slovenia reached recycling rate of

municipal waste of 54.3 %. These great results may be attributed to the changes of the legislation (existence of landfill tax, landfill tax revenue and other kind of environmental taxes), political mechanisms and especially the establishment of municipal waste management centers, the improved separate collection and the treatment of mixed municipal waste before disposal. Statistics also show that paper and cardboard account for the highest proportion of recycled municipal waste (38%) in Slovenia, followed by food waste (25%), plastics (10%), glass (9%), inerts (6%) and metals (5%). Categories with low recycling rates, including wood, textiles, garden waste and electronic equipment account for the rest (EEA 2013b). On the other hand in R. Macedonia and Serbia almost all quantities of collected waste are landfilled and they will need to make an extraordinary effort in order to achieve the target of 65% recycling of respective municipal waste streams by 2030. The situation in both countries can be improved by introducing/implementing certain economic and financial instruments that will enable more efficient waste management practices. The morphological analysis of the municipal waste in R. Macedonia, as given previously in the second section of the paper, show that some municipal waste streams have great potential to be recycled or used as energy/heat resources.

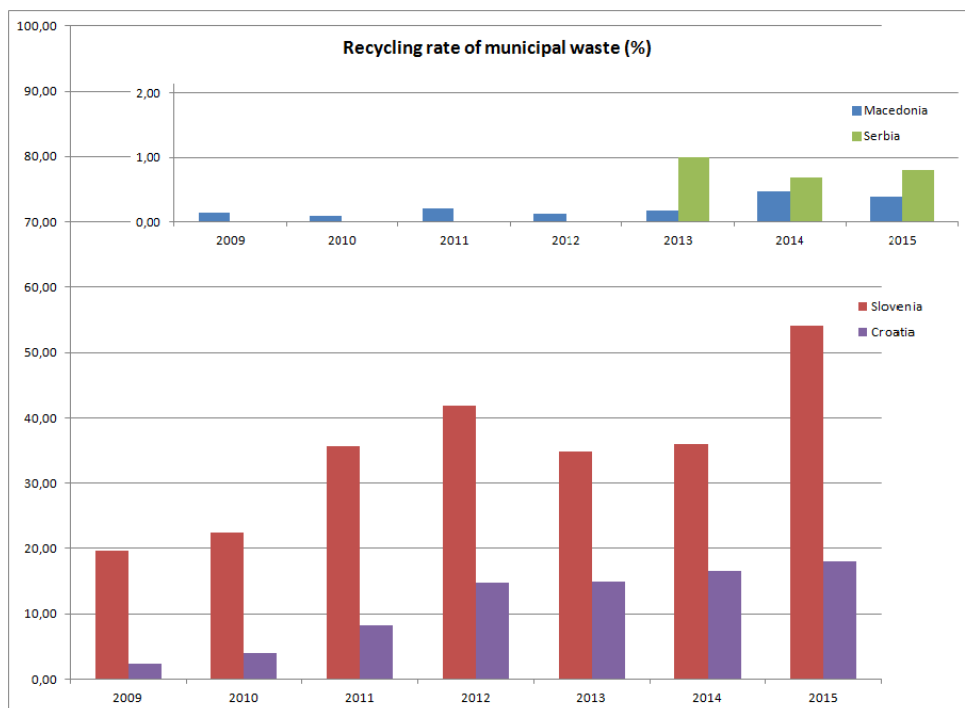


Fig. 4. Recycling rates of municipal waste

The final criterion utilized within this paper for accessing the circularity is the composite indicator of circularity, proposed recently by EASAC. This indicator

combines the energy productivity, GDP per capita, rate of recycling of municipal waste and carbon dioxide emissions as described with formula (3) in the first section of the paper. The calculated values of the composite indicator for each investigated country are reported as follows:

Table 1. Composite indicator of circularity for Slovenia, Croatia, R. Macedonia and Serbia, 2009-2015

Composite indicator of circularity (US dollars per capita per toe)				
Year	Slovenia	Croatia	Macedonia	Serbia
2009	300,11	23,45	1,34	0,00
2010	333,32	41,78	1,00	0,00
2011	535,90	92,62	2,07	0,00
2012	643,86	183,10	1,29	0,00
2013	561,56	192,11	2,37	0,34
2014	708,58	233,50	7,58	0,31
2015	1120,68	251,46	6,96	0,28

As mentioned previously in the text higher values of this composite indicator mean higher energy and materials efficiency with lower CO₂ emissions, and imply a more efficient transition towards circular economy. Obtained results show that Slovenia has the greatest circularity performances among all analyzed countries. The values of the circularity indicator for Slovenia are significantly higher than the ones of Croatia, R. Macedonia and Serbia indicating that Slovenia is the most efficient country in terms of energy and materials use, and tends to improve this efficiency through the years. As can be seen from Table 1, the circularity indicator for Slovenia increased from 300 US dollars per capita per toe to almost 1121 US dollars per capita per toe meaning that circularity performances were improved about 4 times within only six years all due to the well established policies and systems of waste management. Croatia also shows a tendency to increase the circularity of its economy. Throughout the investigated period the values of the circularity indicator increased more than 10 times due to the efforts of Croatia to reduce waste in landfills, increase the recycling rates and to use the waste for energy production or biowaste composting. The circularity indicator for R. Macedonia and Serbia has very low values due to the very low recycling rates of the municipal waste (below 1%), low and GDP per capita and very high CO₂ emissions, particularly in the case of Serbia. Hence, the circularity performances of

these two countries are on a very low level and have to be greatly enhanced, especially the waste management systems, in order to achieve the targets of their own strategic documents and national plans, and then the targets of the EU in terms of circularity.

CONCLUSION

The aim of the paper was to evaluate the current state in terms of reaching circularity of the materials in R. Macedonia, Serbia, Slovenia and Croatia for the period from 2009 to 2015. Several appropriate indicators were utilized and they are as follows: resource productivity, waste generated per capita, waste intensity, recycling rate of municipal waste and the composite circular indicator.

It was concluded that:

- The resource productivity of Slovenia and Croatia is significantly higher (3-4 times) than that of R. Macedonia and Serbia
- Slovenia generated much higher amounts of waste per capita (with average value of 441 kg/capita) compared to Croatia, Macedonia and Serbia where the average values of the generated waste from 2009 to 2015 are 392, 371 and 337 kg/capita, respectively.
- The waste intensity is the lowest in Slovenia implying that decoupling of waste generation from economic growth is more intense. R. Macedonia and Croatia show similar patterns of the waste intensity with Slovenia, almost constant but with slightly higher values, although still in the range where decoupling waste generation from economic growth might happen, whereas Serbia has the highest waste intensity of all.
- Concerning the recycling rates of the municipal waste the results show that so far Slovenia recycled 54.3% of the municipal waste, for Croatia the value of this indicator is 18%, and in R. Macedonia and Serbia the recycling is 0.4% and 0.8%, respectively. It implies that initiatives to increase the recycling rates of municipal waste and thus reduce the waste in landfills in Croatia, R. Macedonia and Serbia must be intensified. Furthermore, the governments must work more intensively to implement the overall recycling programmes and search ways to use waste for energy production or biowaste composting. Also, an integrated system of waste management across the region has to be established.

- R. Macedonia and Serbia will need to make an extraordinary effort in order to achieve the target of 65% recycling of respective municipal waste streams by 2030.
- The calculated values of the potential composite index of circularity imply that Slovenia is the most efficient in terms of energy and materials use, whereas the other investigated countries will have to make great efforts in order to achieve circularity of the materials and the energy used.

Overall, the transition towards a circular economy in the investigated countries is ongoing and it is more pronounced in Slovenia, whereas Croatia, and especially R. Macedonia and Serbia are lagging behind.

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POTENTIALS OF REPUBLIC OF MACEDONIA TO OFFER OUTSOURCED SERVICES

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ABSTRACT

The aim of this paper is to explore the current state of the affairs with the market of the offshoring services by providers from Republic of Macedonia. We have found that Country has potentials for offshoring of accounting and related services. Exploitation of these potentials would result in significant contribution to the development of the accounting profession and to the employment of young graduates. However, significant efforts are needed in the Country to upgrade the level of services and the acumen of the providers in the areas that they identify as weak. Overall, these accountants in Macedonia are familiar with the possibility of provision of various business services to companies abroad and some of them already are engaged in such business models. Respondents, generally, had favorable opinion on the readiness of their organizations to engage on the market of online services. The weak business links and networking skills within the profession were assessed as weak, which is in dissonance with the expressed overall optimism. The results were triangulated with interviews with some leading accountants and they mostly confirmed the findings of the survey. However, they call for the state to help with clustering or similar resource pooling vehicles and/ or bilateral agreements with some interested countries since that they are able to accommodate to the foreign standards and requirements. In these terms, we offer some practical recommendations to the profession and to the policy-makers for further promotion of this business opportunity.

KEYWORDS: Accounting Services, Outsourcing, Offshoring, Accounting Education, Offshore Auditing

JEL: M41, M48, M14

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INTRODUCTION

The accounting services are relatively new addition to the global outsourced business processes offering. Reasons for this are in the domains of the logistics, in problems with compatibility of the various national financial standards and in the level of the expertise of the providers. Traditionally, the providers of the outsourced accounting were almost entirely in the same, or in the best case, in some other country with compatible, if not entirely same, accounting legislation and paradigm. Outsourcing abroad (offshoring) was confined mostly to the mining, manufacturing and assembling. However, even in that cases there were some additional benefits for the country provider that were beyond the cash flows from the salaries paid, the local procurement and the customs and income taxes paid. Countries, especially the emerging and developing, involved in outsourcing for companies from the developed world, benefit from the extended learning and from growth of their overall business, accounting and legal standards up to the levels needed for serving the highly demanded customers. Well-established accounting profession and knowledge of the international financial reporting standards, together with robust IT infrastructure are main prerequisite for outsourcing of accounting and related services such as payroll, billing and other back-office business processes. The extra channel of hard currency inflows from the export of business support services contributes to the sustained growth of these countries.

The propensity towards the outsourcing of the accounting services stems from several trends that do not signal any fading in the near future. The globalization and the liberalized trade call for perpetual reduction of the cost of operations. Large companies in the developed world are not able to compete with high costs of accounting services in their home countries. In addition, the political integrations such as the EU and the economic associations such as NAFTA, by diminishing the regulation obstacles, significantly lower the perceived risk of outsourcing the financial accounting abroad. Finally, it seems that the shortage of workforce in the developed countries will continue to drive the outsourcing of many business services, including the accounting. By establishing themselves as reliable providers of highly valued business services, the developing countries can achieve faster growth. However, the major prerequisite for harvesting this opportunity is the development of the accounting profession that need to be adequately tackled by the formal education and the lifelong training of the

providers of these services. Many researches indicate on the existence of positive correlation between the sophistication of the accounting services in a given country and its economic performance and the level of development. Well-established national accounting system able to provide quality and standardized financial reporting positively affects the growth, which then induces even higher level of performance in a positive and valuable feedback.

All these global trends provide opportunity for Republic of Macedonia, too. The Country could develop considerable competitive advantage on the global market of off shored accounting and related services. However, Macedonia, due to its small size, is not easily identifiable on the macro outsourcing landscape, yet. The Country is not on the list of countries where the large companies usually locate their offshore accounting. Therefore, in this paper we examine the potentials of Republic of Macedonia to offer offshore accounting services, as perceived by the accountants in the country. To assess the level of awareness for the opportunities and the attitude of the accounting professionals towards the offshoring and near shoring of their services we survey a sample of certified accountants. It turned that they are, in general, familiar with the possibility of provision of various business services to companies abroad. Moreover, some of them already provide such services or know at least one colleague of them who does that. They also confirmed, maybe too optimistic, that they possess the necessary knowledge and skills. Respondents generally had favorable opinion on the readiness of their organizations to engage on the market of online services. Support from the state and networking skills were marked as weak. The results of the survey were triangulated with series of interviews of leading accountants in the country, and they confirmed the findings of the survey. However, they also called the State to help with fostering various forms of associating, clustering or similar resource pooling vehicles or bilateral agreements with some interested countries and that they would be able to accommodate to the foreign standards and specific national requirements, when it would be needed.

LITERATURE REVIEW

Accounting, as a mean of communication, reflects the economic and social progress of a country and its level of development, stated Kurosawa, back in 1938. The sophistication of the accounting in its wider context involving the quality of the

accounting education and training was subject of Enthoven interest since 1973. Based on his several consecutive studies of twenty countries of the Third World, in his book from 1981 he proposed framework for enlarging accounting knowledge as precondition for advanced social-economic policies. According to Randriamiarana (2015), the World Bank initiative for setting the International Financial Reporting Standards during 2000 stem from its doctrine of existence of links between the accounting and the economy in a given country. The Bank stated that the standards will act as important fosters for many developing countries to experience higher growth. The accounting is considered as condition for economic development by Pintaux (2002), too. He was studying the West African accounting system and the integration of that Region into the global economy. He found that the applied French-style accounting supported the development of these economies. Boka (2010), analyzed the accounting standards in various economies and their convergence with the International standards. He found that a better convergence supports the progress of a country and directs the future development and integration into the international economy. Any country or organization that strives to remain in the international market cannot afford to disregard the trend of international convergence. However, the convergence requires concerted and maximum effort on the side of the accounting profession to be realized, he noted. Recently, Deaconu and Filip (2017) studied the economic history of Transylvania, in terms of the evolution of the applied system of accounting, from 1541 to 1918. They found that the delay in the evolution of accounting mirrors with the lag in its economic development compared with the rest of the Europe of that time. They also notice that the gap narrowed by the end of World War One and that there is a link between the economic development and the proliferation of double-entry bookkeeping.

Outsourcing is a well-established concept in business. Many companies successfully transfer their business process or parts of it outside their premises. One of the common outsourced processes is accounting (Marcinkowska, 2015). While studying the outsourcing in the accounting industry, Daley (2008) stated that the firms have positive experience with the new service offering, due the variety of the available services and the decreased prices. The online platforms that enable the outsourcing of accounting are now much more secured and the workflow software has grown increasingly user-friendly, efficient, and cost effective, claims Daley. At the McKinsey

Global Institute (2012) list the liberalization and the advancement of the information and communication technologies as the two key contributors to the decreased perception of the risk related with the operations abroad. However, they also claim that the shortage of labor in the developed countries is the main factor for outsourcing to the low-wage locations, elsewhere. Even more important is that it seems that there is positive relationship between the quality of the business services in a given country and its growth performance (Mishra et al., 2012). They stress that the increases in the sophistication of the business services provide valuable foundations for sustained economic growth. Moreover, the offshore services are potential vehicle for low and middle-income countries to participate in the global knowledge economy. These services offer attractive compensation and career development opportunities for graduate professionals in these countries. Hence, they are important, not only for the employment, but also for the creation of additional demand for education, business formation and higher level of consumer services in these countries (Fernandez-Stark at al., 2011). These countries benefit additionally by adopting policies that increase the value-added of these services, improve productivity, eliminate obstacles to sophistication in many related service activities and promote service export performance (Mishra et al., 2012). Many other researchers and organizations also indicate that the developing countries, in general, should consider the introduction of offshoring accounting in their pursue for viable strategies for growth. The availability of appropriate human capital and adequate knowledge and skills, are the key prerequisites for that, claim at UNKTAD (2013), too. However, Kwacz et al. (2013) added some additional factors, when ranking emerging economies as providers of offshoring services, such as their overall business acumen and the type of the leadership.

Fernandez-Stark at al. (2011) expect the established trend in offshoring to continue, explaining it by the persistence and further intensification of the labor shortages in the developed economies, while the wage differences between the countries are likely to persist. Admittedly, the emerging economies will likely remain the most desirable sites for offshoring, because of their large young talent pools and their lower wage costs. Greater investment in education, coupled with shortages of qualified talent in developed countries, will continue to constitute critical advantage for the emerging countries, they claim. According to Daley (2008), the phenomenon of

outsourcing has engulfed the entire accounting industry and now offers wide range of services, starting from bookkeeping, accounts payable, debt collection, billing and invoicing, ending with complex tax returns preparation. Cienski (2013) considers the countries of the Central Europe as the most attractive providers, since they are in the European Union and thus have to share common legal code, have well-educated population, are fluent in many languages, while their labor costs are still lesser than that of the rest of the Europe. He argues that, while the labor rates remain significantly lower in case of India, China and Philippines, the European offshore destinations by sharing the same business culture and the time zone, with the major European business centers, are the best candidates for the higher-valued "near shoring" arrangements and investments. Fernandez-Stark et al. (2011) suggest that the policy-makers in the case of the countries providers, while evaluating their workforce development policies, should consider the rapid evolution and the high competitive nature of the outsourcing industry, calling for much more in-depth understanding of the workforce profiles needed for these higher-level services. Moreover, the skills and the qualification of the workforce effectively determine the point of entry and the market potential for growth of these the host nations. They also suggest a combined institutional approach and collaboration between the business, public authorities and education sector in narrowing the gaps between the demand and the supply of labor able to meet the global standards of these services.

Global Services Forum Report (2013) indicates Ireland as the first offshoring location of choice, followed by India and Philippines. Since the subcontracting aims on reducing costs, enhancing efficiency and allowing concentration on core activities, the Report sees a trend of trade-ability of the offshore services of the emerging economies in coincidence with the greater competitiveness and the cost-cutting pressures in the key sectors of the developed economies.

The McKinsey Global Institute (2012) new growth model for CEE countries identifies the outsourcing as one of the three major opportunities for CEE-nations to raise both the volume and the value of their export. The Report underlines the need of targeted investments in education and development to capture more high-value-added outsourced work will require, as well as, engaging in international marketing efforts and sharing best practices in the industry. Outsourcing is expected to grow regionally, aided by the financial crisis in Western Europe, which is pushing companies to shift

some expensive functions to the east of the continent. In the latest A.T. Kearney Global Services Location Index (2016), the countries from the CEE region are still among the top 40 destinations for global outsourcing. They all, except Bulgaria, even further improved their respective indexes compared with the 2015 Report. The index is made up from three categories: (1) financial attractiveness, (2) skills and availability of staff and (3) respective business environment. Their Report shows that the Polish market has grown by 50%; that 66 new business process outsourcing centers have been established in the country; that 18,000 new jobs have been created, marking the Country 10th best offshoring location in the world. Romania jumped five places and currently is thirteen, while Bulgaria slipped three and ended twelve. The fast-developing SEE Region holds approximately 8% of the global off-shoring market. However, these countries can still take more according to the Association of Business Service Leaders (2014). The developing countries should consider the off-shoring service opportunity in their strategies for growth as well. One of the most important challenges for it, according to IDC (2012), is availability of human capital and adequate skills. Kwacz at al., (2013), consultants from Tower Watson weight the talent availability (workforce availability and education & innovation) with 40% among the rest of the criteria and factors when ranking the emerging economies for services offshoring. According to the McKinsey's Global Institute Report (2012) the offshore talent pool exceeds that of the high-wage countries by a factor of two. Only Russia has almost 10 times more finance and accounting professionals than Germany, for example. However, only 13% of this talent supply from the low-wage nations is suitable to work for multinational companies. The lack of appropriate language skills, the inability of the educational system to convey the needed practical skills and the lack of cultural fit and readiness for high workload and flexible working hours are the main reasons for that situation, claim at McKinsey. Many researches indicate that the university graduates from the Eastern European countries are well suited to work for multinational companies; the closing of the skills' gap will remain to be the essential prerequisite for offshoring of the advanced business services. Even in the case of the countries in which education provides modern skills, according to Fernandez-Stark et al.(2011) the majority of the workers still need extensive on the job training in order to meet the high-quality standards required for serving the global market. Moreover, the companies today look for additional skills and knowledge, much beyond the pure

accounting technicalities. They look for critical thinking and strong decision-making and analytical skills. They also value communication skills and work in teams, look for integrity, high ethics and sense of personal values, skills that are difficult to be "automated" (Crawford, 2016). While the offshoring saves costs and allows the clients to focus on their core competencies, it also poses risks to the clients. To mitigate these risks clients and their offshore vendors need to effectively establish adequate internal controls for off shored business processes. Clients seek vendors who have appropriate processes in place and are willing to provide Service Organization Control (SOC) Report, or at least are capable of getting such report in due course. (Mohapatra at al., 2015). Finally, the offshoring of the accounting is usually accompanied with similar offshoring of the audit processes. Based on a search of the auditing practices of PwC, Hywel Ball and Ernst and Young, Perrin (2017) concluded that the off shored auditing could easily present issues regarding the compliance, resulting with tarnished quality of the audit work due to a lack of consistent regulatory oversight.

METHODOLOGY AND LIMITATIONS

In order to get better insights into the attitude of the licensed accounting professionals in the Republic of Macedonia in relation with the issue of offshoring and near shoring of their services, we conducted a survey based on a structured questionnaire in which we introduced some open questions in order to get more direct input and practical advice from firsthand. We sent questionnaires directly to biggest accounting service providers based on the number of employees and the income reported, mostly located in the capital of Macedonia and received 40 answers out of 150 sent questionnaires. The needed minimum for statistically relevant conclusions is 57. However, this does not implies that the answers are not valuable in surveying the prevailing attitudes towards the issue and the explanation for that might be that the people who responded are those who are, or at least, think that can be ready to enter this demanding market, or even those who already have some experience in this domain. The interviews that we held with the selected professionals indicated on several open issues yet to be properly addressed, including the lack of organized state support on the matter. Another important limitation of our research is the fact that the survey questionnaires were disbursed electronically and the participants who decided to answer our survey might be *a priori* biased positively on the issue, while others who

are more critical might opted to stay silent. This particularly having in mind the very low response rate (invited/answers collected ratio is only 26.7%).

RESULTS OF THE SURVEY

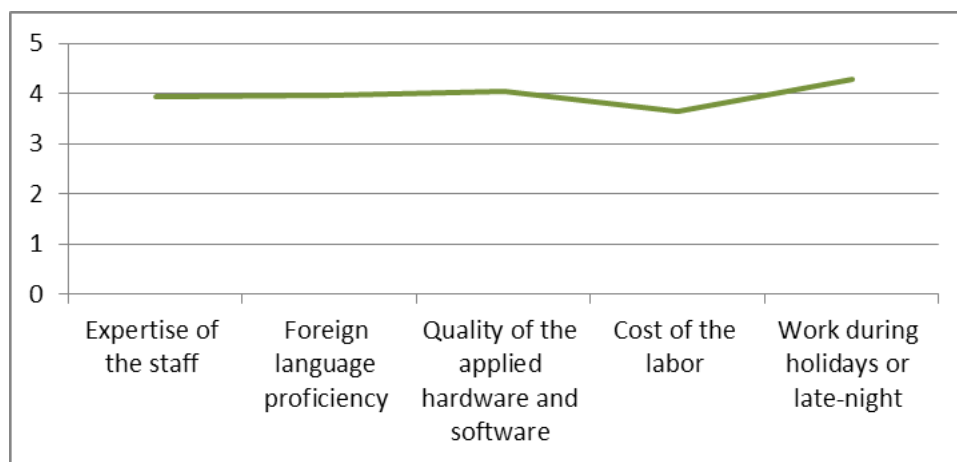
Republic of Macedonia accepted the International Accounting Standards in 2005. The Institute of Chartered Accountants was established in 2012 and is authorized for certification of the accountants and their continuing professional education. Regarding the talent availability, the Country has a relatively well-established system of education. The universities offer accounting courses as part of economics and business administration programs and advanced courses for accounting and auditing majors. The number of students in the business schools, in 2013 was 8,473, out of which 1,344, or app. 16% studied accounting, auditing and finance programs. The cost of accounting services is low. The annual cost per worker in business support services in general, is app. 4,000 euro (State Statistical Office, 2014). The comparison with other countries shows that the accountants in Republic of Macedonia are paid less than in any other country, except those in Philippines and China (worldsalaries.org).

In order to get better insights into the attitude of the accounting professionals in the Republic of Macedonia in relation with the issue of offshoring and near shoring of the services, we sent 150 questionnaires and collected 40 answers. The surveyed accountants were fully familiar with the possibility of giving various business services abroad, 47% heard about that opportunity and only 12% are not aware of such a possibility. Nearly one-third of the respondents (27%) know some local accounting firm or their clients that provide services to companies from abroad. However, only 24%, or almost one out of five has experience in providing services to companies abroad.

The interviewed accountants listed almost all accounting services: data processing, entry, invoicing, calculation of taxes, payroll, but also risk management, computer networking, marketing, design and consulting, as actually provided abroad. The most mentioned country as offshoring destination are: U.S. and Sweden, 6 times, followed by Bulgaria 2 times and England, Denmark, Greece, Slovenia, Serbia, Croatia, Canada, UAEs, Albania, Hungary and an unnamed country in Africa.

Respondents generally have very favorable opinion on the readiness of their organizations to engage on the market of online services. Therefore, in terms of the expertise of the staff, 44% gave the maximum grade 5 and the average reached 3.94. The foreign language proficiency of the staff is ranked high, with an average mark of 3.97. The quality of the applied hardware and software got 4.03. The cost of the labor, or the competitive advantage in these terms that the Republic of Macedonia has in comparison with other similar countries, got average mark of 3.65. Readiness to work during local bank holidays or late-night shifts got very high 4.27.

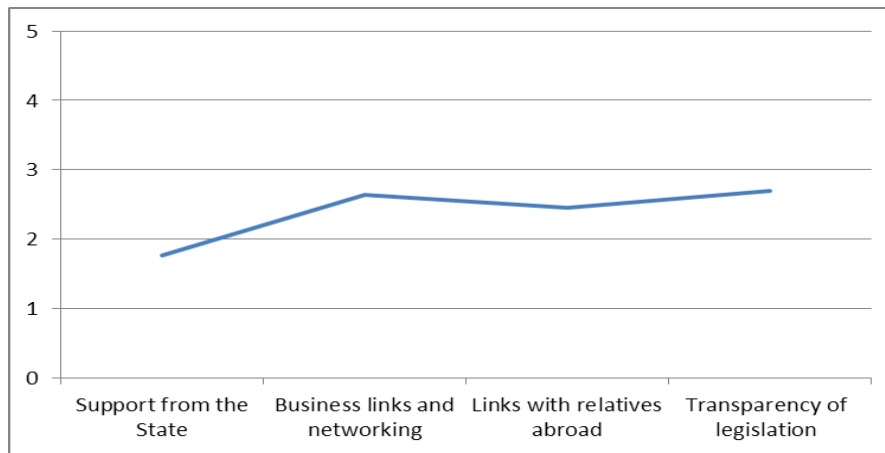
Chart 1 Assessment of the participants of the capacity to provide the offshoring services



Source: Compiled by the authors

Asked about the level of support from the State for exploiting the market opportunities for online services abroad, the average rating of 1.76 is demoralizing. Moreover, 25% of the respondents the support of the state assessed with 1 (practically no support) and none of the respondents give 4 or 5. The transparency of the legislation for these services got slightly better mark (2.70). The business links and networking of accountants and their clients that could be used to initiate such businesses got modest 2.64. Similarly, are marked the links with the relatives abroad (2.45).

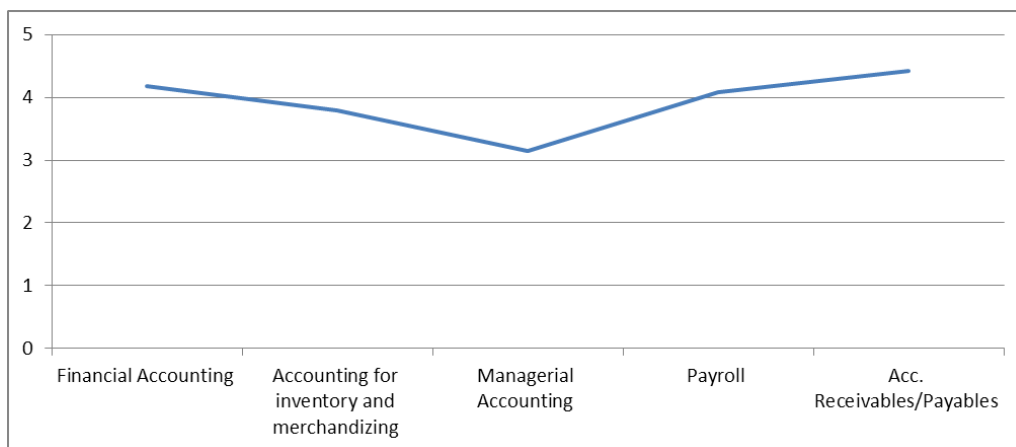
Chart 2 Assessment of the capacity to provide offshoring services (cont.)



Source: Compiled by the authors

In terms of the assessment of the market potential in certain common accounting services, respondents believe that the financial accounting has good potential (4.18), accounting for inventory and merchandizing got 3.79 and managerial accounting 3.15. The payroll (4.09) and accounting for receivables and payables (4.42) are highly rated in terms of their market potential.

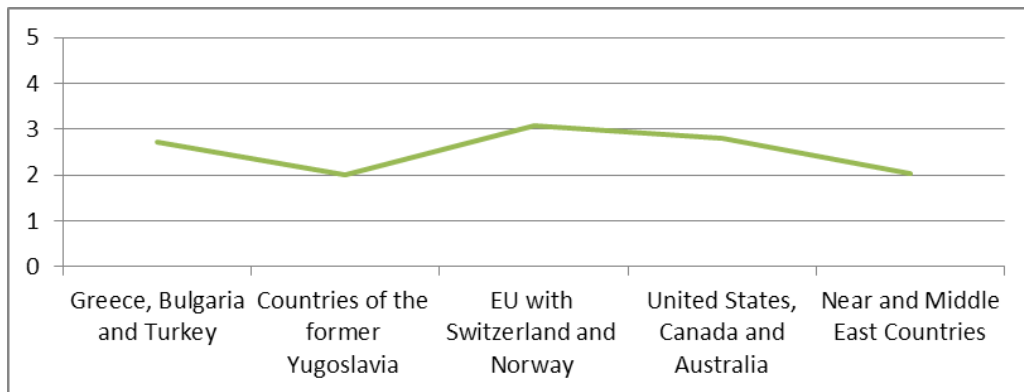
Chart 3 Assessment of the market potential by type of service



Source: Compiled by the authors

Asked to assess the market potential of certain countries or parts of the world that might be open and ready to contract with some accounting company from Macedonia, the countries from the nearby neighborhood, Greece, Bulgaria and Turkey, received 2.73. The countries of the former Yugoslavia were assessed with 2.00. Countries from EU, Switzerland and Norway were assessed 3.09. The United States, Canada and Australia received an average grade 2.79 and those from the Near and the Middle East 2.03.

Chart 4 Assessment of the market potential of certain countries



Source: Compiled by the authors

On the open question “what the professional associations and the State should do to encourage the development of this type of services” a range of answers was obtained. Most interesting are the requests for promotion and advertising of the country in foreign media, training and education for development of this kind services, Internet portal companies will present in an organized way their potential (number of authorized accountants who meet the criteria for working for foreign firms, professional certifications, appropriate software, etc.). Then, there are requirements to facilitate access to the legislation of foreign countries to enter into appropriate agreements with other countries and to organize seminars, training courses and learning materials regarding the regulations of the foreign countries. Others ask for professional associating or clustering of the all interested to work with companies abroad accountants. However, there was one statement, more introspection, about the prevailing attitude: “Accountants in the country need to get out of their comfort zone!” During the interviews with some of the leading accountants, they confirmed the main findings of the survey. However, they claimed that there is lack of sales leads and the state should try to help sign bilateral agreements with interested countries since they are able to accommodate to the foreign standards and requirements. The State should be interested since it will boost the Country Gross Domestic Product. Some of the accountants suggest focusing to the near shoring. Other stress that the Country, although works with the IFRS, is out of the EU. That fact and the lack of proficiency in non-common foreign languages might be serious obstacles. The Chamber of Accountants develops an initiative for setting of a national platform that will serve as a hub organization for offshoring.

CONCLUSIONS AND RECOMMENDATIONS

The research shows that the sophistication of the business services, including the accounting, provides a valuable foundation for their sustained growth. Countries of Central and Eastern Europe, including the Republic of Macedonia, are attractive destinations for accounting services, since they share the common legal environment with the rest of the European Union; people are fluent in foreign languages, while the wages are still considerably lower. Moreover, these economies will likely remain desirable sites for offshoring, due to their large, young talent pools and the lower cost of the labor. However, in the case of the Republic of Macedonia, while the majority of the surveyed accountants are familiar with the possibility of giving various accounting services to companies abroad and that they have the needed expertise, there is a lack of providers for training and education for some of widely professional accounting designation. Moreover, the foreign language proficiency is often limited to the English. Similarly, the surveyed accountants think that the cost of the labor is not their main competitive advantage. The widely available wages comparison provided by Worldsalaries.org proves entirely the opposite.

The very high readiness to work during the holidays and late night is in accordance with the traditional image of the accountants as eager burners of midnight oil. However, it might not be enough today, having in mind the low assessment of the links and networking with counterpart companies and people from abroad, one of the main motivators for international operations when small business is considered.

It is indicative that the accounting profession in the Country claims that the support from the state in relation with this opportunity is either missing or is very weak. The associations should try with active lobbying to establish regular dialog with the Government that will result with concrete initiatives for international networking at all levels (local, national or regional). In these terms, advice is to organize some sort of accounting cluster as provider of shared practical business support services necessary for provision of offshored accounting.

We support some of the leading accountants in the Country, who claim that the state should try to help the process of outsourcing with bilateral agreements signed with some interested countries. However, we stress that there are many other issues that need to be addressed by the profession, itself. First of all, the training and the continuing professional education must not be treated in a formal way, like it is now.

Moreover, the accounting professionals should try to gradually raise the prices of its services, allowing the wages of accountants to grow simultaneously. Finally, the professional association should approach some of the widely recognized franchises of advanced accounting training, in order the country to create pool of internationally accredited accounting professionals that will lead the outsourcing business.

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SDRs (SPECIAL DRAWING RIGHTS) AS COMMODITY MONEY OR SDRs AS A BASKET OF NATIONAL CURRENCIES?

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ABSTRACT

The interest in creating a global currency intensifies itself during the period of crises and when looking for permanent solutions to get out of it and overcome its consequences. This implies that the absence of a global currency i.e. the functioning of the most developed countries' national currencies in such a role leads to serious problems both in the national economies, and the relationships between them. Consequently, an opportunity of improving these situations is most often found in the revitalization of SDR. However, it is predicted which type of SDR it is spoken about: SDR as commodity money or SDR as a basket of national currencies. It is not all the same which type is preferable. In this paper, it is discussed about the achievement of both types given the differences in their inner logic of development as commodity money, and the consequences of their implementation.

KEYWORDS: global currency, system of gold standard, SDRs as a commodity money, SDR as a basket of currencies, fixed rates, floating rates

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1. INTRODUCTORY REVIEW

It is imposed an alternative view of SDR because both types are substantially different. The SDR as a global currency whose value was determined by a certain weight of gold is in accordance with the inner logic of the development of money in terms of measuring simultaneously the commodities' values both on the domestic and foreign markets whereas that money role is absent in terms of the SDR as a basket of national currencies with floating rates between them, to be more precise it is reduced and deformed. The value of the currencies being out of the basket is determined either in terms of the value of one of the national currencies in the basket or the average value of the currencies in the basket. The measure of prices changes because of the rates' fluctuation. And while the multilateralization of relations between separate national economies is inherent and primary for the SDR as commodity money, the SDR as a basket of national currencies with floating rates between them generate tensions between national economies, an undertaking of measures of protectionism, and threats of currency and trade wars if their oscillations are high.

For the sake of the truth, the on-going negative economic phenomena and processes are not a consequence of the SDR's functioning as a cocktail of currencies because they are marginalized as a global currency in the existing relations. The SDR as commodity money has had such a fate too. This means that even if it came to an increase in the SDR's role as a currency basket with floating rates in the cross rates of exchange, the unfavorable effects upon multilateralization would not be avoided, but it would just begin the reduction of the domestic currency's role (the dollar) depending on the change of the relation between the economic forces of those countries whose currencies comprise the basket. However, by creating the SDR as commodity money with all its functions, the processes of multilateralization would be instigated against the current strengthening of protectionism and autarchy. This is of essential significance if one really wants to create a global currency and on the basis of that to reform the IMS.

Treating the currency basket as a final solution for a global currency is unsustainable. It does not serve in honor of the economy because the currency basket is a child of conscious or unconscious veering off the road being marked out by the inner logic of the development of money in the course of the objective process of its dematerialization.

According to the inner logic of the development of money, it is obvious that national currencies are not a proper substitute for the global commodity currency. Under conditions of floating rates in the cross rates of exchange in the world, the national currencies as always present a means of manipulation both in the national economies and the relations between them. And the global commodity currency which relates the national currencies with fixed, but adjustable rates of exchange extorts a fight for a constant improvement of the economic subjects' competitive ability both on the domestic and foreign markets.

A research in terms of this problem will be followed through the achievement of gold as a monetary commodity and also as national and world money. Afterwards, we will address the functioning of the gold exchange standard and its dilution up till the introduction of dollar standard practice because that development extorted the need of creating SDR as a commodity currency (1969) as a response to the dollar weaknesses in the functioning of the Bretton Woods International Monetary System, and as a compromise between the proposals for returning the gold standard validity (by abandoning the dollar price of the gold, Rueff), and creating a global currency whose value would be determined in gold and/or any other types of commodities, including the gold (Triffin, promoting Keynes's proposal for creating bancor). We will also address the reasons for the quick abandonment of that concept (after abandoning the dollar's convertibility into gold in 1971), the transition of SDR into a basket of national currencies (1974), and the reasons for their non-development. And, it will be pointed out in the conclusions that the real reformation of IMS can happen if the world comes back on the line of creating a global commodity currency in accordance with the inner logic of the development of money, and under conditions of the objective process of their dematerialization.

2. THE ACHIEVEMENT OF GOLD AS A MONETARY COMMODITY AND AS NATIONAL AND WORLD MONEY

The system of gold standard validity presents a top in the development of money as a commodity, and the money with a material value (the gold in the function of a measure of value and a measure of prices) which simultaneously perform other money functions:

a means of exchange (a means of transaction), a means of payment, a means of piling up wealth, and as world money. The value of the countries' monetary units was determined in a weight unit of gold (grams), whereas the relations between them determined their par of exchange.

Those monetary units which have increased the commodity salesperson's security can unobstructedly procure other commodities or services in the volume of alienated commodity by using the received gold money. However, nor does physical money give an absolute guarantee. A certain insecurity results either from the price change of the gold as a commodity, or from the change of the general level of prices. Moreover, these changes present a result of the functioning of market forces and they do not bring into question the measure of prices. One gram of gold is always one gram of gold, and it refers equally to all commodities even though its value as a monetary unit can be increased or decreased depending on the growth or fall in prices of the gold as a commodity or at a general level of prices, but never as much as it is the case with the value of monetary units in the systems of paper standard.

In the countries with gold standard, nominally, everyone could count on a longer period of time that any commodity may be either sold or bought on the global market under the most favorable conditions. That possibility was a signal of directing rationally both the production and purchases of each subject at the global market. It extorted and enabled the inclusion of the national economies into the global one according to their comparative advantages. Consequently, it was achieved the highest growth in terms of the previous periods and it lasted a longer period of time in those areas where gold standard validity had been functioning. The functioning of the system of gold standard validity had led to the highest degree of integration of the global economy, and retrograde processes went along with its dilution.

A key framework for the functioning of the gold standard validity was the free functioning of the market regularities, the forces of supply and demand under conditions of free competition both at the national and global markets including the gold both as a commodity and money. This means that the success or failure of the business depended upon its rational inclusion in the markets, and its competitive ability which was attained and improved by increasing the labor productivity, work efficiency and innovative

activity. The failure of providing a place under the sun of the global market had led to bankruptcies of non-competitive firms and crises in separate countries which reflected themselves on other countries too, depending on the problems' size.

A basic assumption about obtaining benefits from the functioning of gold both as a commodity and money i.e. of the system of gold standard validity is by obeying the rule of giving an advantage to the external stability in the national economies.

The results of the functioning of gold standard validity are so attractive that it has been imposed as a possible solution to all reforms of IMS. The global currency's absence and the national currencies' problems in such a role have been bringing it back in "the game" continuously, and not without reason. Dr Vjekoslav Meichsner was right when he wrote that "it can be said without exaggerating that there is no other monetary system which is so theoretically and consequently well- elaborated as it is the gold standard validity. The gold standard validity as a practical monetary system is actually historically conditioned, but it is perfect for a theoretical construction in such a measure that it can serve as an example to the future monetary systems".¹

3. INFLATIONARY INTERESTS HAVE BEEN ENGRAFTED AS A SUPPLEMENT BY TRANSFERRING FROM A GOLD SPECIE STANDARD TO A GOLD EXCHANGE STANDARD

The special drawing rights' creation and development had been sharing the fate of changing from a gold specie standard to a gold exchange standard in the period between the two world wars and in the post-war IMS (at the very beginning – a dominant gold dollar standard), and finally, the change-over to a dollar standard, and floating rates in the cross rates of exchange in the world after the abandonment of gold as commodity-money.

The inner logic of the development of money was terminated in the First World War cataclysm. By preparing for a war and making efforts to treat its consequences, it came down to an abandonment of the rules of the system of gold standard validity, unilateral corrections of the parity of value, and overtaking different external trade and currency

¹Meichsner Dr Vjekoslav (1958), Osnovi nauke o novcu (Basic science of money), p. 182, University - Skopje

restrictions in separate countries. The international monetary relations worsened themselves even more after the Great Depression's outbreak because thus, it imposed new problems to be solved both in separate countries and at an international level, especially in terms of the unemployment's reduction, and the acceleration of the crisis exit.

The International Monetary Conference whose focus was placed on solving the deficiency of gold was held in Geneva in 1922, right after the World War I, in a period of deeply violated economic and political relations. There was developed the idea of accepting the foreign currencies, which were freely convertible into gold as a component of the reserve base. And Jacque Rueff² said "from this idea the gold-exchange standard was evolved as an adjunct to, rather than a substitute for, the gold standard." However, along with the supplement, it was born the idea of using the gold exchange standard as a factor of expansion through the credit facilities it creates. Thus, it was opened an opportunity for the countries with gold convertible currencies to create a deficit in the balance of payments without taking any measures for restricting the purchasing power which was an inevitable need for the gold standard. That was possible given the fact that any deficit in the balance of payment which had been coming back in the USA and Great Britain, as Rueff says "produces a duplication of the world's credit base." By applying this idea, it was withdrawn from the rules of the system of gold standard validity and deviated from the inner logic of the development of money. It was opened a way of embedding inflation within the system. And, instead, as a supplement which would enable the continuation of the functioning of the system of gold standard validity, the gold exchange standard had become a monetary system of the West which fell apart in 1931, in the echo of the Great Depression.

4. BRETTON WOODS GOLD EXCHANGE STANDARD

It is symptomatic that despite the unfavorable experience from the functioning of the gold exchange standard, in the process of making efforts to promote the international and economic relations after World War II, it was agreed on IMS on the basis of the gold exchange standard in Bretton Woods. By maintaining the gold within the system, it was

² Jacques Rueff: *The Monetary Sin Of The West*, The Macmillan Company, New York, New York, 1972

shown readiness for establishing a multilateral system of international payments which would replace the former gold standard validity. Multilateralization of payments was based on maintaining fixed rates of exchange and convertibility of national currencies into gold or dollars convertible into gold, similarly to the system of gold standard validity, but with certain corrections. A significant correction is the fact that the obligation of establishing convertibility of national currencies referred to the payment of balances from current transactions. The Bretton Woods gold exchange standard's main characteristic can be seen in the Statute of IMF where it is stated that "every member's par of exchange would be shown in gold as a common denominator or in U.S. dollars, with weight and purity of validity on 1st July, 1944."

By making such a decision, it was carried out an intervention in direction of the functioning of the Bretton Woods System of gold exchange standard as a gold dollar system even at the very beginning of its functioning. It had come to a reversal before the start of the Fund's working – 1947, and after the decision of the U.S. Treasury's secretary Carl Snyder to inform IMF that the USA would buy out dollars at the cost of 35 dollars for one ounce of fine gold.³ There is no doubt that the gold-exchange system (established by the Fund's Statute) would be functioning without any bigger problems while the USA had gold at their disposal and they were ready to convert the foreign dollar demands into gold. However, that would last much more shortly than it happened with the determination of the gold's dollar price. This move opened a process where the dollar overtakes the gold's function as world money, and the gold is reduced to a commodity (a unique one with a fixed dollar price). It was created an illusion that the dollar is as valuable as the gold. This can be considered true as far as the conversion of the foreign dollar demands into gold was carried out without any problems. However, the illusion was lost along with the creditors' first dissuasions from the conversion of their dollar demands into gold, through application of soft and hard power. The aggravated conversion of dollar demands into gold brought into question the justification of the gold's fixed dollar price's determination, and it was undermined by the growth of the

³ Jean Marchal: *Le system monetaire-nternational-de Bretton Woods aux changes flotants du "serpent monetaire" au SME 1944-1979*, Cujas, Paris, 1979, p.32

prices' general level in the USA (irrespective of the reason for the growth's occurrence), and the dollar's devaluation in relation to the gold.

Because the huge efforts for stabilization of the dollar had not given any results, the creditors' dissatisfaction was increasing, and the USA problems with the dollar's value were sharpening themselves. The ideas of finding a permanent solution for the international monetary system were renewed. Prof. Robert Triffin's⁴ critique of the gold dollar standard's indefensibility and the proposal for creating a global currency, instead national one in the function of the world money, were in the limelight. Triffin's diagnosis of the problem is known as "Triffin's dilemma". According to the professor, the weakness of the system is that in order to improve international liquidity (in terms of a fixed gold price), the United States must increase the deficit in the balance of payments, and if they try to balance it, they have a negative impact on international liquidity. This means that it has to be reformed the IMS, and to be found a new international currency for overcoming both the international insolvency and the inflation problem stemming from the functioning of national currencies as international reserve currencies. In 1969 the disputes on reforming the IMS resulted in a proposal for creating Special Drawing Rights (SDRs) as the first step of the IMS reformation, being on the line of building a new one with a world monetary unit.⁵ Its value was determined in gold. The par of exchange was equal to the dollar's gold parity (1 SDR = 0.888671 grams of gold) whereas the gold's fixed dollar price of 35 dollars for a fine ounce remained unchanged (in spite of the indications that the price is unreal). The idea of making the SDRs a central means of reserves for IMS was not realized. It was only acknowledged the need for creating a global commodity currency (even as paper gold in accordance with the objective process of dematerialization of money). However, the way of their emission and distribution did not make any contribution to the settlement of the problems emerging from the functioning of the gold dollar standard. They became underdeveloped in favor of the functioning of

⁴ „I forecast that if the United States corrected its persistent balance-of-payments deficits, the growth of world reserves could not be fed adequately by gold production at \$35 an ounce, but that if the United States continued to run deficits, its foreign liabilities would inevitably come to exceed by far its ability to convert dollars into gold upon demand and would bring about a "gold and dollar crisis." (Robert Triffin (1978), *Gold and the Dollar Crisis: Yesterday and Tomorrow* International Finance Section. Department of Economics Princeton University, Princeton, New Jersey, p.10)

⁵ „The brilliance of the SDR solution is that it *solves Triffin's dilemma*" (Jim Rickards (2015), 'Triffin's Dilemma' and the future of SDRs, *Capital & Conflict*, 30/09)

the dollar and other national currencies. And why Prof. Triffin gave a discerning answer when he said that “the American negotiators of the SDR agreement desperately tried to shape it in such a way as to make it “better than gold, but not as good as the dollar”—a squaring of the circle, indeed!”⁶

However, this did not last for long since the Americans revoked the convertibility of the dollar into gold and moved on to a dollar floating rate in the cross rates of exchange in the world. Thus, they put an end to the gold exchange standard (even with a privileged position of the dollar) and considering the dominant position of the dollar in the international payments and reserves they extorted the world to change over to an international paper-dollar standard. Hence, the value of national currencies is determined according to their purchasing power, and the currency convertibility is reduced to a convertibility of one currency into other currencies in the course of floating exchange rates. It was made a change in the SDR’s valuation under such conditions in 1974. They had become a composite reserve unit or i.e. “a cocktail currency” whose value was based on 16 currencies and above all, of those countries which took part in the international trade with 1%, and the dollar itself with 33% of the SDR’s value. Later on, the basket reduced itself to 4 currencies, and in 2016 the Chinese yuan was included in it. By having made such changes, the IMS became “a non-system” because it had deviated from the inner logic of the development of money. Instead of developing on the basis of the commodity rules of money in the system of gold standard validity and the contractual rules of game like the ones in the Bretton Woods System i.e. as it was imposed by the inner logic of the development of money, it was made an approach to the relations of bare force in the competitive economies which finally resulted in the Great Depression’s outbreak and the strengthening of protectionism and anti-globalism.

5. COMPARATIVE CHARACTERISTICS OF SDR AS A GLOBAL COMMODITY MONEY AND SDR AS “A COCKTAIL OF CURRENCIES”

An alternative perception of SDR imposes itself due to the fact that both types, the SDR as a global commodity currency (no matter if it is material or immaterial), and SDR as “a cocktail of currencies”, are essentially different. A sin of the economic science

⁶ Robert Triffin, *Ibid.* p.16

presents the fact that it ignores the differences, over passing the scientific argumentation about the final unfavorable consequences, and satisfying itself with the view according to which “any proposed policy—or past policy—must be judged in terms of how it will in fact operate, not how it might operate under ideal conditions”⁷ even despite the more and more expressed contra-productive effects both in the national economies and at a global level.

Examined separately from the aspect of creating a global currency both types of SDR look as if they are equal alternatives. Nevertheless, if we look at them through the prism of the sense of money both in the national economies and at a global level, then it can be seen that the SDR as commodity money is on the line of the development of money in the course of the objective process of its dematerialization, and the creation of SDR as a basket of national currencies presents a serious deviation from the way rising out of the inner logic of the development of money, leading towards the creation of a global currency, since the global one reduces itself to national currencies, and that is “*contradictio in adjecto*”.

The differences can be understood if it is followed the inner logic of the development of money. According to that logic, the money having a material value has reached its pinnacle in the system of gold standard validity with the gold as a commodity and as money both at a national and global level at once. Because of the objective process of dematerialization of money, the process of following that logic has to end up with a creation of a global paper currency like the way it happened with the functioning of the national paper currencies. However, owing to the fact that the situations and relations in the world are not at a level of forming a world government and a world central bank, that is a really untimely outcome. Actually, the world is still a lot far away from the creation of a global currency with no material value. Moreover, if the existing practice of solutions for the national currencies in a function of global money persists, then it is certain just the instability in the national economies and in the relations between them.

⁷ The cited above is taken out from the conversation between Milton Friedman and Robert Mundell, in which Friedman justifies the change-over from fixed to floating exchange rates. In relation to the unsustainability of the new regime of rates of exchange, Mundell brought in a complete argumentation, striving for fixed rates of exchange between the currencies which would comprise the global currency.

The moment when both types of SDR were initiated, they were assigned an important role in the international financial reforms. However, they did not develop themselves in the desired directions. It was not created a space for them to show, as Mohamed A. El-Erian said, their “potential contributions”.⁸ Because of the restrictions in their role, they remained underdeveloped. Speaking concretely about the composite global currency, El-Erian states that “the result is a substantial gap between the SDR’s potential and its performance”. They became underdeveloped after there had been made the first decisions for their allocation as reserve means. Also, they did not revive themselves in the function of global currencies (not even as more significant reserve currencies)⁹, giving their place to the national currencies of the most developed economies individually or as a mutual currency in most of the countries (the euro). And instead of overcoming the problems arising from the absence of a global currency (currency wars, balloon economies, global imbalances, an increase in the protectionism and the anti-globalization processes), they accumulated and erupted in the Great Recession.

5.1 The SDR’s creation as global commodity money presents a step forward in the development of money in accordance with their inner logic

The international community made a real move towards the creation of a global currency contrary to the dollar as a national currency in that function by creating SDRs as a global commodity currency whose value is determined by weight units of gold. Another issue presents the fact that the SDRs were not given the chance to develop themselves in that direction, and thus they remained underdeveloped even in the momentarily most important role as a supplementary means of international monetary reserves.¹⁰ In fact, the SDRs were not put at the height of their power because of the restrictions of their allocation and the scope of their use. And this is in the interest of the currencies being dominant in the world’s monetary reserves.

⁸ Mohamed A. El-Erian (2017), New Life for the SDR?, Project syndicate, APR 24

⁹ Andrew Sheng, Xiao Geng (2016), How to Finance Global Reflation, Project Syndicate APR 25

¹⁰ „Before the recent global financial crisis, the SDR accounted for only 0.5% of international reserves. Even after substantial allocations in 2009 – intended to supplement IMF members’ foreign-exchange reserves and strengthen their capacity to weather the crisis – its share peaked at a mere 3.7%. In short, the SDR is used less as a reserve asset than as the IMF’s own unit of account.“ (Harold James, Domenico Lombardi (2015), Modernizing the IMF, Project Syndicate, JUL 8)

By determining the SDR's value by certain weight units of gold and the national currencies' obligation to determine their value in certain weight units of gold, IMS was formally brought back on the line of the system of gold standard validity, of course, under the conditions of dematerialization of the money. It is another issue how much serious the intention was considering the rapid replacement with a basket of currencies, whereas the name stayed unchanged as if it was a matter of identical institutions even though they were so different. However, by using the SDR as paper gold, it was recognized the attraction of benefits from the functioning of the gold standard validity both in terms of the national economies and the global one.

By using the SDR as paper gold, it was simultaneously enabled the measurement of the commodities' values both on the domestic and foreign markets. That currency implied an intensification of the international collaboration and integration being in the objective interest of the companies and the countries at once. And the obligation of maintaining fixed rates of exchange was a criterion for long-term politics of rational inclusion of the national economies in the international labor division, and an objective criterion for putting forward the relationship of the economic forces in the world. The global commodity currency which relates the national currencies with fixed, but adjustable rates of exchange extorts a fight for a constant improvement of the economic subjects' competitive ability both on the domestic and foreign markets. And the countries which make efforts to increase their competitive ability by devaluing their own currency actually do that to their cost. The global currency will help those types of politics to be easily exposed to the voters as unsuccessful ones in separate countries, and it will also change the holders of those types of politics. Finally, the privileges of the national currencies having an international role will start reducing themselves.

5.2. The SDR as “a cocktail of currencies” with floating rates of exchange deviated from the inner logic of the development of money

The creation of SDR as paper gold brought the IMS back on the line of the development of commodity money under conditions of dematerialization of the money whereas its transformation in “a cocktail of currencies” with floating rates of exchange between them deviated from the inner logic of the development of money which had been

following the SDR having a value determined by a certain quantity of gold. The value of those currencies comprising “the basket of currencies” determines the value of the global currency in a certain proportion. However, its value changes itself because of the price movement in those countries whose currencies comprise the basket of currencies as a global one.

In this context, the calculations made in terms of the estimation of transactions’ profitability are not the biggest problem. A problem presents the prediction that the floating rates of exchange are not an alternative of a consistent IMS¹¹ (taking into account the essence of money) and the fact that they also generate negative influences with far-reaching consequences.

There is no doubt that it would be better if fixed rates of exchange were established between the currencies in the basket because that would imply far-reaching implications in terms of the development of those national economies whose currencies comprise the basket and also in terms of the development of the global economy. Nevertheless, that solution for a global currency can only be an inter-solution up till the creation of a global currency with or without a material value which will measure the commodity values at a global level, whereas the value of all national currencies will be determined in relation to the global one having an obligation to keep the exchange rate stable.

By using the SDR as a basket of national currencies with floating rates of exchange, the commodities’ values cannot be successfully measured both on the domestic and foreign markets at the same time as it was possible when the currencies determined their value by a certain quantity of gold. The value of the currencies being out of the basket is determined either in terms of the value of one of the national currencies in the basket or in terms of their average value. However, a problem presents the fact that the standard of prices changes itself due to the fluctuation of the exchange rates of the currencies in

¹¹ “The choice between fixed and flexible exchange rates is an oxymoron. The alternatives are incomparable. A fixed exchange rate system is a monetary rule. A flexible exchange rate is the absence of that particular monetary rule and is consistent with price stability or anything at all, including hyperinflation. The real choice is between a fixed exchange rate monetary rule and alternative monetary rules such as inflation targeting or monetary targeting” (Robert Mundell and Milton Friedman, *One World, One Money?*, Options Politiques May 2001)

the basket. If the oscillations are high, then it comes to tensions between the national economies whose currencies comprise the basket of currencies, to an undertaking of protectionist measures, and threats of currency and trade wars. Instead of instigating a collaboration and integration, the SDRs as a basket of currencies weaken those processes under conditions of fluctuation of the exchange rates, and they extort an intensification of the tensions between the national economies which end up with a strengthening of autarky tendencies even in the most powerful economies.

By abandoning the obligation of maintaining a stability of the exchange rates of the currencies in the basket, it is relativized, let's not say, distorted the criterion for a rational inclusion of the national economies in the international labor division, and for a reconstruction on the basis of their comparative advantages. It is not the point that the currencies in the basket are paper money, money without a material value. Instead, they do have a value. Their value is actually in their purchasing power. However, a problem is the maintenance of the purchasing power's stability. Moreover, despite the inflation, the biggest problem is that due to its existence, the most developed economies needed an additional valve through the free fluctuation of the exchange rates of the national currencies in order to loosen the market forces and the undertaking of measures from the arsenal of state intervention, to keep the social peace or to achieve other political goals.

A global currency out of the basket of currencies with floating rates between them extorts processes of regionalization instead of globalization (if the currencies of other countries relate themselves to one of the currencies in the basket). That regionalization is at a lower level even than the multilateralization's degree in the international payments accomplished in the Bretton Woods System of gold exchange standard. Let's not mention the gold specie standard. It is instigated a protectionism instead of a liberalization, and a confrontation instead of collaboration and integration. The SDR as a cocktail of currencies presents a suboptimal solution in terms of SDR as a global commodity currency, even when the currencies' rates of exchange would become fixed, and the monetary government would have an obligation to keep them stable. It is a fact that the SDR as a cocktail of currencies are a currency, but it is not global money.

6. CONCLUDING REVIEW

The creation of the Special Drawing Rights (1969) is an attempt of returning on the way of creating a global currency as commodity money according to the inner logic of money. By determining its value as a certain quantity of gold, the SDRs have been put in a function of world money which will be emitted by IMF. Defined like that, they would have done all the functions of the money even though the first idea was to make them function as a non-national reserve currency whose emission would help the USA to start reducing the trade deficit (whose growth was justified by the need for increasing the international liquidity).

This idea failed after having abandoned the convertibility of the dollar into gold and transferred to floating rates of exchange (1971) and after having demonetarized the gold (1974). The world changed over to a dollar standard, and to a convertibility of one currency into other currencies in the course of floating rates. And as if nothing happened, it was made a transformation of the SDR as “paper gold” into SDR as “a basket” of more currencies. Instead of opening a way of solving the problems emerging from the national currencies which perform a function of world money (boiling their role down in the national economies), it was created the SDR as a basket of more currencies with the intention of lowering the instability of the exchange rates of separate national currencies by averaging the value of the currencies comprising the basket, regarding it as a more favorable solution for the other national currencies which will determine their value within the basket.

Examined separately from the aspect of creating a global currency both types of SDR look as if they are equal alternatives. Nevertheless, if we look at them through the prism of the sense of money both in the national economies and at a global level, then it can be seen that the SDR as commodity money is on the line of the development of money in the course of the objective process of its dematerialization, and the creation of SDR as a basket of national currencies presents a serious deviation from the way rising out of the inner logic of the development of money, leading towards the creation of a global currency since the global one reduces to national currencies, and that is “*contradictio in adjecto*”. Actually, a basket of more currencies is better than one currency. However, this presents more a statistic logic rather than an inner logic of money. And they are

essentially different. The SDR as a global currency whose value is determined by a certain weight of gold is in accordance with the inner logic of the development of money in terms of measuring simultaneously the commodities' values both on the domestic and foreign markets, whereas that role of the money is not present in terms of the SDR as a basket of national currencies with floating exchange rates between them. The measure of the value of those currencies being out of the basket is reduced to one of the basket's national currencies or to their average, whereas the measure of prices changes due to the fluctuation of the rates of exchange. And while the multilateralization of relations between separate national economies is inherent for the SDR as commodity money, the SDR as a basket of national currencies with floating rates between them leads to tensions between national economies, an undertaking of protectionist measures, and threats of currency and trade wars if their rates' oscillations are high, with the purpose of improving the competitive position of their own economies.

It is a fact that the world is far from creating a global currency without a material value. However, the remote perspectives on the final solution for creating an immaterial global currency extorted the finding of solutions emerging from the inner logic of money and leading towards an achievement of the final solution. In this context, as a result of the functioning of the global commodity currency (for example, the bancor) and the multilateralization which hypothesizes that currency, it is bigger the possibility that the world will start moving on the way of collaboration and integration whereas by using non-convertible national currencies or a basket of such currencies under conditions of floating rates, those processes get weaker, and the tensions between the national economies become stronger ending up with an intensification of autarky tendencies even in the most powerful economies.

After the demonetization of the gold, the unstable international monetary and financial relations have shown clearly that the national currencies are not a suitable substitute for the global commodity currencies.

It is obvious that the world needs to reconsider the idea of creating a global commodity currency (up to the moment of creating a unique world paper currency). Only by creating such a currency, it can be opened a way for overcoming the danger of currency

and trade wars. Only this can discipline the national authorities to lead politics of maintaining a stable internal and external value of the domestic currency.¹

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¹Basically, it is another issue why the authorities resort to measures which endanger the value of the national currency unit. However, it is a fact that the problems (reduction of the unemployment, acceleration of the economic growth) cannot be solved permanently with measures like these, and as a result of that, one resorts to such measures.

APPROACHES FOR ADJUSTING THE FOREIGN SUBSIDIARY'S FINANCIAL STATEMENTS TO THE EFFECTS OF INFLATION IN THE HOST COUNTRY

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ABSTRACT

This paper is dedicated to inflation and its impact on the international activities of multinational companies. Inflation is an economic factor that significantly affects the performance of multinational companies and is beyond the control of foreign subsidiary's managers. Therefore, if a multinational company wants to evaluate the performance of foreign subsidiaries and their managers, it needs to take into account the impact of inflation.

The aim of this paper is to provide an understanding of the issues of inflation in the host country and its impact on the financial statements of foreign subsidiaries. During inflation periods, the figures in the financial statements are inaccurate, which contributes to the misleading managerial decisions that affect the performance of the company as a whole. Therefore, in the performance evaluation process, multinational companies should take into consideration the influence of inflation on the financial statements of their foreign subsidiaries. Consequently, this paper shows and thoroughly analyses the separate approaches for adjusting the financial statements of foreign subsidiaries to reflect the inflation effects in the host country, namely the restate-translate approach and the translate-restate approach. Eventually, recommendations are given for a relevant approach for adjusting the financial statements to the effects of inflation in the host country.

On the basis of the obtained results, the contribution of this paper is reflected in the determination of the relevant financial statements adjusting approach to the effects of host country inflation that provides the evaluation of the actual performance of foreign subsidiaries and their managers.

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INTRODUCTION

Inflation has a major impact on the international activities of multinational companies and it is considered one of the key variables that should be taken into consideration in the process of performance evaluation. Inflation affects the financial statements of multinational companies, namely the balance sheet and the income statement, and contributes to inadequate operational decisions of management.

During the inflation periods, figures in the financial statements become inaccurate and contribute to misleading managerial decisions that later affect the overall performance of a multinational company. Therefore, it is very important for multinational companies to take into account the impact of inflation on the performance of foreign subsidiaries and their managers.

However, several surveys have shown that a significant proportion of multinational companies have not incorporated effective inflation adjustments into their performance evaluation systems. According to earlier surveys conducted by Persen and Lessig (1979), and later, by Terzioglu, and Watty (1999), it was found that only 30 percent of the surveyed multinationals incorporated inflation adjustments into their performance evaluation systems. Such inflation adjustments are mostly made for subsidiaries located in hyperinflationary economies (Rathore, 2008).

This paper highlights the importance of the issues of inflation in the host country and its impact on the financial statements of foreign subsidiaries. In this context, it shows the advantages and disadvantages of separate approaches for adjusting the financial statements of foreign subsidiaries to reflect the inflation effects in the host country, namely the restate–translate approach and the translate–restate approach. Finally, from the performance evaluation point of view, the recommendations are given for the relevant approach for adjusting the financial statements of foreign subsidiaries to the effects of inflation in host countries. The recommended approach provides the evaluation of the actual performance of foreign subsidiaries and their managers.

In light of the above, the applied methodology consists of qualitative research techniques, such as analysis, comparative analysis, and synthesis.

1. LITERATURE REVIEW

Inflation is a state of the economy in which prices are rising, but the value of money is decreasing. Inflation is defined as „a persistent, substantial rise in the general level of price related to an increase in the volume of money and resulting in the loss of value of currency“ (Acton, 2016, p. 144). Through its impact on interest rates, exchange rates and cost of living, inflation contributes to the decrease of general confidence in the country's economy (Neelankavil, 2007).

Inflation rates in host countries, compared with those in the home country, have two main consequences for multinational companies: 1) Inflation has a significant impact on relative interest rates and exchange rates and 2) inflation affects future production costs both at home and in the host countries where a company has decided to expand its operations (Brigham & Houston, 2016). The direct relationship between inflation rates and interest rates is particularly significant. The high inflation rate followed by high-interest rates discourages the companies for future investments. Consequently, the inflation rates of host countries adversely affect the international activities of multinational companies.

Furthermore, inflation is an economic factor that is beyond the control of the subsidiary's management. The changing level of inflation in the host country is reflected in the performance of foreign subsidiaries and their managers. Consequently, in order to evaluate the actual performance of foreign subsidiaries, multinational companies should anticipate the impact of inflation that is beyond the control of the foreign subsidiary's managers (Drury, 2012).

Performance evaluation of foreign subsidiaries is made even more complicated by inflation. Therefore, multinational companies should not use the same measures for performance evaluation of subsidiaries located in the countries with lower inflation rates and for those located in countries with higher inflation rates (Rathore, 2008). Such a practice paints an unrealistic picture of the performance achieved by foreign subsidiaries and their managers, which is a result of the inflation processes in the host countries.

The huge variations and rapid changes in inflation rates in host countries is a significant factor in designing an international performance evaluation system for the company. When prices change rapidly, the confidence in accounting data declines significantly. In such situations, foreign subsidiary's managers become aware that the historical cost accounting data are inadequate in their decision-making processes (Abdallah, 2004).

During a period of inflation, holding monetary assets, such as cash and account receivables, results in a loss of the general purchasing power. Holders of monetary assets with a given amount of money can buy progressively fewer goods and services. At the same time, holders of liabilities, such as accounts payable and notes payable, gain general purchasing power because they are payable in dollars of decreased general purchasing power. The gains or losses that result from holding monetary items during a period of inflation are known as purchasing power gains and losses (Weygandt et al. 1995). Contrarily, non-monetary items, such as property, building, inventory, equipment etc., are subject to reassessment along with the changes in the general purchasing power of money. These items are not stated in a fixed amount (Mohana, 2010). Consequently, the replacement costs of inventory and fixed assets are significantly higher during periods of inflation.

On a foreign subsidiary's financial statements, the influence of the host country's inflation is reflected by artificially inflated financial results that create a wrong image for the company's operating position. The overstated profit of the company, resulting from matching old costs with new revenues, contributes to the company facing the following unfavorable situations (Choi & Meek, 2011):

- Demands for higher taxes;
- Demands for enhanced dividends by shareholders;
- Demands for higher wages by workers;
- Adverse actions and demands by local governments;
- Decreases in liquidity position;
- Decrease in the credibility of financial statements;

Consequently, it can be summed that inflated profits lead to a higher tax on the company. During periods of inflation, the tax burden on the companies goes up. Overstated profits of the company result in demands for enhanced dividends by

shareholders. The workers have demands for a higher wage as well. The company's liquidity is affected by inflation situation. Therefore, investors get an unreal impression in regard to the company's performance although the credibility of the financial statements has actually gone down, and the company's operation position has deteriorated (Mohapatra, 2012).

In addition to other factors, such as the level of interest rates, exchange rates, economic conditions in host countries, etc., the inflation rate is a factor that significantly reflects on the real return on investment as well (Sebastian & Maurer, 2002). Analogously, the managers cannot make effective financial decisions without anticipating the inflation effects.

Consequently, it is obvious that a significant issue for each multinational company is the anticipation of the effects of inflation in the host country and the selection of appropriate financial statements adjusting approach to the effects of inflation. In order to achieve the given purpose, hereinafter, this issue will be analyzed in detail.

2. APPROACHES FOR ADJUSTING FOREIGN SUBSIDIARIES' FINANCIAL STATEMENTS TO REFLECT INFLATION EFFECTS

When consolidating the financial statements of the parent company and those of its foreign subsidiaries, multinational companies face not only the problem of translation but also the problem arising from the influence of the inflation prevalent in the host country. Therefore, it is necessary to make certain adjustments in relation to the impact of inflation. If the effects of the rising price level are ignored, the foreign subsidiary's profit will stand overestimated and the consolidated picture will be modified. Consequently, the adjustment of the inflation factor is more than necessary (Vyuptakesh, 2010).

Multinational companies have at their disposal two approaches for the adjustment procedure of their foreign subsidiaries' financial statements to the effects of inflation in the host countries (Mohapatra, 2012):

- **The restate-translate approach** considers the effects of foreign inflation on the financial statements of foreign subsidiaries and does not use the exchange rate as a medium of translation. The multinational company starts the adjustment procedure by

restarting the financial statements of all foreign subsidiaries to reflect the changes in the purchasing power of the foreign currencies and then translates them into the domestic currency of the parent company by using relevant exchange rate;

- **The translate-restate approach** considers the effects of domestic inflation on the financial statements of foreign subsidiaries and uses the exchange rate as a medium of translation. Conversely, the adjustment procedures here starts by translating the financial statements of all foreign subsidiaries into the domestic currency of the parent company and then restarting the translated financial statements for inflation using the parent company index;

In other words, using the restate-translate approach, the current cost-nominal functional currency data are first restated into units of constant purchasing power using a general price index for the foreign currency and then translated into domestic currency. Using the translate-restate approach, on the other hand, the current cost-nominal functional currency data are translated into domestic currency and later restated into units of constant purchasing power (Flood, 2015).

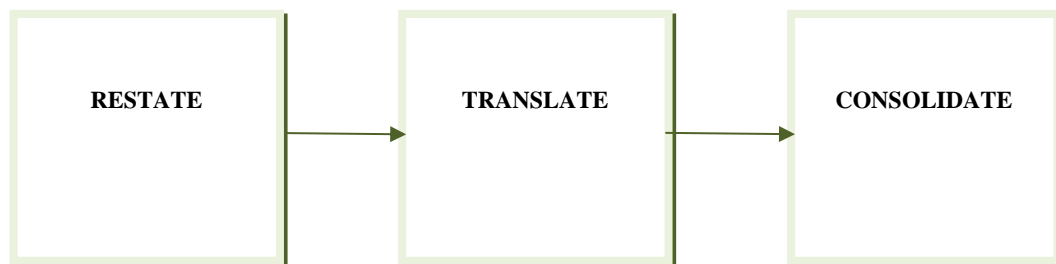
Each of the above-mentioned approaches for adjusting foreign subsidiaries' financial statements to reflect the inflation effects in the host country gives different results for the company. Which approach for adjusting the foreign subsidiaries' financial statements will be used by the company depends primarily on the priority of its goals.

Moreover, when foreign subsidiaries operate in inflationary environments, there are numerous techniques for adjustments in historical cost financial statements to incorporate the effects of foreign inflation. The techniques usually used by multinational companies are 1) creation of reserves, 2) devaluation of assets, 3) Last-In, First-Out (LIFO) method of inventory valuation, 4) historical cost accounting, and 5) current value accounting. Since these techniques are beyond the interest of this paper, they will not be discussed any further in the paper. For more information, see Rathore (2008).

2.1. RESTATE-TRANSLATE APPROACH

In periods of inflation, traditional translation methods which do not take into account the impact of rising levels of inflation rate are considered as improper for managerial and investment decisions. To remedy this fault of traditional translation methods, advocates of restate-translate approach, Zenoff and Zwick (1969), propose that the financial statements of foreign subsidiaries should be first restated to reflect the inflation effects in the foreign currency, and then the restated financial statements should be translated into the currency of parent company. At last, the translated financial statements are consolidated. Figure 1 shows the three phases involved in the restate-translate approach.

Figure 1 Restate-translate approach



Source: From International Accounting (Mohapatra, 2012, p. 88)

According to the restate-translate approach's advocators (Choi, 1975; Zenoff & Zwick, 1969), this approach has the following advantages (Gray, 2014):

- Enables financial statements' users to evaluate the operating results of the company in terms of local currency as well as the foreign inflation effects on these results;
- Enables the parent company' management to evaluate the performance of foreign subsidiaries in terms of the environments in which the subsidiaries operate;
- Enables the parent company's management to evaluate the performance of the foreign subsidiaries after providing for "maintenance" of subsidiaries' assets;

- Enables the parent company's management to determinate the effect of foreign exchange rate changes on the foreign subsidiaries' operating results.

This approach is criticized as inconsistent and less sound. The criticisms of this approach are related to the unit of measure that reflects multiple standards in regard to general purchasing power. For instance, if a multinational company has subsidiaries in three separate countries and was adopted the restate-translate approach, the financial statements of its subsidiaries will be restated in terms of the general purchasing power of the money of the three countries. After translating the restated financial statements, they will reflect domestic currency of mixed purchasing power (Rathore, 2008).

2.2. TRANSLATE-RESTATE APPROACH

Critics of the restate-translate approach suggest that the financial statements of foreign subsidiaries should be first translated into the domestic currency of the parent company and then the translated statements should be restated for the inflation using a parent country index. At last, the restated financial statements are consolidated. This approach is known as the translate-restate approach. Figure 2 shows the three phases involved in the translate-restate approach.

The translate-restate approach was originally adopted by AICPA (Statement No. 3 of American Principle Board, 1969) and according to this approach the financial statements of foreign subsidiaries are first translated into US dollars and then the translated financial statements are restated for inflation effects using the US price index (Mohapatra, 2012).

Figure 2 Translate-restate approach



Source: From International Accounting (Mohapatra, 2012, p. 88)

The translate-restate approach is considered to be more consistent and theoretically more sound as compared to the restate-translate approach. The consolidated financial statements of foreign subsidiaries prepared according to the translate-restate approach are expressed in terms of the general purchasing power of the parent country, i.e. a single standard of measure. However, the translate-restate approach is not free from disadvantages. Beside its above-mentioned advantages, the restate-translate approach is more superior in providing a better measure performance comparison among the separate foreign subsidiaries located in countries with different levels of inflation rates as well as a more appropriate resource allocation decision (Rathore, 2008).

3. RELEVANT APPROACH FOR ADJUSTING FOREIGN SUBSIDIARIES' FINANCIAL STATEMENTS TO THE EFFECTS OF INFLATION IN HOST COUNTRIES TO PROVIDE EVALUATION OF ACTUAL PERFORMANCE

The above-analyzed approaches differ not only in the sequence of the employed procedures to consolidate the financial statements but also in the way the restatement is made. Since both approaches suffer from some shortcomings, the question is raised - Which approach, from the performance evaluation point of view, is more appropriate for multinational companies?

In some countries, the choice of approach for adjusting the financial statements of foreign subsidiaries' financial statements on the inflation in the host countries may depend on established accounting practice. For instance, in Israel, the Companies Law No. 159 permits using any of the generally accepted approaches provided that approach reflected the accurate financial position and results of operation of the company. Analogically, the choice of the appropriate approach depends on whether the foreign subsidiaries' operations are an extension of the Israeli parent company or are independent. If the foreign subsidiary's operations are extensions of the parent company, then the translate-restate approach is considered as the more appropriate approach, namely the foreign subsidiaries' financial statements should be first translated to the Israeli currency and then translated financial statements should be restated for Israeli inflation. If foreign subsidiaries are autonomous operations, on the

other hand, then the restate-translate is considered as the more appropriate approach. In this case, the foreign subsidiaries' financial statements should be first restated to reflect the inflation effects in the foreign currency, and then the restated financial statements should be translated into the Israeli currency (Abdallah, 2001).

Generally, In the accounting literature, many regard the restate-translate approach as being the more accurate of the two, because it takes into account the changes in purchasing power. The translate-restate, on the other hand, captures the effects of inflation by the change in the exchange rate (Saudagaran, 2009).

In this context, Rathore (2008) has emphasized the question of the validity of translating inflation-adjusted foreign financial statements at current exchange rates. According to many authors, this type of approaches could lead to double accounting as well as to mirror price level movements in both domestic and foreign countries. Therefore, they suggest the complete rejections of the use of exchange rates as a medium of translation, namely the translate-restate approach. The restate-translate approach, despite its shortcomings in regard to its inconsistency, is suggested as the more relevant approach for adjusting the financial statement of subsidiaries to the effects of inflation in the host country.

Choi (2011) has also recommended the restate-translate approach. He has claimed that both approaches, the restate-translate, and translate-restate approach, are imperfect. Both approaches are based on the same valuation framework – historical cost. Neither approach changes that framework. However, he has recommended the restate-translate approach as a better solution for multinational companies. According to him, restarting both domestic and foreign accounts to their specific current-price equivalents provides decision-relevant information. Also, this approach enables easier evaluation and comparison of foreign subsidiaries' performance. These claims are consistent with earlier recommendations of the Accounting Objectives Study Group (1973).

According to Gary (2014), the restate-translate approach, that generates an operating performance measure that best reflects the keeping of a firm's physical capacity to produce goods and services, is the better option from management's viewpoint.

Also, in line with these claims is the empirical study conducted by Elsharawy (2006). The purpose of the study has been to evaluate the impact of environmental factors, including the inflation, on the performance of multinational companies operating in Egypt. This empirical study covered 30 multinational companies as a sample of the multinational companies operating in Egypt. The results have confirmed that restate-translate approach is superior approach compared to translate-restate because it has the following advantages: 1) reflects the foreign inflation effects on the performance of subsidiaries; 2) enables the parent company to evaluate the effects of exchange rate fluctuation on performance of foreign subsidiaries and 3) reveals the net effects of inflation and exchange rate fluctuation. Analogically, Elsharaway has recommended the restate-translate approach as an approach that enables the parent company management to evaluate the actual performance of its foreign subsidiaries. Consequently, from the performance evaluation point of view, multinational companies should use the restate-translate approach as it is more appropriate for evaluating the actual performance of foreign subsidiaries. As stated earlier, according to the restate-translate approach, multinational companies should start with restating the financial statements of their foreign subsidiaries by using the foreign price index and then the restated financial statements should translate into the domestic currency by using the relevant exchange rate.

Based on the foregoing, it can be concluded that the restate-translate approach is preferable because it does not use the exchange rates as a medium of translation as well as provides a good measure of performance evaluation comparison compared to the translate-restate approach. This advantage is reflected in terms of real perceiving of the foreign inflation effects on the performance of foreign subsidiaries. Therefore, the restate-translate approach is considered to provide the evaluation of the foreign subsidiaries' actual performance.

CONCLUSION AND RECOMMENDATIONS

This paper was set out with the objective of studying the alternative approaches for adjusting the financial statements of foreign subsidiaries to the effects of inflation in host countries. From the above analyses of both approaches, it can be stated that first approach suggested by Zenoff and Zwick takes into account the effects of foreign

inflation, namely the inflation in the host country where the subsidiaries operate, and the translate restated financial statements into the domestic currency of the parent country. The second approach suggested by AICPA, on the other hand, takes into account the effects of domestic inflation, namely the inflation in the parent country of a multinational company. The adjustment procedure here starts by translating the financial statements of all foreign subsidiaries into the domestic currency of the parent company and then restating the translated financial statements for inflation using the parent country index. Since both approaches suffer from some shortcomings, the obvious question is: which approach is more appropriate for multinational companies?

In accounting literature, there are many proponents of the restate-translate approach. They claim that this approach is more accurate of the two because it takes into account the changes in purchasing power. Despite its shortcomings in regard to inconsistency, it provides to multinational companies better measure for performance comparison compared to translate-restate approach. The proponents of translate-restate approach, on the other hand, claim that this approach is more consistent and theoretically more sound compared to restate-translate approach. In contrast to this, many opponents of the translate-restate approach greatly suggest the complete rejection of the use of the exchange rates as a medium of translation, namely the translate-restate approach. Consequently, it is more than obvious that there is a controversy on this issue in the accounting literature.

From the performance evaluation point of view, in line with the results of the empirical study conducted by Elsharaway (2006), multinational companies should use the restate-translate approach as it is more appropriate for evaluating the actual performance of foreign subsidiaries. This approach is preferable because of it 1) reflects the foreign inflation effects on the performance of subsidiaries, 2) enables the parent company to evaluate the effects of exchange rate fluctuation on the performance of foreign subsidiaries and 3) reveals the net effects of inflation and exchange rate fluctuation. Also, it does not use the exchange rates as a medium of translation as well as provides a good measure of performance evaluation comparison compared to the translate-restate approach. This advantage is reflected in terms of real perceiving of the foreign inflation effects on the performance of foreign subsidiaries. Therefore, the restate-translate approach is considered to provide the evaluation of

the foreign subsidiaries' actual performance. Consequently, if multinational companies want to perceive and evaluate the actual performance of foreign subsidiaries and their managers, they should use the restate-translate approach for adjusting the foreign subsidiaries' financial statements to the effects of inflation.

In accordance with this, the question may be raised: what changes can occur in the evaluation of the performance of foreign subsidiaries by using different financial statements adjusting approaches to the effects of host country inflation? Recommendations for future research are referred to the idea of conducting an empirical study of a targeted sample of companies operating in a hyperinflationary environment that will quantitatively determine and compare the changes that may occur in the evaluation of their performance by using the different approaches for adjusting the financial statements to the influence of inflation. Thus, a clear picture of the importance of choosing and using appropriate financial statements adjusting approach to the effects of inflation will be obtained.

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FAVOURABLE ORGANIZATIONAL CLIMATE AS A COMPLEX NETWORK OF VALUES AND NORMS FOR SUCCESSFUL EXECUTION OF WORKING DUTIES

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ABSTRACT

The organizational climate on the one hand is often defined as repetitive patterns of behaviour, attitudes and feelings that characterize the life in one company. Although culture and climate are linked, the climate is usually easily accessible and variable. All theories of organizational climate, provide additional scientific and rational explanations, why leaders should reduce stress and boost employees' morale in the workplace, to achieve maximum performance. When creating a healthy organizational climate, affect the following elements which can be classified into three groups: ethical qualities, qualities that contribute to general business communication, teamwork behaviour (active listening, defending own views, accepting differences, confronting conflicts, setting goals, accepting other people as resources of knowledge, skills, opportunities, etc.). Positive organizational climate is an important part of the strategic approach of the company, also to human resources management. All aspects of change will be presented through this paper; the aspects should be done in order to bring the organizational climate of the company to an increase in overall job satisfaction. Through analyzing the organizational climate of the research company should be perceived the current situation of the company and the aspects of the current work of employees, which of them employees are generally satisfied or dissatisfied, in order to serve to perceive potential changes.

KEYWORDS: organizational climate, job satisfaction, company competitiveness, working conditions, interpersonal relationships

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1. ORGANIZATIONAL CLIMATE AND ITS IMPACT ON JOB SATISFACTION

The organizational climate is, in fact, "created environment in which the work process is realized in an organization" (Petkovski, 2000) and it represents unity of the following factors: material and technical factor (the entire equipment, premises, associated facilities and their functional connection); financial factor (financial assets, valuation and reward systems); personnel factor (members of the organization, their interpersonal relations) and the organizational structure as a factor. It can be said that all these factors are interconnected and depend on one another.

A large number of Dr. Denis Rose's and his colleagues' studies in the period from 2001-2004 showed a very strong relationship between the organizational climate and employee's reactions such as stress levels, abstinence, dedication, and participation (Rafferty A. E., & Rose, D. M., 2001). One study has shown that the organizational environment is responsible for at least 16% of one-day absences within an organization (Bushell H.M., 2007). Other studies support the link between the organizational environment and large number of other factors, such as retention of employees, job satisfaction, well-being and readiness for creativity, innovation and change. Researchers Hunter, Bedeel and Mumford have considered numerous approaches of evaluation the climate for achieving creativity. They have found out that those studies regarding the climate, based on well-developed and standardized instruments, produced greater effects than those studied at a local level (Hunter, S. T., Bedell, K. E., & Mumford, M. D. 2007).

The term "job satisfaction" has a multitude of meanings, but job satisfaction, simply, can refer to how much do employees love their work. It can be rightly said that a satisfied employee loves his job, while the dissatisfied one does not like his job. Job satisfaction can be defined as a pleasant or positive emotional state that results from evaluating some job (Locke E., 1976). Dissatisfaction occurs when one's expectations are not fulfilled. It was considered, for a long time, that the situation itself was responsible for satisfaction, i.e dissatisfaction of the workers, and it was determined by the degree to which one can satisfy his needs at work. A person who will have some changes with his tasks or will change his work place, is expected to be satisfied or dissatisfied with the work. In addition, job satisfaction should be distinguished from morality and involvement in work. Namely, the contribution to the work means full

immersion. A person who is immersed in the work, works hard, for him it is important to risk, his mood and feelings are influenced by the work and he is mentally preoccupied with the work. Accordingly, the work is a mix of complex interrelations of: tasks, roles, responsibilities, interactions, initiatives and awards (Shuklev B., 2011).

Granted that there are many different factors that influence the behavior, motivation, and satisfaction of individuals, it is difficult an individual to cope and choose the right way to achieve satisfaction. There are various combinations of factors that influence behaviour, through various pleasures are realized. Many employees search for job satisfaction in different ways at different times in their lives. Employees are moving in different ways to achieve their satisfaction. The theory of hierarchy of needs depicts needs into three categories: physiological; social and egoistic. In the category of satisfying **physiological needs**, employees expect their other needs to be met by activities outside of work; they may not feel any aspirations, but to move forward, but they also may not feel the need for job promotions. In the category of meeting **social needs**, employees might require to belong to a particular group, to be accepted, to have good relations with colleagues and elders. Besides, social needs can be met outside the office, in the neighborhood, in union activities. Employees may require satisfying **egoistic needs**, and these needs will be activated in addition to physiological and social needs. Satisfying needs in this category is achieved through status or recognition, or through self-realization, which stems from the work, challenge or stimulation. Regarding the identification of groups of employees who are more or less satisfied with their work many research have been done, consisting in comparing the level of satisfaction among the different groups of employees. Namely, the level of job satisfaction will be higher among those who will shape the work place according to their own image. Nevertheless, there are differences in the degree of job satisfaction. Some people, might never experience job satisfaction, and some, do not demand it. For example, managers are more satisfied with the work of the staff and depends how higher the manager's level is, the satisfaction is higher.

Individuals can respond in different ways to job satisfaction. Some believe that they are inappropriately treated at the workplace, and consider it justified to sneak an employer and thus to supplement their earnings. On the other hand, job dissatisfaction can be associated with symptoms of emotional disorders, such as: loss of appetite,

sleep disorders or in extreme situations, emotional breakdown. For example, inadequate marriage, as a source of stress in the life of an individual combined with dissatisfaction from work additionally make the situation difficult. Often, because of dissatisfaction with the work, reduced production occurs, absence from work or even quitting the job.

2. THE RELATIONSHIP BETWEEN JOB SATISFACTION AND ORGANIZATIONAL CLIMATE

The relationship between the employee and the organization should give an answer to the question why employees would leave the workplace, i.e. what makes the feeling of job satisfaction, loyalty and dedication. From the employer's aspect, in order to keep the employee longer at work, it is necessary the employee to perform the tasks in a quality manner. What criteria are important for this, depends on the expectations of top management, which is in correlation with the company's competitive performance. The relationship between job satisfaction and the organizational climate is the subject of many research. Some studies show that job satisfaction leads to a better organizational climate and greater effectiveness, while according to other studies, there is no correlation between job satisfaction and the working environment. Job satisfaction is measured according to the most popular scale that measures several aspects of job satisfaction Job Descriptive Index (JDI).¹

This scale measures five aspects of job satisfaction: satisfaction (dissatisfaction) with the work itself, supervision, salary-personal income, advancement opportunity and associates. The instrument consists of a series of phrases suitable for each aspect of the five characteristics of the work, and the candidate responds with "yes", "no" or "I do not know". In a number of surveys, the result of this measurement is taken as the only measure of satisfaction. This instrument has been in use for many years, and the literature confirms its reliability and applicability in various groups. In the recent years, job satisfaction has been decreasing, and the most common reasons are: a job

¹ Ibidem, page 232

that requires more engagement, less traditional hierarchical relationships with management, short-term relationships, and less confidence in long-term rewards².

Another instrument for measuring satisfaction is "Minnesota Satisfaction Questionnaire"³. This questionnaire has two versions, a long one with 100 items and a short one with 20 items. The items in both versions refer to 20 characteristics of the work, but the sum of some characteristics of work can be calculated only on the long version of the scale. The short scale gives an indication of general satisfaction, i.e. intrinsic or extrinsic satisfaction. However, the positive correlation between job satisfaction and productivity cannot be denied, since this correlation is not a cause-effect relationship, according to which "*a satisfied worker is a good worker*" or "*a good worker is a satisfied worker*".⁴ In this correlation, it is difficult to determine which variable has a greater impact on the other. Namely, people can feel satisfied because they do their job well, or they may be dissatisfied because they do the job badly. Also, workers who are not under stress can be more productive. However, in conditions of market economy, employers develop awareness that only a normal working environment, a positive organizational environment can bring the desired business results (Srdzoska, E., Blazevska-Stoilkovska, B, 2009). Organizational climate as a model of common values and beliefs of the workforce means a rule of behaviour for the members of an organization. In order for this model to be positive, it is required a commitment for constantly good treatment with employees both in good and bad. The positive organizational climate is reflected in better results, which are manifested through employee retention, job satisfaction and higher incomes and a better competitive position on the market. The consequence of job satisfaction or dissatisfaction is the absence from work. It is common that dissatisfied employee frequently absents from work than the satisfied ones. Unhealthy or unsafe working conditions are everywhere, regardless the workplace (outdoors, indoors, underground, on the ground), and they affect the employees' health; as a consequence there are all kinds of diseases, stress, etc.

² U.S. Bureau of Labor Statistics" Union Members in 2006", 25 January 2007, www.bls.gov/pub/news.release

³ Ibidem

⁴ Ibidem, page 229

According to some researchers, job satisfaction and dissatisfaction are not polarities of the same continuum, but independent and derived from two different groups of factors. The first group are the so-called negative or hygienic factors that cause dissatisfaction: physical working conditions, leadership, interpersonal relationships, salaries/wages, job security, benefits, organizational policy and other factors that affect the content of the work. The second group includes positive or motivational factors that increase job satisfaction: responsibility and development, love for work, self-realization, work success and other factors that are important to meet the needs for self-actualization. Although this theory is not confirmed by the researchers, however, it has greatly helped in the creation and implementation of many programmes for improving the quality of working life and the organizational environment in the companies.

3. EMPIRICAL RESEARCH

In order to prove or reject the hypotheses, it was conducted a research through a survey that included 27 participants, or more precisely 27 managers and employees in the primary school Vlado Tasevski in Skopje, Republic of Macedonia. Managers and employees respond to the same closed questionnaire consisting of 55 questions divided into three sections or groups. The survey was conducted in 2014, in a period of one month. Although the research cannot boast of full coverage of all organizations, nevertheless the covered representative sample can help to draw conclusions about a particular organizational climate into an appropriate organization. This survey questionnaire is anonymous and is filled in by personal desire. It is a scale of attitudes, which is a part of the research in the labour field. The survey questionnaire identifies the organizational environment in the company through the aspects of employees' performance, motivation methods that exist, whether and how the employees are rewarded, and all other factors that contribute to job satisfaction/dissatisfaction. The obtained results will be used exclusively to prove the hypotheses in this paper. They will help in clarifying aspects at work that, more or less, directly contribute to job satisfaction and career development of employees, but above all they contribute to the improvement the organizational environment, which will ultimately affect the

efficiency and effectiveness of the employees of organization (Dragovic, Dr. A. Borota Popovska M., 2010).

The first part of the questionnaire focuses on the basic information of the respondent such as the working position, profession, the duration of employment, as well as the working positions that the respondent worked previously. The second part of the questionnaire measures the ratings of employee satisfaction. In this part are given several statements divided into several groups: working conditions, salaries/wages and promotions, duties, using personal skills and abilities. The respondents need to evaluate these statements with the offered scale from 1 to 5, where 1 represents the lowest grade of the scale and 5 the highest. The third part of the questionnaire covers the other aspects of the work related to the level of employee satisfaction. In this part of the questionnaire are given 28 statements that respondents should answer with the given scale from 1 to 5. Where 1 is the lowest value and indicates total disagreement, the 5 is the highest value and indicates complete agreement. This survey questionnaire can be used to predict the level of satisfaction for future potential employments.

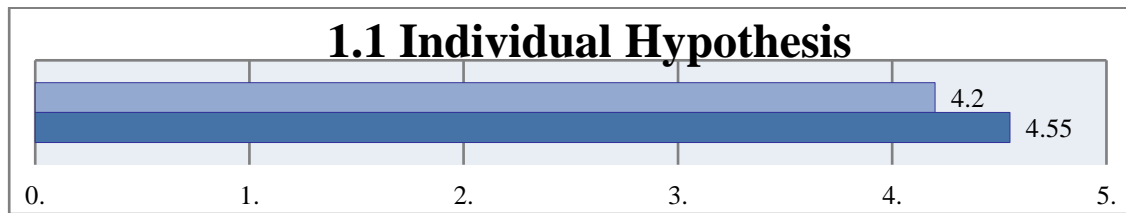
Particular hypothesis 1 In order to verify the claims of the particular hypothesis 1, which states: *If the organizational climate is progressive, "supportive", then the employees would be happy to perform each task*, the results of the individual hypotheses indicators 1.1, 1.2 and 1.3 have been analyzed, obtained from the questionnaire for respondents assessments attitudes.

Individual hypothesis 1.1: The statements of the individual hypothesis 1.1 that states: *If management applies a supportive attitude to the working group, then the personal initiative of the employees will be promoted* - are confirmed or refuted through analyzing the results of the dependent and independent variable.

Independent variable 1.1 Supportive attitude towards the working group

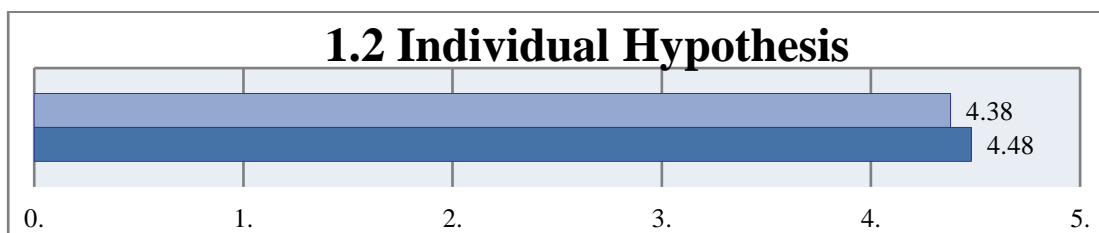
Indicator of the independent variable of the individual hypothesis 1.1 is question 1 of the third part of the questionnaire. After data analyzing the arithmetic mean of the statements of the examinees is 4.55. Indicators of the dependent variable of the individual hypothesis 1.1 are questions 2 and 3 of the third part of the questionnaire. After analyzing the data, the arithmetic mean of the statements of the

respondents is 4.20. The results of the two previous analyzes of the independent and dependent variable data are once again visually displayed below.



After data analysis indicators of independent and dependent variable and their confirmation, it can be concluded that the claims of the individual hypothesis 1.1 are substantiate.

Individual hypothesis 1.2: The statements of the individual hypothesis 1.1 that states: *If the management style in the organization is supportive then employees will more confidentially use the "space for action",* will be confirmed or refuted through analyzing the results of the independent and dependent variable. Indicator of the independent variable of the individual hypothesis 1.2 is the question 4 of the third part of the questionnaire. After data analyzing the arithmetic mean of the statements of the examinees is 4.48. Indicator of the dependent variable of the individual hypothesis 1.2 are the questions 5 and 6 of the third part of the questionnaire. After data analyzing the arithmetic mean of the statements of the examinees is 4.38. The results of the two previous analyzes of the independent and dependent variable data are once again visually displayed on the following histogram.

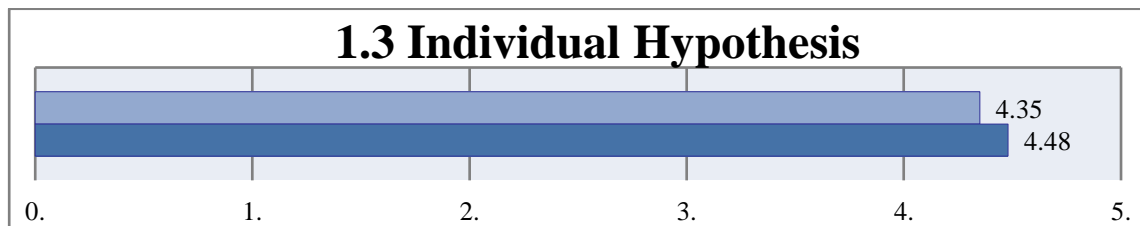


After data analysis indicators of independent and dependent variable and their confirmation, we can conclude that the claims of the individual hypothesis 1.2 are substantiate.

Individual hypothesis 1.3: The statements of the individual hypothesis 1.3 that states: *If the employee is satisfied with the manner of acceptance by the management team, then he will develop his creativity and deepen his knowledge and skills,* will be confirmed or refuted through analyzing the results of the independent and dependent variable 1.3.

Independent variable 1.3 - Serious acceptance of the employee as an individual.

Indicator of the independent variable of the individual hypothesis 1.3 is the question 7 of the third part of the questionnaire. After analyzing the data, the arithmetic mean of the statements of the respondents is 4.48. Indicator of the dependent variable of the individual hypothesis 1.3 are question 8, 9 and 10 of the third part of the questionnaire. After analyzing the data, the arithmetic mean of the statements of the respondents is 4.35. The results of the two previous analyzes of the independent and dependent variable data are once again visually displayed on the following histogram.

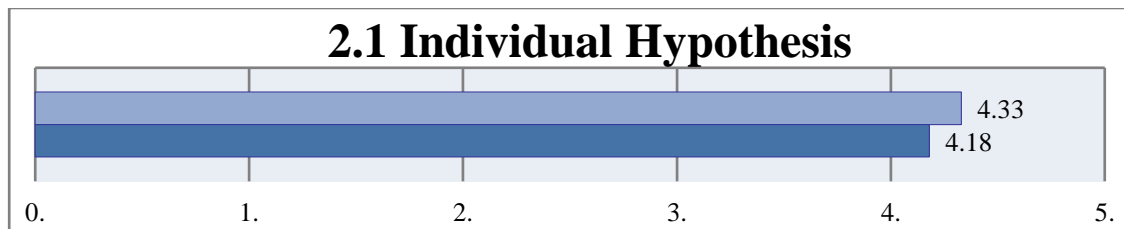


After data analysis indicators of independent and dependent variable and their confirmation, we can conclude that the claims of the individual hypothesis 1.3 are substantiate.

Particular hypothesis 2: In order to verify the claims of the particular hypothesis 2, which means: *If the management team establishes effective information and communication system, that will reach all employees regardless the hierarchical pyramid level in the organization, then the employees would be pleased to perform every task, with greater awareness of belonging to the organization,* the results of the individual hypotheses indicators 2.1 and 2.2 are analyzed, obtained from the questionnaire for respondents assessments attitudes.

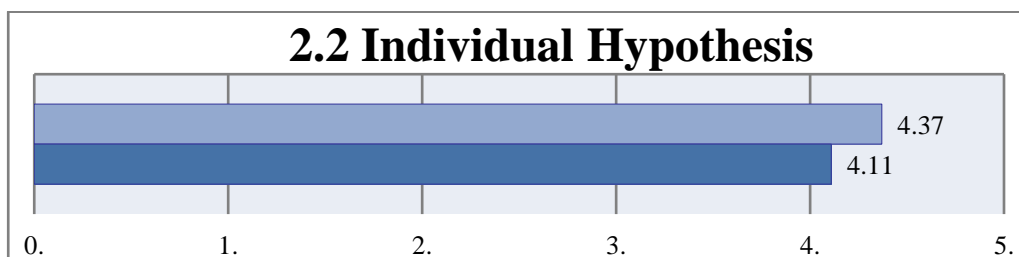
Individual hypothesis 2.1: The statements of the individual hypothesis 2.1 that states: *If the information and communication system in the company is simple, clear, transparent, then employees will have a clear idea of the vision, mission and strategy of the company,* will be confirmed or refuted through analyzing the results of the independent and dependent variable 2.1. Indicator of the independent variable of the individual hypothesis 2.1 are questions 11 and 12 of the third part of the questionnaire. After data analyzing the arithmetic mean of the statements of the examinees is 4.18. Indicator of the independent variable of the individual hypothesis 2.1 is the question 13 of the third part of the questionnaire. After analyzing the data, the arithmetic mean

of the statements of the respondents is 4.33. The results of the two previous analyzes of the independent and dependent variable data are once again visually displayed on the following histogram.



After data analysis indicators of independent and dependent variable and their confirmation, we can conclude that the claims of the individual hypothesis 2.1 are substantiate.

Individual hypothesis 2.2: The statements of the individual hypothesis 2.2 that states: *If the employee has the feeling that no one works behind his back, that the organizational culture relies on transparency, information, feedback effects, then enthusiasm and motivation in performing the duties will be raised*, will be confirmed or refuted through analyzing the results of the independent and dependent variable 2.2. Indicator of the independent variable of the individual hypothesis 2.2 is the questions 14 of the third part of the questionnaire. After data analyzing the arithmetic mean of the statements of the examinees is 4.11. Indicator of the dependent variable of the individual hypothesis 2.2 is the question 15 of the third part of the questionnaire. After analyzing the data, the arithmetic mean of the statements of the respondents is 4.37.

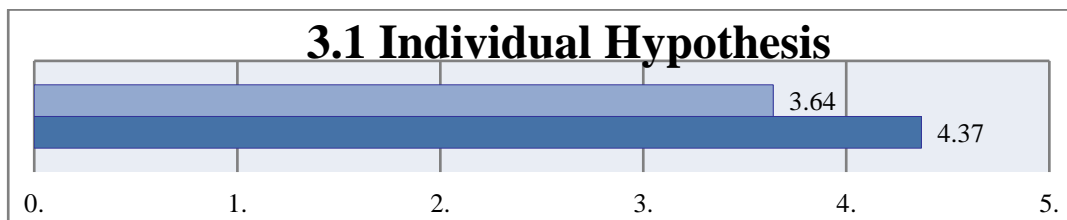


After data analysis indicators of independent and dependent variable and their confirmation, we can conclude that the claims of the individual hypothesis 2.2 are substantiate.

Particular hypothesis 3: In order to verify the claims of the particular hypothesis 3, which means: *If the human resources management puts emphasis on improving interpersonal relationships, as well as working conditions, then the employees will be pleased to perform every task, with greater awareness of belonging to the*

organization, positive, social energy and visionary and creative potentials, the results from the individual hypotheses indicators 3.1 and 3.2 are analyzed, obtained from the questionnaire for respondents assessments attitudes.

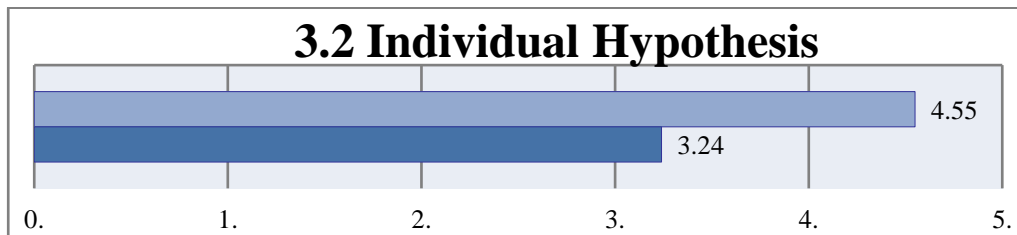
Individual hypothesis 3.1: The statements of the individual hypothesis 3.1 that states: *If the management seriously takes care about employees' health condition, then it will ensure long-term efficient staff to perform the tasks and minimize absences from work*, will be confirmed or refuted through analyzing the results of the independent and dependent variable 3.1. Indicator of the independent variable of the individual hypothesis 3.1 are questions 16, 17 and 18 of the third part of the questionnaire. After data analyzing the arithmetic mean of the statements of the examinees is 4.37. Indicator of the independent variable of the individual hypothesis 3.1 are questions 19 and 20 of the third part of the questionnaire. After analyzing the data, the arithmetic mean of the statements of the respondents is 3.64. The results of the two previous analyzes of the independent and dependent variable data are visually displayed on the following histogram.



After data analysis indicators of independent and dependent variable and their confirmation, we can conclude that the claims of the individual hypothesis 3.1 are substantiate.

Individual hypothesis 3.2: The statements of the individual hypothesis 3.2 that states: *If the human resources management works without pressure, blackmail or mobbing, then the confidence of employees grows and thus quality of their work*, will be confirmed or refuted through analyzing the results of the independent and dependent variable 3.2. Indicator of the independent variable of the individual hypothesis 3.2 are questions 21 and 22 of the third part of the questionnaire. After analyzing the data, the arithmetic mean of the statements of the respondents is 3.24. Indicator of the dependent variable of the individual hypothesis 3.2 is question 23 of the third part of the questionnaire. After analyzing the data, the arithmetic mean of the statements of

the respondents is 4.55. The results of the two previous analyzes of the independent and dependent variable data are visually displayed on the following histogram.

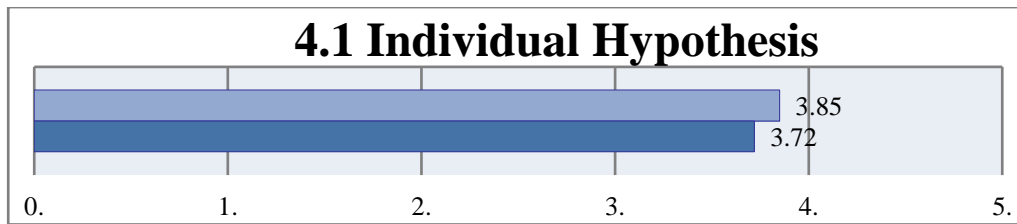


After data analysis indicators of independent and dependent variable and their confirmation, we can conclude that the claims of the individual hypothesis 3.2 are substantiate.

Particular hypothesis 4: In order to verify the claims of the particular hypothesis 4, which means: *If there is a quality system for evaluating the work which gives the employee feeling that he is adequately rewarded for his work, then the employees would be pleased to perform every task, further motivated and stimulated by rewarding*, the results from the individual hypotheses indicators 4.1 and 4.2 are analyzed, obtained from the questionnaire for respondents assessments attitudes.

Individual hypothesis 4.1: The statements of the individual hypothesis 4.1 that states: *If the work of the employees is properly valued by the management, then the employees will feel more motivated in performing their tasks*, will be confirmed or refuted through analyzing the results of the independent and dependent variable. Indicators of the independent variable of the individual hypothesis 4.1 are questions 24 and 25 of the third part of the questionnaire. After analyzing the data, the arithmetic mean of the statements of the respondents is 3.72. Indicators of the independent variable of the individual hypothesis 4.1 is the question 26 of the third part of the questionnaire. After analyzing the data, the arithmetic mean of the statements of the respondents is 3.85.

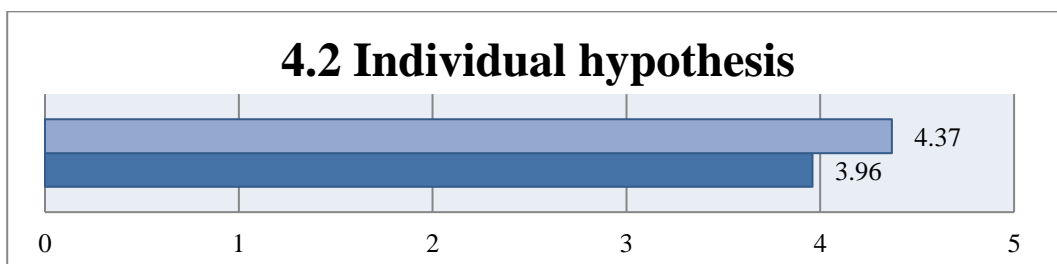
The results of the two previous analyzes of the independent and dependent variable data are visually displayed on the histogram on the next page.



After data analysis indicators of independent and dependent variable and their confirmation, we can conclude that the claims of the individual hypothesis 4.1 are substantiate.

Individual hypothesis 4.2: The statements of the individual hypothesis 4.2 that states: *If management applies incentives, benefits, rewards in the system of employees evaluation, then the employees will be encouraged to continuous improvement and their own personal development*, will be confirmed or refuted through analyzing the results of the independent and dependent variable 4.2. Indicators of the independent variable of the individual hypothesis 4.2 is the questions 27 of the third part of the questionnaire. After analyzing the data, the arithmetic mean of the statements of the respondents is 3.96. Indicators of the independent variable of the individual hypothesis 4.2 is the question 28 of the third part of the questionnaire. After analyzing the data, the arithmetic mean of the statements of the respondents is 4.37.

The results of the two previous analyzes of the independent and dependent variable data are visually displayed on the following histogram.



After data analysis indicators of independent and dependent variable and their confirmation, we can conclude that the claims of the individual hypothesis 4.2 are substantiate.

Once all results of the indicators of dependent and independent variables of all four particular hypotheses are quantified, where we can clearly see the substantiate claims, we can automatically conclude that all statements of the general hypothesis that states: *“if human resource management succeeds to create a favourable organizational environment, then employees will gladly perform every task within*

their competencies, as well as improving the efficiency of the entire organization are completely confirmed.

4. CONCLUSIONS AND RECOMMENDATIONS

Different organizations have different organizational climates and different ways of performing tasks. The company may have a number of "common beliefs and values", yet when this common understanding becomes part of the collective thinking of the employees in the organization, it creates an "organizational culture". Strictly speaking, organizational culture exists when employees have common interest in the organization as a whole. Companies themselves, particularly their top management and their human resources management are in a position to influence the organizational climate, i.e they are responsible for establishing a positive organizational environment. This vision should always come from the top management. They simply do not have to accept any kind of situation in the company. Thus, they need to be proactive, so that they can foresee the changes to start with action in time and appropriately. The management interaction, with a large number of external and internal forces, leads to the development of a particular organizational climate. The management interaction, with a large number of external and internal forces, leads to the development of a particular organizational climate. The organizational climate is influenced by business policy, organizational structure, employee skills, leadership attitudes and leadership qualities. However, it is influenced by the external environment, too, which consists of customers, competitors, government rules, suppliers, etc., that also play a significant role in shaping the organizational climate.

Certainly, the ability management to make decisions, establishing effective communication channels, and the use of the latest technologies are factors that influence stimulating organizational environment, which should respond to all contemporary challenges of survival in the competitive market position. Hence, the conclusion that the organizational climate is a complex system of values and norms, since it is created and developed by a group of people in the company and it aims to help employees in dealing with the problems of everyday business life and greater efficiency and effectiveness of the company. Today's modern companies should be

based on the knowledge and competencies of human capital, to strive to create modern organizational climates, which should provide a competitive advantage. It should be taken into consideration, which is also a kind of recommendation from the stated, that the way this critical resource is managed, influences organizational performance and they have an impact on the organizational climate.

Also, the recommendation arising from empiricism and theory in this paper is that practice of human resources management should never be neglected. Further research can be made for other industries besides education, as well as into the correlation of negative incentives in the workplaces, including SMEs and large companies. The strategic dimension of human resources should anticipate a strong two-way link between human resources and the organizational climate, as these categories are interrelated. If one changes, the other segment also needs to follow the changes.

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ANNEX

Table of respondents as a representative sample of the survey. The basic information of all 27 examinees is presented in order to find out their position, length of the employment, i.e profession, etc.

	Profession	Working experience	Employee previous position(s)	Current working position	Duration of current position
1	Educator	16	Primary school teacher	Educator	13
2	Teacher	4		Teacher	4
3	Teacher	4		Teacher	4
4	Primary school teacher	22		Primary school teacher	22
5	English language teacher	12		Teacher	12
6	Primary school teacher	14		Teacher	14
7	Teacher	2		Teacher	2
8	Teacher	4		Teacher	4
9	Teacher	12		Teacher	12
10	Teacher	7		Teacher	7
11	Primary school teacher	2		Primary school teacher	2
12	School teacher	6		Teacher	6

13	Primary school teacher	9		Primary school teacher	9
14	Teacher	15		Physical Education teacher	15
15	Primary school teacher	17		Primary school teacher	17
16	Primary school teacher	9		Primary school teacher	9
17	Primary school teacher	20		Primary school teacher	20
18	School teacher	17		Teacher	17
19	Primary school teacher	16	Teacher Principal	Primary school teacher	16
20	Primary school teacher	37	Primary school teacher	Primary school teacher	22
21	Primary school teacher	24		Primary school teacher	24
22	Primary school teacher	14		Primary school teacher	14
23	Primary school teacher	12		Primary school teacher	12
24	Primary school teacher	15	Primary school teacher	Primary school teacher	15
25	Psychologist	29	Psychology teacher	Psychologist	29
26	Special educator	8 months			8 months
27	Primary school teacher	8		Teacher	12

SURVEY QUESTIONNAIRE

PART I

GENERAL INFORMATION

Occupation:

How long have you been working for this company?

Your previous positions in the company

What is your job position?

How long have you been working at your current position?

Briefly describe your job and responsibilities (as in CV)

PART II

RATING your job satisfaction

1	2	3	4	5
Not satisfied	Not satisfied with certain segments	slightly satisfied	satisfied	extremely satisfied

Using the scale shown above, rate your level of job satisfaction from the following aspects of your work

GENERAL TERMS AND CONDITIONS

- Lessons every week
- Flexibility in schedule
- Location of work
- Amount of paid time off: vacation/sick leave

SALARY AND PROMOTION POTENTIAL

- Salary
- Promotion opportunities
- Benefits (health insurance, life insurance, etc.)
- Safety (at work)
- Acknowledgment of work performance

Job Responsibilities

- Relationships with your associates
- Relationships with your supervisor(s)
- Relationships with your subordinates (if applicable)

USE of SKILLS and ABILITIES

- Opportunity to use own skills and talents
- Opportunity to learn new skills
- Support for additional training and education

WORKING ACTIVITIES

- Variety of job responsibilities
- The degree of independence is associated with your role at work
- Appropriate opportunity for periodic changes in duties

PART III

OTHER ASPECTS OF WORK RELATED TO YOUR LEVEL OF SATISFACTION

Where 1 is a total disagreement, while 5 stands for full agreement

1. Do you think that human resources management has "supportive attitude" towards the working group?	1 2 3 4 5
2. How much personal self-initiative do you have while you do your assignments?	1 2 3 4 5
3. What "supportive attitudes" would initiate and motivate your self-initiative in the work process?	1 2 3 4 5
4. How do you assess the management style in your company?	1 2 3 4 5
5. Does the appropriate management style allow you to use more confidently the "space for action"?	1 2 3 4 5
6. I confidently use the "space for acting", in the work process, and I am aware of the competencies that I own.	1 2 3 4 5
7. Do you feel that team management respects you and accepts you as an individual, and takes you seriously?	1 2 3 4 5
8. What impact does team management attitude have on your personality, your creativity in the work process?	1 2 3 4 5
9. Team management shows a certain respect for my person, and such approach stimulates my creativity and self initiative at work.	1 2 3 4 5

10. Team management makes me clear that my personality and my working contribution are seriously taken, thus, the self-initiative for deepening the knowledge and skills necessary for performing the tasks is growing	1 2 3 4 5
11. How do you assess the information and the communication system in your company?	1 2 3 4 5
12. Is the information-communication system in your company available to all employees, regardless the degree of hierarchical affiliation?	1 2 3 4 5
13. Information helps me to subconsciously pursue the goals and objectives of the organization.	1 2 3 4 5
14. I do not have a feeling that someone "works behind my back"; I am informed about the matters in the company.	1 2 3 4 5
15. I have a clear idea of the goals and objectives of the company, thus my loyalty and acceptance of the company's values grow.	1 2 3 4 5
16. Does management show interest in employee health?	1 2 3 4 5
17. What specific measures does management apply for employees health?	1 2 3 4 5
18. Do you think that working conditions directly reflect on the health of employees?	1 2 3 4 5
19. Absenteeism from work is directly related to the working conditions of the organization.	1 2 3 4 5
20. Are there possibilities to overcome the problem of absenteeism from work?	1 2 3 4 5
21. Are you subject to pressures and assessments when you perform your daily duties?	1 2 3 4 5
22. What mechanisms should be established to overcome the pressures and blackmail?	1 2 3 4 5
23. Job satisfaction is greater without pressure and blackmail and therefore decreases the possibility of tense situations and making unintentional mistakes under pressure.	1 2 3 4 5
24. Do you think that the existing work valuation system contributes to satisfaction and quality performance of the work tasks?	1 2 3 4 5
25. Are you properly valued for your work?	1 2 3 4 5
26. The quality with which I perform my duties is the result of accumulated satisfaction (or dissatisfaction) from the way of valuing my work.	1 2 3 4 5
27. Does the employer rewards you for a greater effort than the set one?	1 2 3 4 5
28. The employer applies stimulating and motivating measures, which grow the motivation to perform the tasks more successfully and more responsibly.	1 2 3 4 5

IMPORTANCE OF ADVANCED TECHNOLOGIES FOR BETTER COMPETITIVENESS OF SMALL AND MEDIUM COMPANIES

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ABSTRACT

Advanced is any technology used in the design, engineering, fabrication and assembly, automated materials management, as well as in the development of systems of information, integration and control. There is a growing interdependence between a firm's ability to use advanced technology and its ability to implement corporate strategies and achieve corporate goals. Managers who implement advanced technologies achieve cost savings, develop more intensive business links with their suppliers and customers, achieve better market position and develop more profound strategies. These benefits of the advanced technologies improve the competitiveness of their businesses. However, studies show that the introduction of some advanced technology does not necessarily bring superior returns. Moreover, the advanced technology calls for parallel improvement of the managerial practices and for development of corporate culture that fosters innovation. Our survey demonstrates that the owners and the managers of the small and medium-sized enterprises in the Republic of Macedonia have considerable level of awareness about the importance of the constant investment in new technologies. Thus, it corresponds with the rating of the economy of the Country as efficiency driven. However, their management practices are not sophisticated sufficiently to promote the Country into the group of the innovation driven economies.

KEYWORDS: Advanced Technology, Competitiveness, Innovativeness

JEL CLASSIFICATION: M10, M14, M15, M16

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1. INTRODUCTION

The aim of this paper is to explore how advanced technologies foster the competitiveness of the efficiency driven economies such as that of Republic of Macedonia. In the last available ranking of the countries in the World, based on the assessment of their international competitiveness, Republic of Macedonia marked some improvements in terms of the international competitiveness of its economy (World Economic Forum, 2016). It is obvious that the Country, together with most of the other transitional economies from the Western Balkans, will continue to compete based on the efficiency. However, there are two main models for efficiency driven international competitiveness. While the first is based on low price of factors and is exploited mostly by the third world countries, the second is model is based on technology driven efficiency and is present in the emerging countries that are expected to gradually move towards the innovation driven competitiveness. Republic of Macedonia is somewhere between these two typical models. While the textile, apparel and similar labor intensive industries compete on the lower prices, there are some emerging industries like the logistics and transport or the software development that manage to compete based on the innovative products and services that they offer. Nevertheless, the problem with the lower innovative capacity of the Macedonian economy will persist for the foreseeable future since not much can be achieved on a short run in the areas of the quality of scientific research institutions, on the lack of indigenous research and on the reintroduction of the research and development function in the companies, on the weak cooperation between the academia and the businesses, or on the rising the extremely low portion of the Gross Domestic Product committed for the research and development. The Global Index of Competitiveness has 12 Pillars: Institutions, Infrastructure, Macroeconomic Environment, Health and Primary Education, Higher Education and Training, Goods Market Efficiency, Labor Market Efficiency, Financial Market Development, Technological Readiness, Market Size, Business Sophistication and Innovation. Each of the pillars has several defining criteria that are regularly monitored. For the purposes of defining the advanced technologies as precursors for greater competitiveness, relevant are the Ninth, the Eleventh and the Twelfth Pillar. However, while the Ninth Pillar – Technological Readiness, defines efficiency driven economies, the Eleventh-Business Sophistication,

and the Twelfth –Innovation, are the key for the innovation driven economies (The Global Competitiveness Report 2016–2017, 2017).

The Ninth Pillar measures the technological readiness and the agility with which the economy introduces new technologies in order to increase the productivity using various automation, robotics and information and communication technologies (ICT) in the manufacturing processes. This pillar is particularly important for the countries that compete on the efficiency of their operations. The Eleventh Pillar measures business sophistication using two indicators: the quality of the overall business networks and the existence of industry clusters, the quality of the operations and the quality of the strategies of the companies. The Twelfth Pillar is focused on the technological innovation. The latter two pillars are especially important for countries that cannot achieve further progress solely based on exogenous technologies. Since, the last available ranking for Republic of Macedonia, lists the country in the group of Non-EU Emerging economies with Albania, Montenegro, Serbia and Turkey, countries that yet to start to build their competitiveness based on innovation, all new technologies that the companies employ, directly support the competitiveness of the Country. In these terms, it is critical that the managers recognize the long-term benefits of the abandonment of the low cost of the factors of production based competing. The results of our survey proved that most of the owners and the managers of the small and medium-sized enterprises in Republic of Macedonia possess considerable level of awareness about the importance of the investment in new technologies and the related management practices.

2. LITERATURE REVIEW

2.1. Scope of the Advanced Technologies

Advanced technologies can be advanced manufacturing such as flexible systems, computer aided design and computer manufacturing, robotics or similar (Boyer at al., 1997). For Trott (2008) advanced is any technology used in the design, engineering, fabrication and assembly, automated materials management, as well as the development of systems of information, integration and control. The concept came into literature at the end of the 1980 and has rapidly been spread with an increase in the actual applications. An effective implementation of advanced manufacturing

technologies enables companies to achieve economies of scale and scope, simultaneously. These technologies reduce the cost of product innovation, allowing the company to increase the response to market time making it more agile and competitive. The value of these technologies increases under the competitive and uncertain market conditions (Patterson et al., 2009). While in the past the advanced technologies applied only to the interventions in the production process, including the optimal use of factors, automation of manufacturing, control of processes and the products, today all interventions and improvements in the management processes based on advanced information and telecommunication equipment and systems are included in the definition of advanced technologies. There is a growing interdependence between a firm's ability to use information technology and its ability to implement corporate strategies and achieve corporate goals, claim Laudon and Laudon (2010). Increasing market share, becoming the high-quality or low-cost producer, developing new products, and increasing employee productivity depend more and more on the kinds and quality of information systems in the organization. Specifically, business companies invest heavily in information systems to achieve six strategic business objectives: (1) operational excellence; (2) new products, services or business models; (3) customer and supplier intimacy; (4) improved decision-making; (5) competitive advantage and (6) survival (Laudon and Laudon 2010). Similarly, Jae (2000) claims that the managers are aware of the importance of the advanced technologies and that its implantation is often closely related to the survival of the company.

The proliferation of the computers and processors practically in all manufacturing equipment sold today, the advanced technology also involves various information, communication and management support systems. Moreover, there is an important interaction between the adoption of advanced manufacturing technologies and the investments in infrastructure. Companies that simultaneously and balanced invest in advanced technologies and in the related infrastructure perform better than companies which only invest in one or the other. The researches indicate that the infrastructural investments provide a key to unlocking the potential of advanced manufacturing technologies (Boyer at al., 1997). According to Laudon and Laudon (2010), the organizational and managerial dimensions of the applied information

systems help managers to understand why some companies achieve better results than others. Studies of the returns from the advanced technology investments show that there are considerable variations in the returns and the bare introduction of an advanced technology does not necessarily result in superior returns. Consequently, they developed the concept of complementary assets. The advanced technology itself cannot make the desired impact if it is not accompanied by supportive values, structures, and behavior patterns in the organization and other complementary assets. Business companies need to change how they do business before they can really reap the advantages of new information technologies, they claim. This is a social more than a technological challenge. Behind the advanced technologies implementation are the individuals. Their involvement and enthusiasm often make or break the process. The innovation is based on technology, but it is essentially a social process, dependent on the inventiveness of the people (Fuglsang and Sundbo, 2005). For Trott (2012) also, people are the key of the process of implementation of the advanced technologies. This is particularly true for the so-called knowledge workers, who are different from blue collars in their motivations, attitudes and their need for autonomy that allows them to search for innovative strategies to keep their companies competitive and the economy healthy (Davenport, 2005). In terms of the size, the big companies have an advantage when it comes to developing or adapting advanced technologies because of their economies of scales and the great resources they own and can offer to the knowledge workers. However, the bigger companies often opt to improve existing solutions rather than to risk with something new (Benner, 2005). While these companies have access to knowledge resources both internally and externally through having strong relationships with customers and suppliers (Tidd et al., 2005), their management teams often find challenging the task of coordination of the internal and the external competencies (Berchicci, 2009). Advanced technologies, to succeed, require "driving spirit" often more present in the case of small companies. However, the strong individualism in small companies implies also a certain vulnerability, as the process of adopting of the advanced technologies depends to a large extent on the creativity and management skills of one individual (Berchicci, 2009, Trott, 2012). Companies, in the middle between the small and the large, according to Forsman and Rantanen (2011)

are even less prone to innovative and advanced technologies than both small and large companies.

2.2. Cost Efficiency

Optimization of the costs and their reducing without disturbing the normal operations involves various activities, among which the deployment of sophisticated and efficient equipment is probably the most expensive, yet the most effective way (Abraham, 2013). Moreover, the companies, in these terms, should carefully scout the environment for disruptive technologies. The disruptive technologies, as defined by Christensen (2003) radically alter the business landscape and social environment. However, in order to be a disruptive, a new technology not necessary needs to be radical. Sometimes it extends the market, or manages to produce existing products with less cost. While some companies learn quickly or are prone to higher risk taking, manage to adopt these new technologies and get superior profits because, wait until their products, services or business model become obsolete (Laudon and Laudon, 2009). Regarding the costs of the marketing and the promotion, it is important what signal is sent to the market and to the customers, since the customers are the best endorsers of a company. However, the marketing and the promotion function also needs to be performed in an efficient way based on the specifics of the various media (Olsen and Ellram, 1997). The proliferation of various e-business concepts and the use of the social media as marketing channels are entirely based on the advanced information and telecommunication technologies.

2.3. Culture of Change

Nevertheless, how much expensive and sophisticated the new technology is, if it fails to alter the current decision-making of the company, it could easily turn into an irrational investment (Vessey and Glass, 2007). Why companies strive to implement new technologies? They want to become more efficient, responsive to the changes in the environment and ahead of their competitors. However, with the introduction of the new technology, the managers need to promote a corporate culture that will embrace the change that the new technology inevitably entails. Only doing so, the new technologies can help better positioning of their companies relative to the competition (Luftman, 2003). Therefore, the attitude of the management and the level of the

acceptance or (tacit) rejection by the other people in the company, ultimately determine the success of the new technology.

2.4. Better Market Position

The managers who promote advanced technologies perceive them as opportunities to better position their companies on the market. Managers define the framework in which the advanced technology will be introduced and decide how the current decision-making practices will be reinforced or altered in order the new technology to support the customers and their needs (Hanckock, 2002). Areas where the product or service based on the new technology performs poorly on the market should be carefully examined and appropriate corrective actions initiated (Whitten and Bentley, 2002). However, many times there is nothing wrong with the new technology, product or service. Simply, the consumers fail to accept them. Nonetheless, the reasons of failure should be thoroughly examined and analyzed in order the company to learn more about its customers and their preferences (Harkness at al., 2003).

3.5. Information Systems

The various information systems are important domain of the new technologies that a contemporary company deploys. The modern information systems not only support the business processes, but serve as platforms for execution of many business processes in a contemporary company. Consequently, these systems mirror the company culture and support the business strategic values (Blattberg at al., 2004). Moreover, computers and the related software, the Internet and the other social media, if wisely used, can provide useful infrastructure that will help managers to create strategies that will result in a desired competitive advantage (Vessey and Glass, 2000). The universe of the various business support information systems includes products that support the major functional areas of business such as operations, accounting and finance, marketing and human resources management (Parson, 2003). These systems are integrated through the larger enterprise resource planning systems while the managerial functions are integrated by the executive decision support systems. However, these new systems often mean new ways of doing the business (Laudon and

Laudon, 2010). While introducing them in their respective companies, the managers must understand how they will affect the organization as a whole, particularly focusing on the organizational conflict that can result in a resistance to change. The designers of the advanced information systems must take into account how the power distribution between the various formal and informal groups will change under the influence of the new system and what will be the change (Senge, 2003).

3. OUR RESEARCH

For the purposes of our research we developed and administered a structured questionnaire that was sent to the managers of a sample of small and medium-sized enterprises in Republic of Macedonia. The objective was to survey their views about the importance and the impact on selected domains of their business of the advanced technologies that they recently (1 to 3 years in the past) have implemented in their respective companies. The design of the questionnaire followed the principles of Likert scale. The participants were asked to assess the importance and/or the impact of the new and advanced technology they have implemented on selected domains of their companies, starting from: 1 if the importance or the impact in the given domain were negligible; 2 if the importance or the impact were weak; 3 if the advanced technologies were important and with noticeable impact; 4 if they were very important or with considerable impact, and 5 if the new technologies were of critical importance and with substantial impact. The questionnaire was sent to 98 companies and the feedback was obtained from 47. This gives a response-rate of 42%. Regarding the size of their companies, 38 of the respondents were managers or owners of small company and the nine were running some medium-sized company.

As it can be seen in the Figure 1, the interviewed managers assessed the importance of the advanced technologies in the domain of the cost of their operations as of very high importance and impact.

Figure 1. Importance of advanced technologies for cost of operations

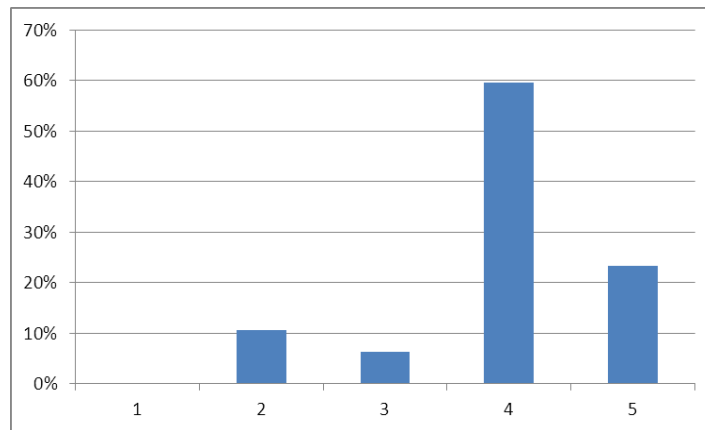
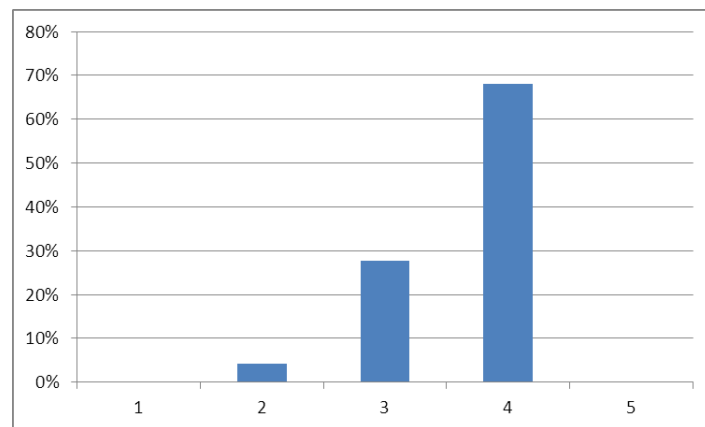


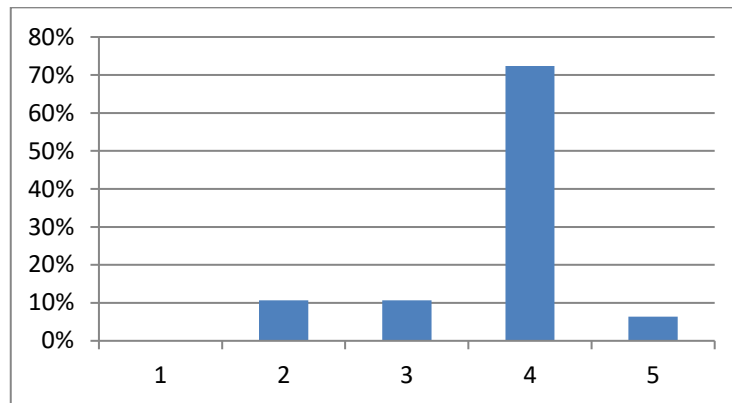
Figure 2 depicts the distribution of marks for the importance of the advanced technologies for achievement of greater productivity.

Figure 2. Importance of advanced technologies for productivity



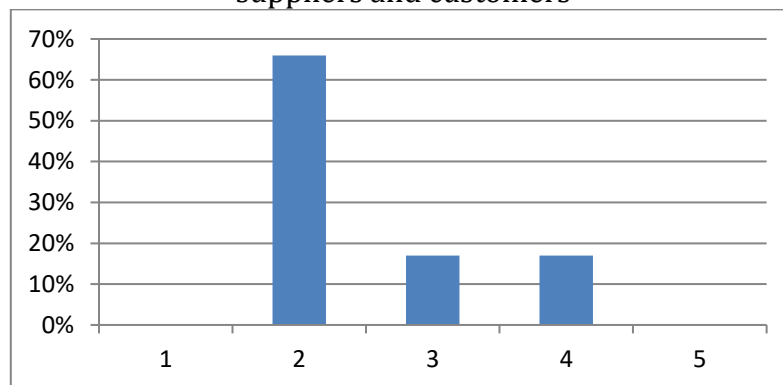
The majority of the interviewed manager (62%) reported critical or very high importance of the advanced technologies for higher productivity of their sales departments, too, listing the faster preparation of offers, better identification of the customer needs and better focus of the overall marketing operations, in particular. That the advanced technologies are of very high and critical importance for the market share, especially on the e-market, think 80% of the interviewed managers (Figure 3).

Figure 3. Importance of advanced technologies for market share



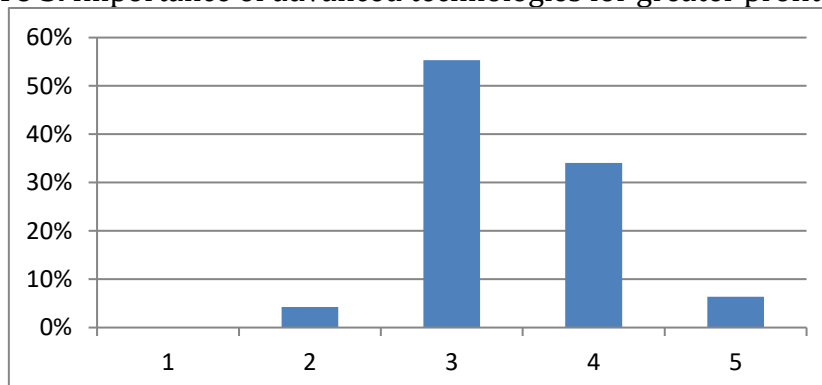
That the advanced technologies are of weak importance and impact for the relations with the suppliers and customers think two-thirds of the interviewed managers (see Figure 4).

Figure 4. Importance of advanced technologies for relations with suppliers and customers



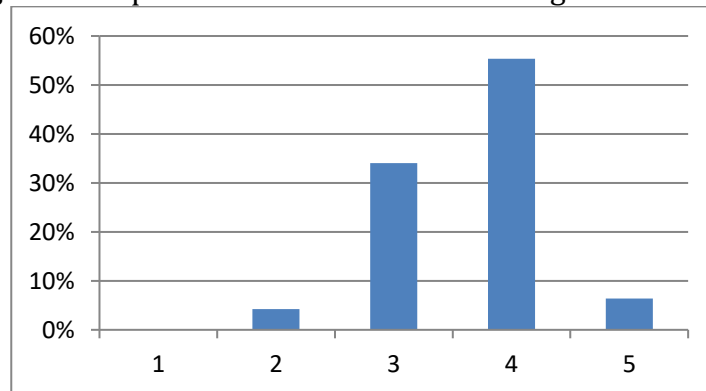
The importance of the advanced technologies on the profitability of their businesses is assessed by the majority (89%) as significant or very important, as depicted in Figure 5.

Figure 5. Importance of advanced technologies for greater profitability



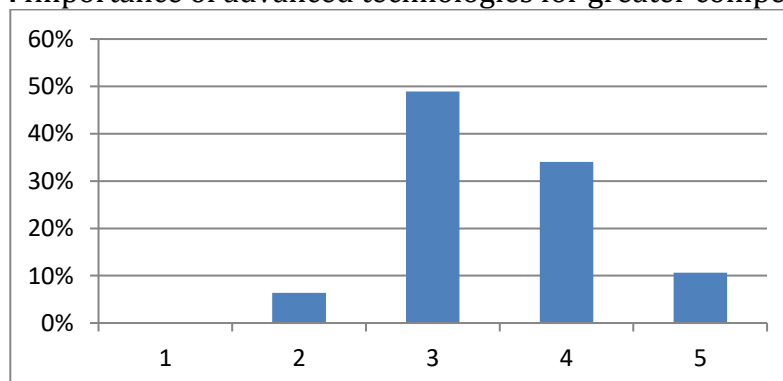
That the company achieves its strategy (mission, vision and goals) more effectively with a help of advanced technologies and that they are of critical or very significant importance, answered 6%, that they are very significant answered 34%, at the level 3 answered 34% and at the level 2, answered 4% of the interviewed (figure 6).

Figure 6. Importance of advanced technologies for strategy



Overall, 45 % of the managers of the Macedonian small and medium-sized companies think that the deployment of advanced technologies is critical and significantly important for the competitiveness of their companies, while half of them consider the advanced technologies as very important (Figure 7).

Figure 7. Importance of advanced technologies for greater competitiveness



CONCLUSION

With all reserves that must be applied to the outcomes from our research, due to the lack of statistically correct sample, some viable conclusions about the perception of the managers of small and medium-sized companies from the Republic of Macedonia about the importance and the impact of the advanced technologies in various domains of their businesses can still be done. Moreover, the results we got are in accordance with the findings of the World Economic Forum as the world leading authority in terms of the monitoring the competitiveness of the national economies. The World Economic Forum continuously lists the economy of the Republic of Macedonia as efficiency driven. Our research also indicates that the managers of the small and medium-sized enterprises in the Republic of Macedonia are aware about the aspects of the Ninth Pillar of the Competitiveness Index that addresses the technological readiness and the introduction of technologies that increase the productivity of the manufacturing processes. The results generally correspond with the relatively good country score of 4.28 out of 7 possible or 63 out of 140 countries included in the Global Competitiveness Index for 2015 (2016). The results of our survey confirm that our managers are equally interested to invest in advanced technologies to support the so-called “soft” domains of their businesses and do not limit these technologies to the manufacturing. Similarly, regarding the Eleventh Pillar of the Index, the sophistication of the business links with suppliers and customers and the quality of the networking strategies our research shows noticeably better results than the last available Index for Country that marked the business sophistication of the Country with 3.87 and 72/140 ranking. The high importance given to the various advanced technologies in sales and marketing and in strategy formulation by our respondents cannot be compared with the Competitiveness Index, since these domains are not directly monitored by the former. Generally, the results of our survey proved that most of the owners and the managers of the small and medium-sized enterprises in the Republic of Macedonia have considerable level of awareness about the importance of the constant investment in new technologies and the related management practices.

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DOES THE INCREASED COMPETITIVENESS IMPROVE STANDARD OF LIVING IN THE WESTERN BALKAN COUNTRIES?

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ABSTRACT

The concept of competitiveness becomes a key of success for the companies, nations or regions that want to participate in the global economy platform.

A more competitive economy is likely to grow faster over time, reach higher level of sustainable development and enable citizens to enjoy its benefits through higher wages and standard of living.

Despite the global financial and economic crisis in the recent decade, the Western Balkans is continuously improving its competitiveness as a region, but the progress is uneven and much slower than in other EU countries.

Furthermore, all of these countries face major convergence challenges in terms of the living standard of their population, such as the trend of increasing inequality and poverty level, which seems to have become a regional problem in the recent years.

The paper aims to present the similarities and differences among the Western Balkan countries regarding the competitiveness level, as well as to examine whether the increased competitiveness has contributed to the improvement of the standard of living of the population in the Western Balkan countries.

KEYWORDS: competition, global competitiveness index, human development index, welfare, quality of life

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1. THE COMPLEXITY OF DEFINING THE CONCEPT OF COMPETITIVENESS AND STANDARD OF LIVING

The importance of the national and regional “competitiveness” is underlined as a core concept and one of the main goals of the Lisbon Strategy (2006). In the literature on competitiveness, much effort is devoted to formulate a proper definition.

Krugman (1994) defined the national competitiveness as: ability to produce goods and services that meet the test of international competition, while [...] citizens enjoy a standard of living that is both rising and sustainable. In one of the European Competitiveness reports it is stated that “An economy is competitive if its population can enjoy high and rising standards of living and high employment on a sustainable basis. More precisely, the level of economic activity should not cause an unsustainable external balance of the economy nor should it compromise the welfare of future generations.” (European Communities 2000).

The OECD uses varying definitions, among which the following might be quoted: “[Competitiveness] may be defined as the degree to which, under open market conditions, a country can produce goods and services that meet the test of foreign competition while simultaneously maintaining and expanding domestic real income” (OECD Programme on Technology and the Economy 1992). Finally, an influential definition comes from the scientific literature: we can define (systemic) competitiveness of a territory as the ability of a locality or region to generate high and rising incomes and improve livelihoods of the people living there.” (Meyer-Stamer 2008, p. 7) What all these definitions have in common is that they all focus on the welfare and identified standard of living as the ultimate goal of each country’s competitiveness policy.

Nevertheless, there is also a different understanding of the scope of the “standard of living” term. While consumption based measures of standard of living dominated in the past literature¹, including economic indicators and factors such as income, gross domestic product and national economic growth, more recent literature documents² include freedom, safety as well as free access to medical care and

¹ Bennett (1937), Williams and Zimmerman (1938), Williams and Zimmerman (1938)

² Curcio C. (2005)

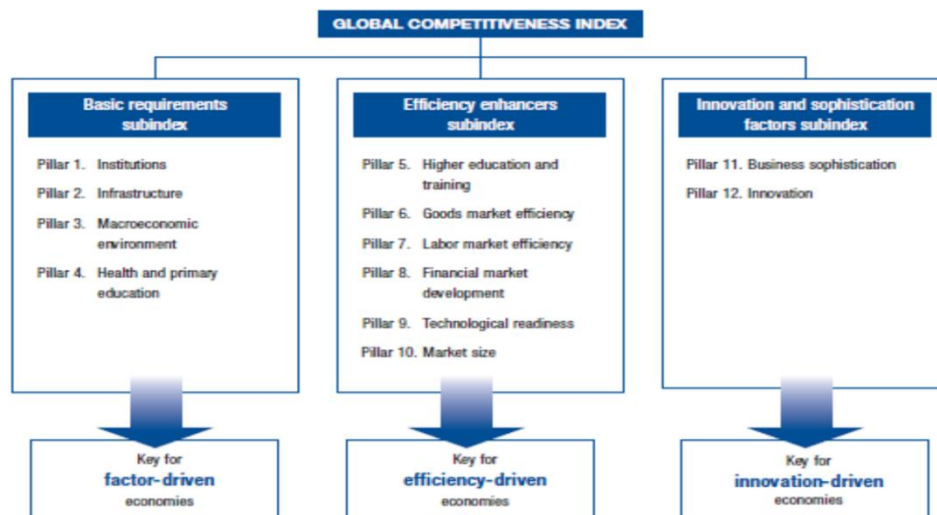
education. Thus, the standard of living in the broader sense is closely related to the country population quality of life.

2. MEASURING THE COMPETITIVENESS AND THE STANDARD OF LIVING

There are several methodologies to measure international competitiveness, preferably used to measure countries macroeconomics performance³ (Durand, 1998). The World Economic Forum's Global Competitiveness Index, however, seems to be the most comprehensive and relatively the most accurate index in comparing competitiveness of more than 130 nations since 1979. Therefore, the latest 2016-2017 GCI Report includes 138 countries which create 98% of the world's GDP. The Global Competitiveness Index (GCI) includes statistical data from: IMF, the World Bank; and several UN agencies (ITU, UNESCO, WHO ...) as well as indicators which derive from the World Economic Forum's Executive Opinion Survey that reflects qualitative aspects of competitiveness.

The World Economic Forum monitors the competitiveness through 3 sub-indexes⁴, 12 pillars and 114 indicators. Each of the three sub-indexes is given different weights, depending on each economy's stage of development (Figure 1).

Figure 1: World Economic Forum's Global Competitiveness Index structure



Source: World Economic Forum's Global Competitiveness Report 2016-17

³ IMD's World Competitiveness Index, WEF's Global Competitiveness Index, OCDE's New Economy Index and UK Government's Productivity and Competitiveness Indicators.

⁴ Basic requirements sub-index, Efficiency enhancers sub-index, Innovation and sophistication factors sub-index

The Global Competitiveness Index (GCI) and its sub-indexes range between one and seven (1-7), considering one (1) as the lowest and seven (7) as the highest level of competitiveness. The WEF's Global Competitiveness Index is the only one that contains the competitiveness indicators related to Western Balkan countries (except Kosovo)⁵ on the long term basis, thus GCI will be the only index to be used in the further analysis as an indicator of competitiveness in the Western Balkans.

Measuring the standard of living is also a complexity "per se", as it is frequently associated with the valuation of life quality or with measuring the well-being index (Kral, 2011). To evaluate or measure the life quality, several metrics have been created by various institutions, such as OECD and Gallup Institute. In order to measure the standard of living, some institutions use objectively measurable indicators of macroeconomic, demographic or social character and some of them base the results on indicators which can be considered as subjective well-being ones (Diener, 2003). A theoretical study about the importance of the so-called social indicators measurement was introduced by Noll in 2004, and he stated that „social indicators research has succeeded to considerably improve the measurement of peoples' standard of living, as well as the monitoring of general social conditions and change“ (Noll, 2004).

For the purpose of this study, two basic indicators will be used:

1. The World Bank's indicator - GNI per capita (based on purchasing power parity - PPP) ⁶ as an indicator of the national income paid to the country's citizen (no matter where they are in the world);
2. The United Nation's Human Development Index, which encompasses the measuring of four data points: expectancy at birth (very much related to medical care and health), school enrollment and adult literacy (education) and GNI per capita (national income per citizen).

In the literature, there are many scientific studies which show the implicit relation between the international competitiveness and standard of living (Okrepilov, 2015) (Yakovieva, 2015), which present potential for relatively extensive empirical

⁵ There are no data on level of competitiveness for Kosovo

⁶ GNI per capita based on purchasing power parity is gross national income (GNI) converted to international dollars using purchasing power parity rates. GNI is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad.

research, since several previous expert studies implicitly (Okrepilov, 2015) or explicitly (Easterlin, 2011) pointed out the relation between the living standard and international competitiveness. Some empirical research was conducted on selected OECD countries regarding the living standard as a factor of competitiveness (Madzik et al, 2015), however, not many analyses on the impact of competitiveness on the living standard of the population in Western Balkans countries have been made.

3. THE COMPETITIVENESS IN THE WESTERN BALKAN COUNTRIES – CURRENT STATUS

Being part of Europe with EU aspiration, Western Balkan countries are struggling to catch up with EU member countries, by implementing numerous policies and measures to increase their nations' competitiveness.

Regardless of the increasing trend of the competitiveness level, the Western Balkans achieve the worst competitiveness indicators in Europe, and they are below the European average competitiveness score (4.72), whereas according to the latest Global Competitiveness Report 2016/17 data, they reached the average regional score of 4.11.

The latest data also show visible inequalities in competitiveness among the Western Balkans countries.

Table 1: Competitiveness in WBC -overall GCI and by 3 sub-indexes

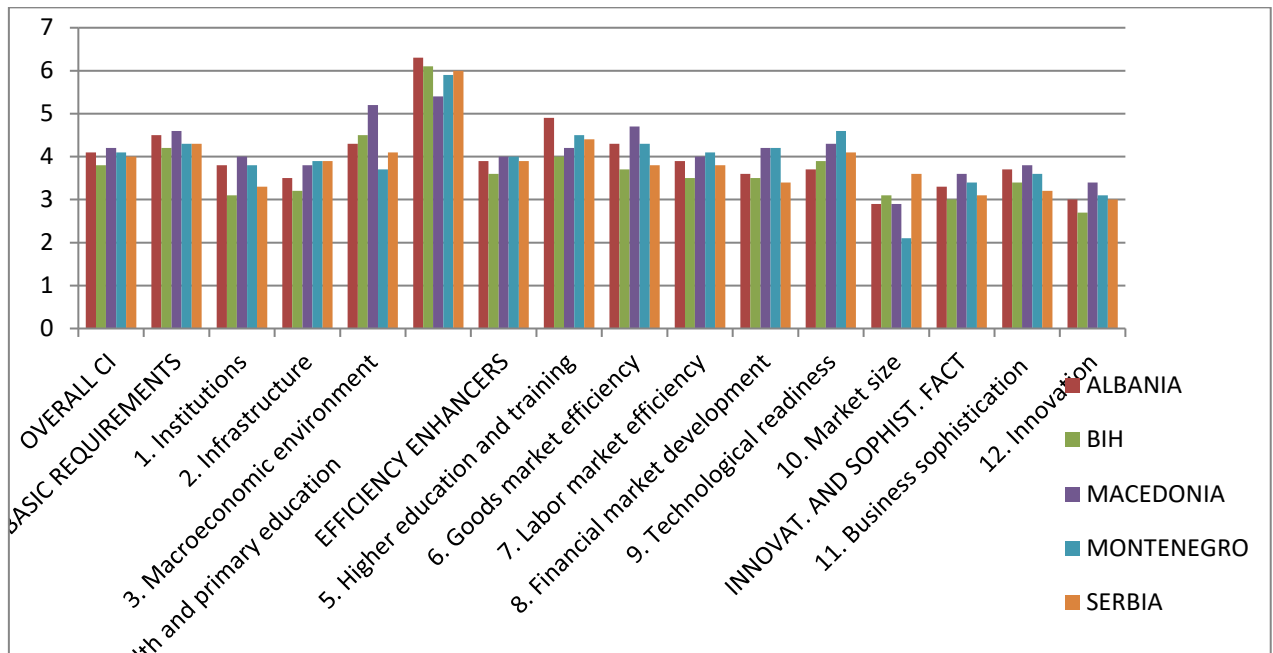
Country	OVERALL INDEX		Basic requirements		Efficiency enhancers		Innovation and sophistication factors	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Albania	80	4.06	74	4.46	86	3.88	106	3.31
BIH	107	3.80	94	4.23	106	3.60	122	3.04
Macedonia	68	4.23	66	4.61	73	4.04	64	3.64
Montenegro	82	4.05	86	4.34	79	3.96	98	3.35
Serbia	90	3.97	87	4.33	90	3.85	120	3.10

Source: GEF Global Competitiveness Report 2016/17, compiled by the author

In this regard, as presented in Table 1, Macedonia is the top competitive country in the Region being globally ranked as 68th country, with the score of 4.23, while Bosnia

and Herzegovina is the least competitive with the score of 3.8 and is positioned at 107 place in the global ranking of competitiveness. Other Western Balkan countries are below the regional average of 4.11 in any way. In this regard, Albania is globally positioned at the 80th place, with the score of 4.06, Montenegro is ranked as the 82nd competitive country with the score of 4.05 and Serbia is at the 90th position, with the overall global competitiveness index of 3.97. As concerns the sub-indexes, the best scores (better than the overall GCI ones) are achieved in “basic requirements” pillars (institutions, infrastructure, macroeconomic environment and health and primary education) and the worst in “innovation and sophistication factors” pillars, thus reaching the sub-index score between 3.10 (Serbia) and 3.64 (Macedonia), much below the overall GCI for each respective country. Analyzing the 12 pillars competitiveness scores, the differentiation among the countries becomes even more obvious. Macedonia, for example, although being the top regional competitive economy, at the same time has the poorest score in “health and primary education” pillar, second worst score in “higher education and training” pillar and moderate score in “infrastructure” pillar, which are the three very crucial factors for the future competitiveness of the country. Furthermore, Albania which is currently on the second position among the WB countries regarding the general competitiveness is facing problems related to infrastructure and technological readiness and has the worst scores in these two pillars in the region (Figure 2).

Figure 2: Competitiveness in WBC by 3 sub-sectors and 12 pillars



Source: GEF Global Competitiveness Report 2016/17, created by the author

Montenegro, on the other hand, which has been continuously showing good competitiveness scores, is facing with the worst macroeconomic environment, while Serbia has the best “infrastructure” pillar score and the worst scores in “financial market development” and “business sophistication” pillars. At the end, Bosnia and Herzegovina, which is considered to be the least competitive country in the Western Balkans, yet has much more pleasant macroeconomic environment and its “health and primary education “ pillar is scored as the second best in the Region.

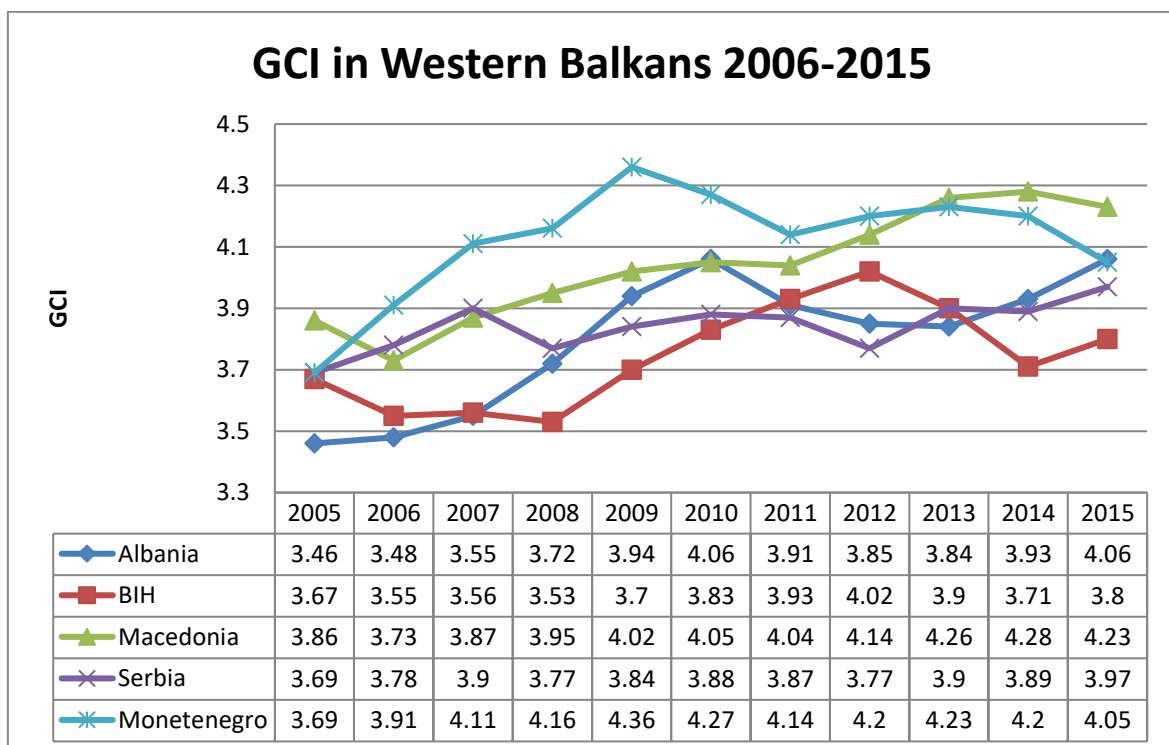
4. THE TREND OF COMPETITIVENESS AND STANDARD OF LIVING IN THE WESTERN BALKAN COUNTRIES

4.1. Trend of competitiveness in the Western Balkans (2005-2015)

Analyzing the trend of competitiveness in the period 2005-2015, measured by GEF’s Global competitiveness index, it can be concluded that the Western Balkans as a region (despite some turbulence due to the global financial crisis) experienced the upward trend of competitiveness. Nevertheless, when analyzing the trend of competitiveness by country, significant differentiation can be noticed. Namely, even though during the first half of the observed period Montenegro marked the highest competitiveness index in the Region, which is much higher than that of the other

countries (reaching the score of 4.36 in 2009), in the last five years, the competitiveness index has worsened a lot, reaching the lowest score of 4.05 in 2015 (which is just slightly above the competitiveness index achieved in 2006). The case with Albania is quite opposite. During the analyzed period, it started as the least competitive Western Balkan country (with GCI of only 3.46 in 2005), but it had reached its peak (GCI 4.06) in 2010 and with some downwards turbulence over the Sovereign debt crisis period, it achieved the same level of competitiveness as it had in 2010. Thus, with the GCI of 4.06 achieved in 2015, Albania is ranked as second competitive country in the Region, slightly above Montenegro and just behind Macedonia. Serbia, and Bosnia and Herzegovina, on the other hand, are the countries which had almost the same level of competitiveness at the beginning and at the end of the observed period, but the trend of their competitiveness was developing differently over the observed period (Figure 3).

Figure 3: Global competitiveness in Western Balkan countries



Source: GEF Global Competitiveness Report 2016/17, created by the author

Namely, while in the case of Serbia, the competitiveness marked rather flat trend with small ups and downs (starting from 3.69 in 2006 and reaching 3.97 in

2015), the trend of competitiveness of Bosnia and Herzegovina was rather turbulent, as it had started from 3.67 in 2005, and unlike other countries, it had a downward trend until 2008 (when GCI was 3.53), and then increased its competitiveness index in the period of the biggest crisis, reaching its peak in 2012, when its GCI was the third in the Region. During the recent years it has experienced worsening of the competitiveness level and became the least competitive country in Western Balkans for 2015 with achieved GCI of 3.8.

The most stable upward trend of competitiveness can be noticed in the case of Macedonia, which was the most competitive country at the beginning and at end of the observed period, as it increased its competitiveness from 3.86 in 2005 to 4.23 in 2015, according to GEF's global competitive index.

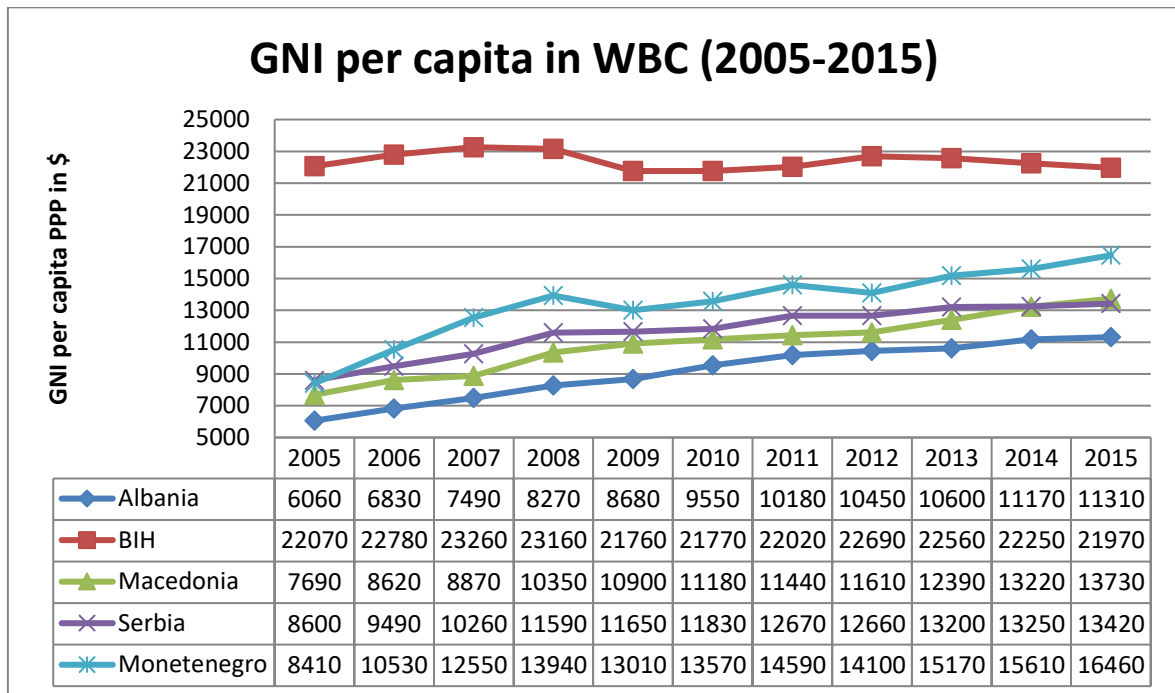
4.2. Trend of the Western Balkan countries' population standard of living

The standard of living of the Western Balkan countries' population, expressed in two basic indicators (GNI per capita and Human Development Index - HDI), generally shows an upward trend, but in some cases quite opposite compared to the competitiveness. Moreover, the standard of living expressed in two indicators showed quite different results in each of the observed countries.

a) Standard of living trend measured as GNI per capita

When analyzing the standard of living through the GNI per capita (international PPP) in \$, it can be concluded that at the moment there is a quite controversial situation. Namely, Bosnia and Herzegovina as the least competitive country according to GCI, turns out to be the country with the highest standard of living (during the entire observed period), measured as the value of gross domestic income earned by each citizen. Furthermore, Bosnia and Herzegovina is the only country (among the observed ones) that as of the year 2008 showed a downward trend of its population's standard of living. (Figure 4). All other countries in the Region registered quite similar upward trends of the GNI per indicator and succeeded to double their citizens' gross income within the observed period 2005-2015.

Figure 4: Standard of living measured as GNI per capita (international PPP)



Source: Word Bank database, created by the author

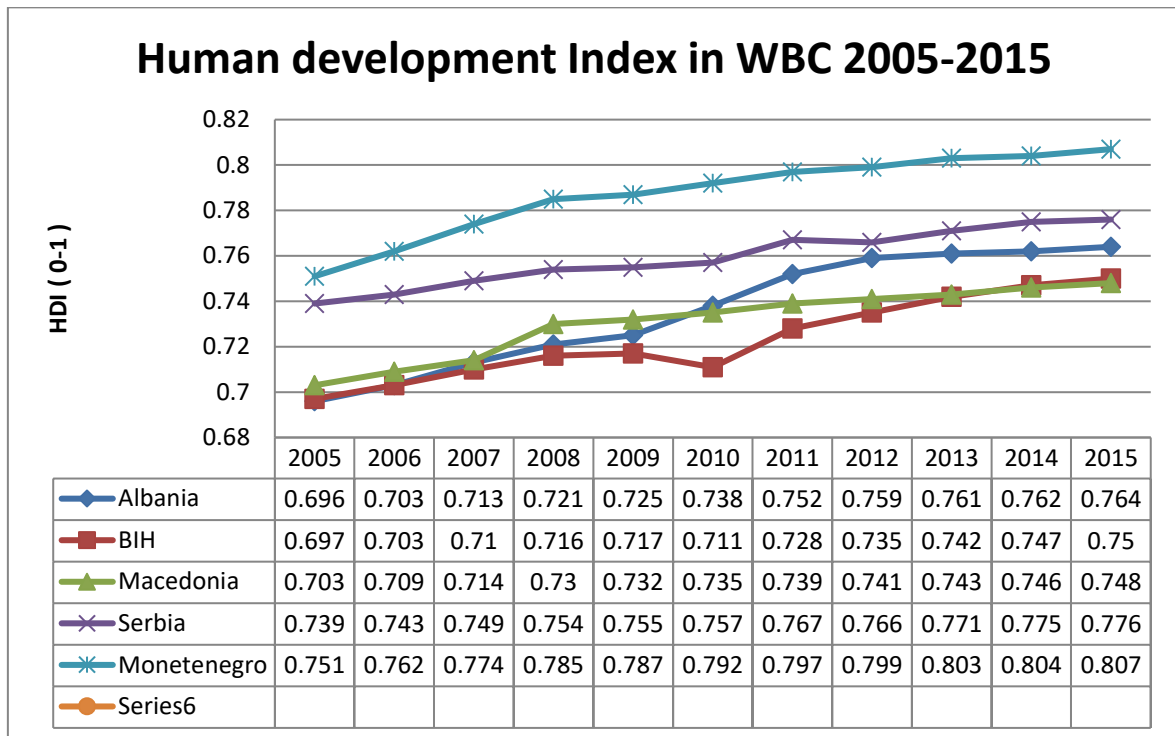
Nevertheless, it is interesting to comment that Macedonia as the most competitive country in the Region has the second worst indicator regarding the standard of living of its population, while Montenegro has the second best GNI per capita in the Region and the most continuous upward trend. Albania, as the second competitive country for 2015, has the worst standard of living indicator in the Western Balkans during the entire observed period.

b) Standard of living trend measured as Human Development Index

As already pointed out, the United Nation’s Human Development Index is much more complex and consists of other factors than pure economic ones. Thus, not only does it consider the national income per citizen, but also three other aspects relevant for the quality of life, such as: expectancy at birth, school enrolment and adult literacy.

The analysis of the standard of living of the Western Balkan countries’ population in the period 2005-2015 shows an upward trend in general (Figure 5).

Figure 5: Standard of living measured through Human Development index (HDI)



Source: Human Development database, created by the author

The same trend development counts for each of the observed countries. Nevertheless, the differences among the two standard of living indicators are quite obvious. Namely, Bosnia and Herzegovina as the best ranked country in relation to the standard of living measured with GNI per capita indicator at the same time has the worst results when using the HDI indicator. The other most evident paradox is that the standard of living of the Macedonian population (measured by HDI) is continuously one of the lowest, and during the last year of the observed period the worst one, while at the same time, Macedonia is the top ranked country in the region in regard to the competitiveness. The improvement of the standard of living measured through HDI is evident in the case of Albania. Namely, while it is the lowest rated country in relation to the standard of living measured through GNI per capita indicator, it shows a continuous improvement of its human development index over the analyzed period, starting as the worst one in 2006, but reaching a better position than Macedonia and Bosnia and Herzegovina for three years in row. The other two out of the five observed countries – Montenegro and Serbia - registered a continuously increasing trend of the standard of living (similar, or even slightly improved trend lines related to living expressed as GNI per capita).

5. IMPACT OF THE COMPETITIVENESS ON THE STANDARD OF LIVING

In order to examine whether the increased competitiveness contributes to the improvement of the standard of living of the Western Balkans' population and in particular to each of the observed country, the influence of the GEF's Global competitiveness index has been examined on two already observed indicators of standard of living: GNI per capita and Human Development Index (HDI).

For that purpose, the OLS approach has been applied, where the competitiveness level measured through the Global competitiveness index (GCI) is considered as an independent variable, while the standard of living level is used as a dependent variable expressed as "GNI per capita (PPP international)" - (GNI) as well as through "Human Development Index"-(HDI) . In the empirical analysis, the annual data series of five Western Balkan countries, covering the period between 2005-2015 has been used. The main data sources were from the World Bank database as well as from the Human Development database and reports.

6. The **Econometric Models** representing the random effects of panel regression model are as follows:

$$\ln \text{GNI}_i = \beta_0 + \beta_1 \ln \text{GCI}_i + \varepsilon_i \quad \text{and} \quad \ln \text{HDI}_i = \beta_0 + \beta_1 \ln \text{GCI}_i + \varepsilon_i$$

where, GNI or HDI is the level of standard of population living measured through GNI per capita (PPP International) and Human development index respectively in time i ; β_0 is the constant; while GCI is the level of competitiveness measured and expressed as Global Competitiveness Index . The symbol ' ε ' presents the error term, or stochastic factor that is supposed to be with zero conditional mean and constant variance, ie $E(\varepsilon_i) = 0$ for each period i . All the data are transformed into logarithms.

For that purpose, two tables of the panel regression are presented. The first table analyzes, the impact of competitiveness level using Global competitiveness index (GCI) on the standard of living, expressed as "GNI per capita (PPP international)" - GNI, both at the regional level and in each of the observed Western Balkan country.

During the analysis of the results, the focus is placed on the t-statistics, which tests the significance of the impact of the Global Competitiveness Index (GCI) on the GNI per capita. The estimation shows that, at the regional level, t-value is 8.4 (which is much higher than the critical value of 2), with 99% of statistical significance (Table 2).

Table 2: Impact of the competitiveness level on standard of living in WBC
 (GCI on GNI per capita (PPP International- regression output 2005-2015))

```
. xi: regress log_GNI log_GCI i.country
i.country          _Icountry_1-5          (naturally coded; _Icountry_1 omitted)
-----+-----
Source |           SS          df          MS          Number of obs =          54
-----+-----
Model |  2.15031124          5          .430062247          F( 5, 48) =          32.45
Residual |  .636135372          48          .01325282          Prob > F          =          0.0000
-----+-----
Total |  2.78644661          53          .052574464          R-squared          =          0.7717
                                           Adj R-squared     =          0.7479
                                           Root MSE         =          .11512

-----+-----
log_GNI |           Coef.      Std. Err.      t      P>|t|      [95% Conf. Interval]
-----+-----
log_GCI |  3.110623          .370413          8.40   0.000          2.365858          3.855388
Icountry_AL |  .0564461          .0507371          1.11   0.271          -.0455676          .1584598
Icountry_BH |  1.711998          1.063089          1.61   0.146          -.7394906          4.163487
Icountry_MK |  -.0108528          .0541397          -0.20   0.842          -.119708          .0980025
Icountry_MN |  .1360466          .0576142          2.36   0.022          .0202055          .2518877
Icountry_5R |  .2174191          .0492976          4.41   0.000          .1182996          .3165386
   _cons |  4.953776          .4951551          10.00   0.000          3.9582          5.949353
```

Source: calculated by the author

Thus, it can be concluded that the competitiveness has a positive and high impact on the standard of living of the Western Balkans population at regional level (measured as GNI per capita) with high level of statistical significance.

On the other hand, the analyses by country show a quite different link between the observed dependent and independent variable. Namely, only Serbia and Montenegro registered a significant and positive correlation with 99% and 95% level of statistical significance, respectively, Albania and Bosnia Herzegovina with t-values less than 2 (1,11 and 1,61, respectively) showed positive, but still insignificant impact of competitiveness on the standard of living, with 70% and 85% statistical significance, respectively. Macedonia is the only country with small, but negative t-value and low statistical significance, which shows a slightly adverse link between the competitiveness and standard of living.

When analyzing the impact of competitiveness on the standard of living (measured through Human Development Index), it can be concluded that, at the regional level, t-value is 7.88 with 99% of statistical significance (Table 3).

Table 3: Impact of the competitiveness level on standard of living in WBC (GCI on HDI - regression output 2005-2015)

xi: regress log_HDI log_GCI i.country						
i.country _Icountry_1-5						
Source	SS	df	MS	Number of obs = 54		
Model	.070527121	5	.014105424	F(5, 48)	=	51.13
Residual	.013241873	48	.000275872	Prob > F	=	0.0000
				R-squared	=	0.8419
				Adj R-squared	=	0.8255
Total	.083768995	53	.001580547	Root MSE	=	.01661
log_HDI	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
log_GCI	.4209638	.0534424	7.88	0.000	.3135106	.528417
Icountry_Al	.4869829	.1142003	4.26	0.002	.2286438	.745322
Icountry_BIH	.2912948	.1715323	1.70	0.128	-.1042593	.686849
Icountry_MK	-.0323089	.0078112	-4.14	0.000	-.0480143	-.0166035
Icountry_MN	.3751689	.1133405	3.31	0.009	.1187749	.631563
Icountry_SR	.5524268	.18946	2.92	0.017	.1238385	.9810151
_cons	-.8686617	.07144	-12.16	0.000	-1.012301	-.725022

Source: calculated by the author

Significant positive correlation with 99% of statistical significance is estimated in the case of Albania, Serbia and Montenegro, while in the case of Bosnia and Herzegovina there is an insignificant correlation between competitiveness and standard of living with low statistical significance. Macedonia is somehow an exception, as the t-value shows a negative significant correlation between the independent and dependent variable, with 99% statistical significance.

CONCLUSION

There is a difference in the trend of improving competitiveness among Western Balkans countries. Generally, at regional level, there is a positive correlation and impact of competitiveness (GCI) on the standard of living measured with both indicators (GNI per capita and Human Development Index). Nevertheless, there is a different impact on competitiveness on the standard of living in each of the observed Western Balkan countries. The biggest discrepancy is noticed in the case of Macedonia, which is the most competitive country in the Region, but also a country with the lowest standard of living of its population, measured with the Human Development Index, as a broader indicator of standard of living. This can be partly explained by the fact that Macedonia, despite its higher global competitiveness, has the poorest score in “health and primary education” pillar and the second worst score in “higher education and training” pillar, which are the crucial factors for the population’s living standard.

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